



MIDWEST

Association of
Fish & Wildlife
Agencies



**State
of the
State/Province
Reports**

2023

2023

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**INDIANA
STATE REPORT**
May 19, 2023

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License Fee Increase and Sales

The Natural Resources Commission in Indiana approved fee increases for hunting, fishing, and trapping licenses, as well as commercial licenses and permits in September of 2021. The fee increases went into effect in 2022. Hunting and fishing license fees had remained the same since 2006, and some commercial license and permit fees had not increased since the 1980s. A few commercial license fees had not been increased since the licenses were initiated in the 1970s. Deer hunting license fees had not increased since 2002. Support was given by partners throughout the state as well as the Indiana Governor's Office. The Department of Fish & Wildlife (DFW) notified license holders through a news release, monthly electronic newsletter, direct email to license holders, social media posts, website, and link in the online license system. License retailers were also notified. These increases helped to address the shortfall in the funding for the Department of Natural Resources' DFW and Law Enforcement.

The total number of licenses issued in 2022 experienced a decrease compared to the previous year, which was a decline of nearly 10% in 2021. Overall, fishing and hunting license sales fell to 11% and 13% respectively. Nevertheless, the overall revenue for the year grew by more than 25% due to an increase in license fees. Considering the surge in outdoor recreation as a result of COVID-19 in 2020-2021 and the license fee increase, both licensing volume and revenue exceeded projected sales forecast.

40 Stories for 40th Anniversary of Nongame Wildlife Fund

DFW collaborated on a year-long outreach effort celebrating the 40th anniversary of Indiana's Nongame Wildlife Fund by telling "40 Stories" about the Fund. The 40 stories were grouped into 12 themes, such as *technology fuels conservation* and *volunteers*, with one theme for each month of the year. Story maps were used to tell the stories in a variety of ways using pictures, videos, and graphics along with text and highlighted our donors, partners, and volunteers. All 40 stories were promoted through social media outlets and mass emails, and are housed on the [website](#). We adapted the 40 stories content into posters, a postcard, a looping video, and a giant banner for the Indiana State Fair.

Near the end of 2022, we increased outreach to donors in an effort to capitalize on the 40 stories. This included a special year-end donation request (postcard and sticker) that was mailed to potential donors. We saw a 100% increase in direct donations to Indiana's Nongame Wildlife Fund in 2022 compared to 2021. From these efforts we also created a consolidated donor list to be used in the future.

2022 Licensed Angler Survey

Historically, DFW has conducted a licensed angler survey every 10 years with the last one being conducted in 2016. The advances of online survey tools created the ability to conduct larger

scale surveys more efficiently and frequently. A planning developed survey questions focused on fishing habitats during the 2021-2022 fishing license period (frequency, driving distance, resource types used, and species targeted), general fishing habits (who do you fish with, where do you get information from, and experience level), agency trust questions (what is agency doing well at, does agency share my values), fish consumption habits, and demographics. The fish consumption portion was a partnership with the Indiana Department of Health and was paired with a paper survey distributed by the Indiana Department of Health to gain information about the consumption of fish by Indiana anglers.

The survey was delivered to all Indiana anglers with a valid email in our license database. This was different from previous angler surveys which consisted of only a subset of anglers receiving the survey. An open link to the survey was also available on the project website so anyone without an email on file could complete the survey.

The survey was distributed to over 300,000 licensed anglers with a specialized survey link which could only be used once. Nearly, 17,000 anglers participated in the survey and results from the survey were compiled using a Tableau dashboard so participants could view data.

Banded Pygmy Sunfish found in Twin Swamps Nature Preserve

Currently one of Indiana's eleven Special Concern fish species, the Banded Pygmy Sunfish was first discovered in Indiana in 2006 in Knox County. The diminutive species (rarely topping 2") can be found in the thickly vegetated oxbows, sloughs, backwaters, swamps, and ditches in the extreme southwest corner of Indiana, which is the northern extent of the species' range. Since the species' discovery, surveys have been completed throughout southwestern Indiana to better determine its current distribution/status in the state. In 2022, surveys uncovered two previously unknown populations in Cypress Swamp and Overcup Oak Swamp in Twin Swamps Nature Preserve, Posey County.

St. Joseph River Black Bass Survey

The St. Joseph River in Elkhart and St. Joseph Counties is one of northern Indiana's premier Smallmouth Bass fisheries. From late September through mid-October a team of staff conducted a Black Bass survey of the entire 40-mile section of the St. Joseph River running through Elkhart and St. Joseph counties. Eight different stations were sampled across 16.5 miles of the river totaling just over 12 hours of sampling. Sites ranged from 1.33 miles up to 4.23 miles. During the 12 hours of electrofishing, 426 Smallmouth and 54 Largemouth Bass were collected. Additionally, 11 Walleyes were also collected. In combination with the Black Bass survey the annual St Joseph River I&M fish sampling work was also completed and it consisted of 2 hours of nighttime electrofishing. During that time 100 Largemouth, 19 Smallmouth and 13 Walleyes were collected.

Indiana Fish Stocking Program

Curtis Creek Trout Rearing Station has approximately 150-200 adult captive Brown Trout broodstock for the State's inland stream stocking program. These fish are spawned each year to produce 30,000 green eggs which are incubated at Fawn River State Fish Hatchery (SFH). At 2"-3" the fish are transferred back to Curtis Creek and reared to 10"-12" at stocking the following spring. Approximately 10,000 brown trout are stocked into three northeast Indiana quality trout streams- Pigeon River, Little Elkhart, and Solomon Creek. These fish are designed to holdover and provide a trophy inland stream brown trout fishery.

Fawn River SFH is Indiana's provider for advanced walleye. Approximately 200,000 walleye fry are received from Cikana SFH in May. The fish are put on an aggressive feeding program requiring 100's of pounds of fat head minnows designed to rear 30,000 7"+ walleye by stocking in October. Because of the larger size the advanced walleye are expected to survive at much higher rates than the smaller 2" walleye fry that were traditionally stocked in Indiana northern lakes. The advanced walleye are the #1 requested fish by anglers to be raised in the state's hatchery system.

JC Murphey Lake rehabilitation

JC Murphey Lake (1,000 acres) at Willow Slough Fish and Wildlife Area is in the process of a complete rehabilitation. A fish salvage has occurred and a total of 2,400 fish, including, adult largemouth bass, bluegill, black crappie, redear sunfish, and channel catfish have been removed from the lake and are being stored for restocking the lake in fall 2023. The lake has also undergone dredging and fish habitat structures are being built and placed. So far a total of 206 fish habitat structures were placed that included 30 artificial structures, 10 catfish condos, 50 catfish nesting tubes, 6 stake beds, 70 wooden fish cribs, and 40 tree/brush piles.

Improving hellbender captive rearing techniques

DNR has established a long-term partnership with Purdue University to captively rear eastern hellbenders for the restoration of the species in the Blue River watershed. In the current phase of the project, researchers are also assessing methods to increase their post-release survival. DFW Staff and researchers at Purdue collaborated to assess the effects of conditioning, release season, and soft release type. Eastern Hellbenders were reared for 18 months in captivity in one of two conditions: a control condition with low-velocity water flow (unconditioned) or a treatment condition with moving water (conditioned) that simulated natural flow velocities at their intended release site. Six treatment groups of 118, 4-yr-old Hellbenders were used to determine the effects of release season (fall or summer), release type (standard soft release or enhanced soft release), and conditioning (unconditioned or conditioned) on days until first movement, release site retention, and survival. We found that treatment groups released into caged cobble beds delayed their first movement and had higher release site retention relative to groups released under caged shelter rocks. Conditioning had a positive effect on survival but only in the treatment group released in the summer. By combining techniques and releasing conditioned individuals in the summer using enhanced soft releases, we increased annual survival of captive-reared Hellbenders from a probability of 0.5 to 0.74. These results provided important information about techniques that can be adopted across captive-rearing programs to help maximize the conservation success of eastern hellbenders.

Targeted Recreational Harvest of White-tailed Deer Reduces Deer-Vehicle Collisions

Fish & wildlife agencies are responsible for managing deer-vehicle collisions (DVCs) to reduce the negative impact of deer on its citizens but are often limited to hunting as their primary management tool. Our goals were to understand the relationships between DVCs, deer behavior, and deer population size, and to test a program that used recreational hunting to reduce DVCs.

Our first goal was to determine how deer density, deer activity levels, and the overlap between activity distributions and vehicle travel times correlated with DVCs. We found higher activity levels and densities and greater overlap between the activity distributions for deer and vehicle travel times in regions with more DVCs. DVCs were predicted well by deer density, the

fraction of time deer spent active during the morning, and the fraction of time deer spent active during the evening.

Our second goal was to address the problem of DVCs using targeted hunting. From 2017-2023, we used deer reduction zones (DRZs) to provide additional opportunities to harvest deer in designated areas. DRZs are 0.5-mile-wide buffers on each side of roads where DVCs were higher than the state average, where the allowable harvest of antlerless deer was increased to nine, and where hunters had an additional opportunity to harvest a second buck through an “earn-a-buck program”. During this 6-year period, DVCs decreased by ca. 20%, demonstrating the effectiveness of using targeted recreational hunting as a management tool to reduce DVCs.

Wildlife Health

Indiana responded to the recent strain of highly pathogenic avian influenza (HPAI). In mid-January, HPAI (H5N1 2.3.4.4 Eurasian lineage) was detected in hunter-harvested ducks in North and South Carolina. The disease was detected in additional locations in eastern North America and was first detected in Indiana in a commercial turkey flock in Dubois County on 09 February 2022. Light Goose Conservation Order participants voluntarily submitted harvested snow geese for testing through at Fish and Wildlife Area’s in southwest Indiana. USDA-APHIS-WS began wild bird sampling in February with redheads (*Aythya americana*). One of those birds was confirmed positive for HPAI. DNR personnel submitted samples throughout the year for opportunistic sampling, consisting of collecting wild birds that died of unknown causes. Positives for HPAI H5 occurred through June, then were undetected until fall. Hunter-harvested waterfowl were sampled during hunting seasons, with multiple detections in October and November. A relatively large (ca. 1000 individuals) die-off of snow geese (*Anser caerulescens*) occurred in Gibson County in November. To date, the following species have tested positive in Indiana: blue-winged teal, American green-winged teal, mallard, gadwall, redhead duck, snow goose, Canada goose, American coot, double-crested cormorant, American white pelican, red-tailed hawk, peregrine falcon, bald eagle, barred owl, great horned owl, and eastern screech owl.

In the summer of 2022, 981 reports of potential epizootic hemorrhagic disease involving 1016 deer were received. 86% of deer tested were found to be positive in 15 of the 17 reported counties. Surveillance for chronic wasting disease continued, no positive cases were discovered.

In December, 17 crows were found dead at the Indiana Statehouse. These crows were found to be infected with a novel Orthoreovirus sp., which is known as the pathogenic agent responsible for the disease Winter Mortality of Crows. This is the first recorded case of this disease in Indiana.

Continued RCPP Participation

DFW staff were successful in securing RCPP funding for grassland habitat restoration and watershed restoration work. The Grasslands for Gamebirds and Songbirds (GGS) program, funded by NRCS & 23 partners, will continue to receive funding thanks to the renewal of the existing GGS RCPP. The renewal provides \$2.6 million in funding to be used for financial and technical assistance for grassland restoration projects on private lands. The project is projected to restore 3,120 acres of grassland habitat with a targeted environmental outcome of increased occupancy and abundance of Northern Bobwhite Quail, Ring-necked Pheasant, Henslow’s Sparrows, and Loggerhead Shrikes.

DFW staff successfully worked with Indiana Department of Agriculture staff to secure RCPP funding for a watershed initiative in the Kankakee River watershed. The primary goal of the project is to address excess water as a resource concern by developing working lands

conservation practices and voluntarily establishing wetlands. DFW staff will help implement the project by assisting with landowner enrollment and providing technical assistance for wildlife-related practices. The project provides \$16 million in total funding for conservation practices. Partner match comes from a broad range of partners including basin development commissions, local non-profits, land trusts, tribal agencies, and agricultural related businesses. Project goals include installing 3,000 acres of new conservation cover, two-miles of two-stage ditches and 800 acres of wetland easements.

Land Acquisition

DFW was without a land acquisition specialist for 9 months of 2022. As a result, many of our acquisition projects were stalled. We managed to close on 181 acres. A 96-acre addition to Wabashiki Fish & Wildlife Area, a 40-acre addition to Little Pigeon Creek Wetland Conservation Area, 2-acre addition (Property Manager's Residence) to Goose Pond Fish & Wildlife Area, and 43 acres of land at the Spring Creek Seeps Nature Preserve. The addition to Spring Creek Seeps provides important buffer to the wetland seeps.

EQIP Update

In federal fiscal year 2022, Indiana's EQIP-Wildlife pools developed 97 new contracts totaling 3,982 acres of new habitat development with a total expenditure of \$1.972 Million. EQIP expenditures in Indiana met the 10% wildlife target mandate in the 2018 Farm Bill.

Private Lands Access

DFW staff continue to seek new opportunities for hunting access on private lands. By leveraging federal funding secured through both a VPA agreement and the GGS RCPP, DFW was able to open 6,344.4 (4,358.4-RCPP, 1986.0-VPA) acres to public hunting during the 2022 hunting season with a grand total of 16,673.3 acres opened to date. Although the program originally started with game bird properties, staff have built the program to include deer, turkey, waterfowl, and small game hunting opportunities. Hunters rate these opportunities very highly and are appreciative of the high-quality opportunities provided by private landowners. Additional funding sources are being pursued and include seeking contributions from NGOs and other conservation organizations.

Increasing Wildlife Passage

In 2022, DFW staff provided technical and financial assistance for 2 dam removal or modification projects. With new funding sources now available, it is anticipated that many more dams will be removed or modified in coming years.

The DFW environmental permitting team has made great strides in working with the State Department of Transportation to allow greater wildlife passage under bridges and culverts across the state. The team provided technical assistance on 131 bridge and culvert projects that either maintained or improved fish and wildlife passage. By working with project designers to incorporate measures such as benches on sloped banks beneath bridges and improved stream substrate design in culverts, connectivity is restored, and roads are made safer.

Lake Michigan Coastal Program

The Lake Michigan Coastal Program (LMCP) contracted with the Northwestern Indiana Regional Planning Commission (NIRPC) to help administer a community needs assessment

focusing on natural hazards and resiliency measures. The multi-year project includes the development of a community self-assessment survey tool, listening sessions, and summary report. The needs assessment will assist the LMCP in identifying, developing, and delivering technical resources to communities to reduce or prevent natural hazard risks. Completing the self-assessment also helps local governments evaluate potential impacts of natural hazards and consider planning and mitigation actions to increase resilience.

The LMCP launched six coastal grant projects in the 2022 funding cycle. Activities largely center on community efforts to restore, preserve, and improve public access to natural areas throughout the Lake Michigan Watershed and reinvigorate outdoor education programs that service residents of the coastal region. These initiatives are financed by pass-through dollars from our federal partners at NOAA combined with cash and/or in-kind matching funds from municipalities, state funds, and non-profit organizations.

Indiana Natural Heritage Data Center

The Heritage Program implemented a Data Request Portal, which allows users to submit data requests and pay invoices electronically, significantly streamlining this process for both users and staff. Over 500 new records were entered into the database and nearly 600 existing element occurrences were updated. We confirmed the presence of *Solidago rupestris* (Rock Goldenrod) in Indiana, which was previously thought to be extirpated from the state. Our botanist and community ecologist updated the subnational (state) conservation status ranks for over 400 plants and natural communities in Indiana.

In addition to our work with plants and natural communities, the Heritage Program continues to work to increase our understanding of the status and distribution of invertebrate species in the State. We completed a multi-year survey to determine the status of Karner blue butterfly in Indiana. We contracted with taxa experts to build an updated checklist of caddisflies in Indiana, which included nine state records. This work will continue into 2023 with the contractors assessing subnational conservation status ranks for these species.

Establishing Social Media Brand Voice

DFW hired a full time Social Media Outreach Specialist to assist the Division in expanding its efforts in outreach to broader audiences. The Social Media Outreach Specialist led efforts to begin revitalizing the division's branding, content, and social media strategies with the goal of increasing public trust via increased online engagement. The Public Engagement team analyzed the specific tone and overall persona of DFW and began the transition to a more whimsical and fun, yet still educational, approach to the work. The team mapped out a "voice matrix" which established 5 objectives for content: (1) accessible and inclusive, (2) understandable, (3) informative and educational, and (5) expressive and whimsical. Guidance was established for the voice transition, including do's and don'ts. An effort was made to expand our social media strategy to include memes, interactive stories, and short form video (reels).

As a result of these efforts, there was an increase in social media metrics, engagement, and morale within their division's staff. Eight times more Instagram followers are being reported per month, Facebook page visits have increased over 20%, and customers are connecting with the team via social media at an increased rate of 124%. The more personable approach has shown a positive impact not only on the public, but on staff as well. Field staff are now more excited to gather and create content (often with creativity, humor, and whimsy).

Iowa

IOWA STATE REPORT

January 2022-December 2022

Pete Hildreth, Division Administrator
Iowa Department of Natural Resources
Conservation and Recreation Division
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Iowa DNR Mission Statement: To conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life in Iowa and ensure a legacy for future generations.

The Department of Natural Resources Conservation and Recreation Division: The Iowa Department of Natural Resources (DNR) is led by Director Kayla Lyon and Deputy Director Alex Moon. The Divisions within the DNR are the Environmental Services Division (ESD) and the Conservation and Recreation Division (CRD). CRD is charged with the management of Iowa's fish, wildlife, and natural resource management under a Forestry Section and the Bureaus of Fisheries; Land and Waters; Law Enforcement; State Parks, Forests, and Preserves; and Wildlife. In October 2020, Pete Hildreth was appointed to serve as Division Administrator.

Strategic Deployment: In May of 2022, CRD leadership held their second Strategic Deployment workshop. Strategic Deployment aims to ensure the objectives (strategy), management plans (tactics) and tasks accomplished by all employees (operations) are in alignment and addresses critical or breakthrough long-range goals to strengthen and improve the organization. Strategic Deployment is a top-down and bottom-up process involving dialogue between management and teams in which progress indicators are developed from the top down and results come back from the bottom up. It is also a communication process to ensure that every employee pulls in the same direction at the same time and is considered the act of setting direction and steering towards your True North.

Using the Division's Wildlife Action Plan, Forest Action Plan, and Statewide Comprehensive Outdoor Recreation Plan as guiding documents, six annual goals were set for FY2023. Leadership's intent for each goal was to gather diverse, cross-divisional teams that would meet for one year to improve processes and communication among bureaus. For each goal, teams assessed the current status of work, challenges they encountered, and improvements that could be made which were realistic and attainable. To date, teams are in the final months developing templates, tools or training necessary for implementation. In May of 2023, CRD leadership will attend another workshop to review work from the 2022 and 2023 teams, look at challenges and successes they had, and develop FY2024 annual goals and teams.

Natural Resources and Outdoor Recreation Trust Fund: In 2006, the legislatively appointed Sustainable Funding Advisory Committee, chaired by the DNR, began their in-depth four year internal and multi-state research in preparation for their comprehensive reports to the Governor and General Assembly. In 2008 and 2009, proposed legislation was overwhelmingly passed to allow the people of Iowa to vote on a Constitutional amendment that would create a dedicated trust fund. In November 2010, the people of Iowa voted to amend Iowa's Constitution to create the

Natural Resources and Outdoor Recreation Trust Fund and authorize a dedicated funding source of 3/8 of 1% of sales tax the next time the tax is legislatively raised. Iowa Code Chapter 461 provides the framework for the distribution, use, and accountability of this Trust Fund. Since the Trust Fund's enactment on January 1, 2011, legislators continue to discuss sales tax options to finance this Trust Fund. To date, the Natural Resources and Outdoor Recreation Trust Fund has not acquired any receipts, although, in 2019, the Governor moved to include the Invest in Iowa Act in her FY21 budget which supported the funding of the Natural Resources and Outdoor Recreation Trust Fund. The issues of 2020 did not help advance the cause. The DNR continues to submit mandated reports to the General Assembly annually. These reports and more information can be found at: www.iowadnr.gov/About-DNR/Grants-Other-Funding/Natural-Resources-Rec-Trust.

Fisheries Bureau:

Rathbun Lake, a federal flood control reservoir constructed in the late 1960s, is one of Iowa's significant publicly-owned lakes. Reservoir aging has resulted in habitat loss (shoreline erosion, increased turbidity, sedimentation, loss of embayments, and loss of woody structure), which has direct implications for multiple fish species and lake aesthetics. A previously completed Continuing Authorities Program Section 1135 project, in cooperation with the US Army Corps of Engineers (USACE), addressed regions of severe bank erosion. This project resulted in measurable improvements to water quality and has protected critical spawning and nursery habitat for multiple fish species. The Iowa DNR recently entered a contract with the USACE to participate in a second Section 1135 project for additional shoreline ecosystem restoration and the implementation of an in-lake electric fish barrier. The continued shoreline restoration will protect much of the remaining critical fish spawning and nursery habitat, whereas, the construction of the electric fish barrier will effectively reduce fish emigration (especially Walleye) in the face of increasing floodwater discharge rates. This two-pronged approach is the result of substantial study, planning and cooperation among all partners, over decades of work at Rathbun Lake, Iowa.

Forestry Section:

The Urban and Community Forestry Program continues to provide technical, educational and financial assistance to communities, individuals and organizations. Last year the program provided support to 331 communities. One of the main components of assistance continues to be tree inventories, forestry management plans and emerald ash borer (EAB) preparation for communities under 5,000 in population. A recent statewide canopy cover assessment provides data on where and how much tree cover we have in Iowa. Iowa communities have 18.5 percent tree cover, about 253,056 acres of community forest. Urban Forests continue to be threatened by canopy loss. The economic loss caused by the top five key pests (Gypsy moth, bur oak blight, EAB, Asian longhorned beetle and thousand cankers disease) is an estimated \$1.4 billion over 20 years for forest landowners and wood products businesses and over \$20 billion in urban tree removal. Forest Service studies show 4.5 million trees were lost due to development in Iowa from 2010 to 2015. Additionally, over 4 million trees were damaged or lost in Iowa communities from the August 10 derecho storm.

Foresters continued to monitor for serious insect, disease, invasive plant species, and environmental problems in Iowa's woodlands. Aerial surveys of 1,422,180 acres was mapped to determine forest health problems and potential management plans. There were 1,411,712 aerial

acres mapped out that had dead and dying trees from emerald ash borer alone. Ground confirmations were conducted to resolve any issues identified in the aerial survey. District foresters worked with impacted landowners on appropriate salvage and reforestation efforts in areas with oak wilt, Dutch elm disease, oak tatters, aspen decline, bur oak blight storm, and flood damage. In cooperation with the IDALS State Entomologist and the USDA, the Forestry Bureau assisted in contracting, placing, and monitoring 4,215 spongy moth traps that captured 742 male gypsy moths. A total of 631 walnut twig beetle monitoring traps were placed around the state. No walnut twig beetles were captured. However, 10,478 ambrosia beetles, Pityophthorus beetles and weevils were collected and submitted as part of the national survey. A total of 11,123 maples in 34 counties were examined for the presence of Asian longhorned beetle. No Asian longhorned beetles were found. Iowa confirmed two first instar larvae of spotted lanternfly in Dallas County. This is Iowa's first detection of this pest and no established population was discovered. Several meetings were held to cover non-native invasive plants and various other plants.

Land and Waters Bureau:

The Public Land Acquisition and Management Program aids operating bureaus to acquire lands and to address land management issues, such as unauthorized land-uses and boundary issues. It also assists programs with agreements such as habitat leases, county or city management agreements, office leases and building disposal agreements. In 2022, public land and conservation easement acquisitions totaled 2,462 acres, protecting natural resources, providing Iowans with new and enhanced outdoor recreational opportunities, impacting water quality and watershed improvement efforts and impacting recovery efforts for threatened and endangered species.

The Rivers Program contains four major areas: water trail outreach, including real-time reporting on hazards in interactive mapping, planning, designing, constructing and signing; low-head dam mitigation to remove or reduce hazards to public safety and/or fish passage; moving water education instruction and training; and comprehensive conservation efforts, in partnership with local groups and stakeholders, in identified protected water areas. A total of 1,100 miles of dedicated water trails have been developed. On major rivers, 34 dams have been removed or made fish passable and safer since the low-head dam public hazard program began in 2008.

The Environmental Review and Sovereign Lands Program provides services for DNR and the public to ensure compliance with state and federal rules and regulations pertaining to public trust resources in Iowa. Staff apply information about protected species, state preserves, natural communities, and other significant natural resources for the review of potential environmental impact of proposed construction and development projects requiring a permit from the Department through the Environmental Review and Sovereign Lands Construction Permit sections. The Threatened and Endangered Species staff coordinate the conservation of federally listed species of plants and animals and state-listed species. Staff also develop and maintain a database of locations of listed species and special natural communities such as prairie and fen wetlands and oversee research activities including federally funded projects. The State Preserves staff work with the State Preserves Advisory Board to develop and maintain a statewide network of preserves on lands with significant biological, geological, archaeological, historical, or scenic value.

Engineering and Construction Services oversee the Department's capital improvement projects. From the smallest outhouse to complete lake and watershed renovation projects, professional staff

provide and put into practice the most advanced technology to ensure safe and cost-effective solutions to architectural and engineering projects. Services provided include; planning and development, topographic surveys, professional engineering and architectural design services, contract administration, project management and construction inspection, federal emergency management, emergency response projects, consultant selection and contract negotiations, and investigative reporting. In 2022, 103 engineering, construction, and public capital improvement projects totaling \$31,909,635 on public lands were contracted; \$10,275,306 of these projects were associated with lake restoration, watershed, and water quality improvement projects.

The Lake Restoration Program's focus is on restoring Iowa's significant publicly owned lakes and publicly-owned shallow lakes/wetlands. Many of our Iowa Lakes, similar to our nation's lakes, are impaired and suffer from excessive algae growth and sedimentation due to nutrient loading and soil loss. The goal is to invest in projects with multiple benefits including improving water quality, building a healthy aquatic community, and increasing public use and recreational opportunities. Iowa has completed restoration work at 30 lakes, with 21 projects underway, and 14 projects in the initial planning stages. Additionally, restoration work has been completed on over 42 shallow lakes/wetlands across the state.

Law Enforcement Bureau:

The Turn in Poachers (TIP) board proved to be a great supporter for the bureau. Their assistance has been instrumental, not only with enforcement cases, but also with securing needed equipment through donations. The board provided Tactacam cameras and Spy High mounting systems to many officers in each of the 6 districts. The officers have been able to make several great cases using this equipment. Along with the cameras, the board was able to provide some new wildlife decoys and a new TIP trailer to be taken to events across the state.

A concerted effort has been made with updating the bureau's training program. Conservation Officers have three mandatory use of force sessions throughout the year, and in addition to the required qualifications that are done within the districts, all officers meet for 1/3 state trainings. Through these trainings, three dates are provided where officers receive extra hands on training that range from positional shooting with handguns and long guns, tactical shooting around and in vehicles, and scenario based defensive tactics training. After the 1/3 state training is completed, a use of force meeting is held within each district. Instructors work on adult learning techniques and reemphasize the lessons learned at 1/3 state trainings. The bureau has identified training needs for 2023, placing efforts on officer safety when on and in the water, along with responding to mass shooting events.

A law enforcement strategic alignment team, consisting of Conservation Officers and Park Rangers, is working together to look at aligning law enforcement efforts in DNR to enhance operational efficiencies, ensuring that the structure and use of resources are managed to create the best possible future for protecting our natural resources and the citizens of Iowa. In 2022, the Law Enforcement bureau had 86 sworn officers and appointed Craig Cutts as the new Bureau Chief.

State Parks, Forests, and Preserves Bureau:

The DNR manages 71 State Parks, Recreation Areas and State Forest Campgrounds with a total of 104,614.7 acres and had an estimated 14 million visitors in 2022. The State Park infrastructure

system has 4,447 campsites, 93 rental cabins, 29 day-use lodges, and 153 picnic shelters, and over 750 miles of trails. Park amenities can also include shower buildings, restrooms and latrines, beaches, lodges, and shelters, concession buildings, boat ramps, docks and piers. Providing service to these amenities requires the construction and maintenance of sewer systems, lagoons, water systems, wells, electrical lines, transformers, roads, parking lots, sidewalks, lights, offices and storage buildings. In 2022 there were 33 capital construction projects that were contracted and an additional 70 that were in the design phase for a total of 103 active maintenance and renovation projects.

Operational Changes: In 2022, the campgrounds at Lake Manawa and Walnut Woods State Parks went to 100%/Same Day reservations with a cut-off time of 9 pm CST to make a reservation. These two parks implemented this operational change to provide convenience to customers in order to have real-time availability of campsites, provides additional time to plan before booking a trip, and allows customers to reserve vacant campsites if a cancellation occurs, which all improves the customer experience and customer service. Customers who arrive at either park without a reservation could use their cell phone or contact the call center to make a camping reservation. The Lake Manawa campground has an electronic gate where a customer must have an access code in order to enter the campground. The access code is provided on confirmation emails, which is automatically sent by the reservation system once the reservation is finalized.

Parks Statewide Signage Master Plan: A signage and wayfinding master plan was developed to include signage guidelines and best practices for the future planning and implementation of signage across all of Iowa's state parks. The master plan will act as a template to ensure that signage within the state's parks remains functional, consistent and adaptable for future generations, connecting visitors to resources, facilities and amenities in each area. In 2022, Phase I of the project was completed with the installation of new entry portals at every park and recreation area entrance. Phase II, full park signage replacement, is anticipated to take five years, and will begin in 2023 with installation at 10 parks and planning for the next 10-12 parks. A variety of installation strategies are being tested to meet the challenge of getting signs in the ground in the ideal weather window during parks busy season.

State Forests: Iowa's state forest system of over 46,000 acres is comprised of four large state forests. State Forests provide some of the largest contiguous tracts of public forest land in Iowa. They are sustainably managed to yield forest products, wildlife habitat, soil, and water protection, protection of unique plant and animal communities, and outdoor recreational opportunities. They are the backbone of several of Iowa's Bird Conservation Areas. State Forest staff completed over 80,800 acres of forest stand improvement, 80 acres of reforestation, over 1,000 miles of trail maintenance, 2,000 acres of prescribed fire, 140 acres of prairie and savanna management, collected 500 bushels of seed, and conducted 11 educational programs in 2022. Through the public bid process, in relation to timber stand management and harvesting, they also sold over 580,000 board feet of timber.

Wildlife Bureau:

All of the public lands managed by the wildlife bureau continued to experience high usage again during 2022. Access to places to hunt remains one of the primary concerns of Iowa's resident hunters, and Iowans continue to demonstrate support for additional public lands and outdoor

recreation opportunities. The Wildlife Bureau operates and maintains 503 public fish and wildlife areas spanning 420,606 acres. About one-third of these acres are federal lands managed by the wildlife bureau under agreements with U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers. Federal lands include more than 23,300 acres of Waterfowl Production Areas in the Prairie Pothole Region of Iowa. All of these public lands are managed to provide quality wildlife habitats and hunting, fishing, and other consumptive and non-consumptive fish and wildlife related recreational opportunities. Managed wildlife habitats include nearly 100,000 acres of wetlands, 140,000 acres of grasslands, and 115,000 acres of forest/woodland. Annual management activities include burning nearly 37,000 acres of prairie, and managing wetland habitats through water level manipulation utilizing 881 water control structures, 246 miles of dams, dikes, and levees and 32 pumping stations.

One of the most popular public hunting programs has been the Iowa Habitat Access Program (IHAP) which provides public hunting on private land. Iowa received its 3rd USDA Voluntary Public Access grant in 2020 and subsequently enrolled/re-enrolled 109 sites and 15,118 additional acres to public hunting prior to the 2021-22 hunting season. This resulted in a significant increase in public hunting opportunities compared to the previous year; increasing the number of IHAP sites from 160 to 233 and the IHAP acres open to public hunting from 22,000 to 32,382. This increase in opportunity was met with increased use of IHAP sites across Iowa as these sites increase in popularity with both resident and nonresident hunters. As of today, 233 sites and 32,382 acres are enrolled in IHAP and scheduled to be open to public hunting during the 2023-24 hunting season.

The wildlife bureau, through multiple partnerships, provides support to a growing workforce of wildlife and forestry professionals that provide conservation assistance to private landowners across the state. Staffing includes 18 private lands forestry positions and 29 private lands wildlife biologists, technicians, and habitat specialists. During 2022, these staff developed 486 wildlife plans on 26,820 acres and 647 forestry plans on 27,724 acres.

As part of the wildlife depredation program, DNR staff work with cities and state parks to establish deer management zones (DMZs) with the purpose of holding special antlerless deer hunts in areas that would not otherwise be open to hunting or to provide additional harvest in areas where CWD has been detected. During 2022, the Natural Resource Commission authorized 69 DMZs, and allocated 13,294 antlerless deer licenses for purchase by qualifying hunters. Hunters purchased 41% of the available tags and harvested 2,474 antlerless deer for a harvest success rate of 45%. Depredation staff also worked with 527 landowners meeting crop damage thresholds for enrollment in the deer depredation program. Landowners were allocated 8,478 licenses for purchase by hunters hunting on those properties. Hunters purchased 61% of the allocated licenses and harvested 2,896 antlerless deer for a harvest success rate of 56%. These deer depredation programs have proven successful at forming partnerships between cities, private landowners, and hunters to manage deer numbers and provide additional recreational opportunities in these areas. Combined, these two deer depredation programs accounted for 8.5% of the statewide antlerless deer harvest.

Kansas

Kansas
State Report
May 10, 2023

Brad Loveless, Secretary
Kansas Department of Wildlife and Parks
1020 S Kansas Ave, Suite 200
Topeka, KS 66612

Kansas Candidate Conservation Agreement/Safe Harbor Agreement to include Western Fanshell

KDWP developed a statewide Candidate Conservation Agreement with Assurances (CCAA) and Safe Harbor Agreement (SHA) starting in 2020 to include 14 aquatic species of greatest conservation need. The agreement allows for the introduction, reintroduction, augmentation, and conservation of these imperiled native species in Kansas. Goals for this agreement are to increase the resiliency, redundancy, and representation of these covered species. Eligible landowners enter into these agreements and are willing to engage in habitat management actions to benefit the species covered under the CCAA/SHA. In exchange, landowners are granted consistent regulatory assurances under the federal Endangered Species Act.

With the recent addition of the Western Fanshell (*Cyprogenia aberti*) to the federally threatened list, KDWP has amended the statewide CCAA/SHA to include this species. Inclusion will allow for assurances to eligible landowners as they continue and/or implement improved land practices to improve water quality, reduce erosion, reduce sedimentation, and improve riparian habitats while these lands are enrolled under the agreement. Such practices will increase the probability that covered species will expand their range, survive, and recruit new cohorts in these areas.

Native species stocking

Approximately 2500 state threatened Plains Minnows (*Hybognathus placitus*) were stocked in the Arkansas River in Sumner County Kansas in November of 2022. These fish were propagated at the Kansas Aquatic Biodiversity Center, located in Farlington, KS, from 250 brood fish collected over the past two years from the Salt Fork Arkansas River in Barber County, KS.

The purpose of releases of this type are to help ensure long-term viability of imperiled species throughout current and historical distributions in Kansas. Eventual down-listing and removal of these species of greatest conservation need from their threatened or endangered status is the goal of recovery efforts of this type.

Kansas Bald Eagles Tracked

In Kansas, just two bald eagle nests were documented in 1990. As of March 2023, 295 nesting territories had been documented since those original nests. In 2021, a planned three-year study began collecting data to assist wildlife managers and energy developers make science-based decisions when addressing potential conflict between bald eagles and energy development infrastructure. That year, 13 bald eagle nestlings in five different counties were banded and affixed with GPS transmitters. The 7- to 9-week-old nestlings were captured in the nest, lowered to the ground in bags and fitted with identification leg bands and GPS transmitters. These units have provided data on the birds' location and flight altitudes, heading, and speeds at intervals of 3-5 seconds in flight and 15 minutes at roost. The goal is to gain an understanding of what environmental conditions and eagle responses to those conditions may put them at risk from wind turbines, power lines, and associated features. Since the study began, mortality has been documented in several study animals while GPS telemetry has documented significant movements across the landscape. Given the explanatory power of the growing dataset, KDWP has extended the project to track the original eagles for up to six years, at which time they will have reached maturity and established their own nesting territories. The agency also plans to affix up to 16 additional birds with GPS transmitters. Data collected will offer a robust assessment of where juvenile eagles fly, seasonal ranges, and how they use airspace in the context of topography, weather, land cover, and energy infrastructure, while potentially allowing conservationists to document their movements from the time of fledging through establishing nesting territories of their own.

Land Acquisitions

The Department was successful in acquiring an additional 562 acres of public land that will be open to hunting and other recreational access opportunities. KDWP is statutorily restricted for land acquisitions. Any proposed tract for purchase exceeding 160 acres must be approved by the Kansas Legislature. There are only a couple of exceptions to this requirement in that in the SE counties of Cherokee, Crawford, Labette, and Neosho (Natural Resource Damage Assessment counties), legislative approval is not required for tracts of less than 640 acres. The other exception to the 160-acre restriction is if a willing seller agrees to a purchase price that is less than appraised value. The Department is allowed to receive donated tracts of lands without Legislative approval and occasionally is the recipient of land if the property passes our review and approval process.

28 acres was purchased in Russell County and lies adjacent to Wilson Reservoir Wildlife Area. 40 acres was purchased in Jewell County and is adjacent to Lovewell Wildlife Area. The largest tract purchased in 2022 was in Kingman County, adjacent to Byron Walker Wildlife area, and totaled 494 acres. This tract did require Legislative approval and was worked in the legislative session for several years before finally passing during the 2022 session. We are working to close on an additional 470 acres combined in Jewell, Kingman, and Sherman counties for 2023.

Law Enforcement

Several needed programs were implemented during 2022 that will aid KDWP officers in the Law Enforcement, Public Lands, and Parks Divisions. New mobile and hand-held radios were purchased and continue to be purchased that will improve communications statewide for our officers and ensure officer safety upgrades are maintained as a priority. The three enforcement divisions also received body-worn cameras that addresses officer safety, liability, and case management needs. The Department is initiating a couple of new records management systems that will make case management, training, and annual reporting more efficient than what we've had in the past.

Fisheries

Paddlefish Program

The KDWP Fisheries Division is opportunistically stocking Paddlefish in reservoirs throughout native range in eastern Kansas to bolster populations. This is an interstate project aimed at enhancing Paddlefish stocks throughout the Mississippi River Basin. In 2022, we stocked a total of approximately 50,000, 8 to 10-inch Paddlefish among John Redmond, Elk City, Perry, Pomona, and Tuttle Creek reservoirs. Evaluation of the program is restricted to angler catch information due to the challenging nature of sampling in flowing waters.

Walleye Program

The KDWP continued the construction of a multi-million-dollar recirculating aquaculture facility to intensively rear Walleye and other species at Meade State Fish Hatchery. This facility will save water in an arid part of the state while increasing production of fingerling and intermediate Walleye. The larviculture techniques used can be transferable to other species in the future.

Research

In 2022, research projects began on typical applied fisheries projects but also included several program evaluations. Currently, the state's Trout Program and Urban Channel Catfish Program are being evaluated through angler use information and fish population data to improve the efficacy and efficiency of those programs. These projects are ongoing but will lead to changes in 2023 and 2024.

Education

Kansas Birding Trail

Kansas is home to more than 475 species of birds. The state enjoys the country's largest inland marsh and largest stretch of tallgrass prairie in the world. Experience a rich diversity of habitats and the possibility of rare bird sightings planned out in convenient driving trips!

Background

- Each trail is anchored in Kansas cities that have lodging, food, and fuel available

- Designed to be entered or exited at any point
- Includes up to 12 excellent birding locations
- Can be completed during a day trip
- Uses paved roads

Trails Locations

1. KC Parklands Trail – Kansas City
2. Eastern Lakes and Wetlands Trail – Northeast
3. Flint Hills Trail – Manhattan
4. Smoky Hills Trail – Northcentral
5. Wetland Wonders Trail – Southcentral
6. High Plains Lakes Trail – Northwest
7. Habitat Islands Trail – Western
8. Cimarron Trail – Southwest
9. Red Hills Trail – Southcentral/Southwest
10. Town and Country Trail – Wichita
11. Osage Cuestas Trail – Southeast
12. Kansas Woodlands Trail – Southeast

For More Information

Visit www.ksbirdingtrail.com

KDWP receives \$25,000 in grant funding from the Recreational Boating and Fishing Foundation (RBFF) with the goal to reach the Hispanic population in Kansas without a current fishing license and provide them with access to fishing information, resources, and opportunities in the state in both English and Spanish, while emphasizing the importance of buying a fishing license and promoting license sales.

This effort is in line with and provides additional support to KDWP's Limited English Proficiency Plan, *Afuera Para Todos*. In Kansas, Spanish is the first most commonly spoken language after English. KDWP only recently began providing targeted resources for its growing Hispanic population, including translated boating and fishing regulations, as well as simple and eye-catching landing pages and resource tabs. KDWP aims to increase the awareness of these resources, while communicating to its Hispanic constituency in both English and Spanish the importance of purchasing a fishing license and local fishing opportunities by utilizing targeted digital marketing strategies on several platforms, focusing primarily on Facebook, and potentially expanding to include Instagram, Google, and Division D advertising. Based on campaign performance, KDWP will glean information about the needs and preferences of its Hispanic constituency to better inform future campaigns and continue building relationships with this important subset of anglers.

Hispanic audiences have been historically underserved by past KDWP digital marketing efforts but engage in fishing throughout the state both individually and socially. Through the Hispanic Hunters Digital Campaign, KDWP demonstrated its ability to reach the growing KS Hispanic

population (12%, ~350,000 people), through targeted digital advertising strategies promoting license sales as well as specifically tailored resources and opportunities which have been only minimally promoted. The Hispanic hunting campaign generated over 6,000,000 impressions, and generated over \$43,000 in revenue, despite a portion of ads being information-based rather than directly promoting a sale. KDWP anticipates an even greater return on the proposed Hispanic Anglers campaign, and an increased awareness of resources available to the Spanish-speaking community of anglers in Kansas.

New Brandt Licensing System

On May 1, 2022, KDWP went live with a brand-new licensing system. The system includes licensing and permitting, vessel registration, public land check in/out, event management, a mobile app for customers as well as a secure law enforcement mobile app and so much more. Along with a new system KDWP made some enhancements which include hard card sales. This is a durable hard card printed and mailed with all active licenses, as well as some pretty cool artwork created by our very own Dustin Teasley.

We also have vessel hard cards for registrations valid for 3 years. The card costs \$6.00 and has been a very popular item.

KDWP also implemented a donation round- up option and has generated over \$70,000 in contributions that will go directly to wildlife conservation in Kansas.



Year To Date Stats



130,215

Transactions



235,574

Products Sold



7,765

Boat Registrations



112,637

Customers



22,466

New Customers



30,567

Lifetime License Customers

Weekly Stats

Week of 4/16/2023 to 4/23/2023

\$442,440

System
Revenue

605

New
Customers

13,434

Products
Sold

36

Brandt Service Desk
Phone Calls

231

Vessel
Registrations

617

Hard
Cards

\$3,816

Donations
Received

5,894

Mobile
Customers



Kentucky

**KENTUCKY
STATE REPORT**
May 2023

Rich Storm, Commissioner
Brian Clark & Gabe Jenkins, Deputy Commissioners
Kentucky Department of Fish & Wildlife Resources (KDFWR)
#1 Sportsman's Lane, Frankfort, KY 40601

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.

Michigan

**MICHIGAN
STATE REPORT**
May 19, 2023

Shannon Lott, Acting Director
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

STAFFING

The Michigan Department of Natural Resources (Department) has approximately 1,400 permanent employees, 1,600 non-career/seasonal employees, and a \$535.5 million budget that supports programs and infrastructure for wildlife and fisheries management, state parks and recreation areas, trails, boating programs, conservation and law enforcement, forest management, state lands and minerals, and the historical museum and archives.

Shannon Lott currently serves as the Acting Director of the Department, Scott Whitcomb as the Acting Natural Resources Deputy, Kristin Phillips as the Administrative Deputy, Randy Claramunt as Chief of the Fisheries Division, and Sara Thompson as Acting Chief of the Wildlife Division.

FISCAL YEAR 2022-2023 BUDGET

The Department's fiscal year (FY) 2023 budget totals \$535.5 million (including \$94.4 million General Fund), representing a 15% increase from the Department's original enacted FY 2022 appropriations due primarily to the addition of one-time investments in improving infrastructure and modernizing equipment. Specifically, the budget includes \$46.9 million (\$45.4 million General Fund) for various one-time investments, such as fish hatchery infrastructure improvements (\$30M), natural resources equipment modernization (\$11.5M), a new Great Lakes Research Vessel (\$4M), and \$500,000 for chronic wasting disease (CWD) testing. Ongoing General Fund investments were provided for emergency response and wildfire suppression (\$751,900), tribal relations and fisheries co-management (\$652,800), and body cameras for conservation officers (\$600,000). Ongoing restricted funds were added for state park operations (\$13.6M), state trail operations (\$3.1M), and other infrastructure improvements (\$6.9M) in state parks, recreational boating facilities, state game areas, and Department of Natural Resources-managed wetlands.

Overall, the Department's FY 2023 budget is comprised of state restricted funds (64%), federal funds (17%), General Fund (18%), and private funds (1%). Federal funding consists mainly of special purpose categorical grants from various federal agencies, such as the U.S. Department of the Interior, the U.S. Department of Homeland Security, and the U.S. Department of Agriculture. Federal funds support programs for wildlife and fisheries habitat and management, forest management, recreation, and other natural resource programs. Restricted funding is generated from sales of licenses, user fees, and other charges. These funds support wildlife and fisheries programs, operation of Michigan's 103 state parks, harbor and boating access site

development, marine safety enforcement and education, snowmobile and off-road vehicle trail repair and development, and operation of nearly 140 state forest campgrounds. The Department also generates timber sales revenue from state lands, most of which is used for the protection and development of our state forests.

LEGISLATIVE ACTIVITY

Work on the FY 2024 budget is progressing with the legislature as the state again sees a surplus in its coffers.

The Department has been tracking a wide range of policy bills. The Department supports a bill that decriminalizes failure to report a deer harvest. Other bills that the Department supports include updating the definition of a peace officer in the Michigan Mental Health Code and off-road vehicle (ORV) enforcement for seasonal sheriff's deputies. The Department also supports a bill package that would professionalize the hunting and fishing guiding industry in the state.

This session, the Department is also hopeful to address some changes to the recreation passport program, mentored hunting program and adoption of the state land strategy.

NOTEWORTHY DIVISION ISSUES

The Department tested approximately 10,400 animals during the past year for CWD. In 2021, the Department started a systematic approach to test all areas of the state in the next five years. The second phase of this approach included the counties in the middle of the Lower Peninsula along with sample collection in known CWD-positive counties. Positive detections continue in Michigan's deer herd in specific areas of the central lower portion of the state. No additional positives were detected this year in the Upper Peninsula (UP). The Natural Resources Commission and the Department continue to work to address this disease. The Department and Michigan State University (MSU) continue to work together on addressing research gaps to help manage this disease.

A new digital deer harvest reporting system was developed and was notably successful, recording about 303,000 hunter harvests. Slight modifications will be made to the system to further increase user-friendliness based on feedback from hunters and Department staff. The Department responded to about 33,000 calls and 7,000 emails related to wildlife from the public. Numerous wildlife habitat projects were conducted in collaboration with federal, state, local, and tribal governments, as well as non-profit organizations. More information on wildlife-related activities can be found in the Department of Natural Resources Wildlife Division [annual report](#).

The Building Michigan Together Plan, signed into law in March 2022, included \$250 million in federal relief program funding to help tackle the backlog of critical infrastructure needs in our state parks system. This historic investment puts in motion a targeted effort to repair, replace or modernize the core components of state parks and trails.

Michigan continues to support Illinois in its nonfederal sponsorship for the Planning, Engineering, and Design phase of the Brandon Road Interbasin Project to protect the Great Lakes

from invasive carp. Michigan and Illinois created a States and Provinces Forum, facilitated by the Great Lakes Commission, to provide an opportunity for review and input of the design process with the U.S. Army Corps of Engineers (USACE) at key milestones. Significant engineering discussions combined with flow and channel modeling of the barrier elements have been completed in preparation of construction for Increment IA. Approximately \$226 million was appropriated for planning and construction in FY 2023 through the Bipartisan Infrastructure Law. In December 2022, Congress passed the Water Resource Development Act, changing the required cost share for construction to 90% federal, 10% non-federal. In March, USACE released a new total project cost estimate for \$1.146 billion with a 52% contingency factor. Michigan currently has requested \$64 million in an FY 2023 budget request to support the nonfederal cost share for project construction and a legislative decision on these funds is pending. Illinois currently has a \$50 million FY 2024 budget request under consideration. Combined, the two states could provide the required match for the project. Illinois and USACE will need to sign a Project Partner Agreement (PPA) before construction activities can begin. Significant progress has been made toward protecting the Great Lakes from invasive carp.

The Department has negotiated with the affected tribes to replace the 2000 Great Lakes Consent Decree and a new proposed agreement has been submitted to the Federal Court.

The Department continues to make progress with its Arctic Grayling Initiative. A third year of broodstock that was procured from the Chena River, Alaska in May 2022, will be transferred out of the isolation facility in 2023. Multiple watersheds have been inventoried for future stocking, and additional habitat suitability work will be conducted prior to selection of streams for reintroduction. Research on competition between Grayling and non-native trout species has been completed. The Department's goal is to stock eggs in selected receiving waters in 2025.

Michigan rivers are currently experiencing a suite of stressors including impacts from invasive species, fragmentation by dams and other barriers, degradation from activities in watersheds, and changes in our climate. To address potential management actions that deal with these stressors, the Department has teamed up with a multitude of stakeholders as part of a structured decision-making (SDM) working group. The goal of this effort is to develop a process that can be used to assess and ultimately enhance the resilience and sustainability of Michigan's rivers and fisheries beginning with the Au Sable River. The SDM framework will (1) identify the scope of the problem related to ecological resilience of the Au Sable River, (2) identify a suite of objectives that should be achieved including a set of management actions that could be taken, and (3) predict the consequences of each action on each of the objectives, as well as account for key uncertainties in the system.

Fisheries Division finalized a walleye management plan for inland waters with an aim toward maximizing both ecological benefits and angler satisfaction associated with the state's walleye fisheries. Although walleye reside in the Great Lakes, rivers and inland lakes, the plan focuses on inland waters – mostly inland lakes – because walleye management in Great Lakes waters is primarily addressed in various other Department-approved management or rehabilitation plans. The new walleye management plan for inland waters provides an overview on the status of the walleye in Michigan under previous management efforts, the biology and ecology of inland

walleye populations, and angler perceptions about walleye management and fishing opportunities under the new plan.

Law Enforcement Division's Great Lakes Enforcement Unit was recently awarded the 2023 Governor's Award for Historic Preservation for the documentation and recovery of the Lake Huron Red Tail aircraft in lower Lake Huron.

The most significant fire from the past year was the 2,516-acre Blue Lakes Fire in the northeastern Lower Peninsula. Staff also responded and filled 69 interagency assignments in Michigan and nine other states during 2022. A Department Incident Management Team (IMT) was dispatched to assist with a hazardous materials fire at the Resolute Forest Products paper mill in Menominee in October.

The Department has invested in several new shooting sport facilities around the state. A new, state of the art, indoor shooting range and meeting facility will open in July 2023 at the Porcupine Mountain Wilderness State Park near Ontonagon. We will also open new outdoor ranges in Marquette County and at the Barry State Game Area South of Grand Rapids in August 2023.

The Department has launched a new mobile application, *Michigan DNR Hunt Fish*, which is available in the Google Play Store for Android and the App Store for iPhone. Since its launch in summer 2022 the app has gained over 147,000 downloads and has sold more than 113,070 licenses. The primary reason for developing a mobile app was due to roughly 75% of hits to the Department's main website, Michigan.gov/DNR, originating from a smartphone.

The Department developed multiple policies this year to address climate change and support the Governor's commitment to achieve economy-wide carbon neutrality by 2050. The first is a climate mitigation and adaptation policy, and the second, a policy that prioritizes the purchase of electric vehicles over traditional vehicles for department use. In addition, the Department was the first state to pioneer selling carbon credits from our state forests and investing the revenue from those credits into more adaptation and mitigation initiatives; the Big Wild Forest Carbon Project has been listed and verified with the American Carbon Registry (ACR), and the Wolverine-Copper Country Forest Carbon Project is still in progress.

The Department continues to incorporate renewable energy sources in strategic locations throughout the state. The Department is performing energy audits of facilities to provide facility managers with recommendations for improved energy efficiency and opportunities for cost-effective reduced greenhouse gas emissions. The Department will be installing six solar arrays at five state fish hatcheries, which will be owned by the department and outside of the power purchase agreement. Additionally, the Department is partnering with corporate sponsors to deploy electric vehicle (EV) charging stations at state parks along Lake Michigan as the first phase of a multi-phased approach to bring EV charging to where visitors travel, as well at Department offices to move toward electrifying the Department fleet.

Final design of the mass timber customer service center in Newberry is complete. The building plans were submitted on March 1 to LARA for plan review. Walbridge has been awarded

the construction contract. Groundbreaking for the new facility will commence in spring 2023. Estimated completion of the mass timber office space is expected to be in summer 2024. Design of the storage building is underway and is expected to be completed within the next three months.

The Department recently completed eight all-employee meetings that were conducted at various locations throughout the state to connect with staff, discuss key department priorities, highlight important department updates, and share success stories of recent projects.

Minnesota

MINNESOTA STATE REPORT

May 25, 2023

David P. Olfelt, Director
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Wolf Management Plan Completion

In 2022, MN DNR completed an update to the state’s 20-year-old wolf management plan. Minnesota’s wolf legacy is unique: the state’s northeastern corner of lakes and forest once sheltered the last remaining wild wolves in the lower 48 states. Today, wolves are distributed across half the state in numbers (2,700) well above Endangered Species Act recovery plan goals (1,251-1,400) for the wolf in Minnesota. Wolf population growth in Minnesota has contributed significantly to the expansion of wolf range in other parts of the upper Great Lakes region. Tribal nations were integrally involved in the plan update, as were federal, state, and local governments; non-governmental organizations; other partners; and members of the public. Goals of the new plan include maintaining a well-connected and resilient wolf population; collaborating with diverse partners; minimizing and addressing human-wolf conflicts; engaging the public; conducting research; and administering the wolf program effectively.

Wildlife Management Area Planning

Minnesota has eight “major unit” Wildlife Management Areas (WMAs), and over 1,500 WMAs overall, providing 1.37 million acres of habitat. MN DNR is undertaking an update of its major unit master plans, many of which are decades old. In 2022, the updated Whitewater WMA master plan was completed, guiding one of the largest remaining contiguous expanses of habitat in southeast Minnesota. Significant changes in this plan reflect a greater emphasis on restoring and enhancing native plant communities, changes in wildlife and public use of the area, new challenges like invasive species, changing user groups, changing climate, and new approaches to farming. Multiple additional major unit master plans will be completed in the coming years.

In 2023, MN DNR is kicking off a multi-year process to develop a comprehensive plan for the remainder of the state’s WMAs, along with its 700 Aquatic Management Areas (AMAs). The project will rely heavily on public and partner engagement to define a systemwide vision and opportunities for the future.

Chronic Wasting Disease Update

During fall 2022, the MN DNR conducted surveillance for chronic wasting disease (CWD) across 10 areas of the state. Hunters were required to have harvested deer sampled over opening weekend of firearm season to obtain enough data to have confidence in disease detection. Compliance with testing was very high, averaging 87% across all areas, and over 7,000 samples were collected. In combination with additional voluntary sampling options, hunters contributed a total of 12,751 samples during the fall season and 26 new detections of CWD occurred. The majority of CWD-positive deer were located in areas with persisting infection in southeast

Minnesota; however, a new focus of disease was detected in Hubbard County in the northwest. Due to discovering CWD in novel areas last year (Grand Rapids and Climax) that were not identified by our CWD Management and Response Plan as having elevated disease risk, MN DNR opted to offer expanded testing services statewide to hunters, at no cost. This included an expansion of the existing Partner Sampling Program, which is comprised primarily of licensed taxidermists compensated for providing samples from adult deer. A total of 157 vendors were recruited into the program, resulting in 3,205 total samples, including 5 CWD-positive deer. A pilot self-service mail-in kit project was also initiated, in which hunters could remove samples from their own deer and submit for testing at no cost to the hunter. A total of 5,000 kits were distributed, with 593 successful hunters submitting samples (11% error rate in tissue identification) and one new CWD positive detection. While MN DNR does continue to find CWD-infected deer, prevalence remains very low and management efforts focus on preventing disease spread to new areas of the state.

Electronic License System Update

MN DNR and Minnesota IT Services (MNIT) recently announced the selection of the conservation technology company S3 to build a modern Electronic License System (ELS) for the state's anglers, boaters, hunters, recreational vehicle operators, and people who enroll in DNR safety trainings. MN DNR and MNIT staff have already begun working with S3 to plan and schedule the build; the system is expected to be rolled out to the public in early 2025.

This effort started in July 2021. A rigorous RFP requirement process was completed involving agency interviews and analysis, stakeholder surveys, and focus groups. Vendor evaluation included written proposals, agency demos, demos to external stakeholders, and an invitation to negotiate with several vendors, leading to a signed contract.

Expected outcomes are more online and mobile functionality to purchase and download licenses; a new events management system for skills and safety classes; a newly developed mobile Law Enforcement Application for Conservation Officers afield; integrating outside systems into ELS; and streamlined recreational vehicle business processes with deputy registrars.

Hiring, Return to the Workplace, and Telework

The Division of Fish and Wildlife (FAW) is approaching a full complement of staff after hiring challenges and economic uncertainties during the COVID-19 pandemic. Since July 1, 2022, the division has hired 59 new staff, including eight managerial positions, out of 574 total staff. We have been fortunate to see many qualified candidates for most of our vacancies. The agency is adapting to the realities of telework and evaluating physical space/office requirements in the coming year. Many staff are teleworking at least part time when business needs can be met remotely. Staff are striving to maximize the value of in-person office days. A review of FAW staff in MN DNR Central Office and regional offices found an average occupancy rate of 19 to 34%. This does not include locations where field work is ongoing and in-person attendance is closer to 100%.

100th Minnesota Outdoor Skills and Stewardship Episode

During the COVID-19 pandemic, MN DNR Fish and Wildlife Outreach expanded its online programming to include a weekly webinar series, [Minnesota Outdoor Skills and](#)

[Stewardship Series \(MOSSS\)](#). The programs introduce people to hunting, angling, shooting sports and other outdoor recreation topics and skills, and we recently completed our 100th episode. Hosted by FAW Outreach staff, DNR staff and outside experts present the information as a conversation with the audience, take written questions, and provide live answers to questions received. The webinars have reached several thousand individuals and have seen tremendous growth in participation throughout the past couple of years. Over the last couple of months, we have averaged over 500 registrants each week with an average of 200 viewers live for each episode. All webinars are live-captioned, recorded and made available on our [website](#). A high percentage of those who have been unable to make the programs live have accessed the recordings.

We are finding that mixing DNR research and staff expertise on fish and wildlife biology management with fishing, hunting, and outdoor recreation tips and techniques has been very popular. We particularly highlight what anglers and hunters can learn from that research and knowledge to improve their outdoor skills.

Conservation Partners Legacy Update

The MN DNR administers the Conservation Partners Legacy (CPL) small grants program which is funded by the state's Outdoor Heritage Fund. The CPL program awards competitive and non-competitive grants of \$5,000-\$500,000 to conservation groups, non-governmental organizations (NGOs), and local governments for habitat projects. To date, nearly \$100 million has been appropriated to CPL, with \$9.5 million slated for 2023. This program has improved or protected over 575,000 acres of habitat with 950 grants, leveraging more than \$18 million in non-state funding from more than 270 conservation clubs and government entities in Minnesota.

Sturgeon Spawning in Red River Basin

Since 1997, the MN DNR and a diverse group of partners have worked to restore Lake Sturgeon to the Red River of the North system. Partnerships with USFWS and tribal resource agencies have been critical for the egg collection, intensive culture, and restocking programs. Concurrently, the Red River system's connectivity has been aggressively restored through the "Reconnect the Red" initiative. Of the 69 targeted fish passage barriers in the watershed, 48 will have been removed or modified for passage by the end of the 2023 construction season, including all eight mainstem dams. In the spring of 2022, Lake Sturgeon spawning was verified in a Red River tributary, which was the first natural reproduction attempt in over 100 years. This important milestone is another step toward the Red River's Lake Sturgeon reestablishment and recovery; additional restoration and connectivity work remains ongoing.

Limit on Gar

Gar harvest is very popular among segments of the bowfishing and spearing community. Bowfishing tournaments that take high numbers of gar, as well as a spearfishing episode in which more than 80 gar were harvested through the ice elevated concerns about the sustainable harvest of gar in Minnesota. As a result, the Minnesota legislature mandated the MN DNR to establish a daily and possession limit on gar. Given that gar population data are extremely limited, the department focused on establishing the most socially palatable gar limit. An extensive outreach effort was conducted to bowfishing and spearing participants, sportfishing clubs, and tribes. A public questionnaire was also distributed via social media and resulted in 1,232 responses and 59 comments. Informed by the range of input received, the department proposed and implemented a

daily and possession limit of 10 gar (shortnose and longnose gar in aggregate). This limit went into effect March 1, 2023, and will be reviewed annually until it can be established as a permanent rule.

Building Climate Change Resiliency in Brook Trout Populations

Along the North Shore of Lake Superior, over 34% of Brook Trout thermal habitat is predicted to disappear by the year 2060. In response, the MN DNR has identified several watersheds that are believed to be most resilient to temperature changes. In these watersheds, priorities have focused on identifying key cold water inputs and refuges, planting riparian vegetation with climate resilient long-lived tree species, and improving connectivity within the watershed specifically to allow Brook Trout access cold-water thermal refuges during low and warm water. To facilitate the connectivity, a prioritization matrix was developed to replace undersized culverts in these watersheds. Replacing undersized culverts is helping these priority watersheds deal with changing hydrology, improving genetic diversity, and allowing Brook Trout to migrate to thermal refuges throughout the year. Recently, 11 undersized culverts were replaced through cooperative partnerships which include local Soil and Water Conservation Districts, U.S. Forest Service, U.S. Fish and Wildlife Service, Minnesota Pollution Control Agency, and Trout Unlimited. Seven culverts are planned to be replaced with larger culverts or bridges in next few years.

Brown Trout in Southeast Minnesota

Southeast Minnesota has more than 150 designated trout streams totaling 720 stream miles. Long-term monitoring data has shown a 400% increase in Brown Trout adult abundance over the last 50 years, creating some of the best trout angling opportunities in Minnesota in over a century. The improvements are due to increased precipitation, better land use practices, and in-stream habitat improvement. While increased precipitation can lead to flooding, it is also beneficial to recharge groundwater and increase spring flow, which is crucial for trout. MN DNR is proposing to add additional miles of designated trout streams in the region, a reflection of improved baseflow in many streams.

Minnesota has also faced challenges with recurring agriculture-related fish kills involving hundreds to thousands of trout and other species following larger rain events in southeast trout streams. Although trout populations recover within a few years, these kills highlight that further improvements to agricultural practices are needed.

DNR, along with partners like Trout Unlimited, enhances three to four miles of stream annually in part through funding from Minnesota's Clean Water Land and Legacy Amendment. In recent years, five miles of DNR angling easements have been added to the 255 miles of easements that allow access for anglers and stream management.

Population Estimates of Predator Species

Muskellunge, walleye, northern pike, and largemouth bass are top predator fish in many Minnesota lakes. What and how much those predators eat, and how their diets compare, is the focus of an ongoing fisheries research project, currently in its final year.

Population size often determines the amount of food a population consumes. We have seen a consistent trend in our study lakes in which largemouth bass were the most abundant, followed by northern pike, walleye, and muskellunge. Therefore, muskellunge populations ate the least amount of food compared to the other predators. They also consumed different prey resources such as white sucker, northern pike, and bullheads. While not consistent in every lake, walleye and northern pike appear to have the highest amount of diet overlap, with yellow perch and sunfish being favored prey in many lakes. Lastly, largemouth bass prefer to eat crayfish and other invertebrates in most lakes when they are available, but sunfish were also important in some lakes.

Development of Coldwater and Exceptional Water Standards

MN DNR Fisheries and Minnesota Pollution Control Agency scientists have developed and proposed new water quality standards to protect exceptional fish communities and cold-water fish communities and their respective habitats. Scientists developed models for fish assemblages in Minnesota lakes to define changes to the fish communities along a gradient of increasing anthropogenic stressors such as shoreline disturbance and watershed disturbance and associated nutrient loading. New biological standards with stricter impairment thresholds are proposed to recognize and protect exceptional lakes with diverse and unique fish communities. Lakes identified as containing exceptional fish communities are in predominantly forested watersheds, with higher aquatic plant species richness, lower phosphorus levels, and higher quality shorelines. Protecting exceptional use lakes is more cost effective than restoration once they have been degraded. New proposed water chemistry standards add protection for other cold water fish species such as Cisco and Lake Whitefish and strengthen Minnesota's water quality standards for lakes which support or are managed for trout. Many populations of cold water fish species in Minnesota are threatened by a warming climate and eutrophication because these species require cool, oxygenated water. The proposed temperature, oxygen, and water chemistry standards can be used to maintain populations of these vulnerable fish species and to protect or restore these important aquatic resources.

Missouri

**MISSOURI
STATE REPORT**
May 16, 2023

Sara Parker Pauley, Director
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Jefferson City, MO 65102

Financial Update

The Fiscal Year (FY) 2023 budget for the Missouri Department of Conservation (MDC) continues to represent less than 1 percent of the total state government budget in Missouri. The primary sources of revenue are the one-eighth of 1 percent Conservation Sales Tax, at about \$148.4 million, and permit sales and federal reimbursements, at about \$76.5 million. Total receipts for FY 2022 were \$237.8 million.

Conservation pays by enriching our economy and quality of life. In Missouri each year, more than 1 million hunt or fish and nearly 2 million view wildlife. In Missouri, the total economic impact of fish and wildlife recreation and the forest products industry is more than \$15 billion annually. Expenditures and retail sales from fish and wildlife recreation and forest products support over 111,000 jobs.

Highlights of Conservation Challenges and Successes

MDC Values. MDC's newly refreshed values include: Dedicated to our mission; Responsible stewards; Trusted professionals; and One MDC. Associated behaviors were developed to highlight the expectations that we will evolve as an agency through continuous improvement, honor the public's trust by using public funds responsibly, value our individual discipline expertise by investing in continuous learning, and fostering an inclusive environment through collaboration and communication.

International Recognition for Sustainable Forest Management. MDC is proud to maintain its Sustainable Forestry Initiative® (SFI) certification for management on 696,000 acres of public lands. Managing forest resources in a sustainable manner is critical to providing quality habitat needed to maintain healthy fish and wildlife populations.

Tree Seedling Program. The George O. White Nursery grows and distributes about 2 million low-cost seedlings every year to Missouri citizens. Each year, it processes over 13,000 customer orders. It provides free seedlings to approximately 90,000 fourth-grade students for Arbor Day and assists the Monarchs Collaborative with hundreds of milkweed root stock to be planted by Master Naturalist and Master Gardener groups.

Hatchery Program. MDC manages 9 fish hatcheries (5 cold water and 4 warm water). In the past year, approximately 1.6 million trout, 5.4 million warm water sportfish, and 1,500 Topeka Shiners

that are federally listed endangered species were stocked to help maintain quality fishing and restore native populations.

Conserving an Endangered Fish. MDC developed a partnership with biologists at the U.S. Army Corps of Engineers (USACE) to further efforts to monitor lake sturgeon spawning activity and habitat use in the Upper Mississippi River. Last year, the partnership was awarded a Sustainable Rivers Grant which funded telemetry equipment needed to track lake sturgeon movement, a USACE intern to help with monitoring, and a hydrologic model of the tailwaters of Lock and Dam 26. The project documented another spawn event last spring at Lock and Dam 26 near Alton, IL which was featured on national news outlets. Staff continue to implant transmitters and track movement of lake sturgeon while working with lock masters at Lock and Dam 26 to manipulate water flows to enhance lake sturgeon spawn likelihood.

Mobile Applications. MDC continues to use technology, such as free mobile applications, to connect people to nature. MO Outdoors enables users to find MDC conservation areas, fishing accesses, hiking trails, shooting ranges, and nature centers by location or based on their desired types of outdoor activities. MO Fishing allows anglers to buy fishing permits and see fishing structures in Missouri water bodies. MDC's most popular app, MO Hunting, allows hunters to buy permits, view regulations, and check-in animal harvests. At the end of FY22, the 3 apps had more than 1.2 million lifetime installs.

Chronic Wasting Disease (CWD). Each year, MDC tests a sample of the state's deer population for CWD. This important effort allows MDC scientists to better understand where the disease is on the landscape so that management actions can be applied (especially post-season targeted culling), learn about how the disease is spreading, and keep the public informed. MDC sampled and tested more than 33,000 deer for CWD between July 2022 and April 2023. Of the deer sampled, 117 tested positive. Those deer bring the total number of CWD cases found in the state to 409 since the first case in wild deer was found by MDC in early 2012. Including recent sampling efforts, MDC has collected more than 243,000 tissue samples for CWD testing since the disease was first detected.

Invasive Species. MDC continues active engagement and leadership within key invasive species collaborations including the Scenic Rivers Invasive Species Partnership, Missouri Invasive Plant Council, Missouri Invasive Forest Pest Council, Missouri Feral Hog Elimination Partnership, and Missouri River Basin Invasive Carp Technical Committee. MDC's dedicated Invasive Species Coordinator serves as the primary point of contact for all invasive species topics and has reinvigorated MDC's internal Invasive Species Working Group. This group uses the principles of the Missouri Comprehensive Conservation Strategy (CCS) to prioritize invasive species to be addressed, locations of focus, and timing of actions. The emphasis and strategic approach, complemented by increased partnerships, is leading to successes in increased knowledge and involvement in the prevention, management, control, and eradication of priority invasive species. For example, staff continue research on invasive carp population dynamics, movement, and removal efforts through basin partnerships and USFWS funding.

Invasive Species Strike Team. MDC, in partnership with the Missouri Department of Transportation and the Missouri Prairie Foundation, continue efforts to control invasive species

along Missouri's highways. In 2022, four teams treated 1,101 miles of highway right-of-way within MDC's Ozark and Southeast regions, equating to over 14,000 total acres of highway right-of-way covered and 3,156 acres sprayed. MDC provided increased contributions to the partnership to support the expansion of the Strike Teams to all districts of the state. Twenty-eight new Strike Teams will be equipped with UTV's, injector sprayers, and logo-wrapped covered trailers in summer 2023. MDC provided funding for new sprayers and trailer wraps and trained over 75 MoDOT personnel on invasive plant identification and treatment methods in March of 2023.

Eliminating Feral Hogs in Missouri. MDC is part of a very productive network of federal and state agencies called the Missouri Feral Hog Elimination Partnership (Partnership). The Partnership is comprised of over 15 federal and state agencies, as well as agriculture and conservation NGOs, collaborating under the common goal of eliminating feral hogs from public and private lands throughout Missouri. During 2022, the Partnership removed 6,289 hogs from the landscape, assisted 709 landowners, and scouted 3,707,473 acres. In addition to on-the-ground operations, the Partnership placed equipment at Soil and Water Conservation District offices for landowners to use in areas with high feral hog activity; distributed mail-out landowner surveys to collect information regarding feral hog damage, mitigation, and removal efforts; and conducted landowner and community outreach activities throughout the southern portion of the state.

Helping Missourians Discover Nature. Discover Nature Schools (DNS) curricula is being used in 1,180 (38.5 percent) of Missouri schools to support teachers engaging students with inquiry based, hands-on, outdoor learning from pre-K to 12th grade. Two new DNS curricula were introduced: *DNS Kindergarten: Bears Through the Seasons* and *DNS First Grade: Exploring Missouri*, each meets all state science standards for the specific grade level. Trained teachers also receive prepared teacher kits to support indoor and outdoor conservation focused lessons.

Archery in the Schools Program Builds Champions. MDC provides Missouri National Archery in the Schools Program (MoNASP) grants to schools for equipment and free teacher and staff training for those administering the program. More than 75,000 Missouri students from 571 schools reported participation in MoNASP during the 2021-2022 season. This year's state tournament was held in Branson and hosted 3,648 student archers from 244 schools. The bullseye tournament had 3,632 archers and 3D tournament had 1,616 archers, with some archers competing in both.

Protection. MDC's 2022 class of 17 conservation agent trainees graduated in October and have eagerly begun their new field assignments around the state. A new class of 16 conservation agent trainees started the academy March 16, 2023. The 1,200-hour training, conducted over the course of six months, is POST certified. The curriculum consists of training in legal studies, criminal investigations, defensive tactics, boating operations, communications, and resource management.

Listening to Missourians.

The Department continues to offer virtual public input opportunities. In addition to annual hunter and angler surveys, MDC conducted surveys related to participant and landowner satisfaction with the Missouri Recreational Access Program, collected input from stakeholders who attended the regional Wetlands Summit hosted by the Conservation Federation of Missouri and MDC, conducted a survey and a series of focus groups with landowners in CWD core areas to better

understand motivations and barriers to participating in targeted culling, conducted listening sessions in Kansas City to inform the further development of community conservation programs and services, and initiated several new research projects to support MDC's initiatives related to inclusion and relevancy. MDC also hired an external consulting firm to collect feedback on the state's hunting and fishing regulations to determine barriers to recruitment of new hunters and anglers and reactivation of latent hunters and anglers. Approximately 260 partners, representing 115 organizations, participated in MDC's sixth annual Conservation Partners Roundtable, which was once again held in person. The event provided partners an opportunity to hear from MDC and strengthen collaborative efforts.

Expanding Recreational Opportunities. As part of efforts to reach new audiences, MDC is working to expand recreational activities on conservation areas. A new MDC bicycle regulation went into effect Feb. 28, 2022, that allows bicycles and some types of electric bicycles (e-bikes) on multi-use bicycle trails and most service roads. In addition, a rock-climbing bluff is now open at Rockwoods Reservation in St. Louis County. A dozen climbing routes were developed in partnership with the BETA Fund, a local organization of rock-climbing enthusiasts, whose mission is to protect and conserve outdoor resources in the Midwest for recreational rock climbing.

Conservation Volunteers. In calendar year 2022, Master Naturalist volunteers contributed 58,532 hours of service to conservation projects and activities in their local communities. In addition, 3,034 volunteer members of the Missouri Forestkeepers Network contributed more than 10,000 hours monitoring forest health and taking care of trees. Volunteers at nature centers, interpretive sites, and shooting ranges, along with hunter education instructors and fishing education instructors, recorded 42,597 hours in 2022. Stream Team volunteers contributed 58,088 hours during calendar year 2022.

Communicating with Missourians. MDC social media channels, including Facebook, Twitter, Instagram, and YouTube, continue to increase followers and engagement. Facebook is MDC's largest social media channel with more than 340,000 followers. MDC's website has 5.6 million unique visitors annually. MDC utilizes email communications to reach 806,590 subscribers and the free *Missouri Conservationist* and *Xplor* magazines are mailed to more than 834,000 individuals to share the value of fish, forest, and wildlife resources. The MDC Wild Webcast series highlights key conservation topics and provides a unique opportunity to ask live questions of MDC experts. MDC hosts a podcast, Nature Boost, to connect more youth and young adults to nature.

Missouri Comprehensive Conservation Strategy (CCS).

Through a truly landmark effort, Missouri is the first and only state in the nation to integrate its State Wildlife Action Plan, State Forest Action Plan, watershed priorities, public and private land conservation opportunities, community conservation framework, and other conservation challenges and opportunities into a single, comprehensive strategy meeting the requirements of both the U.S. Fish & Wildlife Service and USDA Forest Service. Missouri's CCS embraces landscape-scale conservation, working to maintain, enhance, restore, and re-create healthy natural systems. This approach will increase the resiliency of these systems to potential threats, increase connectivity among habitat systems, and provide benefits to a broad suite of species, including but not limited to those of greatest conservation need. These robust landscapes also will support more reliable production of various sustainable, renewable resources (e.g., forest products, grazing

forage, seed, etc.) and other benefits (e.g., outdoor recreation, human health benefits, ecosystem services, species recovery) that improve Missouri's economy and quality of life. This integrated approach proactively encourages an increase in connection between citizens and nature and ensures the responsible use of limited federal- and state-entrusted, partner, and citizen resources.

Community Conservation. Community conservation is one of MDC's top priorities and we continue to rely on partners and partnerships to reach new audiences. A model has been developed as an extension of the CCS that assists MDC's eight regions in determining the highest priority areas. The criteria utilized in developing the model include race/ethnicity, poverty rates, access to green space, tree canopy coverage, and land cover type.

MDC will engage local governments, citizens, and private organizations within municipalities and adjacent developing areas to connect people with nature, raise awareness of the community benefits provided by healthy fish, forest, and wildlife resources, promote conservation of these resources through technical assistance, and encourage development that protects native fish, forest, and wildlife diversity.

Private Land Partnership Programs. MDC has matching fund agreements with the USDA Natural Resource Conservation Service (NRCS) for the Audubon Conservation Ranching-Regional Conservation Partnership Program (RCPP), the Regional Grassland Bird and Grazing Land Enhancement RCPP, and the Restoring Glade and Woodland Communities RCPP. The Conservation Ranching RCPP annually provides \$36,000 of MDC match with financial assistance from NRCS to prepare pastures to be certified for bird-friendly beef. The Regional Grassland Bird RCPP helps cattle producers implement grazing practices that provide habitat for grassland birds while providing quality forage for cattle. MDC provides approximately \$120,000 annually to match NRCS' annual financial assistance contribution of \$192,000. The Restoring Glade and Woodland Communities RCPP, combines approximately \$64,000 annually from MDC with NRCS' annual financial assistance contribution of \$272,000 directly to private landowners to assist in management and restoration of glades, woodlands, and forest habitats. MDC has also teamed up with Quail Forever to offer the Restoring and Improving Monarch Ecosystems RCPP along the I-35 corridor in Northwest Missouri.

Technical Assistance for Landowners. MDC provides landowners with technical assistance to benefit fish, forest, and wildlife conservation. Over 33,000 contacts were made last year helping landowners with \$3 million in funding for conservation practices and program cost-shares. MDC's Missouri Outdoor Recreational Access Program (MRAP) enhances habitat management and public access to outdoor recreation opportunities on private land. Currently, 52 property owners have signed agreements to provide recreational access on over 15,000 acres. The MRAP is funded through the USDA Voluntary Public Access and Habitat Incentive Program. Missouri's Call Before You Cut program provides information to forest landowners who may be contemplating a timber sale. Since inception, over 4,700 landowners who own over 537,000 acres have received a free packet of information.

Helping Communities One Tree at a Time. In FY23, MDC funded 65 Tree Resource Improvement and Maintenance cost share totaling \$605,000. This funding helps communities with urban forestry projects such as master plans, tree inventory, education, hazard tree removals,

pruning, and planting. MDC continues to partner with Forest ReLeaf of Missouri, a unique, nonprofit public/private partnership. A total of 6,877 volunteer hours of service was provided by volunteers, 196 planting projects were completed, 11,927 trees were planted, and 19,500 tree seedlings were potted to be grown out for future plantings.

Assisting Communities Improve Wildfire, Prescribed Fire, and Emergency Response. MDC awarded \$455,321 in Volunteer Fire Assistance grants to 161 rural fire departments to purchase personal protective equipment, suppression equipment, and provided vehicles and emergency response equipment through its Federal Excess Property programs. In early 2022 MDC released a revised version of its Private Landowner Burn Workshop. The new course “Prescribed Burning for Missouri Land Managers” is an online based program, with a required field exercise, which introduces private landowners to prescribed fire and provided a mechanism for landowners and burn contractors to obtain a “Certified Burn Manager” certification. Since its release, 1,628 private landowners and contractors have utilized the course.

Missourians for Monarchs Collaborative. MDC continues working with Missourians for Monarchs, a collaboration of more than 45 conservation and agricultural organizations, state and federal agencies, utility companies, agribusinesses, academia, volunteer organizations, and cooperatives, to carry out a monarch and pollinator conservation plan for Missouri. As of December 31, 2022, the collaborative has created or improved over 470,000 acres of new pollinator and monarch habitat. Due to volunteer constraints and the amount of acreage to monitor/inventory, in 2022, the Collaborative decided to utilize the same algorithm currently used by USFWS’s Monarch Conservation Database as the metric of measurement for the number of milkweed stems per acre. The Collaborative, and its members, will still monitor established monarch/pollinator habitat; however, the overall goal for Habitat Monitoring will now be to assess the quality of established habitat, rather than the number of milkweed stems per acre.

Aquatic Partnerships. In March 2023, an Institute of Fisheries, Wetlands and Aquatic Systems was launched through a partnership with MDC, the Missouri Conservation Heritage Foundation, and the University of Missouri’s College of Agriculture, Food and Natural Resources. This new institute will be a national model for how we positively leverage the power of partnerships to bring together fisheries, wetlands, and other aquatic systems into one integrated area of study to not only further science, but also develop future talent in the conservation field. The institute will support cultivating conservation professionals through workforce development, research, and public policy.

Ozark Hellbender Recovery Milestone. MDC and partners reached a significant milestone in population recovery efforts of the endangered Ozark hellbender as a zoo-raised hellbender successfully reproduced on the Current River was documented. MDC partnered with the Ron and Karen Goellner Center for Hellbender Conservation, a part of the Saint Louis Zoo WildCare Institute, and other agencies in the early 2000s to breed the salamanders in captivity and rear eggs collected from the wild to combat drastic population declines. Once the captive-bred larvae reached between 3-8 years old, they were released in their native Ozark aquatic ecosystem. Biologists began releasing a few zoo-raised hellbenders in Missouri in 2008, increasing the number of released animals to 1,000 or more per year beginning in 2012.

Nebraska

Nebraska State Report May 31, 2023

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Commission updates R3 Plan to engage outdoor recreationists- The Nebraska Game and Parks Commission approved a five-year plan to recruit, retain and reactivate outdoor enthusiasts in 2022. This 2023-2027 Recruitment, Retention and Reactivation Plan provides goals, objectives and strategies to help Game and Parks engage participants in outdoor opportunities and maintain widespread support for conservation and recreation. The plan built on prior efforts in hunting and fishing, but expanded to include boating, parks and shooting sports for the first time — positioning Nebraska as one of the first states to do so.

Special elk depredation season a success - Eight elk were harvested during Nebraska's first special elk depredation season in July 2022. Five bulls and three cows were taken during the season on private land in parts of Lincoln, Perkins, Keith, Deuel and Garden counties. Game and Parks considered the season a success as it achieved its intended goals. This one-month season was designed to allow for as many potential hunters as possible in the geographic area - roughly 873 square miles. The season attracted 178 hunters (152 residents and 26 nonresidents) who purchased 208 permits, usable once they gained landowner access to private property. Game and Parks has worked with landowners in this area for several years to lower elk herds to reduce damage to the cropland, including trampling, wallowing and consumption of crops. Historically, five or six elk are harvested in the this geographic area by hunters during fall/winter elk seasons.

Nebraska Aquatic Habitat Program turns 25 - Two great feats were celebrated by NGPC at Conestoga State Recreation Area— the 25th anniversary of the Aquatic Habitat Program and the largest project ever completed in the program. Since its inception in 1997, the Nebraska Aquatic Habitat Program has generated more than \$90 million for improvements to 137 water bodies. The program works to enhance aquatic ecosystems by implementing restoration techniques in-lake and in the watersheds that feed them. In addition to improving aquatic habitat and water quality, the program also improves boat and bank angler access. Funding is provided by anglers through the Aquatic Habitat Stamp, which is included in the price of a fishing license. Nebraska was the first state in the nation to require such a stamp, making projects that bring new life to aging waters possible. This and 9 other projects across the state were completed in 2022 using Aquatic Habitat Program, Sportfish Restoration and Nebraska Environmental Trust funds.

Game and Parks fights wildfires - Drought conditions across the state made Nebraska susceptible to wildfires in 2022 and 2023. Over the course of the last year, NGPC staff assisted with the containment and extinguishing of wildfires as they popped up both in the west and the east. Our field staff worked with volunteer fire departments, local landowners, emergency management and federal firefighters on various fires to protect life, property and habitat. 2022 was the second worst wildfire season on record in Nebraska, and the Commission is grateful to all volunteers, agencies, landowners and everyone who worked together to combat wildfires.

Low-water creates opportunity to improve boat launch access - Nebraska Game and Parks maintains 185 boat launch facilities in our park and wildlife management areas. Because of the drought and lowering water levels, staff worked to extend boat ramps where possible in 2022. In some cases, the low water level revealed damage to ramps that was repaired. Funding for new projects and repairs is made possible through the Aquatic Habitat Program, Capital Maintenance Funds and Sportfish Restoration Motorboat Access Funds.

Wetlands planning and pumping benefits wildlife - With drought across much the state in late summer and fall, NGPC pumped water into 25 wetland areas across the state for the benefit of wildlife, wildlife watchers and hunters. The ability to deliver water into these wetlands takes planning, funding and collaboration, including to secure land, restore and manage wetlands, and provide pumping infrastructure. Over the past 15 years, wetland restoration projects have been completed on more than 22 wildlife management areas, and we have added pumps, wells or water pipelines to 21 wildlife and park areas. Additional projects are being planned. Evidence of success from these efforts was seen in October when a pair of endangered whooping cranes spent 26 days at the Kissinger Wildlife Management Area in Clay County. This was a record-long fall stopover in Nebraska involving adult whooping cranes. The length of their stay suggests the habitat at Kissinger WMA was favorable. The area has undergone extensive restoration and habitat management for migratory birds, wildlife, hunters and wildlife viewers.

River otter seasons successful - The recovery of river otters is a prime example of conservation success in Nebraska. Once extirpated from the state, caused by over-harvest and habitat loss, NGPC reintroduced river otters from 1986 to 1991. River otters now can be found nearly statewide with populations in most major river systems. Game and Parks' goal is to manage and maintain healthy, thriving populations for the long term. A total of 78 river otters were harvested by trapping during Nebraska's first regulated season. In the 22/23 season, 53 otters were harvested with a season harvest limit of 125. For 2023, plans are to remove the season harvest limit while maintaining the 1 harvest per person per season and eliminating the requirement for trappers to check-in daily that the season remains open on our website or the 1-800#. Mandatory checking and CITES tagging will remain required.

Mountain lion research update - While NGPC has known mountain lions can travel hundreds of miles and to any portion of Nebraska for decades, our research program didn't know just how far they move across the landscape. That changed in 2022 with the dispersal of one male mountain lion on the search for a mate or a home range of his own. In July, a video showed a GPS-collared mountain lion at the western edge of Lincoln; that lion had been trapped and collared in the Niobrara River Valley near Valentine in 2021. This lion kept moving, first to Iowa and then to Illinois, providing data regarding its movement and use of habitat the entire way. It made it as far as Springfield, where Illinois wildlife officials immobilized it and moved it to a big cat sanctuary in Indiana. This was one of the furthest documented dispersals for a GPS-collared mountain lion. Staff continue to collar mountain lions to continue learning about their dispersal and movements.

Ornate Box Turtle named state reptile -Until 2022, Nebraska did not have a state reptile. In October during Nebraska Reptile Month, then-Gov. Pete Ricketts proclaimed the Ornate Box Turtle as the State Reptile. The box turtle is the state's only land turtle and is found in short, mixed and tallgrass prairies; the turtle is most commonly found in the Sandhills.

Conservation officers protect and serve- Nebraska Game and Parks conservation officers play an important part in protecting our state's fish and wildlife for the future. In addition to enforcing parks, wildlife and boating rules, conservation officers travel to every inch of the state to keep us safe, as well. Our officers provide critical emergency response, such as to fires, floods, crisis situations or missing persons cases, and investigate major crimes. They also frequently support other enforcement agencies, particularly in rural areas where assistance can be limited.

In 2022, our team of conservation officers had nearly 250,000 contacts with Nebraskans and visitors to the state. This included more than 44,000 angler checks; nearly 70,650 parks responses; 20,600 boater checks; 23,000 hunter checks; and more than 150 search and rescue missions. Officers also assisted with nearly 2,000 outdoors programs. We also hired seven new conservation officers to help fill the ever-increasing demand for enforcement personnel. Because whether it's a state park, a wildlife management area or one of Nebraska's many water bodies, we know it's important to be there, working for the safety of Nebraskans and our wildlife.

Stahlecker honored for life-saving effort -Nebraska Game and Parks Conservation Officer Trevor Stahlecker was honored in 2022 for his role in a life-saving effort at Pawnee State Recreation Area the year prior. The award, an Agency Partner Certificate of Merit from the Lancaster County Sheriff's Office, was given to Stahlecker and a Lancaster County Sheriff Terry Wagner for their quick response to a crisis situation at the lake. But for their quick actions, the person in crisis may not have survived. Stahlecker, a conservation officer since 2017, covers Lancaster and Saline counties.

New all-terrain wheelchair program

The Nebraska American Legion donated \$16,055 to Nebraska Game and Parks in the fall for the purchase of an all-terrain wheelchair for state park visitors. Game and Parks currently has two of the tracked wheelchairs at Ponca State Park. The chairs provide people the freedom of mobility to fish, view nature and enjoy the outdoors in all types of terrain. Game and Parks has a goal for eight track chairs available for use at state parks across the state. They will be used at park events, mentored hunts, shooting ranges and education programs.

Economic impact - \$4.2B annually supporting 24,000 jobs - In Nebraska, hunting, fishing, boating, wildlife viewing and state park visitation support more than 24,000 jobs and have an economic impact of \$4.2 billion annually. With their participation in outdoor recreation pursuits, Nebraskans and nonresidents contributed tremendously to the economy. In 2022, there were 266,000 anglers and 185,000 hunters that purchased Nebraska permits; 80,000 registered boats; 126,000 shooting sports participants; and 508,000 vehicle park entry permits purchased by visitors.

Growing our reach and relevancy - In an effort to better serve many people across the state, NGPC convened an advisory board to learn how we can improve and grow our relevancy efforts in meaningful ways. What we learned included:

- Outdoor recreation for these expanded audiences includes activities such as picnicking, hiking, and being outside with family.
- Translating our website, print materials and signs in other languages; using inclusive images; and designing programs relevant to underserved audiences would be more inviting.
- Growing awareness of what opportunities/ resources we already offer is important and will require continuing to expand our communications efforts.

Education programs reach new audiences -With creative programming, Nebraska Game and Parks was able to reach new audiences in person and virtually, expanding ecological education and engaging people in outdoor interests across the state. These efforts included coordinated “Nature Nerd” Trivia Nights, which brought people together at five locations across the state for a fun challenge. From Lincoln to Scottsbluff, teams enjoyed evenings of camaraderie over their shared interest in nature. In Omaha, we partnered with a nearly a dozen organizations to host Benson Park Community Nature Night — a night dedicated to exploring nature, enjoying outdoor recreation and celebrating community. We also worked closely with Girls, Inc., to provide nature-based exploration and education focused on the growth of girls into future leaders.

Stocking fish & mussels enhance aquatic resources - One of Nebraska’s strengths is its diversity of sportfishing. We serve anglers by producing a variety of species of fish; in 2022 we stocked more than 65 million fish into 275 waters in 71 counties. These stockings consisted of 20 species of fish, including hybrids. The spring and fall stocking of trout in water bodies across the state continues to be popular with anglers of all ages. Trout also are supplied for the waters hosting community fishing events. In 2022, more than 260,000 trout were stocked at dozens of water bodies. Staff also continue to make strides propagating freshwater mussels, which have been in decline naturally over time in the state’s streams and rivers. Since 2014, Game and Parks has propagated and stocked threatened mussels in select areas to reestablish populations.

Programming boosts fishing participation - Enhanced by the partnerships of volunteers and organizations, outreach and events help get people hooked on fishing:

- More than 200 Certified Youth Fishing Instructors and volunteers gave more than 6,000 hours to fishing education and outreach efforts in 2022. These volunteers make possible the 170 statewide fishing events that reached more than 10,000 anglers.
- Thirty-seven Community Fishing Events attracted 1,200 guests.
- Eight “Discover” programs taught advanced fly fishing, bow fishing and ice fishing techniques to an additional 236 participants thanks to the contribution of Youth Fishing Instructors, Cornhusker Fly Fishers, Bowfishers of Nebraska and the Nebraska Game and Fish Association.
- Project Healing Waters and Cornhusker Fly Fishers, with Game and Parks staff, cosponsored fly rod building and fly-tying classes.
- Other partners, including the Nebraska Walleye Association, Cops and Bobbers, and Live Well Go Fish, also held programs to introduce more people to fishing in Nebraska.
- Take ’em Fishing, a program that encourages anglers to take a beginner fishing, with chances to win prizes, continued in 2022 with 950 entries.
- Communication and marketing to keep outdoor activities top-of-mind is crucial for engaging Nebraskans in the outdoors. To boost awareness of fishing and other activities in state park areas, promotional spots highlighting these options appeared statewide in a variety of media channels. Social media, video and digital ads were paired with radio and television messages. New outreach included responsive ads and digital ads in weather apps when conditions favor outdoor pursuits.

Free earned landowner elk permit program - 2022 was the first year of the Free-earned Landowner Elk Permit Program. It allows a person who owns or leases at least 80 acres of farm or ranchland for agricultural purposes to get a free either-sex elk permit following 10 verified general permit antlerless elk harvests on their property. The goal is to increase hunting access opportunities and antlerless elk harvest, while benefitting landowners who regularly have elk on their property.

Collaboration boosts wetlands education and outreach - NGPC collaborated with Platte Basin Timelapse over the past two years to create a series of integrated outreach and educational materials aimed at increasing awareness of the importance of Nebraska wetlands and the need for their conservation. The materials, including an updated Guide to Nebraska's Wetlands, a new publication for children, videos, and photo galleries, offer the opportunity to learn about Nebraska's diverse wetlands. This project was led by commission staff and funded by a grant from the US EPA; partners included Platte Basin Timelapse at the University of Nebraska-Lincoln, the Nebraska Cooperative Fish and Wildlife Research Unit, and Ducks Unlimited.

NGPC recognized for excellence in communications - Game and Parks earned 11 awards of excellence at the 2022 Association for Conservation Information annual conference. The agency received four 1st, four 2nd and three 3rd place awards in the national peer-critique contest. The first-place awards were for: an informational campaign about camping reservations at lakes McConaughy and Ogallala; the marketing campaign for the Nebraska state parks centennial celebration in 2021; for Trail Tales Magazine, a publication for 4th-graders across Nebraska; and for a Nebraskaland Magazine duck hunting photo.

NFWF grant for restoring Sandhills grassland and wetland habitats -NGPC and its partners received a \$4 million grant through the National Fish and Wildlife Foundation (Americas the Beautiful grant) to restore grassland and wetland habitat for at-risk species. A four-year project starting in 2023 will take place in the Sandhills and adjacent areas, where wetlands and streams face alteration and channelization and eastern red cedar is encroaching on native grasslands. A voluntary, incentive-based approach will be used to improve habitat, while sustaining resilient ranching communities. The goals are to build capacity, restore wetlands and streams, and remove trees using mechanical tree removal and prescribed fire. These will benefit a host of at-risk species and other wildlife in the Nebraska Sandhills and adjacent grasslands. Partners include PF/QF, Forever/Quail Forever, Nebraska Grazing Lands Coalition, Northern Prairies Land Trust, Rainwater Basin Joint Venture, Sandhills Task Force, Santee Sioux Nation and TNC.

Combating depredation with landowners - Nebraska Game and Parks continues to work with landowners to reduce wildlife damage issues to crops and property. Timely technical assistance for damage associated with game species was provided to more than 500 people across Nebraska. Nine big game meetings, six landowner elk meetings, and multimedia outreach through the agency's website, radio shows, emails and news releases keep the public informed about tools and resources available to prevent depredation. While hunting is our preferred management tool, we use all of the resources at our disposal to help landowners with wildlife damage.

Stocking fish & mussels enhance aquatic resources - One of Nebraska's strengths is its diversity of sportfishing. We serve anglers by producing a variety of species of fish; in 2022 we stocked more than 65 million fish into 275 waters in 71 counties. These stockings consisted of 20 species of fish, including hybrids. The spring and fall stocking of trout in water bodies across the state is ever-popular with anglers of all ages. Trout also are supplied for the waters hosting community fishing events. In 2022, more than 260,000 trout were stocked at dozens of water bodies.

Fisheries staff also continue to make strides propagating freshwater mussels, which have been in decline naturally over time in the state's streams and rivers. Since 2014, Game and Parks has propagated and stocked threatened mussels in select areas to reestablish populations.

Protecting our waters from invasive species – NGPC is proactively battling any introduction or spread of aquatic invasive species into Nebraska waters. The Missouri River has an existing zebra mussel population along its entire length downstream of Gavins Point Dam. Lewis and Clark Lake, Lake Yankton and the Offutt Base Lake are the only other confirmed Nebraska waters with established zebra mussels. As part of our prevention plan, in 2022, the agency inspected a record 6,627 watercraft, more than 4,000 more than the previous year. We sampled more than 40 water bodies monthly in 2022 for zebra mussel larvae, and we surveyed 39 water bodies across the state for invasive aquatic plants, resulting in seven new detections of Eurasian Watermilfoil and one new detection of Brittle Naiad. A new outreach campaign, “Protect our Waters,” is helping build awareness of aquatic invasive species. The goal is to inform boaters of their role in preventing AIS through thoroughly cleaning, draining and drying their watercraft before leaving a water body.

Hunting regulation changes affect nonresident hunters - Changes to NGPC regulations and orders in 2022 were designed to give residents preference over nonresidents per Nebraska statutes. Nebraska hunters can now purchase deer and antelope permits in non-draw management units before nonresidents. To maintain resident access to hunting permits, Game and Parks established a sales cap on nonresident either-sex or buck-only deer permits for all permits except landowner and youth. Nonresident antelope archery also was added to the list of draw permits, meaning it no longer is unlimited in quantity.

In preparation for 2023, some changes were made affecting turkey hunting with a quota of 10,000 nonresident spring season permits, reduction of personal permit limits to 2 permits for spring turkey (from 3) and to 1 permit for one turkey (from 2 permits each allowing harvest of 2 turkeys), and a shortened fall season.

Game and Parks outdoor recreation resources – by the numbers - Wildlife management areas and private lands in our Open Fields and Waters program offer walk-in access on over 391,000 combined acres for hunting, fishing and trapping. Wildlife Management Areas - 184,423 acres (287 areas) and Open Fields and Waters – 372,600 acres of land/water/wetlands and 40 stream miles.

Nebraska’s state park system is made up of 78 areas encompassing 105,344 acres that also provide fishing, boating, and hunting access. On 57 state recreation areas (65,371 acres) are open for fishing year-round and hunting is allowed, away from campgrounds and facilities, from the Tuesday after Labor Day until the end of spring turkey season (May 31). Eight state parks (31,836 acres) provide limited/managed hunting and fishing; and 10 state historical parks (2,497) acres provide limited/managed hunting where feasible and are open for fishing. We also have family-friendly firearm and archery ranges at 4 parks and many self-serve archery ranges on park areas.

Agency resources - The Nebraska Game and Parks Commission is funded mainly by our users, including revenue from the sale of hunting and fishing permits and stamps, state park entry permits, and fees for camping, lodging and activities in the park system. In 2022, 89% of the agency budget was “user pay” and federal reimbursement, and 11% came from State General Funds.

We also received a new fund in 2022: the **Water Recreation Enhancement Fund** with \$100 million in general fund revenues. The water recreation projects currently authorized will be administered at Lewis and Clark and Lake McConaughy state recreation areas for developing marinas, and development of a lodge, river access and other facilities at Niobrara State Park.

North Dakota

**NORTH DAKOTA
STATE REPORT**
June 2023

Jeb Williams, Director
North Dakota Game and Fish Department
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Bismarck, ND 58501

Midwinter Waterfowl Survey

The North Dakota Game and Fish Department's annual midwinter waterfowl survey in early January indicated about 29,000 Canada geese in the state.

A low count was expected this year for wintering waterfowl given the substantial snowfall and cold temperatures in November and December leading up to the Survey.

During the survey, an estimated 24,400 Canada geese were observed on the Missouri River, and another 4,400 on Nelson Lake in Oliver County. Dinges said after summarizing the numbers, an additional 5,900 mallards were tallied statewide, most of which were recorded on Nelson Lake.

The 10-year average (2013-22) for the midwinter survey in North Dakota is 122,200 Canada geese and 16,500 mallards.

Mobile App

The North Dakota Game and Fish Department developed a [new mobile app](#) that allows outdoor enthusiasts instant access in the field to their licenses, hunting and fishing regulations and other important information.

To download the app, go to Google Play Store or Apple App Store and search NDGF or North Dakota Game and Fish Department.

If users have multiple hunters and anglers in their household, they can add those profiles to the phone or other mobile device as well.

There are other valuable features on the mobile app that will certainly benefit outdoor users, including sunrise, sunset times and some weather forecast information; view or download guides, regulations, proclamations and maps; a buy and apply section, offering quick access to apply in Game and Fish lotteries, purchase licenses and register watercraft; the list goes on.

And like many mobile apps, it uses your location services to bring information back to the user, such as hunting units based on your location or contact information for the game warden in the area.

CWD Test Results

With most chronic wasting disease testing completed, the North Dakota Game and Fish Department reported 24 deer from the 2022 hunting season tested positive.

Eight deer were from hunting unit 3F2; eight from unit 3A1; two from unit 4B; and one from units 3B1 and 3E2. Single positive deer were also found in four new units – 3A3, 3E1, 3F1 and 4F – where the disease had not been previously detected.

Wildlife division chief Casey Anderson said the department is encouraged the number of cases was on par with results from the 2021 hunting season when 26 cases were found.

“While we certainly wish the number was zero, this stable trend is a good thing and supports our current management approach,” he said.

The 2022 results come while the state legislature considers a bill that would strip the Game and Fish Department’s ability to restrict baiting as a means to combat CWD.

CWD forces Game and Fish to make tough decisions that leave some folks unhappy, Anderson said.

“That said, the department is charged with protecting the health of the deer herd for current and future use,” he said. “It’d be irresponsible of us to ignore the serious threat CWD poses, and we hope to have every tool available to do our job. Unfortunately, with CWD, we don’t get a redo.”

Confirmed cases included 22 hunter harvested mule deer; one harvested white-tailed deer; and one mule deer hit by a vehicle. The estimated infection rates among mule deer were 4.9% in unit 3F2 and 9.8% in unit 3A1. Only 4.4% of hunters submitted heads for testing in units where the department focused its surveillance efforts.

Record Count of Bighorn Sheep

The North Dakota Game and Fish Department’s 2022 bighorn sheep survey, completed by recounting lambs in March, revealed a record 347 bighorn sheep in the grasslands of western North Dakota, up 4% from 2021 and 15% above the five-year average. The count surpassed the previous record of 335 bighorns in 2021.

Altogether, biologists counted 96 rams, 206 ewes and 45 lambs. Not included are approximately 40 bighorn sheep in the North Unit of Theodore Roosevelt National Park and bighorns introduced to the Fort Berthold Indian Reservation in 2020.

There are currently about 470 bighorn sheep in the populations managed by the North Dakota Game and Fish Department, National Park Service and the Three Affiliated Tribes Fish and Wildlife Division. Wiedmann said the next benchmark is 500 bighorns in the state, which seemed improbable just a few years ago.

2022 Deer Season Statistics

A total of 47,590 North Dakota deer hunters took approximately 25,093 deer during the 2022 deer gun hunting season, according to a post-season survey conducted by the state Game and Fish Department.

Game and Fish made available 64,200 deer gun licenses last year. Overall hunter success was 53%, with each hunter spending an average of 4.4 days in the field.

“The lower success was due, in part, to deteriorating weather conditions during the beginning of the season,” said Casey Anderson, wildlife chief for the North Dakota Game and Fish Department. “We were met with high winds immediately followed by blizzard conditions, producing measurable snow amounts and below normal temperatures for most of the season.”

Tough Winter

A winter that started in early November and hung around until April like an unwanted guest tested the endurance of wildlife and landowners, both fixtures on the landscape familiar with unpredictable North Dakota weather.

“North Dakota has one of the toughest climates in the lower 48 and this winter was certainly one of the most difficult we’ve seen,” said Bill Haase, state Game and Fish Department assistant wildlife division chief. “Winter was difficult on wildlife and people, and we appreciate all those landowners out there, especially livestock producers who had the tolerance and compassion to deal with the impacts from deer and other animals.”

By early April, the Game and Fish Department had fielded nearly 250 depredation reports statewide for just white-tailed deer. More than 100 of those calls landed in the Jamestown office for deer alone.

Deer depredation was more notable in areas where wildlife habitat was lacking on the landscape. This was especially true in the eastern third of the state where food and cover is generally lacking, thus forcing deer herds to concentrate in isolated livestock operations.

“There are some landowners, livestock producers in particular with livestock feed supplies, who tend to have the most issues with deer and other wildlife being attracted to their locations,” Haase said. “We certainly heard from some and we have a lot of tools that we can help minimize these issues.”

There are short-term solutions that the department can provide producers with depredation issues, such as wrapping bales and motion sirens. And long-term solutions, like permanent hay yards, portable panels designed specifically to keep deer out of livestock feed supplies and food plots. The department provides hay yard materials at no cost and provides cost-share for construction. Currently, there are about 750 of these structures dotting North Dakota’s rural landscape.

While there is a need to help producers safeguard livestock feed supplies, there is also a demand for more wildlife habitat on the landscape.

“Going into winter, we probably had the poorest habitat conditions we’ve had in a long time in the state,” said Kevin Kading, department private land section leader. “There just isn’t much habitat in a lot of places, but we need to rebound somehow. We need habitat on the landscape.”

Going forward, Kading said, if a landowner is interested in developing habitat, there is a host of programs set up to do just that.

“There are more programs, money and funding available right now for habitat than ever before, really,” Kading said. “And it’s not just through the Game and Fish Department. It’s through USDA, partners and other conservation groups. The Game and Fish Department can be a good source to start with. We can certainly walk landowners through all of these different options and point them in the right direction.”

While wildlife habitat is one of the aspects that can help alleviate depredation issues, so is hunting access. Kading said the Department’s Private Land Open To Sportsmen program is a remedy for both of those by providing habitat for wildlife to rebound and providing access opportunities for hunters. To further encourage hunter access, Kading also suggests landowners enrolling in the hunter-landowner contact program and posting Ask Before You Enter signs on their property.

“Our private land staff is well versed in different programs and partner programs that are out there. The simplest and quickest thing we can do is put grass on the ground. It’s quick to establish, and it creates quality fawning and nesting cover,” Kading said. “There are a lot of [different opportunities for landowners](#) that our staff can help with to put grass on the ground.”

ANS Awareness Week

May 14-20 is Aquatic Nuisance Species Awareness Week in North Dakota in an effort to raise the public’s understanding of the preventative steps recreationists need to follow to stop the introduction and spread of ANS in the state’s waterways.

ANS are nonnative plants, animals or pathogens that can affect the ecology of our lakes and rivers and the economic and recreational value of those waterways.

State Game and Fish Department ANS coordinator Ben Holen said ANS awareness week is comprised of state and federal agencies highlighting the ongoing efforts taking place in North Dakota.

“Many partners are taking a collaborative approach by reaching water recreationists, cabin owners, pet owners and water users about stopping the spread of aquatic nuisance species into our state’s lakes and rivers,” Holen said. “We’ve definitely seen an increase in awareness over the past decade.”

North Dakota currently has low numbers of aquatic nuisance species. Other than zebra mussels, just a few invasive plants and animals – curly leaf pondweed, Eurasian watermilfoil, flowering rush, and grass, bighead, silver and common carp – are found in some state waters.

To fight the introduction and spread of unwanted invasives, Holen said some of the shared burden falls on water users. The Game and Fish Department encourages anglers, pleasure boaters and others to clean, drain and dry all equipment after every use. Clean and remove all plants or animals from watercraft or equipment prior to leaving any recreational area. Drain and remove water from all equipment prior to exiting designated access points. Not draining water can be extremely hazardous and may cause negligent transportation of ANS to various locations. Afterwards, verify that all equipment is completely dry before using again.

Deer Season Set

North Dakota's 2023 deer season is set, with 53,400 licenses available to hunters, down 10,800 from last year. In addition, muzzleloader licenses decreased by 146 and restricted youth antlered mule deer licenses by 145.

North Dakota Game and Fish Department wildlife division chief Casey Anderson said population, harvest and survey data indicate the state's deer population is decreasing, with the eastern most hunting units suffering the biggest loss.

"The severity of winter conditions this year was record setting, particularly in the eastern half of the state," Anderson said. "Consequently, there will be fewer deer licenses allocated in 2023; the lowest number of licenses available since 2016. Conservative license allocations are intended to maintain hunting opportunities while continuing to encourage population growth."

High quality deer habitat is not as abundant as in the past, Anderson said, which has limited the potential for population recovery following the severe winter conditions the state just experienced. For example, deer-gun harvest densities in the Red River Valley are down about 90% from what was harvested in 2005. This, he said, is due in part to those hunting units having lost more than approximately 70% of CRP grass cover and other key habitat features.

"If CRP contracts continue to expire, by 2026, 85% of the once 3.4 million acres that were present in 2007 will be lost," Anderson added. "Habitat does not have to be CRP but needs to fulfill winter and fawning habitat needs in particular for numbers to bounce back effectively."

The recently completed mule deer survey showed western North Dakota's mule deer population is 29% lower than last year.

New Legislation

The North Dakota Game and Fish Department tracked 20 outdoors-related bills during the 2023 legislative session, 12 passed both chambers and signed into law.

HB 1014 – Provides an appropriation for defraying the expenses of the industrial commission and agencies under its control. This includes Outdoor Heritage Fund at \$15 million.

HB 1134 – Nonresident current North Dakota national guard members are eligible to receive resident licenses, except lottery permits.

HB 1224 – Allows a dog handler to carry a handgun in the recovery of a big game animal while in the presence of a dog. The dog handler cannot use the handgun to assist in the recovery of the animal.

HB 1233 – Allows a 11-, 12- and 13-year-old antlerless white-tailed deer youth hunter to also hunt during the regular deer gun season.

HB 1260 – Develops agreements to compensate private landowners for the development of habitat on private property for addressing fish and wildlife populations. In addition, allows the Game and Fish director to issue special antlerless elk depredation management licenses to landowners upon payment of the fee required for a resident big game license. To be eligible for this license, a landowner cannot charge a fee for elk hunting and must allow reasonable public access as determined by the director.

HB 1366 – Allows an individual engaged in barefoot skiing or surfing to wear a wet suit. A life preserver must be on board the towing vessel for an individual barefoot skiing or surfing.

HB 1409 – A nonresident youth who is less than 16 years of age may purchase a resident general game hunting license and may hunt small game and waterfowl, except swans and wild turkeys, during the entire regular small game and waterfowl seasons. The accompanying adult family member or legal guardian does not have to be licensed.

HB 1538 – Relates to fishing. Establishes an application fee of \$75 for all tournaments, a conservation fee of an amount to be determined between the tournament sponsor and a representative of the fishing tournament (except for nonprofits), post contest reporting requirements, Game and Fish establishes a fishery conservation fund, and a surcharge of \$5 on each nonresident fishing license. Effective April 1, 2024.

SB 2017 – Establishes an appropriation of \$107,611,466 to the Game and Fish Department for the biennium beginning July 1, 2023, and ending June 30, 2025.

SB 2097 – Requires a political subdivision to notify the Game and Fish director, among others, before engaging in meetings with federal agencies to have any water body in the state designated a wild, scenic or recreational river under the Wild and Scenic Rivers Act.

SB 2297 – Certified game and fish volunteer instructors who have maintained active status in the state for 30 years are eligible to receive complimentary fishing and certain hunting licenses. Emergency clause carried; effective immediately.

SB 2382 – Provides clarity to the motorboat numbering exemptions section of the North Dakota Century Code.

Ohio



STEWARDSHIP

2022 FEATURED ACCOMPLISHMENTS

- **H2Ohio.**
 - Constructed phase one of an enhanced wetland to redirect agricultural runoff and restore a 15-acre wetland at Mercer Wildlife Area to help filter water directly from Grand Lake.
 - Completed construction on the Maumee Bay State Park project to provide water level control to the 130-acre wetland and allow open interchange of Lake Erie with the wetland.
 - Renewed Conservation Reserve Enhancement Program (CREP) agreements with ODA and USDA Farm Service Agency for both Lake Erie and Scioto River CREP areas to improve water quality within those watersheds.
 - Completed nine and funded 38 H2Ohio Water Quality Incentive Program projects in addition to providing further technical assistance for the 3,160 acres of wetlands and riparian buffers previously enrolled in the program.
 - **Wetland Repairs.** Wetlands provide stopover areas for migrating birds, as well as hunting opportunities for those pursuing waterfowl. The Division of Engineering has looked at the needed repairs at Killdeer Plains Wildlife Area and a consulting firm is conducting an assessment to direct upcoming repairs. Two embankment repairs at Indian Creek Wildlife Area have been completed, and design plans for Magee Marsh Wildlife Area's lakefront barrier repair are finalized.
 - **Crayfishes of Ohio.** The Ohio Division of Wildlife, Midwest Biodiversity Institute, and the Ohio Biological Survey partnered to complete a three-year statewide survey of Ohio's crayfish and publish *A Naturalist's Guide to the Crayfishes of Ohio*, authored by Roger F. Thoma.
 - **Wildlife Trade.** Worked with partners to successfully prosecute two individuals selling marbled crayfish. One individual sold the crayfish over the Internet, shipping them to 38 different states and one U.S. territory. The Ohio Division of Wildlife presented investigation results to enforcement officers in other states and publicized efforts to prevent similar actions in the future.
 - **Sandhill Crane and Barn Owl Surveys.** The spring sandhill crane and barn owl surveys were expanded. Feathers are being collected and biologists are contacting landowners to further our ability to track changes in crane and owl populations, which remain on Ohio's state threatened species list.
 - **White-tailed Deer Herd Monitoring.** Ohio Division of Wildlife staff collected age information from 1,247 deer. Deer harvested during the first two weekends of November were compared with those harvested during the traditional seven-day gun season. No significant differences in age distribution were noted for antler-
- less deer; however, antlered deer harvested during archery season were generally older. Initial evidence suggests that hunter selectivity varies across the different phases of the deer season.
 - **Ohio River Trophy Catfish.** Discussions continued among Ohio River Fisheries Management Team member states to review and consider revision and standardization of Ohio River catfish regulations based on insights from recent tagging studies and additional data.
 - **Conserve Habitat and Provide Opportunities.** The remaining transfer of 16,300 acres at Appalachian Hills Wildlife Area was completed, along with the acquisitions of 30 acres of wet woods habitat at Funk Bottoms Wildlife Area, and 477 acres at Woodland Trails Wildlife Area. We continue to work with landowners to resolve a 30-acre inholding at Eagle Creek Wildlife Area.
 - **Replace Major Equipment.** Replaced the Ohio Division of Wildlife's helicopter and initiated the process to procure a vendor for building the Lake Erie research boat. These vehicles are used to survey and monitor wildlife populations which help to guide our management decisions. Additionally, a fish-hauling truck used in stocking operations at Senecaville State Fish Hatchery was replaced.
 - **Downlisting of Four Fish Species.** The Ohio Division of Wildlife downlisted the status of alligator gar, blacknose shiner, longhead darter, and Tippecanoe darter, as populations were noted to have increased through improved water quality resulting from the Clean Water Act and repatriation projects.
 - **Marine Stewardship Council Sustainability Certification.** Ohio and Ontario, Canada fisheries staff completed the first annual audit following a five-year recertification of the Lake Erie yellow perch commercial fishery. Many large seafood retailers require products to be certified and the certification is based on management, enforcement, and operation of the fishery. The Division of Wildlife participates in interagency management of the yellow perch fishery on Lake Erie to support sustainable sport and commercial harvest.
 - **Lake Erie Yellow Perch Harvest Regulations.** Ohio successfully passed Ohio Administrative Code modifications to modernize angler daily limits and commercial trap net quota allocations. These changes help maintain harvest levels within the Ohio jurisdiction that are below annual Total Allowable Catch set by the Great Lakes Fishery Commission, Lake Erie Committee.
 - **Lake Erie Yellow Perch Research.** Central basin yellow perch research was funded through The Ohio State University to determine the distribution of adult yellow perch in relation to environmental variables. The results of this study will be used to evaluate annual fisheries assessment surveys in relation to how perch interact with seasonal oxygen levels.



STEWARDSHIP

2023 FOCUSED INITIATIVES

- **Wildlife Population Research.** New wildlife research projects will be initiated to study population dynamics of hen wild turkeys and gray fox, evaluate strategies to reduce livestock predation by coyotes, and create spatial habitat models for ruffed grouse and ring-necked pheasants.
- **Dragonflies and Damselflies of Ohio.** The Ohio Division of Wildlife, The Ohio State University, and the Ohio Biological Survey partnered to complete a four-year statewide survey of odonates which will culminate in the publication of *A Naturalist's Guide to the Dragonflies and Damselflies of Ohio*, authored by Jim McCormac, Dave McShaffrey, and MaLisa Spring, in 2023.
- **Natural Resource Damage Assessment Funds Directed to Conservation Efforts at Ohio Zoos.** Through a settlement with Monsanto, the Ohio Department of Natural Resources received \$750,000 which will be directed to the Columbus and Toledo zoos to upgrade facilities for rare mussel, fish, reptile, and amphibian research and repatriation efforts.
- **Reassessment of the Grass Carp Eradication Efforts in the Western Basin of Lake Erie.** The Division of Wildlife is heading into the last year of the *Lake Erie Grass Carp Response Strategy (2019-2023)*. In 2023, we will work with the Michigan Department of Natural Resources and the Great Lakes Fishery Commission to develop a plan for the next five years with the goal to eradicate grass carp from Lake Erie by targeted removal (University of Toledo) and the development of a behavioral barrier on the Sandusky River (USACE).
- **Green Energy Solutions.** Explore feasibility of and incorporate green energy solutions into planned facilities, such as shooting ranges, to help offset rising energy costs and create sustainable infrastructure.
- **Cuyahoga River Lake Sturgeon Rehabilitation.** The Ohio Division of Wildlife is collaborating with the U.S. Fish and Wildlife Service and the National Park Service to determine whether habitat improvements in the Cuyahoga River provide the potential for successful lake sturgeon stocking and reproduction. A long-term annual stocking program, like efforts in the Maumee River, is being considered following completion of habitat evaluations and creation of a rehabilitation plan.
- **Sandusky and Maumee Rivers Sauger Reintroduction.** Research at the University of Toledo is being supported to determine the potential for successful sauger reintroduction in the Sandusky and Maumee rivers. Sauger were historically abundant in Lake Erie river, bay, and nearshore habitat prior to their extirpation resulting from environmental degradation and overharvest. Researchers at the University of Toledo will seek to determine whether stocking sauger could lead to a self-sustaining population given removal of the Ballville Dam and habitat and water quality improvements of the past five decades.
- **Chronic Wasting Disease Outreach.** Focus on education and enforcement of deer carcass transportation and disease surveillance area rules to help control the spread of Chronic Wasting Disease.
- **Injurious Aquatic Invasive Species.** Work with the aquaculture industry and pet trade to update the injurious species list and prevent the movement of injurious aquatic invasive species.



OPPORTUNITIES

2022 FEATURED ACCOMPLISHMENTS

- **Shooting Ranges.** Construction was completed and Indian Creek and Tranquility wildlife area shooting ranges were opened to the public. Indian Creek is a new range offering additional shooting opportunities in southwest Ohio. Both ranges offer multiple distances for shooters.
- **Controlled Hunts.** Using the digital marketing platform, staff sent targeted emails to those who have participated in controlled hunting opportunities in the past to remind them to continue participation as well as inform them of changes. The customer base continues to grow.
- **Ohio Landowner Hunter Access Program.** Overall, 90% of survey respondents indicated they were satisfied or somewhat satisfied with the Ohio Landowner-Hunter Access Partnership program. By adding additional properties, the Division of Wildlife will likely increase both hunter participation and satisfaction. The spring 2022 sign-up enrolled 37 new contracts for 7,889 new acres.
- **Lake Erie Fish Cleaning Stations.** State-of-the-art fish cleaning stations are under construction along the Lake Erie shoreline in cooperation with local partners at Huron, Avon Lake, and Marblehead (Mazurik Boat Ramp). These facilities will open for use during the spring of 2023 and feature cutting tables, water service, and fish waste disposal. The project at Mazurik also includes a new four-season restroom.
- **Fish Stocking.** During 2022, the Division of Wildlife stocked more than 52 million fish of 11 different species in Ohio's public waters. This exceeded the 44 million fish requested for stocking by fisheries managers largely due to exceptional production of walleye, saugeye, and yellow perch fry. All program needs were met while stocking 203 waters statewide to maintain and improve opportunities for Ohio anglers.
- **Updated Boat Access Facilities and Repaired Dams.** Facility improvements including installation of an accessible fishing pier, new ramps, parking areas and access lanes, as well as courtesy docks and dredging were completed at 13 sites. Project sites included those at South Bloomfield and Elmon Richards accesses and Griggs Reservoir (Scioto River); Killbuck-Walwhonding River

Access; Powhatan Point Marina (Ohio River); as well as Zepernick, Fox, Greenfield, Rock Mill, Mogadore, and Monroe lakes. Additionally, a kayak launch and turnaround were installed at Knox Lake and preliminary efforts to improve the Fairport Harbor access began. Dam assessments and remedial repairs were initiated at Spencer, Wingfoot, Highlandtown, Clark, Rupert, and Shreve lakes.

2023 FOCUSED INITIATIVES

- **Senecaville State Fish Hatchery Capital Improvement Project.** Design plans have been completed and a contractor has been selected for a \$1.6 million capital improvement project at Senecaville State Fish Hatchery. This hatchery produces walleye, saugeye, hybrid-striped bass, and channel catfish for stocking statewide. Project construction will begin in the spring.
- **London State Fish Hatchery Display Pools.** New display pools will be constructed at London State Fish Hatchery to feature fish raised at this hatchery (brown trout, rainbow trout, and muskellunge) and other fish of Ohio.
- **Dam Repair.** Repairs will be made to dams at Spencer Lake and Highlandtown Lake and progress will continue to be made towards restoration of the Shreve Lake dam.
- **Fishing Pier.** A new fishing pier that is compliant with the Americans with Disabilities Act will be constructed at Tycoon Lake.
- **Boating Access Partnerships.** Ohio Division of Wildlife staff are working with several localities to provide improvements to boating access at Fairport Harbor Marina, Steubenville Marina, and Neville Boat Ramp.
- **Grand River Shooting Range.** This project is in the design phase with construction slated to begin in 2023. This range update will include additional shooting positions out to 200 yards, an outdoor education center, archery courses, and restrooms.
- **Ohio Landowner - Hunter Access Program Expansion.** Renew existing property agreements and expand the OLHAP program to provide additional properties for hunter access. Competitive funding for habitat improvements on OLHAP properties will be available for participating landowners.



EXCELLENCE

2022 FEATURED ACCOMPLISHMENTS

- **Wildlife Officers.** Through an extremely stringent process, the Ohio Division of Wildlife hired 11 new wildlife officer cadets and started training them to fill vacancies. Upon completing basic peace officer training, they will complete a specialized wildlife officer school and then six months of field training.
- **Fish Hatchery Improvements.** A comprehensive assessment of state fish hatcheries resulted in proceeding with a \$1.2 million infrastructure improvement project at London State Fish Hatchery. This hatchery produces brown trout, rainbow trout, and muskellunge.
- **Shooting Range Check-in Process.** Created a remote check-in process at Indian Creek and Tranquility wildlife area shooting ranges in partnership with Sovereign Sportsman Solutions. The system allows users to scan their shooting range permits for entrance and makes check-out more efficient.
- **Update Statewide Fisheries Database.** Preliminary project documents and a request for proposals were completed in efforts to enhance the database that houses fisheries survey data collected from Ohio's inland lakes, the Ohio River, and Lake Erie. The revision will improve data entry, security, and use in addition to improving public access to summary information.
- **Conservation Adventures.** The Ohio Division of Wildlife continues to partner with the Sportsmen's Alliance Foundation and their Conservation Adventures program. More than 50 schools around the state have adopted the curriculum and interest continues to grow. This program is aimed at increasing wildlife conservation education programs and fundamentally shifts the way we educate high school students about the value and importance of conservation.
- **Law Enforcement Operations.** A plan was implemented during 2022 to restructure the Ohio Division of Wildlife's law enforcement operations, including the position of district enforcement operations manager. Designated as a uniform position, these managers guide all enforcement operations in their respective districts, while at the same time being ready to respond to assist officers or in an emergency. In 2022, all positions were filled.
- **Pre-Planning Environmental Assessment Tool.** Worked with InnovateOhio Platform to develop a self-service planning tool that helps users identify where potential interactions with sen-

sitive species in Ohio might occur. The tool provides up-front data inquiry visualization to prevent disruptions to wildlife and delays in development, and helps planning consultants meet permit requirements.

2023 FOCUSED INITIATIVES

- **Sport Fish Data Visualization in the DataOhio Portal.** An updated statewide fisheries database will improve public access to summary sport fish information in the DataOhio Portal. The new visualization will add to fish stocking information in the DataOhio Portal and provide comparisons of fish populations that can further guide angler decisions on where to fish in Ohio waters.
- **Expanding the Extent of Acoustic Tagging Efforts on Lake Erie.** Pilot projects are underway to expand acoustic tagging efforts to yellow perch and smallmouth bass. Management of walleye, lake sturgeon, and other large-bodied Great Lakes fish species has greatly benefited from acoustic tagging efforts that are supported by the Great Lakes Acoustic Telemetry Observation System. New projects will help determine optimal tag sizes for survival and detection of small-bodied fish such as yellow perch and the number and placement of additional receivers needed to optimize detection of smallmouth bass and other species that primarily inhabit shallow nearshore areas and may not move as extensively.
- **Water Safety Training.** Implement additional water rescue and survival training for wildlife officers to better prepare them to aid the public and fellow officers in times of crisis.
- **Wildlife Officers.** We will hire 15 new wildlife officer cadets. The new cadets will fill anticipated vacancies because of retirements. Wildlife officers combine law enforcement and wildlife conservation with public service.
- **Wildlife Management & Research Staffing.** Staffing reorganization of the Wildlife Management & Research section will include hiring 6 Assistant Wildlife Management Supervisors, 8 Wildlife Management Consultants, 3 Wildlife Research Technicians, and backfilling Wildlife Area Technician positions to increase customer engagement with private landowners and increase habitat management on public lands.



CONNECTIONS

2022 FEATURED ACCOMPLISHMENTS

- **Private Lands Outreach.** Staff supported statewide habitat improvement initiatives and developed partnerships for private land development of young forest habitat projects.
 - Took part in the Ohio Interagency Forestry Team and cross-agency prescribed fires with the Ohio Division of Forestry and Wayne National Forest in the Hocking Plateau Shared Stewardship Project Area.
 - Participated in landowner field days with the Pheasants Forever Working Lands for Wildlife Grazing Specialist to discuss habitat improvement efforts for bobwhite quail in southern Ohio.
 - Worked with partners to market extra Division of Wildlife EQIP funding to establish wild turkey habitat improvement practices. Efforts resulted in almost \$3 million and nearly 500 EQIP contracts in Ohio.
 - Co-hosted both landowner and professional wild turkey habitat workshops with Ohio State University Extension, the National Wild Turkey Federation, and other partners.
 - Created a spatial habitat model for ruffed grouse habitat in eastern Ohio to target areas for young forest creation.
 - Worked with USDA-FSA and NRCS, Ohio Department of Agriculture, and other partners to implement H2Ohio WQIP and the Lake Erie CREP.
 - Partnered with the Ohio Division of Forestry, Ohio Society of American Foresters, and The Nature Conservancy to create a website providing a listing of forestry and wildlife habitat vendors.
- **Lake Erie Charter Boat Captain Certification Program.** The Division of Wildlife partnered with Ohio Sea Grant and Lake Erie charter boat captains to develop a Charter Boat Captain Certification Program. The certification promotes the charter industry, fisheries stewardship, sustainable resource use, and ethical fishing and boating through a series of educational modules as part of a complete curriculum. The program will launch during 2023.
- **Customer Relationship Management System.** Staff have evaluated the current license sales system and established desired capabilities and functions for a more comprehensive customer relationship management system.
- **Magee Marsh Visitor Center Under Renovation.** Renovation of the Magee Marsh Visitor Center is scheduled to be complet-

ed in spring 2023, in time to welcome birders. The updated information center will be attractive and accessible and feature educational, immersive displays about the area's hunting heritage, its wildlife and habitats, and ongoing conservation work.

- **International Mentorship Program.** In conjunction with the Great Lakes Fishery Commission and the African Center for Aquatic Research and Education's African Women in Science Program, the Ohio Division of Wildlife hosted delegates from Kenya, Malawi, Rwanda, Tanzania, and Uganda. Lake Erie staff demonstrated sampling techniques, discussed inter-agency management, and learned about the scientific and cultural differences that the African scientists experience at home. Several staff continue to meet with these scientists through a mentorship program.
- **Implemented Digital Marketing Tools.** In partnership with Sovereign Sportsman Solutions, we implemented the use of marketing automation and a customer relationship management platform. Optimized campaigns continue to expand product promotion to new audiences. These tools help us to strengthen our service and connections to hunters, anglers, and wildlife conservation supporters.

2023 FOCUSED INITIATIVES

- **Put-in-Bay Aquatic Visitor's Center.** Work will begin on a \$5 million renovation of the Put-in-Bay Aquatic Visitor's Center that will upgrade the facility and prepare it for future outreach and education.
- **Visible Patrols.** As people return to the outdoors and the use of our areas increases, we will focus on more visible patrols on heavily used Ohio Division of Wildlife properties so visitors feel safe while using our areas. These patrols will protect our properties from misuse or abuse and protect the public that has come to enjoy our natural resources.
- **Review and Update Resources.** The Ohio Division of Wildlife has a wealth of resources available for use by the public. We will review publications and online information to ensure clear, accurate information is provided and readily available to the public to gain compliance with regulations.
- **Engaging New Audiences.** Explore ways to reach new persons to help them comply with regulations. This outreach could translate into better compliance and foster good relationships between the public and the Ohio Division of Wildlife.



ENGAGEMENT

2022 FEATURED ACCOMPLISHMENTS

- **Wild Ohio Harvest Community Website.** The website expanded online skills content and recipes to equip the public with the knowledge and confidence to pursue wildlife recreation. Additional resources promote opportunities to gain hands-on experience in a professionally led class, course, or experience.
- **Wild Ohio.** The magazine continues to be recognized for its award-winning content and design. With more than 40,000 subscribers, article topics are being expanded to encompass all the ways Ohioans participate in outdoor recreation. The 2022 calendar edition featured a new 13-month layout while continuing to display the very best of wildlife photography.
- **Kayak Locker.** The cellular service necessary to operate self-service kayak lockers was not sufficient at Appalachian Hills Wildlife Area; therefore, the locker will be installed at Wildlife District Three in Akron to provide users with the ability to rent one of six kayaks to enjoy the various fishing ponds.
- **Citizen Science Participation.** In collaboration with the International Crane Foundation and the Ohio Bird Conservation Initiative, the Division of Wildlife helped coordinate a 24-county sandhill crane count. More than 300 sandhill cranes, a state-threatened species, were documented in the state.
- **Bee Survey.** In partnership with The Ohio State University, Ohio Bee Survey volunteers and lab members netted approximately 116 species of bees statewide. Sixty-five of these species are considered specialists, meaning they are dependent on a select few flowering plant species, demonstrating the importance of biodiversity.
- **Bat Survey.** The Division of Wildlife along with 32 volunteers completed 18 mobile acoustic survey routes to study bat distribution in Ohio. Seven of these routes were new in 2022 and the remaining routes have been surveyed at least once before. All data are uploaded to the North American Bat Monitoring Program, which monitors bat population trends for the entire continent.
- **Trout and Steelhead Summit.** The Division of Wildlife met with members of 19 Ohio trout fishing organizations and clubs, Cleveland Metroparks, and Geauga Park District at a stakeholder summit to provide updates and facilitate discussions about trout in Ohio.

2023 FOCUSED INITIATIVES

- **Hatchery Engagement.** Install informational kiosks at the state fish hatcheries to provide the public with more awareness of hatchery operations and facility opportunities. Additionally, develop a self-guided walking tour for visitors at St. Marys State Fish Hatchery.
- **Lake Erie State of the Lake Dashboard.** Lake Erie fisheries staff worked with interagency partners and the Great Lakes Fishery Commission to publish an interactive dashboard that characterizes the status of Lake Erie fish populations. Survey and fisheries indicators are used to graphically display the status of fish stocks that are important to stakeholder groups. The dashboard replaces printed publications and provides an easily updated format to summarize each five-year assessment period.
- **Wildlife Rehabilitation.** Work with licensed wildlife rehabilitators to improve and implement additional minimum standards for wildlife care, providing a resource the public can turn to with injured wild animals.
- **Wild Ohio Harvest Community Expansion.** Continue to build partnerships with new organizations and connect them to Wild Ohio Harvest Community resources online and in person.
- **Expanded Student Outreach.** Continue to expand the Ohio Division of Wildlife's education and outreach to middle schools and high schools by supporting student wildlife research projects. Grants, professional development for teachers, and coordination of the Environmental Education Council of Ohio's annual Student Wildlife Research Symposium further enhance this initiative.



South Dakota

SOUTH DAKOTA STATE REPORT 2023

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Law Enforcement Program

Like many wildlife agencies across the Midwest, the recruitment and retention of conservation officers have been at the forefront of the Department's attention and efforts over the past year. The number of vacant Wildlife Conservation Officer (WCO) positions has ebbed and flowed throughout that time, but in the summer of 2022, there was an all-time high when that number reached twenty. While this was concerning, there was some good news on the horizon: the number of job offers made to qualified applicants was in double digits, setting another record with twelve conditional offers made in one year!

While twenty vacant WCO positions are incredibly concerning, several steps have been taken to increase the number and quality of applicants. First, WCOs were part of a targeted pay increase that increased the starting salary of a new WCO to a much more competitive rate and increased the wages for veteran officers. Second, a much greater emphasis has been put on the recruitment phase.

Many seasonal employees and interns work for the Department, and WCOs made a great effort to contact as many of those individuals to see if they were interested in becoming a WCO, and if they were, a ride-along opportunity was presented.

Third, social media platforms were strategically used to generate interest and announce open positions.

And finally, there was a broadening approach in the examination of prior work and educational experience in the applicants that were being selected. There is momentum right now, and it is truly an exciting time to be a Conservation Officer for the South Dakota Game, Fish and Parks!

Habitat and Access

Habitat and access continue to be the top priority for the Wildlife Division within South Dakota Game, Fish and Parks (GFP). To be able to take monumental steps forward, GFP recognizes it must continue to partner with private landowners to restore, create, enhance, and protect fish and wildlife habitats while also providing the public with reasonable access to hunting and fishing opportunities. With this also comes the need to provide the financial and human resources specifically dedicated to supporting and enhancing these efforts.

Financial resources to support habitat and access programs is variable and primarily based on license sales and financial resources, including Pittman-Robertson and Dingle-Johnson funds. GFP continues to seek additional funding opportunities and recruit, reactivate, and retain outdoor recreationists who will help expand and support the future of conservation through license purchases.

Partnering with private landowners on habitat and access projects remains critical and requires additional human resources. In 2022, GFP increased the number of Private Lands Habitat Biologists from four to twelve statewide. This change expanded the program delivery capacity and effectiveness in meeting with landowners. With this change, a record for the number of acres impacted by GFP private lands habitat programs was set in 2022 at just over 91,000 acres.

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Over 1.48 million acres of private land were opened to public hunting access in 2022 through GFP's access programs. Most of these were enrolled in the Walk-in Area program, which eclipsed 1.3 million acres with 1,498 cooperators. GFP also leased private land for public hunting access through our Controlled Hunting Access Program (CHAP), which provides additional flexibility for the landowner and more control over the number of hunters using the area. Eighteen CHAP areas totaling over 30,000 acres were enrolled statewide and provided 1,300 hunters days of use.

In the fall, the Big Sioux River Watershed CREP project was launched in partnership with USDA to create 25,000 acres of grassland and wetland habitat open to public hunting and fishing access. It is modeled closely after the James River Watershed CREP, which has over 76,000 acres enrolled. Over 40% of the state's population resides in the Big Sioux River watershed.

CREP will provide quality hunting and fishing opportunities close to home for many hunters and anglers, aligning with R3 goals. The water quality benefits of this project are also significant and have garnered additional financial support for enrollments close to impaired lakes and streams from the East Dakota Watershed Development District and incentives from the SD Department of Agriculture and Natural Resources.

GFP contributed financial support to 21 partner positions that will help deliver GFP habitat and access programs along with many other federal, state, and NGO programs. These partnerships have played a vital role in implementing habitat and access programs across the state. GFP will continue to evaluate opportunities as funding is available to support additional partner positions expanding conservation efforts. Beyond supporting partner positions, GFP has been crucial in providing non-federal match dollars or projects for several NGOs.

These organizations have used this match to leverage additional funds through various grant opportunities to develop, protect, and enhance additional habitats in South Dakota. GFP values these relationships with NGOs and recognizes their essential role in conservation.

Habitat Stamp

Aquatic habitat and access staff have focused on a broader range of project types. In 2022, projects completed improved both aquatic habitats and access to public waters in 26 counties across the state. One of the focus areas was achieving infrastructure improvements to 18 dams of the 84 owned by GFP to ensure their longevity. Staff completed 11 boat ramp projects, with two new establishments and two major overhauls. Docks and pier projects are very popular, with seven new docks and four new piers established at waters that did not have them. Four trails totaling 2.5 miles were updated to improve access at 4 locations. One dredging project was completed to restore an impoundment. And 27 other access improvement projects were constructed around the state that consisted of items like ice access, kayak/canoe access, solar lights at boat ramps, parking improvements, cattail removals to improve shore fishing opportunities, steps down cut banks, ADA improvements, native plantings, and engineering design work.

Terrestrial habitat crews focused their habitat stamp project efforts on the 285,000 acres of Game Production Areas (GPAs) across South Dakota. Many of the habitat improvement projects completed in 2022 were previously identified in the 2018 GPA assessment - an evaluation process undertaken to identify specific habitat and access improvement opportunities on GPAs. Completed projects included improving public access trails on 26 GPAs; improving grazing management infrastructure on 18 GPAs; seeding 1,628 acres of high diversity grassland nesting cover and pollinator plots on 31 GPAs; planting

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28 acres of woody cover and shelterbelts on 10 GPAs; developing waterfowl hunting access trails or ramps at 10 GPAs; and enhancing 1,521 acres of grassland and forest on 11 GPAs by removing undesirable invasive woody species. An assessment will be conducted again in 2023 to evaluate all GPAs.

Western South Dakota Shooting Sports Complex

The Department continues to move forward with plans to develop a world-class firearm range in western South Dakota. The complex will be open to the public, youth groups, shooting sports groups, and others. Final design plans have been completed to construct the complex on a GFP-owned 400-acre property well suited to accommodate this opportunity. Fundraising continues to raise private donations to offset the project's cost; about \$3 million has been raised or committed.

CWD Status and Action Plan Implementation

Enhanced surveillance efforts from the 2022 deer and elk hunting seasons detected chronic wasting disease (CWD) in one additional county (Union County). CWD is now confirmed within 20 counties and, for the first time, detected in the far southeastern corner of South Dakota in free-ranging cervids. Test results on 1,027 samples indicate that 23 white-tailed deer, 11 mule deer, and 23 elk were CWD-positive. As a result, new priority areas will be targeted for surveillance during the 2023 hunting season. In 2020, the GFP Commission modified regulations for transporting and disposing of deer and elk carcasses. Any deer or elk transported outside the county of the harvest would have to be disposed of with a waste management provider or permitted landfill. Additional information on CWD in South Dakota can be found at <https://gfp.sd.gov/wildlife-disease/>.

Nest Predator Bounty Program

As part of Governor Noem's Second Century Initiative, GFP implemented the fourth year of the Nest Predator Bounty Program in 2022. While this program focuses on enhancing pheasant and duck nest survival by utilizing localized predator control (a management tool used for decades in South Dakota), the program was also designed to engage youth and others outdoors. Participants can learn about predators, trapping, obtaining landowner permission, habitat, and how all the different components work together across the landscape. Ultimately, this program is building broader support for the need for habitat and outdoor recreation by people across South Dakota and from a broader group of people than our traditional users.

New for 2022, March was open exclusively for resident youth under 18. The program then opened on April 1 to all South Dakota residents. Youth comprised 32% of the total participants, higher than in 2021 at 29%. 143 youth participated in the youth-only month of March, removing 2,100 nest predators. Overall, there were 2,367 participants of all ages, removing 55,220 nest predators. Similar to 2021, GFP drew the name of a youth participant to receive three live traps, a knife, and a trapping handbook each week; 16 names were drawn. GFP continues to partner with South Dakota State University extension and 4H to offer ETHICS SD, a hands-on all-inclusive trapping education program.

AIS Field Operations and Communication Plans for 2023

Slowing the spread of AIS in South Dakota and emphasizing zebra mussel management is the focus of 2023 AIS field operations and outreach and marketing efforts. Zebra mussels have been documented in the lower three Missouri River reservoirs, ten eastern South Dakota waters, and one western South Dakota reservoir as of April 2023. Management objectives for field operations in 2023 include slowing the spread of zebra mussels in South Dakota waters, using inspection stations to develop best management practices, and maximizing contacts with boaters. Grant funds have been provided by the US Fish and Wildlife

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Service for access-based watercraft inspection stations at six western reservoirs this summer. Roadside inspection stations will be used in central and eastern South Dakota to aid in adopting best practices to minimize water movement by watercraft. A roving inspection crew will also be used in eastern South Dakota to conduct access-based inspections.

The main messages shared through the 2023 Outreach and Marketing campaign are "Clean, Drain, Dry" and "Inspections are easy. If you see a station, you need to do your part", as well as increasing awareness of AIS species and AIS infested waterbodies. In addition to standard news releases, advertisements, and social media posts, gas station TV and a zebra mussel "Instant Experience" will be the primary outreach tools. The "Instant Experience" is a short series of slides on a cell phone on reducing the spread of AIS. Geolocation technology will be used to place ad content on cell phone applications for people who stop at an inspection station or a gas station in the TV network. Specific communication packets have also been developed for groups, such as lake associations and marina slip holders on infested waters, to help inform users of best practices on these waterbodies.

Go Outdoors South Dakota

On December 15, 2021, GFP officially launched Go Outdoors South Dakota, a new one-stop shop E-commerce system! This one-stop shop allows customers to purchase their hunting or fishing licenses while making a camping reservation and purchasing their park entrance license in one transaction.

Whether customers were visiting the parks, fishing, or applying for licenses, they could interact with the new system and do all their business with GFP through one streamlined platform. The 2022 elk application period saw a record number of applications taken through the new system, with over 40,000 total applications received across all five elk seasons. The 2022 deer application period also saw high numbers, with over 70,000 applications received for the six major firearm deer seasons.

The State Parks and Recreation areas saw over 394,000 camping nights reserved in Go Outdoors South Dakota. This was almost identical to the number of camping nights reserved in 2021. Park entrance license sales totaled nearly \$600,000 in the new system. With 76,581 nonresident small game licenses and 38,549 fishing licenses sold, license sales were on par with 2021. Staff worked through a few issues and learned the new system, all while still providing the best experience possible for those people in parks, on the water, and in the field. Front-line staff, park staff, and licensing staff were monumental in helping those first-time visitors through the new territory.

GFP staff continues to listen to our customers regarding feedback on the new system. Staff continues to work to make the system even more user-friendly diligently. Hunters and anglers could also auto-renew their licenses for 2023, see all eligible preference points for 2022 applied to their accounts for the 2023 application seasons, and will continue to see enhancements to system performance.

As with any technology upgrade, it has taken time for customers to adjust to the new system and to have the new system work the way GFP intended. Nevertheless, GFP continues to be committed to our focus of combining customer service with innovative technology to enhance the user's experience online to get them outdoors. GFP's goal is to get our customers out doing what they love the most while creating memories and helping sustain our state's outdoor heritage.

Record Year of Fish Stocking

South Dakota public fishing waters were stocked with abundant fish in 2022. Nineteen fish species were placed into 138 lakes and streams. The 66 million fish stocked were produced by state, federal, and private hatcheries, along with fish trapped and relocated from other waters.

Newly hatched walleye and saugeye fry accounted for most of the fish stocked, with 56 million released into 58 lakes. Nearly six million walleye and saugeye juveniles (ranging from one-to-several inches long) were also released into 48 lakes. Larger, catchable-sized fish accounted for most of the weight stocked, with fifteen fish species from one-half to several pounds stocked in 117 ponds, lakes, and streams. A record 220,000 pounds of trout and salmon were stocked into South Dakota public fishing waters in 2022. The stocking of large, 2-to-4-pound rainbow trout continues to expand in Black Hills lakes.

Novel stockings in 2022 included large juvenile walleyes from Blue Dog State Fish Hatchery in the fall. These stockings took the place of walleyes typically produced by natural rearing ponds. This year, the first stockings of intensively reared juvenile walleyes from Cleghorn Springs State Fish Hatchery also occurred. These walleyes, adult hybrid sunfish, and juvenile bluegill were produced at Cleghorn using new Recirculating Aquaculture System technology. This year's other unique stockings included 115, 10-to-20-pound muskellunge given to South Dakota by Utah, and kokanee salmon, obtained as eggs from Wyoming.

Wisconsin



WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2023 STATE REPORT
May 19, 2023

Diane Brusoe, Administrator
Division of Fish, Wildlife, & Parks
101 S. Webster St.
Madison, WI 53707

BUREAU OF WILDLIFE MANAGEMENT

Staffing

During the course of the calendar year 2022, the Bureau of Wildlife Management experienced 21 positions being vacant or a 14% vacancy rate. These positions ranged from Wildlife Section Supervisors to Wildlife Technicians.

Across the Agency and specifically within the Wildlife Management program, a significant focus was put on filling vacant positions around the state over the last year. Specifically, within Wildlife Management, the following positions were filled:

- 3 Wildlife Section Supervisors
- 2 Statewide Staff Specialists
- 6 Wildlife Biologist positions
- 4 Wildlife Technician positions
- 2 Wildlife Conservation Educators

Although significant progress was made on filling vacant positions, the following positions were vacant during a portion of the calendar year with the goal of filling them during the 2023 calendar year:

- 1 Communications Specialist
- 1 Deer Herd Health Specialist
- 2 Wildlife Technicians

Wolf Management Plan

The department began efforts to update the state wolf management plan shortly after the January 4th, 2021, federal de-listing of gray wolves, which returned management authority of

gray wolves to the states and tribes. Gray wolves were subsequently federally re-listed on February 10th, 2022, however work continued unabated to update WI's Wolf Management Plan. Since February 2022 there has been much work to create a draft wolf management plan and the public comment period on that draft plan closed in early 2023, and the WDNR published the comments on our website. In total, we received around 3,500 comments. Staff are currently reviewing comments and considering edits to the proposed plan. A final plan will go before the Natural resources board for approval in the fall of 2023.

Sharptailed Grouse Management Plan

Sharp-tailed grouse are managed as a game species in Wisconsin and are listed as a Species of Greatest Conservation Need due to habitat loss, and other factors that may threaten the persistence of the species. Fragmentation of large blocks of open landscape, ecological succession, and conversion of habitats to other uses are likely the main factors contributing to this decline. Other potential factors include genetic degradation, over-harvest, and disease. In Wisconsin, sharp-tailed grouse exist primarily on a core group of six managed barrens public properties and scattered private lands. Long-term population declines and range contractions provide the greatest evidence of need for an updated conservation and management plan for sharp-tailed grouse. Conservation genetics research demonstrating that Wisconsin sharp-tailed grouse have significantly reduced genetic diversity, high levels of inbreeding, and genetic isolation provide additional urgency.

Therefore, the WDNR Sharp-tailed Grouse Working Group and Advisory Committee, was charged with revising and updating the Wisconsin Sharp-tailed Grouse Management Plan. Membership of both the working group and committee is comprised of DNR representatives as well as other state, county, federal, tribal, and non-governmental agencies and partners. This effort began in the winter of 2022 with the overarching goal to ensure a managed sustainable population of sharp-tailed grouse in Wisconsin, by implementing landscape level habitat strategies within the Northwest Focus Area. The plan to accomplish this goal is by focusing management and research efforts on the existing core range of sharp-tailed grouse in northern Wisconsin, specifically the Northwest Focus Area. Further, the vision for this overall management effort is to develop and facilitate a voluntary and cooperative partnership among public and private organizations to ensure the long-term viability of sharp-tailed grouse populations in Wisconsin through an ecological landscape and conservation area, or focus area, approach.

Greater Prairie Chicken Management Plan

Greater prairie chickens are one of the most unique and charismatic wildlife species in Wisconsin. Landscape-level land use changes have caused large shifts in the range and abundance of prairie chickens, finally resulting in their isolation in a small portion of central Wisconsin. In recent decades the range and population have shrunk even further, raising questions about, and generating new research regarding their long-term sustainability and viability in the state. The WDNR initiated an update to the 10-year Greater Prairie Chicken Management Plan in 2020 and after consultation with the public, numerous conservation organizations, researchers and the Natural Resources Board, the management plan was approved in June 2022. Information in this plan covers: Greater Prairie-chicken biology, threats to the

species, summary and assessment of the 2004-2014 management plan, current management, public use, monitoring, prior and future research, and finally a plan for future management based on a suite of four management alternatives that were presented to the public and Advisory Committee for consideration during the first draft phase of the plan. An implementation plan is currently in the process of being drafted and incorporated into on the ground management.

Elk Management Plan

There are currently two wild, free-ranging elk herds in Wisconsin established through reintroduction efforts. The northern elk herd (formally called the Clam Lake herd) originated in 1995 as an experimental release conducted by the University of Wisconsin – Stevens Point. Management of the herd was transferred to the WDNR in 2000 and has been guided by the Management Plan and Environmental Assessment for the Clam Lake Elk Herd (2000). A second reintroduction effort established the central elk herd (formally called the Black River herd) in 2015 and management is guided by the Black River Elk Herd Management Plan and Environmental Assessment (2001). The Clam Lake and Black River Elk Management Plan Amendment (2012) provided updates to the original management plans and has guided management efforts most recently. Significant changes to elk management have occurred since the original approval of these plans including interstate translocation efforts, establishment of an elk hunting season, and new research efforts. These changes and learned knowledge have led to the need for and development of this updated plan.

The Wisconsin Elk Management Plan, 2023-2033 was developed by members of the WDNR elk advisory committee which includes representation from WDNR staff with various expertise and a diverse team of stakeholder organizations and tribal partners including the WI Conservation Congress, WI Wildlife Federation, Rocky Mountain Elk Foundation, Great Lakes Indian Fish and Wildlife Commission, Ho-Chunk Nation, University of Wisconsin, US Forest Service, USDA APHIS Wildlife Services, WI State Cranberry Growers Association, WI Farm Bureau Federation and others. This committee met frequently from 2018-2022 to evaluate past management plans, identify previous successes and challenges, and establish management objectives and strategies to guide elk management through the next decade using the best available ecological and social science, public input, and expertise of committee members.

The Elk Advisory Committee reviewed the updated plan in November 2022 and supported seeking NRB approval of the plan. The recommendations in this plan attempt to balance the desires of all residents in Wisconsin and within the elk management zones where support for the elk herds remain high. Approval of the Wisconsin Elk Management Plan 2023-2033 will allow the Department and their elk management partners to most effectively manage our state's growing elk herds through the completion of the management objectives and strategies found within the plan.

Chronic Wasting Disease – Surveillance and Management Efforts

A four-year statewide chronic wasting disease (CWD) surveillance sweep was completed in 2021. Following this sweep, 2022 CWD surveillance targeted counties in the state where CWD was known to be established as well as localized surveillance areas surrounding more recent wild and/or captive CWD positives. As a result, 17,179 deer were tested with 1,491 CWD-positive samples detected. CWD continues to be detected in new areas of the state with

initial wild deer CWD positive detections occurring in Buffalo, Langlade, Waupaca and Winnebago counties during the 2022 surveillance year.

The Wisconsin DNR's CWD automation effort, allowing hunters to submit data associated with CWD samples through their Go Wild account, continued for the third year. Utilization of the electronic data submission option continued to increase with approximately 17% of all sampled deer in 2022 having data submitted through the online form compared to 13.4% in 2021. Efforts to increase hunter usage will continue.

During the nine-day gun deer season, there were 238 total CWD sampling locations available to hunters, including 175 self-serve kiosks (20 enrolled in the adopt-a-kiosk program), as well as many businesses and Wildlife Management staff statewide that provided CWD sampling by collecting lymph nodes or the entire head of a hunter-harvested deer.

In addition to CWD sampling opportunities, the WDNR advertised a total of 160 carcass disposal locations statewide, including 69 dumpsters in the adopt-a-dumpster program, 48 dumpsters hosted by the department, and the remaining disposal options administered by private companies or municipalities.

Conservation Agriculture

Significant efforts are underway by field staff to implement a revised farming agreement and neonicotinoid policy to educate cooperating farmers on what the new requirements are and why there is now a neonicotinoid prohibition on public lands. Key requirements in the farming policy include soil sampling, nutrient management, soil conservation plans, and cover cropping. Demand for conservation farming, haying and grazing agreements continues to grow as pressure from urban expansion continues to tighten land resources available to rent. A WI DNR Conservation Grazing Strategy is being finalized for implementation in CY2023. Additional grazing plans and agreements are under development with cooperating farmers who are investing equity in public land sites.

Deer Management Assistance Program (DMAP)

Wisconsin's Deer Management Assistance Program (DMAP) aims to foster relationships with land stewards by partnering to implement sound habitat and herd management practices to meet landowner goals. To accomplish this, DMAP staff provide site visits, site-specific management plans, and education and outreach events, amongst other benefits, to its members. In 2022 alone, DMAP conducted over 200 site visits reaching more than 27,000 acres. The team also provided 15 education and outreach opportunities including writing a monthly newsletter which averaged over 1,500 readers. Despite limited marketing, the program continues to grow - enrollment as of April 2023 is 3,040 members spanning 499,700 acres. The program's popularity has necessitated the need to review its objectives and operations to ensure it stays relevant and beneficial to its members while accounting for staff capacity. To guide this process, we've hosted a series of focus groups with DMAP staff and members as well as external partners to help identify the program's future direction.

Habitat Strategy

The Wildlife Management program is dramatically revising how habitat work is prioritized and funded statewide. Historically funding to work areas was relatively static with smaller funding pools competitively allocated via submitted projects. Starting in July 2022, the program allocated nearly all funding based on project submissions in a semi-competitive format. Projects are developed by field biologists and evaluated based on newly developed Habitat Management Guides and Priority Maps. The Guides delineate the primary management goals and techniques utilized on several high priority cover types: Barrens, Bottomland Hardwoods, Grasslands, Oak Forests, Wetlands, and Young Forests. The Priority Maps spatially delineate High, Medium, and Low priority areas for each of these cover types statewide. Funding is preferentially allocated to High Priority geographies for a given cover type first, whereas Low Priority areas are generally not considered for funding. The implementation of this prioritization process will be refined, additional cover types included, and habitat quality evaluation metrics will be developed in the coming year. Long-term, High Priority areas will have habitat goals developed that are tied to measurable, time-explicit objectives. The goal of this process is to focus increasingly limited resources towards areas where gains can be made for the greatest overall ecological and social benefit.

Public Lands

In 2022, Wildlife Management acquired 1,127 acres within 11 property project boundaries (42 of which were easement acres) for almost \$1.9 million. We are on deck to acquire approximately 1,800 acres in conjunction with an NRCS wetland reserve enhancement program easement. The Voluntary Public Access & Habitat Incentive Program and the Turkey Hunter Access Program provide almost 40,000 acres of public access on private lands through leases with 200 + Wisconsin landowners. This program is made possible by the Federal Farm Bill. WDNR has received grant funds 3 times in the last 10 years to continue this vital program for public hunting, fishing, trapping and wildlife observation. The current grant will expire in 2024; we are hoping the next Farm Bill provides significant funding for this program across the nation. In 2022, over 30 Adopt a Wildlife Area groups collectively logged almost 800 hundred hours to help Wildlife Area property managers control invasive species, manage litter, maintain property infrastructure, restore habitat (on land and in stream) and more on 30 properties.

Wetland Habitat

Wildlife Management currently manages approximately 1,000 impounded wetlands across the state. Resources and staffing capacity are limited to adequately manage all of them to meet today's standards. The program is currently conducting a review and prioritization of wetland infrastructure to divest in low priority infrastructure and focus available resources on the highest priority impounded wetlands. To increase capacity, the WM Program has established new contract partnerships with Ducks Unlimited (DU) and Wisconsin Waterfowl Association (WWA) to assist in engineering and biological services for wetland infrastructure and wetland restoration design. These partnerships are meeting the missions of the state and these organizations. DU and WWA are bringing funding and resources to the table for this work. Spatial wetland Infrastructure and restoration priorities are guided by the Wisconsin

Waterfowl Habitat Conservation Strategy, a plan stepped down from the Upper Mississippi River and Great Lakes Region Joint Venture and North American Waterfowl Management Plan NAWMP waterfowl plans.

Highly Pathogenic Avian Influenza

The department monitors for avian influenza in free-ranging wild birds in Wisconsin throughout the year through investigations of wild bird mortality events involving five or more birds. In 2022, due to the detection of Highly Pathogenic Avian Influenza (HPAI) in North America, the DNR, in cooperation with the USDA-Wildlife Services, USFWS and a few licensed wildlife rehabilitators, enhanced surveillance efforts based on apparent species susceptibility, reported clinical signs and proximity to any reported mortality events in wild or domestic birds. The circulating strain of HPAI was detected in numerous domestic and wild birds from 54 of the 72 counties within Wisconsin (51 counties had wild bird detections). The largest mortality event from HPAI occurred during June in and around nesting colonies of state-endangered Caspian terns on islands in Door County. Mortality estimates included >1000 Caspian terns, >800 double-crested cormorants, >90 herring gulls, and >60 American white pelicans. Additionally, a few cases of HPAI in Wisconsin mammals were detected including red fox kits, bobcats, fisher, otter and a mortality event of 11 skunks. All of the affected mammals observed alive showed neurological signs.

BUREAU OF FISHERIES MANAGEMENT

Adaptive Management Plan for Panfish

In 2016, Wisconsin began an experiment to study the effects of 3 reduced bag limits on bluegill and black crappie size structure on 94 lakes where overharvest was a concern. From 2020-2022, biological data were collected, and stakeholder evaluations were conducted. Size structure improvements were most dramatic and consistent in lakes that were assigned the most restrictive regulation of the 3 tested: a daily bag limit of 15 panfish with no more than 5 of any species. Stakeholders included those who participated in focus groups on a subset of study lakes, those who received surveys while visiting a study lake, and a random sample of all Wisconsin anglers – all groups generally supported the use of reduced bag limits to improve size structures, although a notable number of anglers still would prefer liberal bag limits. Evaluations will continue through 2023 and the Wisconsin DNR will be proposing updated rule packages that follow from study results in 2024, which if approved would take effect when the experimental regulations end in 2026.

Brook Trout Reserves

Brook Trout are an integral part of Wisconsin's natural legacy, culture, and identity. Climate and stream models (FishVis, A regional decision support tool for identifying vulnerabilities of riverine habitat and fishes to climate change in the Great Lakes Region) project a decline of 68% of the stream habitat for Brook Trout by the mid-century. Using information from the Wisconsin Department of Natural Resources (WDNR) Fisheries Information System and Climate Science

modeling tools, the WDNR Fisheries Management identified 54 sub-watersheds at the HUC 12 level where Brook Trout have the best chance of enduring the effects of climate change and other environmental perturbations. These HUC-12 sub-watersheds were designated as Brook Trout Reserves. The selection process utilized riparian land use and cover via the newest release of Wisland2; contemporary (2007-2014) brown and brook trout catch per effort data from 2007-2014; modelled stream temperatures and brook trout occurrences-Fish Vis (<https://ccviewer.wim.usgs.gov/FishVis/#>); WDNR managed lands and project boundaries; and Fishtail, an index characterizing stream fish response to urban and agricultural land use as characterized by the 2006 National Land Cover Dataset: <https://ccviewer.wim.usgs.gov/FishTail/#>. Assembled data were group into the following themes: 1) Contemporary conditions and resilience to climate change; 2) Riparian and sub-watershed land use quality; 3) Degree of current protection and level of management opportunity; 4) Competition from non-native salmonids; and 5) conservation genetics. The designation of reserves enables the WDNR and its partners to focus their specific tools to ensure that Brook Trout remain viable in the state. The resulting BTRs cover 205 sub watersheds and represent the most resilient 33% of statewide brook trout habitat under 2050 climate change projections. In 2022 the Fisheries Program pursued additional State and Federal funding for streambank easement acquisitions and riparian reforestation in the BTRs. Additionally in 2022 the Fisheries Program acquired 4 Streambank Protection Program easements within the Brook Trout Reserves totaling 2.46 stream miles of riparian and instream habitat protected. The Fisheries Program is currently pursuing additional State and Federal funding for streambank easement acquisitions and riparian reforestation in the BTRs.

Inland Trout

From July 1st, 2021, to June 30th, 2022, fisheries management staff completed 127 trout stream habitat improvement projects on 76 streams totaling just over 64 miles. Of the 112 projects completed, 6.5% restored aquatic connectivity, 8% involved maintenance and repair to existing projects for damaged caused material decay or recent flood events, 18.5% were intensive instream habitat projects, and 67% were vegetation management projects along the riparian corridor. Staff also completed trout habitat work on 3 spring ponds totaling 3 acres. Many of these habitat projects are completed with the assistance from volunteers and external partnerships.

Staff also conducted 474 rotational trout surveys on 90 streams and 273 trout trend surveys on 164 streams to assess Wisconsin's inland trout populations.

Great Lakes

Lake Michigan staff worked with staff from the Office of Applied Science to update the Lake Whitefish stock assessment model for Lake Michigan and Green Bay during the course of 2022. New data were added and other structural improvements were made to the stock assessment model. Using the model output, staff applied the total allowable catch (TAC) recommendations to the regulation framework to develop commercial fishing zone specific quotas. Both the TAC and zone specific quotas will be finalized in late spring/early summer 2023.

The Lake Michigan Commercial Fish Board has expressed interest in opening a commercial fishery for lake trout in Lake Michigan. Fisheries department staff initiated a Lake Michigan Lake trout stakeholder group to provide input on the request. This stakeholder group and other interested public met four times to hear presentations and ask questions about the lake trout population, movement and biological data based on the mass marking program, and the stock assessment model. Staff also worked with partners in the Lake Michigan basin to develop TAC recommendations for lake trout based on a method developed, used, and reviewed by other partners.

A new electronic charter reporting application for reporting effort and catch information on Lake Michigan and Lake Superior was developed during 2022 and will be rolled out to Charter captains in May 2023. This regulation change will help reduce staff time required to enter data from paper forms and may help collect more accurate and timely data.

In 2022, we completed our fishing assessments for both [Lake Superior](#) and [Lake Michigan](#).

Fish Contaminants Program and Consumption Advisories:

The Fisheries Management Program continues to monitor contaminant levels in fish from waterbodies across the state and are currently focusing on locations with known or suspected contamination issues. While monitoring for mercury and PCBs is still occurring at a baseline level, sampling for PFAS (per- and polyfluoroalkyl substances) has become more prevalent. As we understand more about the [impacts of this class of contaminants on human health](#) through consumption of contaminated fish, the Program has been dedicating the majority of the funds allocated for contaminants monitoring to PFAS.

Between January 1, 2022 and December 31, 2022, the Fisheries Management Program, in consultation with the Department of Health Services, have issued multiple fish consumption advisories across the state (see list below). Online versions of the [Choose Wisely](#) publication are updated with each new advisory, and the [printed version](#) is updated every 2 years. An updated printed version of the Choose Wisely publication is planned for summer (2023).

Waterbodies with PFAS-related advisories issued since January 1, 2022:

- La Crosse River at Angelo Pond, Monroe County
- Green Bay (rock bass)
- Wisconsin River at Lake Mohawksin
- Wisconsin River at Castle Rock Lake

Stocking:

Fisheries staff raised and stocked over 6 million fish during 2022. We are working with private aquaculture facilities to both purchase and make available surplus fish for stocking on the landscape. Our newest facility at Kettle Moraine Springs Hatchery in Sheboygan County, Wisconsin is experiencing continued wastewater equipment issues and pretreatment procedure issues for critical equipment. Our new facility will have the capacity to rear 340,000 steelhead for stocking into Lake Michigan waters as well as starting half of our Coho salmon production

during the year. We will be utilizing recirculation aquaculture technology to efficiently use the available ground water.

Walleye Plan:

The update to the statewide Walleye management Plan is complete and final and the DNR's Walleye Team is now in the implementation phase of the new Plan.

- We have already made progress by setting up a GovDelivery list to stay in touch with stakeholders to provide updates, additionally we have generated a list of Walleye fishing guides that we can consult with
- We are currently in the process of setting up a workshop to discuss walleye restoration strategies with key partners.
- We plan on conducting a regulation toolbox review and possible update in 2023.

Finally, we are completing a stocking evaluation for the Wisconsin Walleye initiative. In 2021 and 2022 fisheries staff completed their first two rounds of making population estimates in lakes that have been part of the Wisconsin Walleye Initiative. Data collection efforts will continue over the next several years. Individual lake data may be used to adjust or discontinue stocking in that particular lake, but full evaluation and recommendations from the effort are not expected until 2026-27.

The fisheries program will be examining how much contribution the fall fingerling walleye have to adult populations, assessing why stocking is successful in some places and not others, and endeavoring to determine optimal stocking rates based on the type of lake receiving stocked walleye. The program will also be looking to identify those adult populations that were created from stocking that are now successfully naturally reproducing at a level that could sustain the population without additional stocking.

OFFICE OF APPLIED SCIENCE (Wildlife and Fisheries Research)

The Office of Applied Science (OAS) provides original research and consultation services on priority fish and wildlife management and conservation needs. The OAS team of research scientists, biologists and technicians work to supply the agency and stakeholders with objective, applied science to support decision making. The scientific information provided by OAS is used by the Fish, Wildlife and Parks Division and its management programs to inform decision making, manage fish and wildlife populations, determine harvest frameworks and inform conservation policy. OAS staff lead multiple research projects and leverage resources through collaboration with universities and other government agencies. These collaborations extend the scope and breadth of our research portfolio. OAS research is published in peer-reviewed scientific journals, in DNR technical reports and provided through customized products to support the work of agency committees and decision makers. Below are some highlights of current research projects and initiatives within OAS. In 2022 OAS filled 3 key research scientist positions (Waterfowl, Furbearer, and Inland Fisheries) and are now at a full complement of 10 fish and wildlife research scientists. In addition, we created a Decision Science unit and launched several new research projects and research consultation efforts that support key future conservation decision points. Examples of some of the OAS portfolio of projects are described below. Additional information about OAS projects can be found on the WDNR website by searching for the keyword "research".

Decision Science

OAS provides tools and resources to assist FWP programs in making conservation and management decisions through our decision science sub team. Decision science draws from multiple scientific fields, including economics, psychology and mathematics, providing a framework to support transparent, robust decision making. Using decision science tools, such as Structured Decision Making, we can evaluate how well outcomes will meet objectives and help decision makers weigh options. In 2022, OAS completed two decision science consults in collaboration with the Wildlife Management Program (CWD response plan update) and Fisheries Management Program (Fisheries Strategic Plan).

Reassessing the Predator-Prey Balance on Lake Michigan

Maintaining balance between predator and prey populations is critical for successful salmonine fisheries management in Lake Michigan. Control of stocking rates is likely the most important tool available to the managers of Lake Michigan salmonine fisheries. Stock assessment modeling has been used to estimate Lake Michigan salmonine and prey abundances and evaluate predator-prey balance. Alewives (and to a lesser extent rainbow smelt) have historically been the major prey fish for salmonines, but lately prey abundance has shifted for some species. Thus, the predator-prey interactions and balance need to be reevaluated. Data inputs include annual stocking numbers and annual biological/fishery data for salmonines. Annual relative abundance from bottom trawl and hydroacoustic surveys and up to date diet data are also used as model inputs. To be useful in the future, fishery models require updating in light of new data, changes in the prey community and associated shifts in salmonine feeding ecology and population dynamics.

Ecological Factors That Influence Walleye Recruitment in Ceded Territory Lakes

Over the last few decades, walleye have been declining in certain northern Wisconsin lakes, but not across all northern lakes. It is unclear what characteristics of a lake determine whether the walleye population will remain stable or decline. In an effort to understand what factors determine a lake's success, researchers are comparing the characteristics of successful walleye lakes to lakes that are in decline. Staff are sampling lakes across the Ceded Territory of Wisconsin. All of these lakes have had historically stable walleye production. However, some have recently gone into decline. Comparing lakes that used to be productive to lakes that remained productive will be powerful for identifying the characteristics of successful and unsuccessful lakes. We will be characterizing habitat availability (aquatic vegetation, depth, woody habitat and shoreline development), lake productivity (phytoplankton and chlorophyll), primary forage availability (zooplankton) and relative abundance of fish species in the lake (forage, predators, competitors). In 2022 data from this project supported the statewide walleye management plan and in quota setting for walleye harvest in the ceded territory.

Snapshot Wisconsin

Since its statewide launch in 2018, Snapshot Wisconsin has grown to the largest trail camera network in the nation. This people-powered research project relies on volunteers to host trail cameras that take "snapshots" of wildlife as they pass by. Volunteers classify the species

from their trail cameras with help from crowd-sourcers on the online platform, [Zooniverse](#). The data help DNR understand the distribution of wildlife populations around the state and make important wildlife management decisions. The project continues to grow, with outreach efforts focused on reaching diverse and non-traditional audiences. The project partners with nature centers and educators, connecting the public to the project and to the activities of the department. In addition to supporting management decisions, data from Snapshot Wisconsin has been made publicly available through an interactive [Data Dashboard](#). This online tool offers both volunteers and the public a new way to explore our Wisconsin wildlife species. Currently, the data for 19 wildlife species is freely available. Anyone can discover how species are spread across the state, when they are most active, and how many sightings Snapshot has observed in each county.

Susceptibility of Ruffed Grouse Populations To Past And Projected Impacts of Rapidly Changing Winter

Because of ruffed grouse's popularity as a gamebird, it is a relatively well-studied species. However, much of this research focuses on aspects of habitat management, and less is known about how winter conditions influence their population dynamics. Recent research suggests that declines in snow cover and increased winter variability could lead to increased stress in the population and lower overwinter survival. At the same time, winter weather conditions are predicted to warm and have diminished snow cover. Additionally, an increased likelihood of extreme events is predicted to occur in the coming years. All of these changes represent an impending threat for the winter-adapted ruffed grouse. Our objective is to investigate the susceptibility of ruffed grouse to projected changes in winter variability and vulnerability of aspen and early-successional forests to increasing temperatures. We plan to use climate metrics like snow depth and weather severity to assess winter impacts on ruffed grouse occurrence, survival and population distribution. Field-based survival estimates and cause-specific mortalities will be recorded by staff and used to determine how the ruffed grouse population may react to future winter conditions.

Using Waterfowl Productivity And Movement Metrics To Assess Priority Watersheds In Wisconsin

The 2020 Wisconsin Waterfowl Habitat Conservation Strategy (WWHCS) provides guidance for targeted conservation of waterfowl habitat in Wisconsin. The strategy is informed by a spatial model that incorporates data on wetland proximity, ecosystem services, seasonal waterfowl distribution and relative abundance of waterfowl. These inputs are weighted heavily towards the distribution of waterfowl in Wisconsin, but no formal assessment of waterfowl productivity is included in the model. The WWHCS recognized the need to fill in research gaps and validate its decision support tool. This study aims to examine variability in breeding pair densities, nest densities and brood densities. It also will investigate habitat use and selection across the range of priority breeding habitats identified in the 2020 WWHCS. Simultaneously, the study will examine how robust the priority watershed designations are to variation in model weights and potential biases in the datasets.

BUREAU OF NATURAL HERITAGE CONSERVATION

Last year marked 40 years since the bureau was first created. The bureau is responsible for conserving Wisconsin's biodiversity, including a system of State Natural Areas that has grown to nearly 700 sites, thanks in large part to partners from agencies, universities, counties, local governments, and land trusts. One of the newest sites proposed for inclusion in the system will be called *Waaazija Haci State Natural Area* - a name selected by the Ho-Chunk Nation, meaning "lives amongst the pines." This natural area represents a very small portion of what was formerly millions of acres of Ho-Chunk Nation's ancestral lands. The Ho-Chunk Nation currently owns land adjacent to the site, and bureau staff have collaborated with Ho-Chunk Nation on burning and other land management for several years.

The bureau recently completed a [strategic plan](#). The bureau's mission remains centered around biodiversity conservation with a focus on non-game animal species, rare plants, high-quality examples of natural communities, and State Natural Areas. The biodiversity crisis and the increasing challenges to declining species will require continued adaptation and continued focus on the highest priorities. We will continue to look for new ways to fund this work and continue to build and maintain partnerships. We want people from all backgrounds to be involved in, and benefit from, our efforts, and we are working on ways to be more welcoming and inclusive. We want to help develop the next generation of conservation professionals, and we want our staff to better represent the state's more diverse population. Finally, we will need to do all of this while staying true to our mission of conserving the natural heritage of Wisconsin.

In 2022, like other years, our work was centered around on-the-ground habitat management and conservation efforts, documenting locations of rare species and high-quality habitats, data analyses, a variety of consultations, conducting research, and collaboration with many programs, agencies, industries, and individuals across the state. We also continued to facilitate the highly important efforts of many volunteers. Here are a few examples from 2022 that were included in a recent edition of [Wisconsin Natural Resources Magazine](#).

Black-Necked stilt

The black-necked stilt (*Himantopus mexicanus*) was considered an "accidental" species in Wisconsin until the state's first confirmed breeding record occurred at the Horicon National Wildlife Refuge in 1999.

In 2019, the DNR and U.S. Fish and Wildlife Service began monitoring black-necked stilt nesting pairs in Horicon. Biologists documented 43 pairs this year. Now, Horicon may contain the largest concentration of nesting black-necked stilts in the Midwest and perhaps one of the largest of any site east of the Mississippi River.

Connecticut warbler

Connecticut warblers once numbered in the thousands in Wisconsin. Today, recent DNR surveys indicate only a handful of breeding pairs remain. In response, the DNR's Natural Heritage Conservation program is acting on several fronts. Work is underway with private and

public partners like the Bayfield County Forest to protect and enhance breeding habitat in mature jack pine stands. The DNR also has increased its investment in the Neotropical Flyways Project. This project works to identify and conserve critical migratory bird habitats in Central and South American wintering areas, where deforestation may be driving declines. Related to this work, we are participating in discussions to accelerate bird conservation across South America's Gran Chaco biome, the core wintering area for this species and other North American migrants.

Rainbow Mussel

Rainbow mussels, a rare species observed in only two Wisconsin streams since 2009, have been confirmed in one new southeast Wisconsin stream. Researchers from Carroll University were sampling a site on the White River, recording several mussels of various shapes and sizes, when students uncovered the buried treasure. The discovery of the rainbow mussel (*Villosa iris*) is part of a larger effort by the Wisconsin DNR, Illinois Natural History Survey and other federal, state and local partners to examine mussel populations and identify the most significant remaining mussel assemblages in the Fox River watershed. Genetic sampling and propagation activities also are underway to aid in rainbow mussel conservation.

Climate Adaptation Work: Wild Rice

The Spur Lake Working Group of DNR and partner stakeholders, including representatives from several local tribal nations, is continuing efforts to address climate change and hydrology impacts and bring back wild rice (*Zizania palustris*), also known as manoomin, to Spur Lake in Oneida County. Spur Lake, a Climate Adaptation Demonstration Site of the Northern Institute of Applied Climate Science, historically hosted a robust wild rice bed of biological and cultural significance, but that declined in the early 2000s.

This past summer, the Spur Lake Working Group took on a pilot restoration experiment, removing perennial vegetation from identified plots and seeding wild rice. The plots will be monitored for the next three to five years, with results informing future management efforts.

Wood Turtle

The DNR and West Virginia University are teaming up for turtles with a USFWS Great Lakes Fish and Wildlife Restoration Act grant. In 2021 and 2022, standardized population monitoring of the wood turtle (*Glyptemys insculpta*) was completed at 41 sites on tribal, state and federal lands in Wisconsin's Great Lakes Basin, with environmental data also collected. Ongoing work with this crucial data will help predict species occurrence and guide future habitat restoration actions.

Eastern Prairie Fringed Orchid

The federally threatened eastern prairie fringed orchid (*Platanthera leucophaea*) reappeared in a state natural area near Oshkosh in 2022 following DNR and volunteer management at the site. It's another shining example of what can be accomplished when DNR staff and volunteers unite. After orchid numbers dwindled at the site, DNR and volunteers began habitat restoration, hoping the orchids would return. When volunteers discovered a single plant, a local conservation partner

was able to cross-pollinate it with a nearby population to improve genetic diversity and long-term viability of the species.

BUREAU OF PARKS AND RECREATION MANAGEMENT

Visitation and Annual Admission Sales

The Wisconsin State Park System (WSPS) continues to experience elevated visitation and camping reservations in 2022 compared to 2019 (pre-covid) levels, with an increase of 12% and 30% respectively. Parks and Forests remain instrumental for public health and wellness; the WSPS strives to provide opportunities for visitors to engage in outdoor activities and make our properties accessible and welcoming to all visitors.

Sales of Annual Admission passes have risen 36.7% since 2019 (pre-pandemic) to 2022, with a total of 474,553 Annual Passes sold during the 2022 season.

	2022	2021	2020*	2019	2018
Sticker Type	Quantity Sold	Quantity Sold	Quantity Sold	Quantity Sold	Quantity Sold
Resident Annual	263,658	297,070	294,392	200,149	190,260
Resident Reduced Rate Annual	66,574	70,997	39,735	50,229	49,751
Non-Resident Annual	62,862	77,226	103,326	43,502	37,865
Senior Annual	81,459	81,935	63,845	53,271	48,658
Total Annual Stickers Sold	474,553	527,228	501,298	347,151	326,534
*Reduced admission pass sales season due to COVID restrictions					

Electronic Payment Kiosk Expansion

A prototype electronic kiosk was installed at Devil's Lake State Park, in March 2021, that dispenses an actual Resident Annual Vehicle sticker. The electronic payment kiosk program will be significantly expanded during the 2023 season, with the purchase of 28 more units. Like the unit at Devil's Lake, the new electronic kiosks will be able to dispense a Resident Annual sticker at the time of purchase. Existing kiosks will also be retrofitted to dispense stickers. Both the new and retrofitted kiosks will provide an enhanced customer service experience to customers throughout the State.

Camping Program

Interest in camping remained high in 2022. Camping occupancy increased during the pandemic despite system-wide closures necessitated by COVID-19. Occupancy dropped slightly in the current period but remained 30% higher than pre-pandemic.

	Calendar Year 2019	Calendar Year 2020	% Change, 2019- 2020	Calendar Year 2021	% Change, 2019- 2021	Calendar Year 2022	% Change, 2019- 2022
# of Camping Nights Occupied	447,614	478,878	7%	611,250	37%	584,087	30%

- Occupancy rates were high, particularly during the peak season of Memorial Day to Labor Day, standard electric campsites were particularly in demand at 84% occupied. Standard electric campsites saw 97% occupancy on the weekends, meaning that any weekend vacancies were likely last-minute cancellations.
- Peninsula State Park had the most camping nights purchased and brought in the most revenue from camping. Devil's Lake State Park had the highest number of bookings
- The 2023 peak season is likely to be equally as busy, with more than 65,000 reservations (300,000 nights) already made for 2023. System-wide inventory is already 34% booked for the 2023 season.

Hiring

The WSPS continues to vigorously fill vacancies as opportunities arise. Starting in January 2022, the program had 62 hiring actions. This included seven property superintendents, 12 park managers, 33 park rangers, two educators, a statewide naturalist, a district supervisor, and two recreation operations supervisors.

While these hiring actions help put staff in vacant positions, many of these fills were internal transfers or promotions, so the program intends to continue to request additional authorization to fill vacancies as soon as funding becomes available. There are currently 20 vacant positions out of 201 total authorized FTE, representing a 9.95% vacancy rate. Due to spending authority, the WSPS is unable fill all authorized positions.

Administrative Code Updates: Management of Department Lands

The Wisconsin State Park System is in the process of making updates to Administrative Code NR 45. The Public Lands Team (PLT), which includes representatives from all land managing programs, Legal, and the Division of Public Safety and Resource Protection, is leading the initiative.

The initial request for comment resulted in over 400 proposal submissions from staff. Survey work on public sentiment towards select topics took place in 2021, in anticipation of this rule package, which included property opinionnaires and other staff and visitor topic-specific survey work. Topics covered in the rule package include camping, reservations and fees; drones; animals/pets; vehicles; noise; alcohol; and removal/damage to flora and fauna. General housekeeping modifications have also been made, along with adjustments to language to improve readability and understanding. The public input period is anticipated for late summer of 2023 and enactment of the revised Code is anticipated for Summer 2024.

Biennial Budgets and Capital Development Backlog

The WSPS's 21-23 biennial budget is wrapping up, along with previously funded projects in the 19-21 budget. The proposed 23-25 biennial budget was submitted and largely supported and included in the Governor's proposed budget. Budget requests total approximately \$120 million, and this figure will likely increase as projects are updated and emergency projects arise.

The total backlog of outstanding Capital Development projects is estimated at about \$1.2 billion and includes all unfunded projects from all bienniums, with the exception of the currently funded 21-23 biennium. Projects are broken down into the following categories: trails, roads, buildings, utilities, and recreational amenities. High priority projects to be completed in the next three years total \$419 million, with an estimated additional \$100 million need annually for at least 10 years. This cost does not account for fees, inflation, remote location or adjustments in materials pricing, so the figure is likely to increase. Projects are always being adjusted and added to the backlog as the need arises; this is a living document that will be forever changing.

Statewide Accomplishments

- Phase 1 of the Check Out Wisconsin State Parks at Your Library was very popular, and the program continues to grow with the 2023 Phase
- A partnership was established with Black Folks Camp Too to increase diversity among WSPS visitors and staff. By utilizing the "Unity Blaze" campfire symbol, the WSPS will show its commitment to "treating everyone, everywhere equally"
- The North County Trail triad agreement was signed by the Wisconsin Department of Natural Resources, National Park Service, and North Country Trail Association. This is the second such National Scenic Trail triad agreement in the state.
- Operation Fresh Start Conservation Academy crews honed their skills at Wisconsin State Park System properties. Participants in this program train alongside industry professionals to prepare for careers in conservation, land management, parks, forestry, etc.

- Open the Outdoors – the WSPS is dedicated to enhancing the experiences of our visitors by providing a variety of resources available to users of all abilities including accessible equipment, sensory experiences, and inclusive playgrounds
- Action Trackchair All-Terrain wheelchair at Peninsula State Park – in collaboration with the Kinect M1 Access to Adventure program, expanded mobility opportunities will be provided on designated hiking trails within Peninsula State Park
- Ownership and operation of Lizard Mound State Park was returned to the WSPS from Washington County. The 32-acre property, which is on the National Register of Historic Places, is home to 28 effigy mounds. The property is one of the largest and best-preserved collection of mounds in southern Wisconsin.

DIVISION-LEVEL ROADMAP INITIATIVE

In 2023, the Wisconsin DNR continued work on the Roadmap Action plan by establishing division-level teams tasked with providing recommendations to agency leadership in three key focus areas: Relevancy; Diversity, Equity, and Inclusion; and Employee Engagement. The Fish, Wildlife, & Parks Roadmap serves as an umbrella from which the six programs can collectively work to advance the three focus areas. The Fish, Wildlife, & Parks Division remains committed to science-based conservation and recreational work while also addressing priority emerging needs such as climate change. Those key priorities remain and are addressed in each program’s strategic direction or plan. The Fish, Wildlife, and Parks Division has adopted six vision statements to support the roadmap goals and future desired state:

- We foster a sense of community and become a provider of choice for the outdoor opportunities and recreational resources that Wisconsin’s diverse citizens and visitors value and seek.
- Our programs anticipate, recognize, adapt, and respond to changing societal trends, customer preferences, and “here and now” demands; continue to use the best available science and technology for effective decision making.
- Wisconsin citizens understand, value, and support what we do through ongoing political advocacy, diverse partnerships, sustained volunteer efforts, donations, and sustainable financial support.
- Our traditional user group and constituents take pride in their relationship with and support of our core activities and responsibilities, while also supporting efforts for growing our customer base through existing and future programs.
- Our staff recognize, understand, and reflect the diversity of our customers, Wisconsin’s citizens and visitors.
- We interact in culturally appropriate ways with a diverse range of customers who are comfortable participating in Department programs, providing input for decision-making, accessing Department properties, and enjoying the recreational opportunities we provide.

Ontario

ONTARIO
PROVINCIAL REPORT
May 2023

Fish and Wildlife Policy Branch
Ministry of Natural Resources and Forestry
300 Water St, 5th Floor North Tower
Peterborough, ON K9J 8M5

Regulatory Changes

- **Baitfish management:** Ontario has made changes to its bait management framework in an effort to mitigate the potential spread of invasive species and disease. As of January 1, 2022, Ontario has established four Bait Management Zones (BMZ). All commercial bait operators and anglers are required to keep baitfish and leeches within the zone it originated from (with a few limited exceptions). Anglers using baitfish or leeches outside of the BMZ of their primary residence (including non-residents) are required to purchase their bait and keep the receipt to prove the bait was acquired within the BMZ. The bait must be used within two weeks of the date of purchase. Anglers using baitfish and leeches within the BMZ of their primary residence can either purchase or self-harvest their bait and are not required to keep a receipt.
- **Black bear management:** Ontario is exploring improvements to the current harvest management approach for black bear in the province. Over the last several years, a population monitoring initiative has been underway to update the province's black bear population estimate and improve our knowledge of local black bear populations. This broadscale population survey, which is now part of our annual monitoring efforts is the largest of its kind in North America.
- **Chronic Wasting Disease:** Ontario continues to work at keeping CWD out of the province. Efforts include regulations to prohibit or restrict products derived from cervids and movement of cervids. In 2022 Ontario tested 646 samples and all tested negative for CWD.

Policy Updates

- **SARS-CoV-2 and Wildlife in Captivity:** Ontario implemented requirements on education facilities (e.g. zoos), wildlife rehabilitators and researchers that keep mammals in captivity to prevent the transmission of the virus that causes COVID-19. Requirements are based on ECCC's "Wildlife and SARS-CoV-2: Handling Guidelines" available at <http://www.cwhc-rcsf.ca/publications.php>. These requirements will be reviewed in Fall 2023, prior to 2024 renewals.
- **Trapping/trapline allocation:** Ontario continues to evaluate feedback received from key stakeholders, Indigenous communities and organizations, on a proposal to renew the policy for the allocation of registered traplines areas.
- **Catch and Release Recreational Fishing:** Ontario is evaluating feedback received from the public, key stakeholders and Indigenous communities about proposed changes related to catch and release fishing. The changes would allow anglers to delay the release of a fish caught during the open season for that species, only long enough to photograph, measure and weigh, if the fish is of a restricted size or over

daily catch and possession limits. The changes would require the immediate release of fish that are out of season, are species at risk or are otherwise prohibited under the existing recreational fishing rules. The target date for implementation of any changes related to this proposal would be January 1, 2025.

Emerging Issues / Trends

- **Avian Influenza Emergency Management:** Highly Pathogenic Avian Influenza (HPAI) continues to be detected in domestic poultry and wild birds in numerous regions of Ontario. Positive domestic premises have been placed under quarantine. The Canadian Food Inspection Agency is the lead agency for responding to HPAI outbreaks in commercial poultry operations with support from Ontario Ministry of Agriculture, Food and Rural Affairs. MNRF provides support with wild bird disease surveillance and communications with stakeholders and members of the public who are licensed or authorized to hunt, hold, or rehabilitate birds