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**ILLINOIS
STATE REPORT
JUNE 2019**

Colleen Callahan, Director
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

Overview

The Office of Resource Conservation within the Illinois Department of Natural Resources manages Illinois' wildlife, fisheries and forest resources, along with stewardship and restoration of natural lands. The office manages fish and wildlife populations through hunting and fishing regulations based on scientific data and promotes the state's hunting and fishing heritage. Primary funding comes from hunting and fishing license sales and Federal Fish and Wildlife Funds, State Wildlife Grant Funds, Illinois Forestry Development Funds and Natural Areas Acquisition Funds. The Office also works with the Federal Government and other agencies to remediate lands contaminated by industrial discharges or accidental release of pollutants. The Office administers the state portion of Federal Farm Bill programs including the Conservation Reserve Enhancement Program and others. Regulation of state-endangered and threatened species also falls within the responsibilities of the Office.

Fish and Wildlife Highlights

Division of Fisheries

Illinois Asian Carp Actions in Northeastern Illinois

The Illinois Department of Natural Resources (IDNR), as a major partner in the Asian Carp Regional Coordinating Committee, continues to work above and below the Corps of Engineers' electric barrier system to monitor and prevent the upstream migration of Asian carp on the Illinois River and in the Chicago Area Waterway System (CAWS). Some highlights (as of Spring 2019) from our coordinated Asian carp efforts are as follows:

Contracted harvest efforts have contributed to over 7.8 million pounds of Asian carp removed from the IWW below the Electric Dispersal Barrier since 2010.

- Asian carp mean density in Dresden Island Pool, as described by Southern Illinois University hydroacoustic estimates, appears to have decreased by an estimated 96% from 2012 to 2018. This is likely influenced by continued commercial harvest efforts in the IWW.
- Only two Asian carps have been found upstream of the electric dispersal barriers since intense actions began in 2010 despite continued and intensive monitoring in the CAWS.
- Coordination between IDNR and other local, state, and federal partners on this issue remains high.
- Recent model results suggest heightened removal, both in the upper Illinois Waterway from contracted efforts and intensified commercial efforts in the lower Illinois and Mississippi rivers may further aid in prevention of spread and local negative impacts to native species. Contracting with commercial fishers shall commence in Peoria Pool of the Illinois River to enable increased management and control of this invasive population. Strategy identified here: https://www.ifishillinois.org/programs/CARPReport_news.html

- For further details regarding ongoing efforts: www.asiancarp.us

Aquatic Invasive Species

On September 5, 2018, IDNR Fisheries Biologist, Blake Ruebush, and City of Pittsfield staff removed 3,000 pounds of Water Lettuce *Pistia stratiotes* from King Park Pond in Pittsfield, Illinois. Water Lettuce is a non-native and invasive plant that was introduced into the pond, likely an illegal stocking. This plant can be possessed for aquariums and those in the aquarium industry only and is not legal in any public waters within Illinois.

Water Lettuce was first observed in King Park Pond on August 7, 2018. In less than a month this aggressive aquatic plant went from covering less than 1% of the pond to nearly 75% coverage on September 5th when it was removed. The plants were hauled away and disposed of. Subsequent efforts from IDNR included herbicide treatments to any remaining plants in the pond.

These plants were removed for multiple reasons:

- Water Lettuce is not native to Illinois and is considered invasive in some parts of the U.S.
- This plant was likely illegally stocked into the pond without permission from IDNR.
- The Water Lettuce had the potential completely overtake the pond and possibly cause a fish kill.
- The density of the plants interfered with fishing activities.
- This location has fall stocking of trout in October for those with trout stamps, the Water Lettuce would prevent shore access to the water.

IL Department of Natural Resources and IL Department of Corrections partner to create fish habitat

In the summer of 2018, the Illinois Department of Natural Resources and Illinois Department of Corrections developed a partnership to create and install fish habitat in public lakes. The first habitat installation project occurred at Pittsfield City Lake on August 15th where 132 ‘fish attractors’ were deployed.

IDOC provided recyclable materials to construct fish attractors and IDOC staff to coordinate and oversee fish attractor construction. IDNR provided additional materials to construct fish attractors and transported and deployed the attractors into Pittsfield City Lake. Fishermen can find the attractors in two different coves.

Lake Michigan Program

Charter and non-charter recreational anglers expended 328,547 angler-hours to harvest 17,342 yellow perch and 80,817 trout and salmon from the Illinois waters of Lake Michigan last year. The sport fishery remains stable; estimates of fishing effort decreased by 8%, salmon and trout harvest decreased by 18% and yellow perch harvest increased by 81% compared to the previous year. Despite the increase in 2018, yellow perch harvest remained near historic lows for the spring-summer season (March-September). However, a strong 2015-year class of perch contributed to a popular late-fall and early-winter fishery at Chicago.

Illinois River

IDNR biologists conducted a targeted catfish survey on the Illinois River in May – June using large hoop nets. A total of 84 hoop nets were fished for 48 hours each in side channel and main channel habitats in the Alton, LaGrange and Peoria reaches from River Mile 56 upstream to River Mile 196. A total of 797 catfish were collected, which included 608 channel catfish, 183 flathead catfish and 6 blue catfish. One net

set near Chillicothe collected 145 catfish. In addition to spring catfish monitoring, 16 sites along the Illinois Waterway were surveyed as part of the Illinois River Project's Annual Fish Community Monitoring. Many of the catfish collected in the Illinois River hoop net survey and electrofishing survey were tagged with an external Floy Tag to help assess catfish demographics in Illinois as part of a state-wide effort and collaboration with Eastern Illinois University. The lower Illinois River continues to support a thriving catfish fishery both for sportfish angling and commercial harvest.

The Illinois River Program, in conjunction with the state hatchery system, stocked over 15.5 million sauger fry ranging from 1-2" in the upper Illinois River in 2018. The upper Illinois River continues to be known for producing a world-class sauger fishery and hosts the Master's Walley Circuit Tournament out of Spring Valley every spring. This tournament provides LaSalle Hatchery with brood sauger for production of sauger and saugeye for fish stocking throughout the State of Illinois.

In 2018, the Illinois DNR, in conjunction with other agencies continued to prepare for lock closures for lock maintenance on the Illinois Waterway in 2020. The 2020 lock closures will provide an invaluable learning opportunity to evaluate the response of the aquatic ecosystem to reduced boat and barge traffic during the lock closures.

Region 1 Streams

Rock River Basin

The Rock River in Northwestern Illinois continues to be a popular destination for anglers looking for record size Walleye, Shovelnose Sturgeon and Catfish. Each year the IDNR stocks around 70,000 fingerling Walleye into the upper end of the Rock River and this has created an outstanding fishery, with the Upper Rock Basin (Pecatonica River) holding the state record for Walleye. Due to the success of the stocking program, anglers regularly report catching memorable Walleye (25"- plus) from Rockford to Prophetstown.

The Rock River also holds the State and North American record for the Shovelnose Sturgeon and the state record for the Black Buffalo. In addition, Flathead and Channel Catfish are abundant, with trophy size Flathead Catfish common. In 2015, in response to a large fish kill between Dixon and Sterling, the IDNR biologists collected and relocated 80 large flathead catfish into the kill area and built and installed 20 catfish spawning structures into the kill area. Heavy spring flooding in 2016-2018 prevented biologists from checking these structures though, so their effectiveness is still to be determined. However, the Rock River continues to maintain a nationwide reputation for catfish which attracts a large number of tournament anglers. In 2018, 18 large catfish tournaments were held on the Rock River totaling 830 boats. In addition, two large tournaments, the Cabela's King Cat and the Bass Pro Catfish Tournaments were also held with support from the IDNR, with each boasting more than 150 boats. In 2018 the IDNR conducted a general basin survey and collected a total of 108 Flathead Catfish. Included were 72 adult fish (greater than 11") and 36 young fish. The largest adults were over 40" in length with a total of 6 fish in the trophy range, which represents 8% of the adult fish collected. In addition to the large number of trophy size fish, 58% of the fish over 11" were also over 16" in size (quality size). This is quite good and at the top of the acceptable range, with 19% of the adult also over 24" (preferred size) and 15% over 28" (memorable size).

Upper Mississippi River Basin

IDNR biologists are continuing to work with the Galena River watershed group to develop a plan for the Galena River and have also begun looking at a dam removal project on the Apple River near Hanover. Both projects are in the early stages, but enthusiasm is high with lots of local support.

Region 1 Impoundments

IDNR Fisheries and the City of Eureka completed the dewatering and rehabilitation of Lake Eureka. A fish toxicant was applied to remove a very dense common carp population. IDNR Fisheries completed a restocking of bluegill, redear sunfish, hybrid crappie and channel catfish in the fall. Largemouth bass will be stocked in the spring of 2019.

IDNR Fisheries continues to assist The Nature Conservancy with the management of the sport fishery and aquatic habitat in the Emiquon Preserve. However, in 2018, with the introduction of the Asian carp species from the Illinois River, negative impacts on the aquatic vegetation and native sport fish have begun to be documented and observed within the site. Future monitoring and management will be necessary to maintain quality aquatic habitat at this site.

IDNR Fisheries continues to assist The Wetlands Initiative with the management of the sport fishery and aquatic habitat in Hennepin & Hopper Lakes. These lakes are currently providing a great fishery for multiple species as well as being a destination for bird watchers and other outdoor enthusiasts.

Region II Streams Program Update

Dam Removal/Fish Passage Update

Two additional dams have been removed in the past year, bringing the total to 29 projects completed in Illinois in recent years. Three fish passage structures have also been installed. Fishery evaluations have been completed on a number of these projects and have clearly established the benefits of dam removals. Many miles of stream habitat have been reconnected and fish have rapidly recolonized areas where they were previously absent due to dams. On the Upper Des Plaines River, removal of 9 out of 11 dams has facilitated recolonization of species throughout the watershed. Removal of the two remaining dams has been delayed but is still on track to complete the reestablishment over 100 miles of free-flowing river; a nationally significant accomplishment. Several other dams are under evaluation for removal and fish passage at a flood control dam is in final stages of evaluation as well. The Army Corps of Engineers and IDNR have an ongoing feasibility study for the remaining dams on the Fox River as part of the Section 519 Ecosystem Restoration Program.

Brandon Road Lock and Dam Fish Passage Project

The Brandon Road Lock and Dam (BRLD) is located on the Des Plaines River in northeastern Illinois and is part of the Illinois River Waterway, an important biological and commercial connection to Lake Michigan. The leading edge of the Asian Carp invasion is located eight miles downstream of the 39 ft. high structure. Although the leading edge has not advanced for many years and numbers of Asian Carps have been reduced in the downstream reach, the threat of upstream movement remains. BRLD represents a “pinch point” as the only viable fish pathway to Lake Michigan. As a result, the Army Corps of Engineers proposed installing an invasive fish barrier at the BRLD to stop Asian Carp. Unfortunately, this barrier will also stop native fish movement which will impact both restoration and recruitment source for upstream fish assemblages.

The upper Des Plaines River (UDPR) upstream of the BRLD is a highly urbanized river which is still in recovery from historic water quality degradation and ongoing problems caused by combined sewer overflow (CSO) events. Since 1974, a total of 44 species, previously extirpated due to water quality problems have been documented in the UDPR. It appears that many of the 44 “new” species found in the UDPR migrated through the BRLD from lower Des Plaines and Illinois River Waterway, which has also seen dramatic improvements in fish species richness since the Clean Water Act.

To document that fish passage through the lock is possible and that the barrier project could impact native fish migration, IDNR collaborated with Southern Illinois University on a microchemical analysis of upstream migrants. A difference in strontium/calcium ratio between the Illinois and Kankakee Rivers, downstream of BRLD and the UDPR, allowed analysis of microchemistry levels in the cross-sectioned fin rays to determine natal origin of individual migrants collected in the UDPR. Results show that individuals from four families, including suckers, catfish, black bass, and gar, which were found upstream of BRLD originated downstream of BRLD. This microchemical evidence documents movement of native fishes through the BRLD and indicates mitigation for the barrier project is needed to continue restoration of upstream fish assemblages and for attainment of “Full Use of Aquatic Life” as required by the Clean Water Act.

Des Plaines River Restoration /CSO Abatement

The Des Plaines River Basin Survey was completed in 2018 as part of routine sampling to monitor stream health in Illinois. Typically, for most Illinois streams, we observe only minimal changes over the five-year sampling cycle. However, as noted above, the Des Plaines River continues to show improvements in fish assemblages. The improvements were due in part to progress in reducing Combined Sewage Overflow (CSO) events resulting from the Tunnel and Reservoir Plan (TARP) managed by Metropolitan Water Reclamation District of Greater Chicago. Results from the 2018 Des Plaines River survey demonstrated dramatic improvements in the lower segments of the upper Des Plaines River. This can largely be attributed to the addition of a reservoir with a 3.5 billion gallon carrying capacity in 2017, greatly reducing CSO events.

Four stations within the lower segment had an average increase of eight points in the Index of Biotic Integrity score, a fish-based measure of stream quality which ranges from 0 to 60. Another surprising result from 2018 was the increase in Smallmouth Bass within the lower segment of the upper Des Plaines River. In 2013, before the reservoir addition, the mean Smallmouth Bass catch rate was only 6 per hour which increased to 35 Smallmouth Bass per hour in 2018.

The two lowermost stations had catch rates of 68 and 83 per hour, with a wide range of size classes present. These catch rates are comparable to high quality fisheries in less urbanized streams like the Kankakee River. Size structure and abundance of Des Plaines River Smallmouth Bass populations prior to 2017 were insufficient to support the size/age classes collected in 2018. It appears that many of Smallmouth Bass found in 2018 likely migrated up through the Brandon Road Lock and Dam.

Chicago Area Waterway Habitat Improvement Project

Friends of the Chicago River and IDNR received a grant from the Chi Cal Fund in late 2017 to reconnect Mill Creek to the Cal Sag Channel. A natural limestone shelf as well as the base of a bike trail bridge blocked fish passage into Mill Creek from the Cal Sag Channel. The Cal Sag Channel, like other rivers of the Chicago Area Waterway System (CAWS), has experienced a recovery in recent years with increases in fish species diversity and abundance. In 2016, only five fish species were collected in Mill Creek, despite the presence of excellent habitat. Typically, a stream the size of Mill Creek can support over 20 fish species. The loss of species richness occurred over time due to poor water quality stemming from septic tank out flows in the creek. In recent years, updated sewer systems have been installed in the surrounding communities and the water quality has improved markedly.

However, without connection to a downstream recruitment source, fish could not repopulate Mill Creek. In April 2019 the bridge foundation was notched to allow fish passage and rock riffle structures were installed at the mouth of the creek to restore the natural morphology. We will conduct a follow up survey this summer. We hope to see many new species taking advantage of the great habitat available in Mill Creek.

The Kankakee River Walleye Enhancement Program

The Kankakee River Walleye program entered its 19th year with collection of brood fish in Wilmington and Kankakee. Fifty-one brood fish from the Kankakee River were sent to the LaSalle Hatchery, 19 of which were female. Over 2 million eggs were fertilized producing 1,512,000 fry. Five hundred thousand fry were stocked in a rearing pond at the hatchery. The remaining 1,012,000 fry were released in Monster Lake of Mazonia's South Unit. The hatchery fry will be stocked in the river in May and June as 2-inch fingerlings. The number of fingerlings placed throughout the Kankakee and Iroquois Rivers averages approximately 90,000 per year. Electrofishing catch rates were 46 walleye per hour below the Wilmington dam and 18 per hour in Kankakee. Many anglers have reported having a very successful spring thus far.

Des Plaines River Sauger Stocking

IDNR Region II Streams Program released approximately 25,000 Sauger fingerlings into the Upper Des Plaines River. Although there has been a successful stocking program downstream of the Riverside/Lyons area since 2000, this is just the second release of Sauger in the upper Des Plaines River. During the past several years, nine of the eleven dams on the Des Plaines River have been removed by IDNR, Army Corps of Engineers, Cook County Forest Preserve and Lake County Forest Preserve. These removals have created many additional miles of natural, free-flowing riverine habitat, allowing for expansion of the stocking program. The recently released Sauger were raised at IDNR's LaSalle Fish Hatchery and were released at Irving Park Road and upstream of the former site of Dam #2. The Des Plaines was once a highly degraded urban stream. Thanks to the Clean Water Act, TARP and the cooperation of State, Federal, and Local entities, the river has become the focus of restoration efforts and a great recreational resource for Illinois' urban residents.

Region 3 Streams Program

The removal of two low head dams in the Vermilion River basin, near Danville, IL, was initiated in 2018. Removal of these dams on the Vermilion River mainstem and North Fork Vermilion River, built in 1914 and 1920, provides unobstructed access to an over 1,290 square mile drainage area upstream of these dams. The 11-foot high Danville Dam on the Vermilion River created an effective barrier between the lower 22 miles of the river and the remainder of the basin, including Illinois' only National Scenic River – the Middle Fork Vermilion River. The basin is particularly biodiverse with at least 96 species of fish and 46 species of mussels, many state-listed. A strong monitoring program with partners from Eastern Illinois University, the Illinois Natural History Survey, and Le Moyne College with funding from a State Wildlife Grant has already resulted in six publications.

We worked with researchers at the University of Illinois to complete a thermal tolerance bioassay on the Illinois state-endangered Bigeye Chub (*Hybopsis amblops*) to provide data in support of ongoing 316(a) permit reviews. Publication is in review.

We completed a Listing Package for the state-endangered Redspotted Sunfish (*Lepomis miniatus*) with partners from the Illinois Natural History Survey. Several years of successful propagation, the establishment of multiple refuge populations, and translocation efforts has led to a recommendation to the Illinois Endangered Species Protection Board to upgrade the status of the species from state-endangered to state-threatened.

The Mackinaw River is 129 miles long with a drainage area of 1,136 square miles. The basin has experienced a decline in the Smallmouth Bass population in recent years. Electrofishing catch rates have dropped up to 80% from historic highs with strong evidence of missing year classes. 2018 marked the third year of a supplemental stocking effort. An additional 9,824 Smallmouth Bass, including 200 spawn-ready retired broodfish from Jake Wolf Memorial Fish Hatchery, were stocked in the river at multiple locations in 2018. We continue to study reasons for the decline with researchers from the Illinois Natural History Survey, while jumpstarting natural reproduction in the river through the supplemental stocking effort. Early results are showing promising signs of successful population recovery.

Region III Reservoirs

With the coordination of the district fisheries biologist and the help of the U.S. Army Corps of Engineers, anglers and fishing clubs statewide, and local/regional businesses and industry the Lake Shelbyville Fish Habitat Alliance successfully completed its second year of operation to enhance the quality of the fishery for anglers and the economic benefit of local communities. Since January 2017, the many volunteers that comprise the LSFHA has acquired local and statewide donations and funds to build and place an additional 250 Lake Shelbyville cubes (66%) and Georgia cubes (33%) and 55 recently-built artificial stumps in Lake Shelbyville. Through sonar evaluation, angler catch, and Illinois Natural History Survey electrofishing, we know that the cubes are attracting large numbers fish (crappie and others).

The upgraded design of the Shelbyville cube has been so successful that anglers have suggested that the LSFHA quit building the original Georgia cube design. Anglers have caught crappie off of the Shelbyville cubes in less than an hour after they were placed! The INHS will continue to conduct further evaluations. The LSFHA applied for and successfully obtained a \$30,000 grant from Friends of Reservoirs, which was announced in 2017. An additional \$27,000 was allocated by the Friends of Reservoirs to the LSFHA. This was in addition to the original \$30,000 due to the success of our program. The money was received late in 2018 and will be utilized to build more cubes and stumps and add more plantings and rock piles to enhance angling on the lake. Other grants and funding sources are being sought to build many thousands of additional cubes.

In coordination with the Lake Shelbyville project U.S. Army Corps of Engineers staff, district fisheries biologist, Mike Mounce, suggested that fingerling striped bass and hybrid striped bass be acquired to help enhance the fisheries on the project lakes. In 2018, the USACE obtained 111,000+ striped bass fingerlings for Lake Shelbyville to enhance the diversity and quality of this fishery. This trophy species will benefit the anglers and economic health of local communities if successful. In coordination with a federal hatchery, these fish should be stocked soon, and the USACE plans on continuing this stocking for many years. The striped stocking was recently repeated in May 2019.

Mike Mounce received the “Commander’s Award (and medal) For Public Service” and a “General’s Coin” from the USACE commanders over Lake Shelbyville for his efforts to improve the fishery of Lake Shelbyville. Mike was very surprised and humbled by the award, as many people have been involved with the projects to improve angling quality on the reservoir.

Region 4 Streams Program

The Lower Sangamon River basin survey was successfully completed with 15 sites sampled in July-August. Conditions remain fairly consistent with recent surveys (2008, 2013) with the mainstem sites showing fair diversity and sportfish opportunities for channel catfish, flathead catfish, white bass and (limited) panfish. Many of the lower basin’s tributaries are sluggish, silt-laden streams harboring low diversity fish

communities. One exception, Crane Creek, is a cool, well-vegetated sand prairie stream supporting relict populations of ironcolor shiner, lake chubsucker and starhead topminnow, none of which are found elsewhere in the Sangamon and for that matter, central Illinois. One encouraging find was evidence of range expansion for smallmouth bass, which was collected for the first time in Crane Creek and Panther Creek within Jim Edgar Panther Creek Conservation Area.

Kaskaskia River sampling continues to show good catfish populations below Carlyle (channel, flathead and occasional blue catfish) but widespread prevalence of Asian carp, primarily silvers. Bass, crappie, and bluegill add to the fishery of the oxbow lakes along the navigation channel, but these populations appear to be in decline lately. Alligator gar stocked into the river since 2012 have yet to appear in our electrofishing, this warrants special netting surveys in the coming year.

Region 2 Impoundments

In a cooperative project which has been conducted annually since 2007, artificial fish habitats were placed at various sites throughout Braidwood Lake in 2018. The location for placement of these units is based upon input provided by anglers in cooperation with the district fisheries biologist. Emphasis is placed on those portions of the lake which do not typically experience the highest water temperatures. Since the project's inception, over 900 of these habitats have been placed. Funding for this project is provided by Exelon's Braidwood Generating Station and assistance is provided by the members of various bass fishing clubs.

Coordinated and finalized two new Cooperative Management Agreements, completed surveys on both waters and submitted Administrative Rules for inclusion into the Fishing Regulation Booklet.

IDNR Fish Hatchery System Report

The IDNR operates three state hatcheries located strategically across the state including Jake Wolf Memorial Fish Hatchery, Little Grassie Fish Hatchery and the LaSalle Fish Hatchery. The hatchery section's mission is to maintain, restore, establish, or sustain sport fish populations in lakes, rivers, and Lake Michigan in order to diversify sport fishing opportunities through supplemental production and stocking of hatchery reared fish. Fishing continues as one of the most popular outdoor activities in Illinois and direct spending by anglers in 2011 was nearly one billion dollars, which generated approximately three billion to the State's economy.

Fish produced by the hatchery system are utilized in three types of stockings. They are the stocking of newly impounded or chemically rehabilitated public waters, supplemental stocking of existing fish populations with poor recruitment, and the establishment and maintenance of sport fisheries in existing waters.

In FY18, the hatchery system produced and stocked a total of 25,256,497 fish of 18 species into state and public waters. These stockings included 1,000 alligator gar, 57,739 black crappie, 76,167 blue catfish, 459,292 bluegill, 111,594 brown trout, 688,371 channel catfish, 258,505 Coho salmon, 172,642 Chinook salmon, 1,530,152 largemouth bass, 228,119 muskellunge, 80,891 rainbow trout, 886,230 redear sunfish, 15,800,115 sauger, 372,265 striped bass hybrids, 73,614 smallmouth bass, 54,402 steelhead, 2,989,069 walleye, and 1,416,330 walleye-sauger hybrids.

Division of Wildlife

2018-19 Deer Season Harvest

Hunters in Illinois harvested a total of 151,709 deer during the 2018-19 seasons, including all methods and special hunts. Male to female sex ratio was 55:45 (46% antlered; 54% antlerless) in the total harvest. There were two less late-winter season (antlerless-only) counties open compared to last year. The prior year's total deer harvest was 147,695 (56:44 male to female ratio), and the Illinois record harvest of 201,209 occurred in 2005-06.

Chronic Wasting Disease (CWD)

We experienced a delay in CWD testing this year due to the unavailability of the chemical reagent necessary for tissue staining (IHC method). To date, eighty-seven (87) cases of CWD have been confirmed from 6,705 tested samples in 2018-19, a 16% increase from 75 cases in 2017. A total of 6,863 hunter-harvested samples were collected (5,125 tested) revealing 64 CWD-infected animals, while IDNR sharpshooting operations detected 18 CWD-infected deer from 1,019 collected samples (701 tested). Historically, most CWD positive cases (62 % of the cumulative total of 823) have come from the original 4 counties (Winnebago, Boone, McHenry, and DeKalb), but this has been shifting in recent years. Slightly over half (51%) of the cases this past year came from the counties of McHenry (14), Jo Daviess (10), Ogle (10) and Grundy (10). Although CWD has spread from 4 counties in 2003 to a total of 17 counties in 2016-17 (no new counties were added this past year), prevalence rates have remained low, approximating 1% throughout the 17-year history of the disease in the state.

Urban Deer Population Control

A total of 42 Deer Population Control Permits (DPCPs), not including permit extensions for additional time and/or deer, were issued to 11 natural resource management agencies, arboretums/botanic gardens, federal research facilities, and homeowner associations in seven northern Illinois counties during winter 2018-2019. Permittees were authorized to remove a total of 1,358 white-tailed deer via sharpshooting (1,338) and live-capture followed by mechanical euthanization (20); 1,243 (92%) deer were actually collected over the five-month period (November 2018-March 2019). All usable deer carcasses were processed and donated to charity. Additionally, some municipalities and homeowner associations in more rural areas of Illinois have implemented, or are considering, controlled hunting programs to address site-specific, deer-related problems.

Deer Removal Permits (DRPs)

A total of 232 Deer Removal Permits (DRPs) were issued in 55 counties in 2018, compared to 198 permits in 51 counties the previous year. Five permits authorized hazing of deer only; 227 DRPs authorized the lethal removal of 1,724 deer. These permits resulted in the collection of 879 animals (51%). Excessive deer damage to corn and soybeans accounted for 63% of the DRPs issued during 2018. Approximately 19% of the 2018 DRPs were issued due to concerns about deer on airport runways/taxiways. Permits were also issued for deer-related damage to specialty/truck crops (beets, lettuce, peas, pumpkins, strawberries, organic vegetables, etc.), nursery stock, and fruit trees/orchards. As usual, DRP issuance peaked in June and July with 54% of the permits issued during these months.

Epizootic Hemorrhagic Disease (EHD)

Moderate levels of EHD were reported in 2018 with 458 suspected cases reported from 51 counties. The disease was reported at low levels across the southern third and western half of the state. Higher levels of disease were reported along the Illinois River including Peoria, Fulton and Schuyler counties, as well as the southeastern Illinois county of Jasper. EHD virus was isolated from 9 spleen samples submitted; EHDV_2 was detected in 7 cases, EHDV_1 in 1 case, and serotype was not determined in 1 case.

EHD reporting levels in 2018 were somewhat higher than typically observed, but dramatically lower than the worst three outbreaks observed during this period (2012 – 2,968 dead deer from 87 counties, 2007 - 1,966 dead deer from 54 counties, and 2013 – 1,224 dead deer from 64 counties).

2018 Spring Turkey Harvest

Through May 12, Illinois turkey hunters had harvested a preliminary total of 14,788 wild turkeys during the 2019 spring turkey season, including the youth season. The season has concluded in the South Zone but is ongoing in the North Zone where will conclude on May 16th. This compares with 13,165 birds harvested at the same point in the 2018 season. The total harvest in 2018 was 13,454 and the state-record total harvest of 16,605 turkeys was set during the spring of 2006. Youth turkey hunters harvested a preliminary total of 1,364 birds during the 2019 Illinois Youth Turkey Season. Last year's youth season harvest total was 1,143 birds. The number of Illinois counties open to spring turkey hunting remained at 100 of the 102 counties statewide.

2017-18 Waterfowl Season

As a mid-latitude state, waterfowl abundance and hunter success in Illinois depends on habitat quality and food resources available. Habitat conditions varied across the state in 2018, as inconsistent weather and precipitation has become more normal during the growing season. These unpredictable growing season water levels continue to complicate waterfowl management in many of Illinois' most important wetlands. As such, habitat was considered average in many locations. Late summer or early fall flooding negated some quality areas making them unavailable to migrating ducks. The 2018-19 hunting season may be remembered as one of inconsistency and frustration for many hunters. Early unseasonably cold weather seemed to move many early-migrant species out of the state in November. Thereafter, a prolonged stretch of mild weather delayed mallard migrations, especially for hunters in the south half of the state. Hunter harvest was down 15–50% at DNR managed sites reporting harvest shortly after the season. Duck abundance along the Illinois River was less than in 2017, but greater than in 2017 along the Mississippi Rivers. Duck numbers peaked along the Illinois River November 14 but were 22% below the 5-year average. Duck numbers along the Mississippi peaked 14 November, 35% above the 5-year average, and the 6th highest peak since record keeping began in 1948. Duck abundance peaked on December 11 in southern Illinois, 96% above the 10-year average, but numbers dropped quickly and remained well below average through the end of January. Northeast Illinois duck abundance peaked November 14 well above the 10-year average; however, the number of completed surveys was lower than in most years. Mild temperatures and little snow cover through late-January allowed Canada geese to remain in Wisconsin throughout most of the hunting season. Goose abundance was below average in northern and central Illinois throughout December and January.

2017-18 Upland Harvest

The 2017-18 survey estimated that 12,575 hunters (23% increase) shot 33,876 wild pheasants in Illinois (128% increase), compared to the 2016-17 totals of 13,955 hunters and 24,316 wild birds. The number of hunters and the number of days each hunter spent in the field both increased from 2016-17. The 2017-18 quail survey estimated that 8,597 hunters shot 29,385 wild quail (18.2% decrease) compared to 7,256

hunters and 35,951 quail in the 2016-17 survey. The number of quail per hunter/day was down 35.8%. Estimates from 2017-18 indicate that 29,770 hunters (down 15%) harvested 514,812 doves (up 1.1 %). The number of birds per hunter/day was down 5.8% for mourning doves. The number of rabbit hunters in 2017-18 (27,332) was up 21.8% from the previous year and they harvested 132,1671 rabbits (up 46%). Despite the decrease in participation, the number of rabbits per hunter/day decreased 15%.

Agency Highlights

Hunter Heritage: Recruitment, Retention, and Reengagement

At the core of the Hunter Heritage Program approach to increasing participation in hunting is a feedback model proven to recruit, retain and reengage (R3) people in an outdoor recreation activity. Many states are using this model framework, but Illinois is taking it a step farther through a combination of science and partnerships with a broad array of constituent organizations.

For example, a part of the scientific approach is using hunting licenses and permit records to estimate R3 rates and project how changes in hunter demographics will impact efficacy of wildlife management and conservation revenue (e.g., Pittman-Robertson funds). Data are also being collected to objectively assess what and how hunter programs are falling short in the R3 process or how likely new types of hunting licenses and permits would be at recruiting or retaining hunters. Through collaboration and data-sharing with partner hunting organizations and human dimensions researchers, the Hunter Heritage Program can greatly improve factual evidence needed to adapt and implement effective hunter programs across Illinois.

Analyses to date show that hunters compose about 2% of Illinois residents, of which hunters are declining 2% annually. This decline is largely attributed to poor hunter retention rates of youth (<18 years) and recruitment rates of adults, with additional attrition related to most hunters becoming older and rarely hunting after age 57. However, a growing segment of hunters appears to be females, which have better R3 rates than males across most age categories. Lastly, records indicate Wildlife Management revenue from hunting licenses has decreased since 1938, even when adjusted for inflation and the increased number of specialty hunting licenses developed ostensibly to increase R3 rates.

The Hunter Heritage Program has also been diligent in building partnerships with constituent groups interested in hunter R3. In March 2019, the Hunter Heritage Program organized a 2-day R3 conclave that brought together 22 state and federal programs or non-government organizations. The team developed several task groups that are commencing development of a statewide strategy that will focus on increasing R3 rates across public demographics and mitigate long-term constraints to hunters, like land access and overly-complicated regulations. Over the next few months additional local to national government and non-government organizations will be included to fully develop a comprehensive strategy that is adaptable and scalable to all levels of our constituents. The Hunter Heritage Program is also working on developing contemporary resources for hunters, such as revised Hunter Fact Sheets, Hunting and Trapping Digest, and websites.

Feral Swine

USDA Animal and Plant Health Inspection Service Wildlife Services (APHIS-WS) and IDNR have removed 486 feral swine in Illinois since 2009; removal methods include trapping (286 feral swine removed), shooting (146 feral swine removed, utilized for small groups and as a follow-up to trapping efforts), and aerial control (52 feral swine removed). These efforts resulted in the elimination of two established breeding populations of feral swine in from the state (2015).

More recently USDA WS working in conjunction with IDNR, Pike Co Soil and Water Conservation District, Pike Co. Farm Bureau, IL Dept of Agriculture, USDA NRCS, and the IL State Police were able to remove of a newly emerging population from Pike County resulting from a pork producer who refused to properly contain his livestock. This producer was subsequently issued a citation by the IDNR for chronic neglect of a fence that could lead to the establishment of a FS population (IDNR Title 17; Chapter 1; Sub-Chapter b; Part 700) and ultimately sentenced to 6 days in jail, a 60 day suspended jail sentence, and is not allowed to have livestock of any kind for 2 years as a result of violating his probation.

APHIS-WS efforts are currently directed toward follow-up of citizen reports of feral swine including numerous reports of feral swine from the southern Illinois counties of Saline, Pope, Pulaski and Alexander Counties. Legislation passed in 2014 allows the IDNR to regulate feral swine in Illinois; importation, possession, and commercial take of feral swine are prohibited. Feral swine hunting is limited to firearm deer seasons, and landowners are required to obtain a no-cost nuisance animal removal permit from the IDNR to remove feral swine from private property.

Bobcat Hunting

Illinois offered its third hunting and trapping season for bobcat since 1972. More than 5,000 people applied for 1,000 permits to take a bobcat by hunting, trapping, or salvage from roads. Successful permit holders tagged a total of 343 bobcats. Hunters and trappers took 306 bobcats and an additional 37 road-killed bobcats were tagged by permit holders.

Illinois Recreational Access Program (IRAP)

Utilizing Voluntary Public Access-Habitat Improvement Program (VPA_HIP) grants from the USDA, the IDNR created the Illinois Recreational Access Program (IRAP) so that outdoor enthusiasts have more places to go. In 2018, IRAP leased over 19,438 acres of private land in 44 counties, creating opportunities for spring turkey, archery deer, squirrel, rabbit, quail, pheasant and waterfowl hunting. Several sites are also available for pond and river bank fishing as well as hiking. IRAP has written 76 habitat management plans, in cooperation with IDNR, USDA and SWCDs, on 10,857 acres of qualified leased private property. These plans are specifically written to provide a diverse habitat to improve Wildlife Action Plan targeted species. In 2018, IRAP completed more than 582 acres of nonnative invasive species control, 612 acres of timber stand improvement, 113 acres prairie prep/planting, 3 acres of tree plantings, and 1,844 acres of prescribed burning and 11 miles of burn break. In addition, IRAP saw a substantial increase in public access site applications for a variety of hunting activities in comparison to 2017.

Endangered Species

In Spring 2018, the Department successfully deployed a new web-based Endangered Species Permitting Tool. The new system allows individuals and institutions to apply for new permits, as well as edit, amend, and/or renew existing permits, and allows staff to issue permits electronically. In total, 378 permits for scientific research, personal possession, educational programs, and zoological/botanical institutions were issued for endangered species in 2018. During the reporting period, targeted surveys of state-listed Indiana Bat, Northern Long-Eared bat, Northern Riffleshell, Clubshell, Eastern Massasauga, Rusty Patch Bumblebee, Ornate Box Turtles, Timber Rattlesnake, Franklin's Ground Squirrel, River Redhorse, Eastern Sand Darter, and Eastern Woodrat were conducted. The Department continues implementing recovery actions for state-listed Indiana Bat, Hines' Emerald Dragonfly, Eryngium Stem Borer, Eastern Massasauga, Greater Prairie-Chicken, Osprey, Barn Owl, Blanding's turtle, and Alligator Snapping Turtle. The

Department has continues producing science-based conservation guidance documents for over 20 state listed species.

Illinois Habitat Team

The Illinois Habitat Team Program provides technical assistance, seed, plants, equipment and labor for wildlife habitat establishment and improvement on state Pheasant Habitat Areas, Habitat Areas and private lands. Due to retirements and promotions the Habitat Team was down to one member for most of the year. A Natural Resources Coordinator was hired in September and a Technician II was hired in November. In 2018, the team reported the following accomplishments: sprayed 325.5 acres for invasive plant control, mowed 144 acres, treated 645.0 acres for woody encroachment, conducted prescribed burns on 75.0 grassland acres.

Natural Areas Stewardship

The Department's Division of Natural Heritage implements an active stewardship program on Natural Areas. From July 2015-June 2018, state budget limitations constrained contractual stewardship work. In July 2018, IDNR's budget was restored. Since July 1, 2018, Heritage staff have initiated 124 projects in procurement totaling \$2,473,277.

The Department continues to work toward formalizing the Illinois Natural Areas Stewardship Grant Program. The program will provide grants to eligible Conservation Land Trusts for stewardship activities on lands protected by the Illinois Nature Preserves Commission as Dedicated Illinois Nature Preserves and Registered Land and Water Reserves. The Department has drafted administrative rules to govern this new grant program and has submitted to the Governor office for review prior to submitting to the Joint Committee for Administrative Rules for review, public comment, and adoption of the final rule. The grant program may be implemented in FY2020 pending the adoption of the final Administrative Rule and available funding.

Incidental Take Authorizations

The IDNR has the authority to permit the take of listed species, if the taking is incidental to some otherwise legal action. Since 2001, the Department has 203 Incidental Take Authorizations either issued or pending. Examples of project types for which this permit is sought include transportation (river, road, and rail), utility corridors (power and pipeline), wind farms, mining, dam removals, and commercial development. The Department continues to strive to apply a consistent standard for mitigation of potential impacts to imperiled species as required by statute. The Department defines adequate mitigation as bringing conservation benefit to the species. Applicants are encouraged to provide support for on-the-ground efforts such as habitat acquisition and restoration; propagation, translocation, or species/habitat research to support recovery efforts; or outreach materials that provide land management and impact minimization recommendations for future applicants. Through this effort, the Department continues to experience an increase in partnerships between the agency and local land trusts, biological consultants, university researchers, and other conservation agencies to define timely and applicable mitigation strategies to support species.

Monarchs

During 2018, Illinois Monarch Project (Illinois' monarch collaborative) continued to meet monthly with leaders from agriculture, rights of way, urban, natural lands, communication, and science sectors. In July 2018, the Directors of Illinois Dept. of Natural Resources, Dept. of Agriculture, Environmental Protection Agency, and Secretary of Dept. of Transportation signed a memorandum of understanding to support

monarch conservation efforts in Illinois. In addition to supporting Illinois 150,000,000 milkweed stem goal thru their agency programs, they will review and approve the Illinois Monarch Project Monarch Action Plan, which is slated July 2019. Additionally, design work is underway for Illinois' monarch license plate.

Wildland Fire Programs

IDNR staff managed 9,500 acres in 120 units with prescribed fire during the last burn season. Seven introductory wildland firefighting classes were held for IDNR staff and volunteers. Fifteen IDNR staff completed advanced wildland fire training classes at the Midwest Wildfire Training Academy. Fourteen G130 – 190 wildland fire classes were presented to the volunteer fire departments. A total of 62 fire departments were represented with 345 firefighters completing the classes. Through federal excess equipment programs, IDNR acquired approximately \$14,000,000 of surplus fire equipment, including fire engines, trucks, rescue boats, lighting standards, generators, tools and a variety of other items. IDNR provided two 20-person Type 2IA crew to assist in wildland firefighting efforts in Western States.

IDNR Nursery Program

For FY19, the IDNR Nursery Program produced 590,000 bare-root trees and shrubs in 26 different species. Additional nursery production included 2,000 containerized trees and shrubs in 17 different species; 12,000 containerized prairie forbs and grasses in 45 different species; 1,440 pounds of cleaned prairie forb seed in 45 different species, and 6,525 pounds of cleaned prairie grass seed in five different species. The Mason Nursery also assembled 500 packets of Monarch/Pollinator native seed mix.

Illinois Forestry Development Act (IFDA) Forest Management Program

IFDA requires landowners to have a current IDNR-approved forest management plan. These comprehensive plans define forest resources that are present, current condition, needs of the forested area for long term forest health, and recommendations. Illinois has approximately 538,100 enrolled acres engaging 9,563 forest landowners. As a result, approximately 15% of non-industrial private forest land in Illinois is being managed for long term forest health. Recommended forest improvement practices include afforestation, reforestation and forest stand improvement.

Illinois Forest Legacy Program

The Forest Legacy Program is a partnership between the IDNR and the USDA Forest Service to identify and acquire environmentally important forests. Conservation easements are the main tool used for protecting these important forests. The IDNR Division of Forestry maintains eligibility to complete up to three projects per year. Illinois has seven Forest Legacy Properties within its borders totaling 558 acres.

Urban and Community Forestry Program (UCF)

The UCF program administers the Tree City USA, Tree Campus, Tree Line and Growth programs. Communities received education and recognition for their local forest management programs. Illinois has been ranked first for the number of Tree Campuses in the nation since program began. Illinois has 182 Tree Cities, 18 Tree Campuses, 27 Growth Award winners.

Illinois Forest Utilization & Marketing Program

IDNR bonded and licensed 383 individual timber buyers or companies listing 860 total authorized agents to purchase timber from any Illinois forestland owner. Seventy-five sawmills and additional hobby or portable mills are currently operating in the state. Verified sales of timber and products, primarily as hardwood logs, from private forests exceeded \$41 million. The total economic value of the forest products industries to Illinois, including all primary and secondary sectors, exceeded \$23 billion as measured in 2012. The agency, through its forestry division Utilization and Marketing Program with support from the Illinois Forestry Development Council is engaged in a 2018_2019 effort, under a multi-state competitive USDA Forest Service grant to closely analyze Illinois and most northeastern US states full timber output and economic forest/forestry values.

Illinois Conservation Reserve Enhancement Program (CREP)

The Illinois Conservation Reserve Enhancement Program (CREP) is a State Incentive Program combined with the USDA Federal Conservation Reserve Program (CRP). CREP provides long term environmental benefits by allowing 232,000 acres of eligible environmentally sensitive lands within the Illinois River and Kaskaskia River watersheds to be restored, enhanced and protected over a period of time from 15 years to perpetuity. Since CREP was established in 1999, 1,408 easements have been placed, protecting 90,990 acres. However, CREP was temporarily suspended effective July 1, 2015 and has not accepted any new easement enrollments to date.

Nutrient Loss Reduction Strategy

IDNR staff are involved with planning and implementation efforts for The Illinois Nutrient Loss Reduction Strategy (NLRs). The 2008 Gulf Hypoxia Action Plan, calls for each of the 12 states in the Mississippi River Basin to produce a plan to reduce the amount of phosphorus and nitrogen carried in rivers throughout the states and to the Gulf of Mexico. In 2011, U.S. EPA provided a recommended framework for state plans. Illinois' plan was developed by a policy working group that includes representatives from state and federal agencies, including IDNR, agriculture, and non-profit organizations as well as scientists and wastewater treatment professionals. IDNR staff are actively involved in the Nutrient Monitoring Council that is charged with coordinating water quality monitoring efforts by government agencies, universities, non-profits, and industry; the Agriculture Water Quality Partnership Forum that steers outreach and education efforts to help farmers address nutrient loss; and the Urban Stormwater Working Group that coordinates and improves stormwater programs and education.

Illinois Wildlife Action Plan

Illinois' Wildlife Action Plan continued to guide work enhancing and restoring Natural Areas and Species in Greatest Conservation Need (SGCN) including threatened & endangered species throughout the State of Illinois. During 2018, implementation continued on 21 ongoing State Wildlife Grant (SWG) Projects that focus on conservation assessments and management of at-risk species and the habitats required to maintain them. Collectively these projects provide information on at least 35 State-listed wildlife species of amphibians, birds, fish, insects, mussels, and reptiles. Five new SWG Projects were initiated and two others were supplemented with additional funds. New projects focus on conservation assessments of at-risk species including terrestrial and aquatic insects, secretive wetland birds, and the Eastern Massasauga. Supplemented projects focus on wildlife health and conservation assessments of state-listed turtles and snakes. SWG Projects were completed during 2018 that focused on habitat requirements and monitoring of at-risk salamanders and frogs, and on monitoring and habitat improvement for the King Rail. One Regional Conservation Coordination project in Southern Illinois was also completed. Updates made to the IWAP Webpage included: developing written summaries for over 120 completed and ongoing SWG

Projects; posting downloadable versions of the SGCN and IWAP Watch Lists; and creating story maps for each of the habitat-based Campaigns that reflect their current goals, focus areas, focal species, major stressors, and highlighted conservation activities.

For More Information

Contact the Illinois Department of Natural Resources Office of Resources Conservation for more information:

Chris Young
Office Director
(217) 785-8272 (office)
(217) 993-1650 (cell)

Indiana

INDIANA STATE REPORT

May 25, 2019

Mark Reiter, Director
Indiana Division of Fish & Wildlife
402 W. Washington Street, W273
Indianapolis, IN 46204

Strategic Plan

Division of Fish & Wildlife (DFW) completed a 5-year strategic plan with a focus on the following themes: engaged citizens, healthy fish and wildlife populations, sustainable funding, and an excellent workforce. During the course of the next 5 years, these 4 focus areas will help take DFW to the next level for conservation of natural resources and serving the public. With the recent emphasis on an engaged and informed citizenry, 5 new positions were added to the Outreach & Education unit: two Outreach Specialists, an Education Outreach Specialist, Volunteer Outreach Specialist, and Human Dimensions Specialist.

Online Customer Platform

DFW successfully completed a Request for Information process with Division of State Parks for a new online customer platform with the goal of a more customer centered portal for all Fish & Wildlife and State Parks services. This new platform will deliver a high-quality customer experience and valuable products in an efficient manner that will reduce agency costs. The agency is now moving to a full Request for Proposal process.

Financial Update

DFW has been operating at full staff for the past two fiscal years and is getting caught up on addressing various needs for research, equipment, and facilities. While this is great news, it is placing additional pressure on existing revenues and budgets. We continue to leverage existing funds with third-party partners, volunteers, and in-kind match and investigate new funding opportunities. The Division has received or helped partners to receive new funding through RBFF, Indiana's Natural Resources Foundation, and Duke Energy.

There has been increased attention towards modernizing state facilities and deferred maintenance needs. Additional funding has been approved in the budget bill during this year's General Assembly and we are hopeful DFW will be able to utilize this new funding towards improving aging infrastructure.

In March 2019, Indiana DNR received a clean audit report for the Wildlife and Sport Fish Restoration program by the Office of Inspector General (OIG). The audit covered approximately

\$62.7 million on 68 open grants that covered state fiscal years 2016-2017. This is the second consecutive time Indiana DNR has received an OIG report with no findings and is a testament on the agency's internal controls and staff diligence towards compliance.

Recruitment, Retention and Reactivation of Hunters and Anglers (R3):

DFW conducted 115 public angling events with a total of 8,405 participants and 54 hunting, trapping and shooting events with a total of 1,252 participants. Data collection was enhanced by utilizing digital solutions (online forms, tablets, and smartphones). In an effort to expand internal support of the R3 program, the R3 coordinators created a report that identified internal challenges and barriers. A list of action items and next steps were identified and assigned. One of these actions was the creation of a R3 workshop calendar for 2019 with the goal of increasing public awareness of R3 events to help us better reach our target audiences (families, women, adults, and locavores) and create a multitude of next step opportunities. "Learn to" workshop curriculum were created and released to DFW staff for hunting and fishing workshops. Curriculum for trapping and shooting is under development. Pre-, post-, and follow-up surveys were developed for R3 participants to ensure thorough evaluation of programming. DFW planned Indiana's first R3 Summit (Spring 2019) to build external capacity. Partners were engaged and motivated during this one day meeting that aimed to summarize the Outdoor Recreation Adoption Model in relation to hunting, fishing, trapping, & shooting sports. Following the summit, DFW is continuing to work with partners to draft a statewide R3 Plan.

DFW has engaged in an aggressive direct email campaign in an effort to boost license sales in the current year and retain anglers into the future. A general license renewal reminder was emailed to all anglers who purchased a license in 2018. New recruits and reactivated long-term lapsed anglers will receive an email from their respective District Fisheries Biologists highlighting local fishing hotspots, fishing tips, and providing other relevant information. Short-term lapsed and nonresidents lapsed anglers will receive emails (some will also receive postcards) following RBFF's email reactivation toolkit encouraging these anglers to purchase a license this year and go fishing. Avid anglers, those who have purchased a license five of the last five years, will receive an email from Indiana's Chief of Fisheries thanking them for their continued support of fishing and conservation in the state.

Land Acquisition

DFW continues to acquire more land. In 2018, 1,053 acres were added onto Fish & Wildlife Areas and 1 acre was donated for a Public Access site. Through the Healthy Rivers Initiative (HRI), the state's largest land conservation initiative, an additional 145 new acres were purchased. In total, 1,199 new acres were acquired by DFW.

State Wildlife Action Plan (SWAP)

A minor revision of Indiana's SWAP was completed. The revision entailed the removal of six species of mussels and Northern Leopard Frog from species of greatest conservation need

and the addition of Plains Gartersnake. In 2018, 2,026 acres of habitat were purchased by Indiana DNR within SWAP identified conservation opportunity areas and another 2,565 acres were permanently protected (either through easements or outright purchase) by our conservation partners. Since 2015, that brings the total habitat permanently protected within conservation opportunity areas to 15,178 acres.

In recognition of the need for better collaboration among conservation partners and the need for more diverse support and understanding of Indiana's SWAP, there were three "Conservation Happenings" meetings held across the state. These meetings provide a forum for the conservation community to meet, discuss barriers to doing conservation work, and identify specific actions and opportunities to collaborate in addressing those barriers.

Grassland for Gamebirds & Songbirds

Grasslands for Gamebirds & Songbirds (GGS) is a landscape partnership program launched in the fall of 2018 that develops grassland & pollinator habitat within 5 focal regions of Indiana. Targeted accomplishments in the first 3 years of the programs' existence include habitat development with 70 producers, development of 2,250 acres of grassland/pollinator habitat using EQIP funds, habitat development of another 1,000 acres of grassland and early successional habitat using partner financial assistance funds, and approximately 1,500 acres of quality Northern Bobwhite Quail habitat as part of National Bobwhite Conservation Initiative (NBCI) focal area protocols. To date, partner habitat contributions total 11 projects developing 253.8 acres of habitat. EQIP habitat projects total 41 presently pending approval for development in 2019. A robust number of landowners have expressed interest in participation with 805,683 potential producers reached to date through promotion efforts. An NBCI focal area in southwestern Indiana will serve as the brunt of the monitoring efforts, while also allowing DFW to implement an NBCI focal area on Indiana's landscape. Monitoring efforts are being finalized and will begin in late spring/summer of 2019.

Access Program Providing Land Easements (APPLE)

APPLE, an acronym for Access Program Providing Land Enhancements, is DFW's first private lands hunter access program. This program provides financial incentive payments to private landowners who allow controlled public access hunting for gamebirds on their private lands. In 2018, DFW enrolled 5 tracts accessing 550.4 acres of quality gamebird habitat. In all, 30 hunting opportunities were provided through this program. APPLE will significantly expand the acreages enrolled and the hunting opportunities in the fall of 2019. Plans are underway for this program to grow beyond hunting access for gamebirds into a program providing access for deer, turkey, waterfowl, gamebird, and other small game hunting as well as fishing, birding, and wildlife viewing opportunities. The monies used to fund the APPLE program are used as "in kind contribution" (a form of match) for our RCPP that funds the GGS initiative.

Community Hunter Access Program (CHAP)

CHAP, or Community Hunter Access Program, is a program designed to increase hunting opportunities for White-Tailed Deer and help alleviate human/deer conflicts. The program provides community partners with financial and technical assistance to administer hunting programs in their communities. For the 2018 hunting seasons, there were 3 successful community hunts. These 3 community hunts provided 1,303 acres of access for deer hunting in the fall of 2018 that yielded 730 hunting opportunities. For the 2019 deer hunting seasons, it is believed that the number of communities participating in this program will grow from 3 to 7. With that growth, more acres accessed and more hunting opportunities are anticipated.

Monarch Wings Across The Eastern Broadleaf Forest

Monarch Wings Across The Eastern Broadleaf Forest (MWAEBF), led by Pollinator Partnership (P2) and funded by a grant from the National Fish and Wildlife Foundation (NFWF), trains and organizes volunteer seed collection networks to collect seed from important nectar (forbs) and larval (milkweeds) species to expand the availability of plant material to enhance monarch and pollinator habitat in Indiana and across the Midwest. This initiative has been co-led in Indiana through the DNR- Division of Fish and Wildlife and USFWS-Partners for Fish and Wildlife. Seeds collected by volunteer teams are shipped, cleaned, and prepared by Mason State Nursery in Illinois. In Indiana, 12 volunteer seed collection teams were formed and 257 volunteers were trained. Indiana's dedicated volunteers have made over 160 collections, logged an estimated 1,800 hours, and driven over 5,000 miles. In Indiana alone, more than 20 projects have received plant materials (planted in 2018) to enhance pollinator habitat. To date, 15,000 native plugs and 24 lbs. of seed have been provided for pollinator habitat projects from seed collected in 2017 alone (anticipated to double with 2018 collected seed). Through an additional NFWF grant awarded to P2, this effort is going to be continued and expanded as "Project Wingspan" through 2021. This continuation will expand this effort from 5 to 8 states, as well as expand the focus from monarchs to include the rusty-patched bumblebee.

Wildlife Science Update

The first documented outbreak of avian cholera in the state occurred near the lower Wabash River in southwest Indiana. About 700 birds, most of which were snow geese, were found dead in association with the 3-month outbreak that lasted into March 2018.

A total of 111,251 deer were harvested during the 2018 season, a 2.1% drop from the previous year's harvest. DFW increased surveillance efforts for chronic wasting disease and bovine tuberculosis in hunter-harvested deer in targeted areas of the state; sample results to date have been negative.

Thirty-nine juvenile hellbenders were released into the Blue River; this is the second release of hellbenders that were reared in captivity from eggs collected in the wild.

DFW expanded its analytical capabilities with the hiring of its first wildlife biometrician in August.

Federal funds were obligated for two new external research projects: "*Integrated Deer Management*" uses biological, ecological, and sociological information on deer populations to inform management decisions in a holistic context; and "*Effects of Nuisance Control on the Ecology, Harvest, and Management of Temperate Breeding Canada Geese*" improves the understanding of how management of the large and sometimes aggressive birds impacts urban areas and long-term populations.

Flood Response on Public Lands

In early 2018, residents in northwest Indiana experienced a perfect storm. After a winter that had been filled with large amounts of snow and frozen ground, the weather pattern shifted and the sky let loose with vast amounts of precipitation in the region. While several Fish and Wildlife Areas were dealing with flood issues, Kankakee Fish and Wildlife Area was shaping up to be at the epicenter of this developing situation. Local staff began to prepare levees for the potential of flooding. Staff worked with locals to begin placing sandbags along the river to protect neighboring lands from the swelling rivers. Despite extensive efforts, levees started to fail as flood waters continued to rise. Over the next few days, several spots along the levees fell victim to the rising floodwaters and gave way causing extensive floodwaters to inundate the area. As levees began to fail, efforts started to shift from monitoring and preventative measures to emergency management. DFW along with Indiana Department of Transportation mobilized additional assets into the area. Neighboring farmers were contracted to help expedite the efforts to minimize the overall impact and law enforcement assisted with drone recon to help assess the situation. There were over a dozen breeches and damage was over \$1 million on Kankakee Fish and Wildlife Area. Staff worked long days, holidays, and weekends for several weeks straight to provide relief for neighboring lands and minimize local damage. While these events caused an amazing amount of damage, it would have been far worse had it not been for the efforts of so many involved. Efforts are still underway to repair the damage from this flood event.

Eradication of *Hydrilla verticillata* from Lake Manitou

In August 2006, DNR biologists discovered hydrilla during routine sampling at Lake Manitou, an 809 acre lake located in northern Indiana. In response to this first discovery of hydrilla in the Midwest, Indiana DNR implemented a rapid response plan that included initial quarantine of the lake to prevent its spread and an eradication program utilizing season-long herbicide application strategies. Along with an aggressive control effort with the goal of eradication, Indiana DNR implemented an adaptive surveillance program that included tuber sampling, aquatic vegetation sampling, and scuba diver visual surveys. Over a 12 year history that involved 10 years of season long herbicide applications and the last 5 consecutive years without hydrilla detection within the lake, we have declared this project a successful

eradication. The total cost for the project was \$2,950,000. While that number seems large, it is a small price to pay to keep one of the world's worst invasive species out of Indiana waters.

Lake Webster Muskellunge

After several years of declining numbers of Muskellunge in northeast Indiana's Lake Webster, the population and popular muskie fishery is on the rebound. This April's catch of 305 muskies during DFW's muskie egg-taking operation was the highest on record dating back to 2005. In contrast, only 42 muskies were captured in 2016. This year's catch also included numerous small muskies less than 32 inches long that had been PIT-tagged prior to stocking, either as age-0 fall-stocked fingerlings or age-1 spring-stocked fingerlings. The tagging project will enable biologists to compare survival and cost-efficiency of stocking both groups. Although the exact cause of the decline is not known, DFW biologists suspect a combination of excessive adult densities, reduced sizes of stocked fingerlings, and increases in aquatic vegetation control may have led toward poor survival of stocked fingerlings.

Info Fisheries Database

DFW has partnered with the Indiana Office of Technology to construct a statewide fisheries database. This database will provide a centralized location for the storage of fisheries information, stocking records, aquatic vegetation data, and other fisheries related data. The database will also allow for the analysis of larger and long-term data sets.

Aquatic Habitat Enhancement

DFW partnered with Indiana Bass Federation on aquatic habitat projects on Lake Monroe. A total of 240 habitat structures were placed east of the State Road 446 causeway. As a follow up to the project, DFW is doing experimental Largemouth Bass stocking of large fish (8-10 inches) in the spring. 3,200 Largemouth Bass were purchased by the Indiana Bass Federation. DFW will evaluate the stockings to determine if they are making a positive impact on the fishery. In addition, DFW is researching how Channel Catfish nesting boxes can improve Channel Catfish recruitment. Nesting boxes have been placed at Pigeon Pit, Springs Valley Lake, Saddle Lake, Catfish Pond, and Crooked Creek Lake.

Asian Carp

DFW is involved in cooperative projects researching Asian carp with Kentucky Department of Fish & Wildlife Resources, West Virginia Department of Natural Resources, USFWS, and West Virginia University. DFW has received \$52,000 in grant funding from USFWS for participating in the following projects: 1. Abundance and Distribution of Early Life Stages of Asian carp; 2. Quantifying Lock and Dam Passage, Habitat, and Survival of Asian carp; 3. Early Detection and Evaluation of Asian carp Removal.

Iowa

**IOWA
STATE REPORT
January 2018-December 2018**

**Dr. Dale L. Garner, Division Administrator
Iowa Department of Natural Resources
Conservation and Recreation Division
502 East 9th Street, Wallace Building – 4th Floor
Des Moines, IA 50319**

Iowa DNR Mission Statement: To conserve and enhance our natural resources in cooperation with individuals and organizations to improve the quality of life for Iowans and ensure a legacy for future generations.

Iowa DNR Vision Statement: Leading Iowans in caring for their natural resources.

The Department of Natural Resources – Conservation and Recreation Division:

The Iowa Department of Natural Resources (DNR) has been led by Acting Director Bruce Trautman since May 1, 2018, after the retirement of Director Chuck Gipp. The current Divisions within the DNR are Environmental Services Division (regulatory) and the Conservation and Recreation Division (CRD). CRD is charged with the management of Iowa's fish, wildlife, and natural resource management under the bureaus of Fisheries; Land and Waters; Law Enforcement; State Parks, Forests, and Preserves; and Wildlife. In February 2017, Dr. Dale L. Garner was appointed to serve as Division Administrator.

Natural Resources and Outdoor Recreation Trust Fund (formerly known as Sustainable

Natural Resource Funding): 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. The DNR submits 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.

Support for the DNR's Fish and Wildlife Trust Fund (FWTF): The FWTF is a special account first established in Iowa in 1937 to manage and regulate Iowa's wildlife and fishery resources. In 1996, an amendment to the Iowa Constitution was passed to protect the Trust Fund from being diverted for other purposes during difficult state economic times. This amendment stipulates that fee-generated revenue and associated federal funds can only be used for the

purposes of promoting, managing, researching, and regulating hunting, fishing, and trapping in Iowa. The adjustment to fees was only through legislative action, which reduced flexibility in the DNR's management of funds, and many fees had not been increased since 2003. With the support of many stakeholder groups and license buyers over the years, in 2018, the legislature passed, and Governor signed, a bill that shifted the authority of setting license fees to the DNR (House File 631). New fees were implemented beginning with the 2018-2019 season.

Fisheries Bureau:

Big Creek Fish Barrier Study - A physical fish barrier was constructed on the Big Creek Lake (Polk County) spillway in the summer of 2012 to reduce adult Muskellunge escape. The barrier consists of six chain link top rails (1.6" outer diameter) stacked in a horizontal fashion with 2" openings between the rails (21.6" total height). The rails are made of 16 gauge galvanized steel and are attached to vertical spillway posts with line rail clamps. Automated PIT tag readers were installed at the Big Creek Lake and Brushy Creek Lake (Webster County) spillways in the spring of 2016. The effectiveness of the barrier is being evaluated by monitoring PIT tagged Walleye and Muskellunge escape. Brushy Creek Lake is being used as a control lake because it has similar attributes, but it lacks a barrier. Managers have implanted 32 mm HDX PIT tags into 5,000 Walleye and 900 Muskellunge per lake. Habitat use and seasonal movement of Walleye and Muskellunge are also being monitored with radio-telemetry. A total of 168 Walleye and 104 Muskellunge have been tracked over the course of the study. Pool elevations, flow, and water temperature are being monitored with Onset HOB0 data loggers to determine how these environmental variables relate to fish movement and escape. Preliminary results indicate that the barrier is effective at reducing escape at Big Creek Lake. One-hundred eighty-one Walleye and 66 Muskellunge have escaped from Brushy Creek, where only 58 Walleye and 11 Muskellunge have escaped from Big Creek. Fish that have escaped from Big Creek have all been juvenile fish.

An Overview of Iowa DNR Hatchery Operations - Fisheries management biologists have many tools available to them for the management of fish populations in rivers, streams, reservoirs, impoundments, and natural lakes. Habitat, watershed improvements, and fishing regulations are good examples, but stocking fish is another valuable tool. In many cases, a successful fishing trip for Iowa anglers is the result of our stocking program. Without stocking, fisheries for Channel Catfish, Muskellunge, and Walleyes would be minimal in reservoirs and impoundments. Like other states, the DNR has a fish production system comprised of hatcheries and grow-out facilities. The DNR has four hatcheries, located in Fairport, Manchester, Rathbun, and Spirit Lake, and three grow-out facilities located in Decorah, Elkader, and Mount Ayr. In 2018, twelve species of fish were produced by these facilities and stocked into public bodies of water: Bluegill, Blue Catfish, Brook Trout, Brown Trout, Channel Catfish, Largemouth Bass, Muskellunge, Northern Pike, Palmetto Bass, Rainbow Trout, Smallmouth Bass, and Walleye. Within some of these species, we stock several sizes of fish ranging from fry up to a catchable size. In total, 164.9 million fish were stocked from Iowa DNR fish production facilities in 2018. By far, the most stocked fish, by number was Walleye fry at 162.4 million. The most stocked fish by weight were catchable trout at 137,382 pounds.

Distribution of Remnant Brook Trout Populations Research: In 2017 and 2018, the DNR and Iowa State University received a U.S. Fish and Wildlife Service (USFWS) two-year grant totaling \$98,694 to inventory coldwater stream fish communities and habitat and search for

remnant native Brook Trout populations in N.E. Iowa. In 2018, about 90 sites were surveyed with an additional 90 sites scheduled for summer 2019. In addition to fish and habitat surveys, each site also had a water temp logger installed. Sites will be monitored for water temperatures for at least two years. This data will be used to update State of Iowa coldwater stream classifications. In addition to the USFWS grant, Iowa State University provided about \$12,000 to the project in the form of a teaching assistantship and the DNR has contributed about \$44,000 in project support as of March 2019. This project will conclude in June 2020.

Genetics of Iowa Driftless Brook Trout Research: The Iowa DNR and University of Wisconsin-Stevens Point received two grants from USFWS to evaluate the genetic diversity and source of Iowa's wild Brook Trout fisheries. All wild populations have been sampled and genetic clips taken to be evaluated by UWSP. Preliminary results of the analysis showed 1) there is no reason to believe that South Pine Brook Trout are not native to Iowa, 2) the South Pine population is relatively diverse when compared to other wild populations in MN and WI, 3) most other streams restored by using South Pine Brook Trout could be used for future broodstock collections, 4) a couple Iowa streams could use additional stockings to increase genetic diversity, and 5) three streams stocked with Ash Creek (WI) Brook Trout have strong similarity to Ash Creek (WI). This project should be completed by Fall 2019 and the genetic information will be used to guide Brook Trout management in the Iowa Driftless that possibly include restoring Brook Trout populations in other streams using South Pine Brook Trout and reducing or eliminating the production of St Croix domestic Brook Trout. This project was made possible by contributions from the following conservation partners: Driftless Chapter and North Bear Chapter of Trout Unlimited and the Iowa Chapter of the American Fisheries Society.

Forestry Section:

Forest Health: Foresters continued to monitor for serious insect, disease, invasive plant species, and environmental problems in Iowa's woodlands. Aerial surveys of 1,841,166 acres were mapped to determine forest health problems and potential management plans. There were 1,020,827 aerial acres mapped out of dead and dying trees from emerald ash borer (EAB) 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 Iowa Department of Agriculture and Land Stewardship's (IDALS) State Entomologist and the U.S. Department of Agriculture (USDA), the Forestry Bureau assisted in contracting, placing, and monitoring 4,327 gypsy moth traps that captured 178 male gypsy moths. A natural established gypsy moth population was detected through the survey in Jackson County just west of Bellevue, IA. DNR worked with IDALS to eradicate this gypsy population to prevent further damage from this pest and prevent the establishment of quarantines. A total of 1,260 acres were treated with Btk (Foray 48B) in May 2018. EAB larvae or adults have now been identified in 65 of Iowa's 99 counties. A total of 604 walnut twig beetle monitoring traps were placed around the state. No walnut twig beetles were captured. However, 3,596 ambrosia beetles, Pityophthorus beetles, and weevils were collected and submitted as part of the national survey. A total of 8,055 maples in 19 communities were examined for the presence of Asian longhorned beetle; none of the trees were positive for the beetle. Several invasive plant workshops were hosted with the demand being on

Oriental bittersweet control. To help educate the public, thirty-two pest workshops discussing the pests detailed above were held throughout Iowa.

Urban Forestry: 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 330 communities. One of the main components of assistance continues to be tree inventories, forestry management plans and 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 long-horned 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. Additionally, Forest Service studies show 4.5 million trees were lost due to development in Iowa from 2010 to 2015.

Land and Waters Bureau:

Public Land Acquisition and Management Program: The bureau provides assistance to operating bureaus to acquire lands and to address land management issues, such as unauthorized land-uses and boundary issues. It also assists the program bureaus with agreements such as habitat leases, county or city management agreements, office leases and building disposal agreements. In 2018, public land and conservation easement acquisitions, totaling 3,595 acres, protecting natural resources and providing Iowans with new and enhanced outdoor recreational opportunities were completed; 3,223 of these acres directly impact water quality and watershed improvement efforts.

Rivers Program: This program contains multiple initiatives over four major areas, including: water trail outreach, 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 970 miles of dedicated water trails have been developed with 753 additional miles under evaluation.

Environmental Review & Sovereign Lands Program: The Environmental Review and Sovereign Lands Construction Permit staff provide information about endangered 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. The Threatened & Endangered Species staff coordinates the conservation of 18 federally listed species of plants and animals and over 300 state-listed species. Staff 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 97 preserves on lands with significant biological, geological, archaeological, historical, or scenic value.

Engineering and Construction Services: This program oversees the Department's capital improvement projects. From the smallest restroom 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 2018, 108 engineering, construction, and public capital improvement projects totaling \$18,991,290.72 on public lands were contracted; \$4,283,140.88 of these projects were associated with lake restoration, watershed, and water quality improvement projects.

Lake Restoration Program: 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 Lake Restoration Program's focus is on restoring Iowa's significant publicly owned lakes and publicly-owned shallow lakes/wetlands. The goal is to invest in projects with multiple benefits such as improved water quality, a healthy aquatic community, and increased public use. Iowa has completed restoration work at 25 lakes, with 16 projects underway, and 19 projects in the initial planning stages. Additionally, restoration work has been completed on over 33 shallow lakes/wetlands across the state.

Law Enforcement Bureau: Currently the Iowa DNR Law Enforcement Bureau employs 83 full-time, sworn peace officers. The Bureau added 5 new officers in October 2018, but with retirements, there are still seven vacant positions. Soon, another position will open as the Chief of Enforcement has announced his retirement effective June 27, 2019.

Iowa officers continue to often times serve several counties. They have to prioritize calls and work efficiently to complete their duties. Deer calls take up the bulk of an officer's time in the fall as many people come to Iowa in search of a trophy. With all the deer activity, officers still find time for other enforcement activities. This past year, Officer Steve Griebel was named the Mississippi Flyway Officer of the Year. This award was voted on by the member states and Canadian Provinces that make up the Mississippi Flyway. This was the first time that this prestigious award has been won by an Iowa officer. Steve made a number of great cases that often covered activity that stretched into neighboring states. He also worked hard at education efforts with young hunters and wetlands protection with landowners.

Many cases are made throughout the state by the use of social media and online postings. One of our officers made a multi-state case involving several subjects. These subjects were filming deer and turkey hunts and claiming that they were conducted in other states. Familiar background scenes in the postings led officers to sites in Iowa that they were able to match up perfectly with the videos. Several individuals, both residents and non-residents, were charged with license and other violations related to their deer and turkey hunting.

In addition to officers continuing to protect the resources of the state, they also participate in engaging new people into outdoor sports. Officers work at hunting and fishing clinics and outdoor shows and events. They talk to school groups and take kids and young adults on

mentored hunts, as well as being out on snowmobiles, boats, and ATVs. Iowa officers strive to be the face of the mission and vision of the Iowa DNR.

State Parks, Forests, and Preserves Bureau: The DNR manages 70 State Parks, Recreation Areas and State Forest Campgrounds. These areas encompass 102,000 acres and host an estimated 15 million visitors each year. The State Park infrastructure system has 4,812 campsites, 94 rental cabins, 31 day use lodges, 157 picnic shelters, and over 450 miles of trails. Park amenities also include restrooms, latrines, shower buildings, beaches, concession buildings, boat ramps, docks and piers. Providing service to these amenities requires the construction and maintenance of sewer systems, lagoons, water systems, wells, electric lines, transformers, roads, parking lots, sidewalks, lights, offices and storage buildings. In 2018 there were more than 90 maintenance and renovation projects underway in Iowa State Parks and Forests areas.

New Legislation: In 2018 the Iowa Legislature passed Senate File 2389, which authorizes the Department of Natural Resources (DNR) to establish certain fees at state parks and recreation areas. This significant change eliminates the need for the DNR to go through rule making under the authority of the Natural Resource Commission to establish, change and manage fees for camping, use of rental facilities, and other special privileges in state parks and recreation areas. The new pricing structure will afford the DNR flexibility to set and change fees to attract new park visitors, expand state park visitor customer base, maximize facility use, manage capacity issues, maintain state assets and respond to trends and promotional opportunities in a timely manner. DNR spent most of 2018 compiling data to use in its creation of new fee schedules for all state park, recreation area and forest campgrounds and rental facilities. DNR also began the rule making process in 2018 to adopt new rules, which are needed to implement the new legislation. The new rules will go into effect in 2019.

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 927 acres of forest stand improvement, 33 acres of reforestation, 524 miles of trail maintenance, 3,031 acres of prescribed fire, 126 acres of prairie and savanna management, collected 105 bushels of seed, and conducted 14 educational programs in 2018. They also sold 549,000 board feet of timber valued at \$307,875.

Wildlife Bureau: The Wildlife Bureau operates and maintains 491 public fish and wildlife areas spanning 397,673 acres. About one-third of these acres are federal lands managed by the wildlife bureau under agreements with USFWS and U.S. Army Corps of Engineers. Federal lands include more than 22,000 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 32,577 acres of prairie, and managing wetland habitats through water level manipulation

utilizing 881 water control structures, 246 miles of dams, dikes, and levees and 33 pumping stations.

The **Iowa Habitat Access Program (IHAP)** on private lands started in 2011 under a Voluntary Public Access grant from USDA. For the 2018/19 hunting season there were 161 sites and 22,547 acres of managed wildlife habitats on private lands open to public hunting. The Southwest Iowa Communities for pheasants and farming initiative formed in 2018 and added 1,000 acres of private land to hunting. This initiative is a partnership with Pheasants Forever, local communities and organizations to increase hunting opportunities while offering precision agricultural services at a reduced cost to landowners. The majority of IHAP acres include wildlife habitats that are at or nearing full establishment and hunting use and satisfaction continues to trend upward as these new habitats become better established. 99% of hunters indicated they would hunt an IHAP site again with upland birds being the most pursued game. In 2018 landowners enrolled in the program were surveyed and 95.5% indicated that they were satisfied and 92% indicated that they would recommend IHAP enrollment to a friend.

The **Private Lands Program** assists landowners in implementing forestry and wildlife habitat improvements on their property. In 2018, efforts were expanded in association with the Young Forest Initiative and partnering with the Wildlife Management Institute (WMI) and the Natural Resources Conservation Service to promote healthy forest management. Through this partnership, WMI hired 4 new Forestry Specialists to help private landowners improve their woodlands for wildlife, recreation, wood products, and soil and water quality. A fifth WMI Forestry Specialist position has been created as part of an effort to accelerate implementation of forest wildlife stewardship plans on forested wildlife areas. Under professionally developed forest management plans, young forest will be created on a combination of public and private lands through forest stand improvement, prescribed fire, and other forest conservation and management practices that will benefit many species of wildlife experiencing population declines, including ruffed grouse, American woodcock, wild turkeys, and many species of songbirds.

Chronic Wasting Disease (CWD): Since 2002, Iowa has tested 76,071 wild white-tails and 4,597 captive deer and elk for CWD. In 2018-2019 DNR staff collected medial retropharyngeal lymph nodes from 7,220 wild white-tailed deer for testing. In addition, 2 free-roaming elk and 4 fallow deer were also tested. Captive animal samples (260) were collected from 10 different facilities. The greatest collection effort for wild deer was concentrated on counties with known positives. Nine new positives were identified in Allamakee and 4 in Clayton. Additionally, 1 positive roadkill deer was discovered in Dubuque County in 2018. Intensive sampling following the 2017 discovery of a positive wild animal in Wayne County (south central Iowa) yielded 4 additional positive animals. In total, 18 new wild positives were discovered during the 2018-19 deer seasons. In early 2018, 3 positive white-tailed deer from a shooting facility in Pottawattamie County were confirmed. The facility was depopulated by USDA Wildlife Services and a total of 79 animals (73 white-tailed deer and 6 elk) were removed. An additional 12 white-tailed deer and 1 elk were confirmed positive from the depopulation effort. It is anticipated that intensive sampling will continue in northeastern (Allamakee, Clayton) and southcentral (Wayne) and efforts will be increased in the new Dubuque zone during the 2019-20 seasons. Surveillance efforts will continue in the remainder of the state with special emphasis placed on proximity to neighboring states' positives and known CWD positive captive facilities.

Kansas

KANSAS 2018-2019 SUMMER MAFWA REPORT

First Cave Myotis Bat With White-nose Syndrome Found In Kansas

White-nose syndrome (WNS) was confirmed for the first time on a cave myotis bat (*Myotis velifer*) collected in Kansas. This brings the total number of bat species confirmed with the deadly fungal disease in North America to 10. Kansas Department of Wildlife, Parks and Tourism (KDWPT) biologists collected sick and dead cave myotis, a bat species common in Kansas, in Barber, Comanche, and Kiowa counties. Samples were sent to the U.S. Geological Survey National Wildlife Health Center in Madison, Wis. for testing, and bats from all three counties were confirmed positive for WNS.

WNS was also confirmed in a unidentified dead bat found in Pratt County, bringing the number of counties in Kansas with WNS to five. Earlier this year, WNS was confirmed in Cherokee and Barber counties.

KDWPT Addresses Landowner Concerns Surrounding Elk Management

A shift in Kansas' elk hunting season dates and management units will address local landowner concerns of crop damage caused by elk. KDWPT commissioners voted in favor of moving the harvest season opener from September 1 to August 1 and reducing the size of Unit 2 – the unit that includes and provides a protective buffer around Fort Riley – to provide landowners with more options for controlling elk numbers on their land.

A firearm season of August 1-31 will allow landowners to use hunting to remove elk at a time when crop damage can be an issue. And part of the boundary of Elk Management Unit 2 was shifted closer to Fort Riley to allow more options for hunting elk that had taken up permanent residence in an area north of the Fort. Permits valid in Elk Management Unit 2 are restricted to limited draw and hunt-your-own-land elk permits. By shifting the boundary, the area in question becomes part of Unit 3, where an unlimited number of over-the-counter resident and landowner/tenant either-sex elk permits or antlerless-only elk permits are valid. The buffer was intended to provide additional protection for elk residing on Fort Riley, but these elk were permanently residing on private land miles from the Fort.

While most of Kansas' elk are located on the Fort Riley military reservation, elk numbers in other parts of the state have been on a long but gradual increase, due in large part to landowners who accept elk on their land with the knowledge that they'll be able to hunt them and maintain them at acceptable numbers.

La Cygne Reservoir Makes Top 100 Bass Lakes In U.S.

La Cygne Reservoir, the 2,600-acre power plant cooling lake in eastern Kansas, was listed as one of the country's top 100 bass fishing lakes by *Bassmaster Magazine*. In the publication's July/August 2018 issue, the nation's top 100 bass lakes are listed by region, based on the number and size of largemouth or smallmouth bass that are produced and caught. La Cygne is listed as No. 10 in the Central Region.

Bassmaster Magazine editors considered the results of electrofishing efforts last spring, which turned up an eye-popping 17 bass longer than 20 inches per hour of shocking effort. Editors also noted that two largemouth bass weighing more than 10 pounds were caught on the same weekend in March 2017.

La Cygne Reservoir consistently ranks near the top for bass fishing in Kansas. Each spring, biologists use electrofishing to sample the largemouth bass populations of Kansas lakes, gathering data to help make stocking requests and regulation recommendations. The data is also used in the annual fishing forecast, and the 2018 Kansas Fishing Forecast lists La Cygne as No. 1 with a Density Rating of 89.09 bass longer than 12 inches per hour of electroshocking. Of those, 66 were longer than 15 inches and 17 were longer than 20 inches. While some smaller state and community lakes produced fish over 20 inches during sampling efforts, none approached the numbers found at La Cygne.

Because the lake's water is used to cool the La Cygne Generating Station coal-fired power plant, it rarely freezes and fish enjoy warmer water temperatures year-round. The longer growing season, and the fact that some Florida strain largemouth bass genes still linger, probably account for the lake's big bass. Florida strain largemouths were stocked in La Cygne in the early 1980s. It was hoped that with the warmer water temperatures, larger fish would be produced. However, subsequent surveys didn't indicate strong survival of the Florida strain fish, so no follow-up stockings were conducted. Even so, subsequent genetic testing of La Cygne bass shows remnants of their Florida cousins.

River Proposal Threatens Kansas Lakes, Rivers

To meet Nebraska's legal obligation to increase the flow of the Republican River into Kansas, the Central Nebraska Public Power and Irrigation District proposed creating a connection in Nebraska between the Platte River Basin and the Republican River Basin. After entering northcentral Kansas, the Republican River feeds into Lovewell Reservoir and Milford Reservoir before joining the Kansas River near Junction City. The Republican River also connects with several other waterways in northcentral Kansas.

The State of Kansas opposed this project because invasive Asian carp and white perch in the Platte River could enter the Republican River (along with other nuisance species) if the two rivers are connected. As a result, the project could severely impact Kansas' sportfish and native aquatic species, water-based recreation, tourism and the state's fishing economy. There is no evidence that those two species currently live in the Republican River.

Changes to the Republican River could also impact critical habitat for the shoal chub and plains minnow, which are threatened species in Kansas. Both species release their eggs into flowing water where they would be susceptible to being eaten by white perch.

Aquatic Wildlife Propagation Center Opens

The future for some of Kansas' most imperiled aquatic species got brighter last summer with the opening of the Kansas Aquatic Biodiversity Center (KABC) at the Farlington Fish Hatchery in southeast Kansas. The grand opening culminated more than 10 years of planning and work.

The KABC is operated by KDWPT and is part of a program to propagate imperiled aquatic wildlife for reintroduction into areas where they have had serious population declines due to human activities and other factors. It will also be a holding facility for animals in immediate peril due to a decline in the quality of their habitat. Initially, KABC staff will work to propagate common, non-imperiled animals to develop procedures and get the rearing systems up and running. Once the systems are ready, KABC staff will begin propagating a few select species that have been determined by KDWPT to be important to restoring existing populations.

The facility could have a quick impact by raising and releasing aquatic animals currently on a threatened or endangered species list and the center will play a huge role in the recovery of species in future disaster areas, such as where a chemical spill has impacted miles of a particular stream. As well as a place to take survivors of the disaster, the center could also propagate replacement animals far faster than the species could reproduce naturally. KABC will also participate in research projects pertaining to such aquatic animals.

Building the facility required the collaboration of various state and federal agencies. KDWPT, the U.S. Fish and Wildlife Service and the Kansas Department of Health and Environment (KDHE) contributed to the \$853,000 construction cost. KDHE provided more than half, largely with funds collected from mitigation agreements with corporations responsible for past ecological disasters. Such funding will help support the center in the future, too.

KABC is currently working on a research project concerning alligator snapping turtles with a Missouri university.

Construction Continues at Jamestown Wildlife Area

Jamestown Wildlife Area in northcentral Kansas is a 5124-acre public hunting area with more than 1,900 acres of wetlands, and an extensive renovation of the area and its infrastructure continues. Several marshes were kept at a low level while construction on a division berm was underway last fall.

Construction was more than half-way complete in late summer. Borrow areas where the contractors took earth to build the berm will become new, managed wetlands.

Improvements will allow area managers to flood a larger area and have more control of water elevations. With these new capabilities, staff can better manage the wetland for optimum "moist soil production" – a land practice that simulates a wetland's natural wet and dry cycles, and encourages native, seed-producing plants to grow – ultimately resulting in increased

hunting opportunities. While weather will largely determine when these projects may be completed, managers expect an entirely new look for Gamekeeper Marsh by the 2019 season.

High Quality Hunting Opportunities Through iWIHA

iWIHA is a spin-off program of the state's Walk-in Hunting Access (WIHA) program, which has become a mainstay for many Kansas hunters. WIHA began in 1995, and compensates landowners for acreage opened up to public hunting. Payments vary by the amount of land enrolled in the program and the length of the contract. And while the program has seen much success – nearly 1 million acres were enrolled in 2018 – there is still progress to be made in the state where 97 percent of land is privately-owned.

The iWIHA program is similar to WIHA in that landowners open up their ground to public hunting in exchange for payment, however access is controlled with the use of an online registration system. iWIHA allows KDWPT to achieve its mission of providing quality public hunting access, especially around urban areas where landowners have been hesitant to participate in WIHA for fear their land will become overrun with hunters.

Through iWIHA, one hunter can register and bring a certain number of “guests” to hunt on any given day for each tract. Hunters can electronically “check in” the night before or day of the hunt to see if slots are available. Once the quota is met, no other hunters can check in until someone checks out. KDWPT law enforcement staff will provide monitoring and enforcement for the areas.

Four State Fishing Lakes Receive Partial Renovations

In a cooperative study with Kansas State University to evaluate the influence of gizzard shad on food webs in small impoundments, KDWPT conducted partial fishery renovations on four small impoundments last winter

The first step was lowering water levels in late October, then as weather conditions permitted, Rotenone was applied at a concentration of 7.5 parts per billion. The low dose of Rotenone is designed to target gizzard shad while not affecting sport fish. No salvage orders were issued, and sport fishing equipment and harvest regulations remained in effect.

Gizzard shad present a challenge to managing many small Kansas impoundments, which are designed to provide close-to-home fishing opportunities. In Kansas smaller impoundments, open-water predators are rare or non-existent and gizzard shad populations often expand to levels that cause problems for more desirable sport fish.

Walleye Study Underway At Glen Elder Reservoir

A three-year study investigating walleye life history and behavior at Glen Elder Reservoir in northcentral Kansas will give anglers and biologists a better understanding of what makes

walleye tick in this impoundment. The telemetry study will evaluate mortality patterns, movement, home range, and habitat selection of adult walleye.

Thirty female and 30 male walleye were implanted with ultrasonic transmitters, though not all fish with transmitters were greater than the 18-inch minimum length limit.

Each fish is also tagged with a 3-inch long pink Floy tag in the dorsal fin for anglers to identify it as a study fish. The tag contains the individual fish number, the KDWPT office number to contact, and a message indicating a \$100 reward will be given for return of the transmitter.

Manual tracking will be conducted at least two times per month with more frequent tracking during critical periods of the year. Once each fish is located, water depth, GPS location, water temperature, and the fish identification number will be recorded. Angling mortality will be determined by tag returns, natural mortality by the lack of movement of a transmitter over time, and fish emigration will be detected using a stationary receiver. Daily movement patterns will also be studied by following a subsample of fish around over a 24-hour period.

This is a unique study for the state of Kansas and will provide many answers pertaining to Glen Elder walleye life history that will help biologists better manage this important sportfish. Anglers will also benefit from learning daily and annual movement patterns and habitat selection.

Aquatic Nuisance Species

There was good news in Kansas last year involving the efforts to prevent the spread of aquatic nuisance species. According to Chris Steffen, KDWPT aquatic nuisance species coordinator, no zebra mussel larvae were detected during 2018 sampling efforts. Staff sampled 110 Kansas lakes not currently on the ANS Waters list, including city, county, state and federal lakes.

Zebra mussels are known to occur in 30 Kansas lakes and the agency has embarked on a year-round education program to inform anglers and boaters about the dangers of ANS and the steps they can take to prevent further spread. Staff hope 2018 test results indicate the message is getting through.

Chronic Wasting Disease In Kansas Deer: 2018-2019 Update

The Kansas Department of Wildlife, Parks and Tourism (KDWPT) collected and tested samples from 360 in 2018-2019. Thirty-seven of those samples were confirmed positive. The targeted region for sampling deer taken by hunters this year was southwestern Kansas. However, sick or suspect deer observed in other parts of the state were also tested.

The 37 confirmed positives came from deer taken in Cheyenne, Rawlins, Decatur, Norton, Phillips, Smith, Thomas, Sheridan, Gove, Rooks, Osborne, Scott, Lane, Hamilton, Haskell, Hodgeman, Ford, Edwards, Stafford, Reno, and Pratt counties. While most positives are

still coming from northwest Kansas, new counties were added to the list this year, including several that show the disease's spread to the south and east – Haskell, Edwards, Pratt, Osborne, and Reno

Kansas Reports Safest Hunting Season Yet

The 2018-2019 Kansas hunting season was the safest one yet – with zero fatalities and a record-low, four reported firearm-related incidents.

Of the four incidents reported last season, two were the result of hunters swinging on game; one was attributed to poor firearm handling; and one was the result of the unsafe use of a decoy. Fortunately, none of the reported incidents were fatal.

Hunter Education staff also track treestand-related incidents, and two were reported for 2018-2019. In both cases the hunters were not wearing fall-arrest systems and neither incident proved fatal.

Kansas Hunter Education staff attribute these record-breaking low numbers to one thing: the program's more than 1,400 volunteer hunter education instructors who share with students safe firearm handling practices, ethics, wildlife regulations and conservation principles. Instructors certify approximately 9,000 students per year.

While staff and volunteers would ideally like to see the number of incidents drop to zero, current reports remain a stark contrast to statistics from 50 years ago when seven lives were lost in a year, two years in a row.

Kansas Biologists Harvest More Than 90 Million Walleye Eggs

The walleye egg-taking season started slowly in Kansas, but it ended quite successfully. While cool water temperatures delayed and prolonged egg-taking efforts, once they started, they were fruitful. In fact, biologists set a record, taking 12 million eggs in one day from Cedar Bluff Reservoir. In all, working at three Kansas reservoirs, fisheries staff collected 92 million eggs.

Kentucky

**KENTUCKY
STATE REPORT**
June 11, 2019

WILDLIFE

Black Bear Program

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

Deer and Elk Program

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

Small Game

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

Turkey and Grouse Program

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

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

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

Wildlife Diversity

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

Migratory Bird Program

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

FISHERIES

Habitat Program

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

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

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

Non-Game Fisheries Assessments

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

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

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

Kentucky Wetland and Stream Mitigation Program -Sponsored by KDFWR

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

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

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

Asian Carp

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

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

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

Michigan

**MICHIGAN
STATE REPORT**
June 1, 2019

Mr. Daniel Eichinger, Director
Michigan Department of Natural Resources
P.O. Box 30028
Lansing, Michigan 48909

STAFFING

The Michigan Department of Natural Resources (DNR) has 1,493 permanent employees, more than 1,600 non-career/seasonal employees and a \$438.4 million budget that supports programs for wildlife and fisheries management, state parks and recreation areas, trails, boating programs, conservation and law enforcement, forest management, state lands and minerals, the historical museum and archives.

Daniel Eichinger became the Director of the DNR on January 1, 2019. Shannon Hanna is now serving as the Natural Resources Deputy as of June 1, 2019. Keith Creagh, William O'Neill, and Marc Miller are no longer with the DNR.

FISCAL YEAR 2018-2019 BUDGET

The DNR budget is \$438,442,800 for fiscal year (FY) 2019. The General Fund decreased approximately fourteen percent from \$56,944,900 in 2018 to \$49,081,800 in 2019. This decline was due to the removal of many one-time appropriations that were provided in FY 2018. The DNR is funded by state General Fund revenues, federal funds, and a variety of restricted funds. The budget consists of 11 percent General Funds, 19 percent federal funds and 70 percent restricted funds.

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 Michigan's 135 state forest campgrounds. The DNR also generates timber sales revenue from state lands. Approximately 90 percent of timber sales revenue goes to the Forest Development Fund and is used for the protection and development of our state forests. The other ten percent of timber sales goes toward the Game and Fish Protection Trust Fund.

The DNR budget contains an additional \$2.6 million for disease surveillance in wildlife. This will assist with the continued efforts in Michigan to perform surveillance and monitoring in relation to Chronic Wasting Disease (CWD) and Bovine Tuberculosis. The DNR received a

supplemental appropriation of \$5.3 million for CWD in September 2018. The funds are being used to address outstanding research and communication needs in cooperation with Michigan State University (MSU).

The DNR Law Enforcement Division received approximately \$1 million to add seven conservation officers to increase the enforcement effort of the 2000 and 2007 tribal consent decrees. Parks and Recreation Division received an increase of over \$4 million to enhance state parks services provided such as trash collection, mowing, bathroom cleaning, etc. in response to the increased demand in usage during the shoulder season (prior to Memorial Day and after Labor Day). Infrastructure investments continue in both state parks and state forests.

LEGISLATIVE ACTIVITY

Infrastructure investment is dominating legislative discussions. Governor Whitmer proposed an increase in gas taxes to address the backlog of road infrastructure. The DNR would receive two percent of the increase to be used to fund harbors, boating access sites, snowmobile trails, and non-motorized trail and recreational projects. The Senate, House, and Governor will work together to complete the budget in a timely manner and determine if the gas tax will be increased.

NOTEWORTHY DIVISION ISSUES

The DNR tested over 30,000 animals during the past year for CWD. Positive detections continue in Michigan's deer herd in specific areas of the central lower portion of the state. For the first time, a positive deer was identified in the Upper Peninsula this year. The Natural Resources Commission and the DNR continue to work together to address this disease. The DNR will determine its monitoring efforts for the 2019 deer season and will encourage hunters to have their deer tested. Additional research is needed to assist with the management of this disease. As stated earlier, the DNR and MSU are working together to address the outstanding research issues, which may include the development of a live animal rapid test.

The State of Michigan and DNR continue to advocate for the construction and operation of the Brandon Road Lock and Dam to prevent the spread of invasive carp. The appropriation supplemental approved in September 2018 included \$8 million for the future operation of the Brandon Road Lock and Dam.

The DNR was able to purchase a significant inholding of pristine sand dune in one of the most popular state parks. The purchase price was \$12 million and was funded through the Michigan Natural Resources Trust Fund and private donors. There is an outstanding portion of the inholding that has yet to be purchased but is currently under an active sand mining permit. The DNR hopes to purchase the additional acres in the very near future.

Minnesota

**MINNESOTA
STATE REPORT**
May 24, 2019

Grant Wilson, Interim Director
Division of Fish and Wildlife
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155

Update on Constitutionally Dedicated Legacy Funding

Since 2008, a portion of Minnesota's sales tax has been constitutionally directed to protect, restore, and enhance forests, prairies, wetlands, and habitat for fish, game, and wildlife through the Outdoor Heritage Fund (OHF). The funding must supplement, not substitute for, work done with traditional sources of funding. The DNR, along with other agencies and organizations, applies for these funds annually on a competitive basis.

DNR administers the Conservation Partners Legacy (CPL) small grants program, which awards competitive and non-competitive grants of \$5,000-\$400,000 to conservation groups, NGOs, and local governments for habitat projects. In the first 10 years of OHF, over \$67 million was appropriated to the CPL grant program, with an additional \$10 million slated for this year, the 11th. This program has improved or protected over 250,000 acres of habitat with 650 CPL grants, leveraging nearly \$10 million in non-state funding from 193 conservation clubs and government entities throughout Minnesota.

Duck & Pheasant Plans

DNR is updating its 2006 Long Range Duck Recovery Plan and 2015 Minnesota Pheasant Summit Action Plan, with partner and public input. The original Duck Plan had ambitious, long-term objectives of increased duck breeding populations, fall duck harvest, and fall waterfowl hunter numbers. The Duck Plan update will include short-term targets within the scope of DNR management. The Pheasant Plan targeted pheasant habitat. DNR and its partners recognize the multifaceted benefits of grassland and wetland conservation and management (pollinator habitat, clean water, carbon storage, etc.), and both updates will address these shared interests while continuing to support habitat for wildlife, using an annual "report card" to communicate progress.

Marketing

Division of Fish and Wildlife has entered into a marketing (professional technical services) contract with Recreational Boating and Fishing Foundation (RBFF) to partner on their national "Take Me Fishing" branded marketing efforts, within the state of Minnesota. This national engagement opportunity allows Minnesota to leverage trademark assets and accomplish marketing synergy with a national effort, to increase license sales in MN. It also gives free access to marketing professionals to implement the campaign in Minnesota. RBFF is a non-profit organization whose goals and objectives match those of the state's – to increase license sales.

The contract runs November 2018-June 2019, with an option to extend. Marketing started start mid-February 2019. Total cost is \$60,000, which is within the budget of past marketing.

Climate Change Website

Minnesota DNR introduced a revised [DNR climate change website](#) at the end of 2018, featuring these new tools and content:

- [Minnesota Climate Trends map](#): A tool people can use to view and download historical climate data for the state, including temperature and precipitation.
- [Impacts of climate change](#): Stories about how climate change is impacting people's outdoor experience in Minnesota.
- [What DNR is doing](#): Examples of DNR's climate adaptation and mitigation actions.

The Minnesota Climate Trends map is a powerful tool for exploring and visualizing climate trends. Users can select from a variety of geographic units, such as counties, watersheds, ecological subsections, or state parks, for which to retrieve a climate variable, and users can also specify the range of months and years for analysis. The mapping tool automatically generates a chart, visible right on the web page, and users may also download the data generated from their query.

Wildlife Action Plan

Minnesota Wildlife Action Plan 2015-2025 is a statewide conservation strategy developed with and implemented by conservation partners under the leadership of DNR's Division of Ecological and Water Resources. The plan has three approaches to achieving conservation goals:

- A habitat approach with a focus on sustaining and enhancing terrestrial and aquatic habitats in the context of the larger landscape/watershed and a changing climate. Conservation actions focus on improving habitat quality and enhancing landscape-scale biological diversity by addressing stressors such as fragmentation, invasive species, and climate change within a mapped Wildlife Action Network.
- A species approach with a focus on 346 Species in Greatest Conservation Need (SGCN) identified in the plan as requiring the implementation of conservation actions directed at specific issues such as disease, deliberate killing, low reproductive capacity, or poor dispersal ability. The approach also addresses species for which information is needed to assess their conservation status or factors contributing to their decline.
- An engagement approach focuses on internal and external conservation partners and citizens. This approach will involve sharing data, tracking effort and accomplishments, interpreting work of this grant for a general audience, and further engaging citizens of Minnesota in conservation.

Conservation Focus Areas (CFAs) are priority areas for working with partners to identify, design, and implement conservation actions that extend beyond traditional administrative boundaries. CFAs provide a framework for partners to leverage resources and expertise toward a shared conservation goal. Three CFAs are underway: Prairie Coteau, Root and Whitewater River Watersheds, and Brainerd Lakes. For each, SMART objectives are identified and implemented (specific, measurable, attainable, results-oriented and time-bound). Species-targeted work includes but is not limited to rare mussels, wood turtles, Richardson's ground squirrel, northern long-eared bat, rusty patch bumblebee, and Topeka shiner. Long-term monitoring focused on prairie plant and animal communities continues. Pollinators and integration of citizen science are two emphasized strategies for the upcoming year.

Change in Rainbow Trout Strain Stocked in Lake Superior

Since 1976, DNR has stocked the domesticated Kamloops hatchery strain of Rainbow Trout in Lake Superior tributaries to provide a put-grow-and-take fishery in an effort to reduce pressure and harvest on declining naturalized steelhead populations. These declines continued into the 1990s, and in 1997 a catch-and-release-only regulation was implemented for wild unclipped naturalized steelhead. The adipose-clipped Kamloops continued to serve as the harvest fishery for Rainbow Trout in Minnesota waters of Lake Superior.

Since the 1990s, anglers have witnessed and been concerned by Kamloops spawning with naturalized steelhead in Minnesota tributaries and feared genetic introgression would negatively impact steelhead populations. Initial genetic studies were done in the mid-1990s, and no hybridization was found. Given vastly improved genetic analysis techniques, DNR initiated another genetics study on hybridization in 2016 and worked collaboratively with anglers and other agencies to obtain genetic material from Minnesota's North Shore tributaries, the Brule River, Wisconsin, and Michigan waters of Lake Superior.

Hybridization between Kamloops and naturalized steelhead was found to be widespread along Minnesota's North Shore as well as in other jurisdictions, yet at relatively low levels. Because of this, DNR made the management decision to change from the domesticated Kamloops strain to a genetically-screened Lake Superior wild steelhead strain. These "pure strain" Lake Superior steelhead will still be adipose-fin clipped and will be available for harvest. Initial stream stocking of the pure strain Lake Superior steelhead occurred in 2018 as pre-smolts, and DNR expects them to start to be available in the spring fishery by 2020 or 2021.

Recruitment, Retention, and Reactivation (R3)

Rounds 1-3 of the capacity-building [Angler and Hunter Recruitment & Retention Grants](#) have been completed. Round 4 projects are underway, and Round 5 projects will be awarded in summer 2019. Total participants from the 35 projects completed to date is 11,365. The first 35 grants leveraged matching funds totaling \$654,941. In the first four rounds of the grant program, 124 applicants requested over \$1.8 million, and DNR awarded 45 grants totaling \$589,500.

The Minnesota R3 Advisory Council began in 2018, has met a few times, and is spearheading efforts to create a Minnesota R3 Plan and build a statewide mentor network. The Becoming an Outdoors Women program continues to flourish with two weekend workshops and more than 50 additional classes offered annually. Efforts have continued with the Division of Parks and Trails to place interns at nine different state parks to offer summer skills programs. DNR has expanded efforts to reach diverse and new audiences by hiring two community fishing and hunting skills liaisons to work with Latino and Karen communities, with a focus on building partnerships with community organizations to build capacity to provide fishing and hunting programming.

Strategic Planning

The DNR's department-wide strategic plan (the Conservation Agenda) contains the mission and goals of the agency. Each DNR division plays a role in helping the agency succeed with that mission and its goals. The Divisions of Fish and Wildlife (FAW) and Ecological and Water Resources (EWR) developed strategic plans in 2018.

[EWR Strategic Plan 2018-2028](#) explains the most important challenges and trends affecting the division and its natural resources, describes how to address the highest priority challenges and trends, and provides strategies that can advance a vision for all Minnesotans. The 10-year plan identifies eight strategic issues: Water Resources, Biodiversity, Invasive Species, Climate Change, Communication & Collaboration, Data, Workforce Health, and Sustainable Funding, each with a goal for a desired future state. The plan also refreshes EWR's vision statement to be more inclusive – *Healthy Lands and Waters throughout Minnesota*. Progress towards these eight goals will help ensure the long-term sustainability for the state's natural resources, and ensure that we are an excellent organization serving all Minnesotans and connecting them to the outdoors.

FAW Strategic Plan 2019-2021 relied on research and the voices of staff – on work teams, in an all-staff survey and through input opportunities – to clarify division objectives and develop implementation strategies. Many of its strategies should be completed during the plan's three-year timeframe, but intermittent updates will extend the utility of the plan. FAW's work contributes to the department Conservation Agenda by conserving and enhancing diverse fish and wildlife habitats, providing outdoor recreation opportunities for new and existing participants, contributing to a strong and sustainable natural resource economy, and demonstrating operational excellence. Five strategic issues were identified in the plan: Funding Innovation, Relevancy to New Audiences, Conservation and Management, Strategic Communication, and a Unified Division.

Ice Fishing Pressure

Ice fishing is arguably the fastest growing sector of sport fishing in Minnesota. Over the past ten years, there has been a rapid expansion in the sales of wheeled fish houses, which are basically hard sided campers built for ice fishing (e.g. Ice Castle, Glacier, etc.) These fish houses, or shelters, as they are commonly referred to, have largely replaced the old "permanent" winter shelters that were transported to the lakes on trailers and moved onto the lake on wooden or metal skids. Previously, ice anglers had difficulty changing lakes or even fishing spots on the same lake. Wheeled houses commonly have generators, cooking facilities, satellite dishes, flat screen televisions, a biffy and comfortable beds. Ice anglers are increasingly mobile, spending many more hours on the lake each trip. Anecdotally, the comfort these fish houses afford has stimulated more participation by families, akin to a summer camping trip, albeit in the winter.

DNR does not index ice-fishing pressure on a statewide basis but does conduct lake specific creel surveys on a number of important waters. During the winter of 2018-19 (December 1, 2018-February 24, 2019), DNR documented approximately 6 million hours of winter fishing pressure on Mille Lacs, Upper Red Lake, and Lake of the Woods combined (roughly 2 million hours on each lake). Minnesota requires licensing for hard-sided fish houses. An estimated 54,000 fish house licenses were sold in 2018, most of which were wheeled fish houses.

Mille Lacs Lake Management

Under the Consensus Agreement with 1837 Treaty Bands, the Walleye population on Mille Lacs Lake is managed based on spawning stock biomass (SSB) goals. The target SSB is 20 pounds per gill net lift from the fall assessment. In 2017, the assessment was just under target, and in 2018 the target was exceeded with almost 28 pounds of mature Walleye per gill net lift. SSB has increased as Walleye from the 2013 year class were recruited to the spawning population. Though this goal has been achieved, angler harvest could reduce SSB available to spawn in spring 2020.

DNR and the tribes agreed to a safe harvest level of 150,000 pounds of Walleye for the 2019 fishing year. The state allocation is 87,800 pounds, which includes harvest and hooking mortality. Due to the relatively high (for recent years) allocation, and the elimination of overage pay-back, due to low harvest in 2017, state anglers can harvest Walleye in summer 2019. A conservative regulation was enacted (21-23 inch harvest slot, harvest from May 11-31, catch-and-release the rest of the summer), primarily due to unknown, unpredictable angling pressure response. There is some ambiguity about when the Consensus Agreement expires, but the last SSB target identified in the document is for spring 2020. This suggests a new agreement must be in place by spring 2020, since SSB is evaluated based on the fall 2019 gill net assessment.

A management planning process for the state fish allocation has begun. The process will use the existing Mille Lacs Fisheries Advisory Committee and other sources for input. Questions designed to define angler preferences have been incorporated into the annual creel survey, and public meetings will be held locally (Garrison and Brainerd), as well as in the Minneapolis-St. Paul area. It is anticipated that the management plan will be completed in winter 2019.

Two important programs were completed in 2018. The first was a Walleye population estimate, used to ground truth and tune the population model used to guide management decisions. The estimate of Walleye longer than 14-inches of 730,000 was very close to what the population model predicted, increasing confidence in the model. Additionally, the estimate of 730,000 Walleye was almost three times higher than estimates conducted in 2013 and 2014, which were the low point of Walleye population abundance, and is similar to estimates made in 2003 and 2008.

The second program completed in 2018 was a three-year experimental stocking of oxytetracycline (OTC) marked Walleye fry. The purposes of this program were to assess if DNR could capture enough adult Walleye to provide eggs to stock Mille Lacs Lake, fine tune techniques to support adequate hatch rates, and to evaluate the number of fry produced naturally in the lake. The program was successful with the first two goals, and it was found that current levels of SSB were far more than adequate to produce enough natural Walleye fry to maintain a fishery.

Legislative Update

The Legislature adjourned on Monday, May 20 without a two-year budget in place. Budget targets were agreed to, and conference committees worked on bills for ultimate passage during a special session. Details of the bills are not available as of this writing.

CWD continues as a focus. More than 50 wild deer tested positive in the past three years, with the majority from a small “core area” in the southeast. In January, a wild deer was found dead in proximity to a CWD-positive deer farm in north-central Minnesota and tested positive. The farm, one of eight that tested positive for CWD, was depopulated in April, and seven of the 89 testable deer were positive. Thirteen non-testable dead deer were discovered on the farm. House and Senate held CWD hearings, proposed restrictions on cervid farms (e.g., animal tagging requirements, moratorium on new farms, fencing requirements, mandatory depopulation of positive farms, inspection requirements), and discussed funding for live test research, increased enforcement of cervid farm regulations, and for surveillance and response efforts. There was strong support for using General tax dollars; the Governor sought \$4.57 million for the agency response. Finally, a ban on the importation of hunter-harvested cervids replaces that restriction in rule.

As carryovers from 2018, DNR again sought to allow landowners who obtained an elk hunting license the ability to sell the license to a Minnesota resident at no more than the cost of the license. Landowners may not have the time to hunt or not be hunters, and providing the opportunity to a family member or friend may improve how elk are viewed. Anglers will again be able to use cast nets on certain waters to harvest bait when the bill becomes law. A three year cast net trial was popular with catfish and sturgeon anglers, with no issues related to moving bait from one water body to another. The repeal of the crossbow stock length requirement, authority to use shotguns smaller than 20 gauge for turkey, and use of drums to bait bear on public lands round out provision expected to become law.

White-tailed Deer

The winter of 2018/19 was again mild throughout most of the state and, coupled with previous mild winters, deer populations have increased significantly under relatively conservative management. Portions of northern Minnesota experienced moderate-to-severe winters and substantial snowfall, which will require more conservative seasons in 2019. Statewide, numerous deer permit areas are once again above population goals following several years of relatively conservative antlerless deer harvest. The 2019 deer season will see increased opportunities to harvest antlerless deer throughout most of the state. Additionally, a growing proportion of deer permit areas will fall within the disease management zone, requiring more liberal harvest management and additional requirements (e.g., limited carcass movement) of hunters in those areas.

In 2018, DNR finalized its first-ever statewide deer management plan. A public committee is being formed to advise on the plan's implementation.

Chronic Wasting Disease (CWD)

Fall 2018 marked the second year of surveillance in both the north-central and central portions of Minnesota, where two captive cervid farms were found positive with CWD in early 2017. The CWD management zone deer permit area (DPA) 603, created in fall 2016, continued with sampling all adult (>1 year of age) deer harvested during all hunting seasons in fall 2018, along with 3 additional operational phases in winter 2019. From fall 2018 thru March 2019, 8,009 samples were tested for CWD, confirming 34 additional positive deer. Of these positives, 24 were from DPA 603, four from DPA 346, two from DPA 347, and one from the north-central surveillance area in DPA 247. Minnesota has confirmed 52 total positive wild deer in five counties.

DNR is in the process of updating the CWD response plan to include components related to persistent and endemic infection. Due to the discovery of additional wild positive deer near captive cervid facilities in Crow Wing (northcentral) and Winona (southeast) counties, DNR is in the process of creating CWD management zones and regulations that align with the response. Over the same time period, DNR has conducted extensive public engagement with the public, partners and stakeholders about the disease, future direction, and the revised plan. Finally, human dimensions survey of deer hunters and landowners in southeastern Minnesota was conducted to assess attitudes towards the disease and management response. Additional human dimensions work is slated for 2019-2020 across a larger area of Minnesota.

Missouri

**MISSOURI
STATE REPORT**
May 24, 2019

Sara Parker Pauley, Director
Missouri Department of Conservation
2901 West Truman Blvd.
Jefferson City, MO 65102

Financial Update

The Fiscal Year (FY) 2019 budget for the Missouri Department of Conservation (MDC) continues at 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 \$122 million, and permit sales and federal reimbursements, at about \$67 million. Total receipts for FY 2018 were \$194.7 million.

In Missouri, conservation pays its way, and is good for Missouri's jobs, economy, and quality of life. In Missouri each year, more than 1 million individuals go fishing, 576 thousand hunt, and 1.7 million view wildlife. Hunting, fishing, and wildlife recreation generate \$5.2 billion in economic impacts, and there is an additional \$10 billion in economic impacts from the forest products industry, for a total of \$15.2 billion in economic impacts. This economic activity supports 111,000 jobs. Conservation makes Missouri a great place to live, work, fish, hunt, view wildlife, and be outdoors.

Organizational Update

Sara Parker Pauley continues as the ninth director of MDC. In February 2019, Kendra Witthaus replaced Todd Sampsell as MDC assistant to the Director for Operational Excellence, to lead continuous improvement efforts and transformation efforts for organizational operations and processes.

MDC continues implementation of a multi-year market-based pay plan. MDC is implementing a new performance management approach by July 1, 2019. The director, deputies, and division leaders continue meeting with regional staff twice yearly in the eight administrative regions and the headquarters office to increase awareness and alignment of the strategic plan.

Highlights of Conservation Challenges and Successes

Refining the Strategic Plan. MDC's strategic plan, *Missouri Conservation: Design for the Future*, was unveiled in 2018 and developed to guide MDC during FY19-23. The plan outlines three simple goals for MDC: take care of nature; connect people with nature; and maintain the public trust. With input from the public and conservation partners, MDC has identified 6 desired outcomes, 17 strategies, more than 150 specific actions, and 42 measures that will help us track our progress.

International Recognition for Sustainable Forest Management. MDC is proud to be formally recognized as managing public lands to the standards of an internationally recognized sustainable forest management program by successfully maintaining our Sustainable Forestry Initiative® (SFI) certification. Managing forest resources sustainably is critical to providing habitat needed to sustain sensitive fish and wildlife populations.

Tree Seedling Program. The George O. White Nursery in Licking, Missouri grows and distributes over three million low-cost seedlings every year to Missouri citizens across the state. Each year, it serves approximately 10,500 customers with orders. It also provides a free seedling to approximately 95,000 fourth-grade students across the state for Arbor Day and assists the Monarchs Collaborative with hundreds of milkweed root stock to be planted across the state.

Mobile Applications. Staying on the forefront of technology, MDC has developed the free mobile app MO Outdoors, which enables users to find MDC conservation areas, fishing accesses, hiking trails, shooting ranges, and nature centers around the state based on their desired types of outdoor activities. MO Outdoors also connects users to area regulations and seasonal information, hours of operation, images, area closings, and interactive maps. In addition to MO Outdoors, MDC developed MO Hunting and MO Fishing. MO Fishing allows fishermen to buy fishing permits as well as see fishing structures in Missouri water bodies. MO Hunting allows hunters to buy permits and check-in animal harvests, such as turkey or deer.

Chronic Wasting Disease. Chronic wasting disease (CWD) is a deadly deer disease that has been found at low prevalence in 16 counties throughout Missouri since 2012. For the 2018-2019 season, MDC tested over 32,000 deer and detected 41 new cases of CWD, including nearly 21,000 deer sampled by MDC staff on opening weekend of fall firearms season and 7,663 deer sampled by 140 partnering taxidermists and meat processors. MDC also worked cooperatively with over 1,300 landowners on a voluntary basis to remove and test an additional 2,220 after the close of regular deer seasons in localized areas where CWD has been found. This latest tally brings the total number of free-ranging Missouri deer detected with the disease to 114 out of over 130,000 tested since sampling efforts began in 2001. The most up-to-date numbers and locations of CWD detection can be obtained at <https://huntfish.mdc.mo.gov/hunting-trapping/wildlife-diseases/chronic-wasting-disease-cwd/cwd-missouri>.

Invasive Species. The prevention and control of invasive species is significant to MDC. MDC formed the Invasive Species Coordination Team (InSCT) that uses the principles of the Comprehensive Conservation Strategy (CCS) to prioritize species to be addressed, locations, and timing of actions. The emphasis and strategic approach, complemented by increased partnerships, will hopefully lead to successes in control and eradication of priority invasive species.

Eliminating Feral Hogs in Missouri. MDC leads a very productive group of agencies called the Missouri Feral Hog Partnership. All members of the partnership are dedicated to total elimination of feral hogs from the state. The partnership completed and is implementing a Statewide Strategic Feral Hog Elimination Plan. Since implementing the plan, MDC and partners have increased feral hog elimination efforts. In 2018 a total of 9,365 hogs were eliminated from

the landscape and from January through March 2019 a total of 3,280 hogs were removed. The success is reflected in significantly reduced feral hog populations in parts of the state.

Helping Missourians Discover Nature. MDC's Discover Nature Schools (DNS) conservation education curriculum is being used in 1,621 (69 percent) Missouri schools to help teachers engage students with hands-on, outdoor learning from grades pre-K to 12. In addition, the Discover Nature Fishing program helps children and families have fun outdoors by learning to fish. MDC staff train experienced anglers from around the state to help others learn to fish. The statewide program provides lessons and events to help kids and families gain skills and confidence to fish on their own. MDC staff also provide formal nature-based educational programs to over 300,000 citizens yearly. These programs cover a diverse array of topics including but not limited to: hunting, angling, hiking, birdwatching, kayaking, shooting sports, and native plants. MDC is currently working with several conservation partners to implement a new R3 plan.

Archery in the Schools Program Builds Champions. MDC provides Missouri National Archery in the Schools Program (MoNASP) grants to schools for equipment, as well as free teacher and staff training for those administering the program. More than 200,000 Missouri students from over 700 schools participate in MoNASP. The MoNASP program promotes education, self-esteem, and physical activity for kids in grades 4 to 12. This year more than 3,200 youth participated in the two-day MoNASP State Tournament, sponsored and coordinated by MDC and the Missouri Conservation Heritage Foundation (MCHF).

Protection. *Operation Game Thief*, a hotline sponsored by MDC and the Conservation Federation of Missouri (CFM), led to the conviction of a Green County man in one of the state's largest ever poaching investigations, which involved approximately 100 state, federal, and Canadian wildlife officers. The convicted, along with two of his family members, are linked to the illegal killing of furbearers, fish, small game, and hundreds of deer over a three-year period. Lawrence County Prosecuting Attorney Don Trotter remarked, "The deer were trophy bucks taken illegally, mostly at night, for their heads, leaving the bodies of the deer to waste." More than 300 charges have been filed on the group in state, federal, and international jurisdictions. Their story has gone viral, resulting in an audience reach of over 1.2 billion people across the globe.

Listening to Missourians. Delivering excellent public service means listening to and understanding what Missourians say about conservation programs and services. In the recent fiscal year, there were numerous public engagement opportunities, including open house meetings, annual hunter surveys, conservation area plan comment periods, regulation committee comments, and Ask MDC contacts. MDC also offers a 30-day public comment period for citizens to provide input on the management of MDC areas. In this fiscal year, over 25 plans were available for review. MDC also hosted its second annual Missouri Conservation Partners Roundtable event, a gathering of over 140 conservation partners to provide feedback on how we can keep nature relevant, reach new audiences, better connect with people our partners serve, and provide programs, events, or services that help people connect with nature.

During the first week of December 2018, three open houses were conducted to gather public input regarding possible elk regulations. Open houses held in Van Buren, Ellington and Eminence (the same communities where the first open houses were held in 2008 before the elk

were reintroduced). Respondents were most interested in providing comments regarding permit allocation, followed by hunting methods and season dates, then the elk management plan and landowner opportunities. Most agreed that all proposed regulations were reasonable.

Conservation Volunteers. Volunteers are invaluable MDC partners. Over 750 hunter education volunteer instructors contributed more than 10,000 hours of classes, certifying over 24,000 students. Twelve community-based Master Naturalist chapters contributed more than 68,500 hours in conservation projects. In addition, 50,000 hours of time were contributed by nature center, interpretive center, and shooting range volunteers; there were approximately 120 protection volunteers. Over 2,600 individuals, groups, and organizations are involved in the Missouri Forestkeepers Network. Discover Nature Fishing volunteers have offered more than 170 classes. Stream Team celebrated its 30th anniversary and contributed 141,045 hours in 2017 of volunteer labor to our aquatic resources by conducting water quality monitoring, removing trash, planting trees, and stenciling storm drains.

Communicating with Missourians. All MDC social media channels, including Facebook, Twitter, Instagram, and YouTube, continue to grow monthly. Facebook is MDC's largest social media channel with more than 272,000 followers. MDC's website has 5.1 million unique visitors annually. MDC utilizes email communications, which currently has 604,543 subscribers, and the free *Missouri Conservationist* magazine, mailed to more than 512,000 individuals, to share the value of fish, forest, and wildlife resources. The new MDC Wild Webcast series highlights key conservation topics and provides a unique opportunity to ask live questions of MDC experts. MDC's "Trees Work" outreach has expanded to a statewide effort to help Missourians understand the environmental, human health, social, and economic benefit of trees. Trees Work has been recognized by the Arbor Day Foundation and the Association for Conservation Information for its innovative communications plan and outreach tools.

Comprehensive Conservation Strategy (CCS). Conservation agencies will only meet future fish and wildlife commitments to the public within a system of healthy habitats. MDC is being proactive with habitat and species conservation programs by integrating the conservation priorities of our agency and conservation partners into a network of lands and waters. The focus of the work will be within Conservation Opportunity Areas and subset landscapes called Priority Geographies that have specific objectives to accomplish measurable goals at a landscape level. The CCS will integrate the Missouri State Wildlife Action Plan and Forest Action Plan into a comprehensive plan submitted to the U.S. Fish and Wildlife Service and U.S. Forest Service.

Community Conservation. MDC celebrated the Urban Fishing Program's 50th year of bringing close-to-home fishing to our urban communities. Last year, MDC provided 76,744 channel catfish and 64,207 rainbow trout to the Kansas City and St. Louis urban lakes.

The Green City Coalition (GCC), a partnership between the City of St. Louis, MDC, Metropolitan St. Louis Sewer District, and St. Louis Development Corporation, addresses social, economic, and environmental issues surrounding vacant properties by working with member organizations and residents to convert vacant land to community green spaces. Over 200 vacant publicly owned parcels (23 acres) have been reimaged by Wells Goodfellow and Walnut Park East neighborhood residents and students through community events.

MDC has matching fund agreements with United States Department of Agriculture Natural Resource Conservation Service for the Audubon Conservation Ranching-Regional Conservation Partnership Program (RCPP) and the Regional Grassland Bird RCPP. The Conservation Ranching RCPP annually provides \$80,000 of MDC match for \$290,000 of financial assistance from NRCS. These funds are provided directly to Missouri cattle producers in Kansas City, Central, Ozark, and Southwest Regions to support conservation-friendly ranching practices. The Regional Grassland Bird RCPP is also targeted to Missouri cattle producers to help implement grazing practices that provide habitat for prairie chickens and other grassland birds while providing quality forage for cattle. MDC provides approximately \$100,000 annually to match NRCS' annual financial assistance contribution of \$192,000.

Technical Assistance for Landowners. MDC's Private Land Services (PLS) Division continues providing Missouri landowners with technical assistance that benefits fish, forest, and wildlife conservation. The division, with 74 full-time positions, had over 10,000 contacts last year and helped landowners with \$1.7 million in funding for conservation practices and program cost-shares. The division has implemented a Missouri Outdoor Recreational Access Program statewide to enhance habitat management and public access to outdoor recreation opportunities. Currently, 60 property owners have signed agreements to provide recreational access on 14,800 acres. Spring 2019 marks the 10th anniversary of MDC's Call Before You Cut program, designed to provide information to landowners considering a timber sale. Participating consulting foresters have provided site visits to 591 landowners, covering 59,000 acres.

Permit Delivery Approach. MDC facilitates permit acquisition by offering various purchasing options. People can buy Missouri hunting, fishing, and trapping permits statewide at many gas stations, convenience stores, sporting-goods stores, large retail stores, other vendors, and at many MDC offices and all conservation nature centers. People can also buy permits directly online from the MDC website at mdc.mo.gov/buypermits and from their smartphones through the free MO Hunting mobile app. One popular and convenient feature of the app is that no paper permits are needed. The app lets users upload electronic copies of all their permits to the mobile device to show as needed. People can also buy permits over the phone by calling 800-392-4115.

Helping Communities One Tree at a Time. MDC awarded \$378,231 to 40 Missouri communities through its Tree Resource Improvement and Maintenance (TRIM) grant program. TRIM grants offer cost-share funding for government agencies, public schools, and nonprofit groups to manage, improve, or conserve trees on public lands. TRIM grants help recipients provide educational programs and accomplish activities that keep their neighborhood trees healthy. MDC continues its partnership with Beyond Housing in north St. Louis by providing funding to employ a community forester who will assist underserved communities with community forestry needs, such as outreach and education, technical assistance, grant writing, and management plans. The partnership helps citizens access and enjoy the benefits of trees and nature.

Assisting Communities Improve Wildfire, Prescribed Fire, and Emergency Response. MDC awarded \$420,198 in Volunteer Fire Assistance grants to 184 rural fire departments for the purchase of wildfire clothing and small equipment; and provided vehicles and emergency response equipment through its Federal Excess Property programs. Federal Hazard Mitigation funds were

acquired to assist rural communities with the development of Community Wildfire Prevention Plans and to provide outreach and education on how to minimize the threat of wildfires to property. Funds also aided in training and equipping Prescribed Burn Cooperatives for habitat restoration on private lands. MDC provided 52 staff for wildfire suppression in western states in FY19.

Missourians for Monarchs Collaborative. MDC is working with more than 40 conservation and agricultural organizations, state and federal agencies, utility companies, agribusinesses, and cooperatives to develop a collaborative monarch and pollinator conservation plan for Missouri. The Missourians for Monarchs collaborative has representatives from agribusiness, conservation organizations, academia, state and federal agencies, volunteer organizations, and agriculture organizations with a goal of establishing more than 19,000 acres of pollinator habitat per year over the next 20 years or 385,000 new acres of habitat by 2034. To date, the collaborative has been successful at creating or improving 304,000 acres of new pollinator and monarch habitat.

MFA Partnership. MDC partnered with MFA, Inc. and the USDA Natural Resources Conservation Service to provide funding for a Natural Resources Specialist (MFA employee) to provide training and technical assistance to landowners, MFA employees, and agency staff on precision agriculture, cover crops, and other conservation practices that are amenable to profitable farming operations. This groundbreaking position provides MDC assistance with workshops, field days, and articles that promote soil, water, and wildlife management objectives on production acres; and identifies areas of common ground for future collaboration. The position also evaluates government processes needing improvement and provides solutions to help government work more efficiently with production landowners on their stewardship goals.

Flood-damaged River Accesses. March 2019 brought historic Missouri River levels through the northwest part of the state and extremely high Mississippi River levels along the eastern side of the state. Staff have begun the process of evaluating damage to many river accesses, levees, and impacted conservation areas.

Kansas City Native Plant Initiative (KCNPI). The KCNPI is a network of more than 60 private, public, and nonprofit organizations from the Kansas City Metropolitan area that have a shared vision – a future of beautiful, native landscapes connecting heartland communities where nature and people thrive together. The partners, with KCNPI, are expanding their efforts to engage the surrounding communities in the Anita B. Gorman Discovery Center’s outdoor spaces and increase attendance to the many programs and activities currently being presented. They will coordinate with KCNPI partners and others about customizing engagement opportunities and outreach targets and involve local elected officials.

Ruffed Grouse Reintroduction. In partnership with the Wisconsin Department of Natural Resources, Quail and Upland Wildlife Federation, and private landowners in the restoration area, MDC has been working to reestablish a ruffed grouse population in Missouri. The three-year project (2018-2020), involving the translocation of 300 grouse, began in 2018 with 100 grouse from Wisconsin that were released on Little Lost Creek Conservation Area in Warren county. Extensive habitat management has been conducted to make the area suitable for grouse.

Nebraska

NEBRASKA STATE REPORT MAFWA – May 24, 2019

Jim Douglas, Director
Nebraska Game and Parks Commission
2200 N. 33rd Street, Lincoln, NE 68503

Take 'Em Fishing – We rolled out a new campaign in spring of 2019 challenging anglers to take someone new fishing. Our goal is to get more people participating in fishing and to engage our anglers to help make this happen. Whether it's a grandchild, child, spouse, neighbor, colleague or friend, we challenge anglers to share their passion with someone they care about. It doesn't matter if they've never fished before, or if they've just fallen out of the habit. First, anglers take our pledge to show their commitment to taking someone fishing this year and helping keep the sport of fishing alive and well in Nebraska. Those who take the pledge can receive a pin or sticker. When they introduce – or reintroduce – someone new to fishing, they snap a photo and fill out the online form. By taking someone new fishing they will be registered to win great prizes, including a fishing kayak, gift cards to outdoor retailers, guided fishing trips and other outdoor gear that we'll be drawing for all summer long. The grand prize, a Bass Tracker Classic fishing boat, will be drawn in September. See more at <http://OutdoorNebraska.gov/TakeEmFishing/>.



The Nebraska Upland Slam- In 2018, the Nebraska Game and Parks Commission, along with Pheasants Forever/Quail Forever, introduced an exciting new challenge for upland bird hunters – the Nebraska Upland Slam. The Upland Slam challenges hunters to harvest a sharp-tailed grouse, a greater prairie-chicken, a ring-necked pheasant and a northern bobwhite in Nebraska. Hunters enter each harvest via an app (available at OutdoorNebraska.org/UplandSlam). Those who successfully complete the Upland Slam receive a certificate and pin, are recognized online and in Nebraskaland Magazine, and are entered into a drawing to win one of several prizes sponsored by Pheasants Forever/Quail Forever. The Upland Slam was implemented to improve upland game hunter recruitment/retention and to showcase Nebraska's excellent mixed-bag hunting opportunities. The Upland Slam also highlights the length of Nebraska's upland game seasons and promotes hunting in different regions of the state. More than 250 hunters ranging in age from 13 to 75 years from 14 different states participated. and 140 hunters from 10 states (121 from Nebraska) completed the Upland Slam.

Pheasant Research – Based upon research started in 2012 and in conjunction with the agencies Pheasant Plan (Berggren Plan for Pheasants), we are embarking on research to understand the relationship between pheasant abundance and the amount of suitable habitat in a surrounding landscape. We are especially interested if there are thresholds of suitable habitat in the landscape that result in more than a linear effect (eg. exponential effects) on the pheasant population.

Pheasant genetic research was started in 2016, leading to interesting information indicating pheasants sampled in Nebraska and South Dakota are derived from 2 distinct ancestral lineages – one from northern Eurasia and one from eastern China. More wild pheasants in both NE and SD descend from eastern China compared to northcentral Asia at a 3:1 ratio. We plan to further explore the distribution of pheasants to further our understanding of genetic differences between wild and pen-reared pheasants, to attempt to determine whether a specific genetic stock of pheasants (especially male pheasants) would be better suited to survive in the wild.

We also have begun and will continue research to explore the impact (positive or negative) of pen-reared pheasants on wild populations. With the number of pheasants being released by Controlled Shooting Areas (CSA's), we want to determine what impacts released birds may be having on wild pheasant populations and if there are recommendations that could be made to CSA's that could benefit wild pheasants.

Flooding Impacts – Commission properties including Wildlife Management Areas including 3 office and shop locations, 18 Park areas, 3 Trails (including multiple bridges), Angler and Boating access facilities on at least 12 locations (Missouri River access sites south of I80 still underwater), and 2 Fish Hatcheries sustained damage this spring from the “bomb cyclone” and associated flooding that led to a disaster declaration for much of the state. Extensive damage to county roads, state highways, and bridges is creating challenges for staff and the public to get to properties. We estimate the financial impact of the flood at \$7-\$10 M, with a \$3 -\$4 M impact on the Fish and Wildlife side of the agency and \$4-\$6 M impact on State Parks and Trails.

Mule Deer Research in Nebraska- Working with the University of Nebraska-Lincoln (UNL), NGPC began a multi-year study aiming to better understand mule deer populations in Southwest Nebraska. Mule deer (*Odocoileus hemionus*) populations throughout the western states have been declining since the 1990's, causing concern for many state wildlife agencies. In Nebraska, declining harvest trends, challenges associated with hunting permit allocations, and inquiries from the public regarding declining mule deer numbers have underscored the need to look into this issue further. Areas of particular concern for NGPC and the public include southwest, northwest and central Nebraska, where several deer management units with historically large numbers of mule deer have showed a decrease in harvest trends over the last five years. Through this study, the Commission hopes to assess the factors contributing to these declines, primarily focusing on cause-specific mortality and habitat use. This year, UNL researchers successfully placed radio-collars on 59 adult mule deer does and 91 fawns. Currently, researchers are compiling and analyzing this year's data, as well as preparing for the upcoming winter capture season. Next year, the project will be expanded to include Northwest Nebraska, assessing the mule deer population in the Pine Ridge.

Mountain Lion Season The Commission approved Nebraska's second harvest season for mountain lions during January – March 2019 in the Pine Ridge Unit (northwest Nebraska). Population estimates for the Pine Ridge increased from 22 in 2014 – when the inaugural season was held – to 59 during the most recent genetic survey in 2017. Up to 8 mountain lions could have been harvested, with a limit of 4 lions and a sublimit of 2 females in 2 hunting units. Five mountain lions were harvested during the 2019 season (4 males, 2 females). In June of 2019, The Commission will be considering approval of a similar mountain lion season for 2020.

R3 Task Force-The Nebraska R3 Task Force continues to be a partnership effort that has brought many NGOs and industry partners together with the Commission to focus efforts on R3 needs in Nebraska. The Task Force has provided support to the mentoring video campaign, a large scale data mining effort with UNL to better understand our customer permit purchasing, developed a new series of web pages devoted to mentored hunting/shooting sports for all R3 partners, a collegiate outreach program at UNL, and an effort to provide consistent standards and methods to evaluate all Nebraska R3 programs. In 2018 the Task Force began making changes to the overall group structure to involve more potential partners in R3 efforts in 2019. The changes resulted in development of an R3 Executive Committee for Nebraska that will work to develop a larger R3 Task Force that will meet twice annually on R3 issues in Nebraska.

Collegiate Sportsperson's Council- In the fall of 2018, the R3 team developed the CSC which is a group of high school and collegiate hunters that represent the more active hunters in their age cohort to help advise the Commission on R3 actions as well as barriers their age groups faces when hunting, fishing or participating in shooting sports. The group met in the fall of 2018 and already has begun to address several key barriers and opportunities to participation.

R3 Communications Coordinator- The Commission entered into agreement with Pheasants Forever to develop a new shared position through PF that will work to develop communication efforts for R3 needs in Nebraska, as well as help tell the conservation story in Nebraska amongst our collective partners. The new PF position, in cooperation with a R3 Coordinator position brought on in 2016 with the National Wild Turkey Federation, will continue Nebraska's innovative efforts to support increasing hunter/angler numbers as well as support shooting sports.

Collegiate Hunters of Nebraska- This new outreach effort is developing a communication strategy with college students to address support needs for this cohort. Based upon input from two focus groups, new efforts have resulted in a video campaign targeting University of Nebraska-Lincoln (UNL) students to help them understand how easy it is to continue hunting while in college and a new hunting equipment checkout program with UNL Campus Recreation.

R3 Summit- More than 325 individuals, including representatives from 40 state fish and wildlife agencies and a number of non-profit and industry partners, met for the first National R3 Symposium in Lincoln. The symposium provided a venue for partners to share the most current data on participation and the effectiveness of R3 efforts, and sessions focused on the tactics that are proving successful in providing experiences that don't just introduce people to hunting and shooting but offer a series of learning opportunities that keep them active and engaged. On the second day of the symposium, the Council to Advance Hunting and the Shooting Sports (CAHSS), Association of Fish and Wildlife Agencies, Archery Trade Association, National Shooting Sports Foundation and the U.S. Fish and Wildlife Service signed a Memorandum of Understanding signaling their commitment to work together on R3 efforts.

Commission Customer Data Mining Effort- The Commission continues work with UNL on a data mining effort to better understand the purchasing desires of our customers, where we are seeing growth and potential opportunity and where we are seeing concern in purchase changes.

From this data, a new Nebraska R3 Plan will be developed as well as being used to analyze potential changes in permitting the agency may want to consider to help meet our R3 goals.

Expanding public access for hunting and fishing- Nebraska currently supports over one million acres of federal, state, conservation-partner-owned and private land open to public hunting, trapping and fishing. Nebraska's land-base is over 97% privately-owned and increasing access to private lands continues to be one of the agency's primary objectives (as outlined within our "R3" plan). The Open Fields and Waters Program (OFW) provides incentives to private landowners willing to allow walk-in hunting, trapping and/or fishing and represents the agency's primary mechanism to accomplish this objective. This year (2018-2019 hunting seasons), over 317,000 acres of private lands were enrolled in OFW, which represents an all-time record for the program (23% increase from 2017-2018, and a 36% increase from 2016-17). In recent years, new OFW enrollments have been targeted within pheasant priority areas identified in the Berggren Plan to increase upland game hunting opportunities. Since the Plan was initiated (spring 2016), public access opportunities have increased by 83% within these priority areas. During the 2018-19 season we also targeted additional grouse hunting opportunities (to further increase the chances of hunters being able to complete the Upland Slam on public land), expanded upon our Canyons Access Initiative and the deer and turkey opportunities it provides, while seeking out additional Northern Bobwhite opportunities as well during a time of high quail populations. Many of our conservation partners contribute to access opportunities in Nebraska

Proposed changes to Nebraska's state threatened and endangered species lists -The Nebraska Game and Parks Commission has the statutory responsibility of administering Nebraska's Nongame and Endangered Species Conservation Act. Revisions to the list of endangered and threatened species were last completed in 2000. The current revision proposes removal of the North American River Otter from Nebraska's threatened list following successful reintroduction and conservation efforts for that species over the last 15 years. The revision proposes the addition of two species to Nebraska's endangered list: Sicklefin Chub and Western Silvery Minnow; and recommends that four species be added to our state threatened list: McCown's Longspur, Timber Rattlesnake, Flathead Chub, and Plains Minnow. Detailed information for each species, including peer-reviewed listing proposals, response to peer review, outlines of potential impacts, and scheduled public hearings, are available on the agency website.

Pheasant Plan Efforts Continue- This is the third year of NGPC's Berggren Plan – a five-year initiative aimed at improving the pheasant hunting experience in the state of Nebraska. In 2018, NGPC staff positively impacted over 20,284 acres of habitat within the priority areas. As in recent years, most efforts in 2018 centered around the establishment and management of Conservation Reserve Program (CRP) tracts (more than 13,500 acres). Management of existing grasslands through the use of prescribed fire (>5,000 acres) and tree removal (>600 acres) also continued to be a priority in several of the priority areas. Additional habitat work by other agency programs and conservation partners complements this effort. The Berggren Plan provides a nexus for improving habitat for upland gamebirds, flexible and profitable options for landowners, and great upland game hunting opportunities for our hunters.

Managing Grasslands for Prairie Grouse: stemming the tide of eastern red cedar invasion-

Starting in 2015, the Commission has been using Wildlife and Sport Fish Restoration (Pittman-Robertson) funds to incentivize eastern redcedar removal, grazing management and prescribed fire across the eastern Sandhills and several of our Biologically Unique Landscapes identified within the Nebraska Natural Legacy Project. The goals of these projects are to battle cedar encroachment, improve habitat for our prairie grouse species (greater prairie-chicken and sharp-tailed grouse), and improve grazing conditions for ranchers. Working with the U.S. Fish and Wildlife Service, Sandhills Task Force, Pheasants Forever, the Natural Resources Conservation Service, private landowners and other partners as well, our staff has successfully implemented cedar removal on tens of thousands of acres, mostly at low cedar density where costs per acre are very low. This has been done on large blocks of land across multiple ownerships, treating at a landscape scale – which is essential to achieve the goals of the projects. The project has built upon previous strengths in our partnerships with those involved and has led to many other benefits. The use of prescribed fire in the Sandhills was once quite limited. This program and the partners involved are increasing acceptance and utilization of fire. It has also led to a Working Lands for Wildlife (WLFW) focus area through the Environmental Quality Incentives Program (EQIP), which specifically dedicated funding from EQIP to the area for practices that are beneficial to prairie grouse.

New Hatchery Building for Mussel Propagation- A new building was constructed at the North Platte Hatchery to facilitate propagating and raising freshwater mussels and other aquatic species of concern. This will allow the Agency to augment and re-establish these species in areas where they have been historically established. Efforts like this may prevent additional species from being listed as threatened or endangered in the future. The building and equipment was funded through a State Wildlife Grant and an NET grant.

Family fishing nights/bilingual fishing nights added (Vamos a Pescar)- Our first year as a Vamos a Pescar grant recipient was very successful and the program will be expanded in 2019. Over 1200 individuals were reached, through 10 fishing events where equipment and bait as well as instruction in English and Spanish was given. Recreational boating was provided at a special event, Fishing Fiesta, which commemorated Latino Conservation Week. 17 informational sessions about enjoying the outdoors in Nebraska were also given in the Lincoln and Omaha metro areas. Through social media and other promotional campaigns, over 90 posts were made on a variety of pages. The connections with the Latino/immigrant communities was our most significant accomplishment.

Cabela's end-cap beginning fishing supplies program- In an attempt to help new anglers, Cabela's and Nebraska Game and Parks teamed up on the New Angler Experience Pilot for the spring and summer of 2018. Five endcap displays were created with new anglers in mind. These endcaps contained affordable quality fishing gear, educational graphics, and informational brochures and activity suggestions. A team of Cabela's and NGPC staff designed the endcaps and the customer care of new anglers. Family Fishing Event participants interested in acquiring fishing equipment were encouraged to visit the Cabela's LaVista store with a coupon for a free tackle box during Lincoln and Omaha area events. One hundred tackle boxes were given to those visiting the LaVista Cabela's, which meant that 24% of those receiving coupons at Family Fishing Events ultimately visited the store and display.

What is the value of a Nebraska Conservation Officer?- A 10 year average shows that a single conservation officer will contact 1,065 fishermen, 545 hunters, 28 fur harvesters, 2,606 park patrons, 528 boaters, and another 2,311 miscellaneous individuals in addition to giving 30 community based programs each year. Conservation officers are highly mobile and on average are responsible for covering over 1,700 square miles of the State. Assigned patrol areas vary greatly across the state: the largest patrol area encompasses a land mass larger than the state of Connecticut and Rhode Island combined, while the smallest area has over a half million people. These varying patrol areas present challenges to addressing complaints in a timely manner and establishing an enforcement presence in remote areas. On average, Conservation Officers drive over 1.5 million miles every year in the performance of their duties, illustrated by the Division's top two operating expenditures: fuel costs (23%) and vehicle purchases (22%).

Agency strategic plan: Focus on the Future- A vision for tomorrow - To meet the mission of "being stewards of the state's fish, wildlife, park and outdoor recreation resources in the best long-term interests of the people and those resources," a strategic plan, entitled "Focus on the Future" was completed for 2018-2022. The plan outlines the agency's core values and provides the guiding principles to meet public needs, while addressing key challenges regarding the natural resources managed by the agency. Goals, strategies, strategic directions and desired outcomes are identified for seven major pillars of the agency. These goals deal with policy, preservation of the natural resources, management of the outdoor recreation opportunities, cultivation of public understanding of the natural and cultural resources and investment in professional development of staff. Activities undertaken by the agency will put the natural resources above short-term interests and ensure work is done with excellence, using the best scientific knowledge and management practices, while maintaining fiscal responsibility. This is a roadmap towards the future to ensure Time Outdoors is Time Well Spent.

Using technology to reach stakeholders. In 2018, social media – particularly Facebook, Instagram, Twitter and YouTube – played a big role. We used these channels to share information about hunting seasons, fishing opportunities, outdoor tutorials, park events, wildlife viewing opportunities, photography tips, and updates to regulations and orders. Video, especially, proved to be a valuable tool. We introduced many of our new Venture Parks features through videos and produced video tours of some of our most popular state parks. In 2018, Game and Parks also reached customers through video livestreams. We hosted several Facebook Live events in which the public could ask biologists questions about fishing and other activities. We also live-streamed a big game meeting on YouTube, so hunters and landowners who wanted to attend but couldn't make the drive had the opportunity to ask questions of our big game managers. We also reached out to customers with more traditional means through public meetings, hundreds of news releases and workshops, day camps and other events. These activities and our online presence, allowed us to reach thousands of Nebraskans in 2018:

- Outdoor Discovery Programs: 5,478
- Hunter Education: more than 9,000
- Missouri River and Fort Kearny Outdoor Expo's: 43,000
- Facebook: 106,000
- National Archery in the Schools Program: 35,000
- Instagram: 18,000
- Twitter: 23,000

North Dakota

NORTH DAKOTA STATE REPORT

June 2019

Terry Steinwand, Director
North Dakota Game and Fish Department
100 N. Bismarck Expressway
Bismarck, ND 58501

2019 Legislative Session

The North Dakota Game and Fish Department tracked 40 outdoors-related bills during the 2019 legislative session, 21 of which were passed by both chambers and signed into law. Some bills of note include:

HB 1021 – Included in the Information Technology Department's appropriation, during the 2019-21 interim, a 14 member land access committee (with nine voting members) will study access to public and private lands for hunting, trapping, fishing and related issues, including trespass violations and penalties, and provide recommendations regarding a land access database with capabilities of electronic posting. The study committee may establish a trial electronic posting and hunter access information system in up to three counties prior to Aug. 1, 2020, and report findings and recommendations to the 67th legislative assembly.

HB 1246 – Defines the eligibility requirements relating to gratis licenses for hunting big game and to provide a legislative study.

SB 2293 – Creates an aquatic nuisance species program fund in the state treasury. Effective Jan. 1, 2020, establishes an ANS fee of \$15 for each motorized watercraft registered in North Dakota to run concurrent with the three-year watercraft registration period. For motorized watercraft operated on waters in North Dakota but not licensed in North Dakota, an ANS fee of \$15 to be paid for each calendar year and to display an ANS sticker on their watercraft. Effective April 1, 2020, establishes a \$2 surcharge on each resident fishing license and combination license, with the exception of the resident 65 and older fishing license, permanently or totally disabled fishing license, or a disabled veteran fishing license. In addition, includes a \$3 surcharge on each nonresident fishing license and each nonresident waterfowl license.

Deer Season Set

North Dakota's 2019 deer season is set, with 65,500 licenses available to hunters this fall, 10,350 more than last year.

In total, antlered mule deer licenses increased by 450 from last year, antlerless mule deer by 700, antlered whitetail by 700, antlerless whitetail by 1,250, "any antlered" by 3,150 and "any antlerless" by 4,100.

In addition, muzzleloader licenses increased by 184 and restricted youth antlered mule deer licenses increased by 45.

Mule deer doe licenses are available in unit 4A for the first time since 2011.

As stated in the 2019-20 chronic wasting disease proclamation, hunters harvesting a deer in units 3A1, 3B1 and 3F2 cannot transport the whole carcass, including the head and spinal column, outside of the unit, with the exception that hunters can transport the whole deer carcass between units 3A1 and 3B1 during any open deer season.

Also in the CWD proclamation, it is unlawful for an individual to hunt big game over bait, or place bait to attract big game for the purpose of hunting, in deer hunting units 3C west of the Missouri River, 3E1, 3E2, 3F1, 3F2, 3B1, 3A1, 3A2 and north of N.D. Highway 2 in unit 3A3.

Spring Mule Deer Survey

The North Dakota Game and Fish Department completed its annual spring mule deer survey in April, and results indicate western North Dakota's mule deer population is down from last year, but still 14 percent above the long-term average.

Biologists counted 2,454 mule deer in 298.8 square miles during this year's survey. Overall mule deer density in the badlands was 8.2 deer per square mile, compared to 10.3 in 2018.

Although mule deer density was lower than 2018, big game management supervisor Bruce Stillings said the population is above objective and remains at a level able to support more hunting opportunities this fall.

"The 2019 spring results show that mule deer have recovered nicely following winters of 2009-11, which led to record low fawn production and a population index low of 4.6 mule deer per square mile in 2012," Stillings said. "The population recovery is due to no antlerless harvest for five years, combined with milder winter conditions during 2012-2016, which led to good fawn production since 2013. However, the long-term health of the population will depend on maintaining high quality habitat."

Deer Test Positive for CWD

A white-tailed deer found dead just south of Williston in late February has been confirmed positive for chronic wasting disease, according to Dr. Charlie Bahnson, wildlife veterinarian for the North Dakota Game and Fish Department.

"This is unfortunate news because it means CWD is much farther south than the positive deer harvested this past fall in the northwest corner of deer unit 3A1 in Divide County," Bahnson said.

CWD is a fatal disease of deer, moose and elk that can cause long-term population declines if left unchecked. Since 2009, 14 other deer have tested positive for CWD in North Dakota – 13 from Grant and Sioux counties in hunting unit 3F2 in the southwest, and the other taken last fall from the northwest in Divide County.

The deer found near Williston is the first documented case of a mortality due to CWD in North Dakota.

“All 14 previous detections were perfectly healthy-looking deer that were hunter-harvested before they got sick,” Bahnson said. “This deer was severely emaciated and had an empty digestive tract, which is unusual even in starvation cases that can occur in harder winters like this one. This deer stopped trying to forage some time ago.”

Targeted Deer Test Negative for CWD

Samples of deer taken by targeted removal two weeks ago south of Williston have all tested negative for chronic wasting disease, according to Dr. Charlie Bahnson, wildlife veterinarian for the North Dakota Game and Fish Department.

Following detection of CWD in a deer found dead in February, Game and Fish removed an additional 52 deer for testing. “It was really important to figure out how big of a problem we had on our hands,” Bahnson said. “These test results are the best we could have hoped for, given the circumstances. We know now that CWD is there, but infection rates appear to be low.”

2018 Deer Season Summarized

A total of 48,717 North Dakota deer hunters took approximately 31,350 deer during the 2018 deer gun hunting season, according to a post-season survey conducted by the state Game and Fish Department.

Game and Fish made available 55,150 deer gun licenses last year. Overall hunter success was 64 percent, with each hunter spending an average of 4.4 days in the field.

Hunter success for both antlered and antlerless white-tailed deer was 64 percent.

Mule deer buck success was 81 percent, and antlerless mule deer was 83 percent.

Hunters with any-antlered or any-antlerless licenses generally harvest white-tailed deer, as these licenses are predominantly in units with mostly whitetails. Buck hunters had a success rate of 69 percent, while doe hunters had a success rate of 65 percent.

Game and Fish issued 13,098 gratis licenses in 2018, and 10,785 hunters harvested 5,832 deer, for a success rate of 54 percent.

A total of 1,022 muzzleloader licenses were issued in 2018, and 900 hunters harvested 349 white-tailed deer (176 antlered, 173 antlerless). Hunter success was 39 percent.

A record 28,824 archery licenses (26,318 resident, 2,506 nonresident) were issued in 2018. In total, 22,666 bow hunters harvested 8,914 deer (7,927 whitetails, 987 mule deer), for a success rate of 39 percent.

Pronghorn Hunters Successful

Hunter success during last fall's pronghorn hunting season was 81 percent, according to statistics provided by the North Dakota Game and Fish Department.

Game and Fish issued 1,081 licenses (701 lottery and 380 gratis), and 976 hunters took 792 pronghorn, consisting of 761 bucks, 28 does and three fawns. Each hunter spent an average of 2.7 days afield.

Two percent of the harvest occurred during the archery-only portion of the season.

2018 Bighorn Sheep, Moose and Elk Harvests

Harvest statistics released by the North Dakota Game and Fish Department show overall hunter success during the 2018 season for bighorn sheep was 100 percent, 92 percent for moose and 65 percent for elk.

The department issued two bighorn sheep licenses and auctioned one. All three hunters harvested a bighorn ram.

The department issued 329 moose licenses last year. Of that total, 319 hunters harvested 294 animals – 138 bulls and 156 cows/calves.

The department issued 418 elk licenses last year. Of that total, 380 hunters harvested 248 elk – 135 bulls and 113 cows/calves.

NASP State Tournament Results

A record 820 archers competed in the North Dakota National Archery in the Schools Program state bull's-eye tournament March 22-23 in Minot.

Oakes students claimed top honors in the elementary (grades 4-6) and middle school (grades 7-8) divisions, while Hankinson received the top prize in the high school (grades 9-12) division.

Winning teams and the top 10 individuals qualify for the national tournaments, scheduled for May in Louisville, Ky and June in Salt Lake City, UT. The Game and Fish Department and North Dakota Youth Archery Advisory Council contribute a total of \$3,000 in travel assistance to the first place team in each division, and \$1,000 to the overall male and female individual winners. In addition, a total of \$20,000 in college scholarships was awarded by the NDYAAC to the top five overall scorers in both boys and girls divisions.

Bighorn Sheep Population Declines

The North Dakota Game and Fish Department's 2018 bighorn sheep survey, completed by recounting lambs in March, revealed a minimum of 283 bighorn sheep in western North Dakota, up 7 percent from 2017 and equal to the five-year average.

Altogether, biologists counted 84 rams, 161 ewes and 38 lambs. Not included are approximately 20 bighorns in the North Unit of Theodore Roosevelt National Park.

Scholarships Available for Students

The North Dakota Game Wardens Association, Ray Goetz Memorial Fund and Kupper Chevrolet are providing scholarships to a graduating high school senior or current higher education student, majoring in fisheries, wildlife management or law enforcement.

Applicants must be North Dakota residents, and have maintained a 3.25 grade point average. Scholarships will be awarded this fall upon proof of enrollment.

Game and Fish Pays \$658,000 in Property Taxes

The North Dakota Game and Fish Department recently paid more than \$658,000 in taxes to counties in which the department owns or leases land. The 2018 in-lieu-of-tax payments are the same as property taxes paid by private landowners.

The Game and Fish Department manages more than 200,000 acres for wildlife habitat and public hunting in 51 counties. The department does not own or manage any land in Traill or Renville counties.

Spring Turkey Season Set

The North Dakota Game and Fish Department is offering 6,025 wild turkey licenses for the 2019 spring hunting season, 370 more than last year.

Eleven of the 22 hunting units have more spring licenses than in 2018, seven have fewer and three remain the same. Unit 21 (Hettinger and Adams counties) is again closed in 2019 due to lack of turkeys in the unit.

First-time spring turkey hunters ages 15 or younger are eligible to receive one spring license valid for the regular hunting season in a specific unit. To be eligible, the youth hunter must be 15 or younger on opening day of spring turkey season, and have never received a spring turkey license in North Dakota.

Some Lakes Suffer Winterkill

North Dakota Game and Fish Department fisheries biologists investigated winterkills at several lakes this spring, and some were considered significant enough to affect the quality of fishing. Biologists will continue to monitor suspect lakes and other fisheries throughout the spring.

A total fish kill means all fish died, a significant kill is when the game fish population is greatly reduced and a partial kill means dead fish were observed but catchable numbers of game fish are still present.

Some lakes that were sampled that showed partial winterkill include Pipestem and Jamestown reservoirs (Stutsman County), Green Lake (McIntosh County), Woodhouse Lake (Kidder County), Patterson Lake (Stark County), Crooked Lake and Scooby Lake (McLean County).

Minor winterkills were noted in some other lakes but weren't significant enough to affect fishing. Information of all waters actively managed by Game and Fish is available by visiting the Game and Fish website, gf.nd.gov. This page will be updated as other lakes are surveyed.

Confirmed lakes with total or significant winterkill are listed by county. For more information on individual lakes, or to report fish kills that may not be on the list, anglers can contact the local Game and Fish district office.

- Burke – Powers Lake (significant), Short Creek Dam (significant)
- Burleigh – Mitchell Lake (total)
- Eddy – Battle Lake (significant)
- Emmons – Baumgartner Lake (total), Jake's Lake (total)
- Foster – Juanita Lake (significant)
- Griggs – Carlson-Tande Dam (significant)
- Hettinger – Larson Lake (total), Mott Watershed Dam (total)
- Kidder – Etta-Alkaline Complex (significant), Leno Lake (total), Rafferty Lake (total), Remmick Lake (significant)
- Logan – Logan (Mueller) WMA (significant)
- McInstosh – Lehr WMA (total)
- McKenzie – Leland Dam (significant), Sather Dam (significant)
- McLean – Coal Lake (total)
- Morton – Crown Butte Dam (total)
- Pierce – Buffalo Lake (significant)
- Richland – Grass Lake (significant)
- Rolette – School Section Lake (significant)
- Sargent – Bergh Slough (significant), Fiala Lake (significant)
- Stutsman – Gaier Lake (significant), Sunday Lake (significant)
- Walsh – Matejcek Dam (significant)
- Wells – Harvey Dam (significant)
- Williams – Cottonwood Lake (significant), McGregor Dam (significant), Tioga Dam (significant)

Catchable Trout, Catfish, Pike Stocked

North Dakota Game and Fish Department fisheries personnel have already stocked dozens of local community fisheries with catchable trout, catfish and pike, with additional lakes still to be stocked in early- to mid-May.

Approximately 10,000 11-inch rainbow trout, 600 2- to 4-pound rainbow trout, 1,200 adult catfish, 1,100 adult pike and 1,100 1- to 3-pound cutthroat trout were recently stocked in community fisheries around the state.

Fisheries production and development section leader Jerry Weigel said these stockings put catchable fish in waters that are easily accessible and many have fishing piers, and in or near communities throughout North Dakota.

Ohio

OHIO
STATE REPORT
May 1, 2019

Kendra S. Wecker, Chief
Ohio Division of Wildlife
2045 Morse Rd., Bldg. G
Columbus, OH 43229

STEWARDSHIP

STEWARDSHIP ACCOMPLISHMENTS FOR 2018

- Purchased 4,858 acres of American Electric Power (AEP) ReCreation property in coordination with the U.S. Fish and Wildlife Service (USFWS). Committed to a three-phase contract with AEP to facilitate the acquisition. Dedicated the first parcel as the Jesse Owens Park and Wildlife Area jointly with the Division of Parks and Watercraft.
- Acquired the 2,341-acre Eagle Creek Wildlife Area in Brown County. Leveraged Federal Lands and Waters Conservation grant along with mitigation funding from Ohio Department of Transportation (ODOT) to purchase the property. This unique partnership, along with U.S. Fish and Wildlife Service, centered around high-quality bat habitat. Division staff assisted in bat acoustical monitoring and mist netting on the property that confirmed the presence of state and federally listed bats enabling ODOT funding.
- The [Mid-America Monarch Conservation Strategy](#) was completed. Ohio's goal is to add 95 M milkweed stems by 2035. The Division is a partner in an annual milkweed pod collection with ~19M milkweed seeds/year collected. Private lands biologists transported all the pods collected statewide and delivered to Corrections & Rehabilitation facilities for processing. In addition, Wildlife Area management has increased milkweed stems by 18M through 58k acres of habitat improvement on Wildlife Areas since 2014.
- Completed removal of the Ballville Dam. This long-term project was a collective partnership with the City of Fremont, USFWS, US Army Corp of Engineers and Ohio Environmental Protection Agency, that restored the natural hydrological processes over a 40 mile stretch of the Sandusky River. The dam removal re-opened fish passage to 22 miles of new habitat, restoring flow conditions for fish access to new habitat above the impoundment, and improving overall conditions for native fish communities in the Sandusky River system both upstream and downstream of the dam.
- Completed actions to prevent migration of Aquatic Invasive Species between the Mississippi River and Lake Erie basins at the St. Mary's State Fish Hatchery, including installation of new pumps, control valves, sluice gates, and raceway modifications.
- Completed Operation North Coast, a multiple-year, large-scale investigation that included charges against 48 defendants and resulted in 47 felony charge, 210 misdemeanors, \$6,736.00 in fines and \$125,026.82 in restitution.
- Developed a Deer Stakeholder Working Group by hosting a series of four workshops led by human dimensions researchers from Ohio State University and Michigan State University. Each of the workshops were attended by approximately 25 stakeholders having a vested interest in the management of Ohio's white-tailed deer herd. Stakeholders included wildlife researchers, wildlife managers, deer hunters, and farmers. A final report presenting

stakeholder recommendations was prepared and submitted to the DOW for review and comment.

- Finalized the Ohio Bat Conservation Plan through multiple meetings with the Bat Action Team and input from numerous reviewers. This plan provides a conservation strategy to maximize partnerships and research efficiencies.

STEWARDSHIP INITIATIVES FOR 2019

- Provide an evaluation of and recommendations for the Cooperative Hunting, Fishing and Trapping Program to measure effectiveness, locations, and quality of habitat of this private land access program.
- Continue partnership with Toledo Zoo, USGS and USFWS to produce and stock fall young-of-year sturgeon in the Maumee River as part of restoration of their populations in Lake Erie.
- Complete the \$2.4 million Spring Valley Range improvement and begin the \$8.9 million Delaware Range and \$550,000 Fernwood State Forest Range improvement projects. Spring Valley improvements include construction of an Outdoor Education Training Center that will serve a classroom facility for many Recruitment, Retention & Reactivation efforts. These renovations will include upgraded range facilities identified by our customers.
- Pilot the Shooting Access Grant in all five Division of Wildlife districts. The grant is designed to help provide public shooting opportunities in underserved areas of the state by partnering with private ranges to honor the division's shooting range permits. Implement a GIS map of the Ohio range inventory and make it available to the public. Retool the National Archery in Schools Project Grant to allow funding for organizations looking to start archery programs that are open to the public.

OPPORTUNITIES

OPPORTUNITIES ACCOMPLISHMENTS FOR 2018

- Produced over 46.3 million fish in state fish hatcheries that were stocked to improve fishing in water areas across the state, meeting or exceeding nearly all production targets for the 12 different species and various life stages requested by fisheries managers to promote fish opportunities statewide.
- Awarded more than \$1.6 million in grants to 400 conservation organizations and collected over \$1.1 million in in-kind match; and developed an online grant application and final reporting for Conservation Club, Aquatic Ed, Step Outside and Rod and Reel grants for consistency, better customer service, and faster processing. Awarded eight Range Improvement Grants for a total of \$143,000, and four Range Grants to municipalities for the development of five new archery ranges and upkeep of existing ranges.
- Ohio Division of Wildlife private lands biologists are currently working with National Resource Conservation Service, Pheasants Forever, and Ohio Department of Agriculture to promote the use of perennial native warm season grasses and forbs in pasture plantings throughout southwest Ohio. Our joint effort included the Northern Bobwhite in Grasslands initiative that provides landowners with funding opportunities to implement such practices via the Environmental Quality Incentives Program (EQIP).

CONNECTIONS

CONNECTIONS ACCOMPLISHMENTS FOR 2018

- Improved angler access through completion of Hoover Reservoir Launch Ramp, Mogadore Reservoir Launch Ramp, and the Phil Hillman Steelhead Access on Conneaut Creek. The Hoover Reservoir Oxbow Ram was a cooperative project with the City of Columbus that included upgrades for two-way vehicle traffic, upgraded parking lot, concrete ramp, and floating dock.
- Collaborated with the newly formed Ohio Chapter of Backcountry Hunters and Anglers for an introductory hunting event. This partnership has developed key messaging on the relevancy of wildlife conservation to millennials.
- In partnership with Parks and Watercraft, expanded Born Wild, Stay Wild communications campaign to include "Do Not Feed Wildlife" messaging.

CONNECTIONS INITIATIVES FOR 2019

- Restore funding to Ohio's Conservation Club Partnership Grants to fully implement R3 programing.
- Draft the Ohio Recruitment, Retention, and Reactivation Plan. Conduct Recruitment, Retention, and Reactivation consultations for conservation partners (inventory assessment of programs/events/resources, identifying gaps,). Conduct Recruitment, Retention, and Reactivation mentor training in each district for staff and partners.
- Work with interagency partners towards completing a yellow perch management strategy evaluation that will result in new harvest policies in each Lake Erie management unit for inclusion in the eventual Yellow Perch Management Plan.

TRADITIONS

TRADITIONS ACCOMPLISHMENTS FOR 2018

- Initiated Ohio's Recruitment, Retention, and Reactivation (R3) Plan that will build upon the state's strategic plan and provide direction for the Division's R3 efforts at the tactical level; and implement a participant registration platform as a first step in allowing the Division to better gauge and track R3 efforts across the state. Finalize the development of customer engagement and communications plans for R3 efforts that includes the continued development of Wild Ohio Harvest Community web pages to provide information for the public to learn how to hunt, fish, or shoot.
- Dedicated a completely renovated shooting range at the Harrison State Forest and a new Archery range at Lake County Metro Parks.
- Opened youth fishing ponds at the District Five office in Xenia. This project was modeled after the successful program at the District Three office in Akron which provides a high-quality experience for over 4,000 youth anglers.

TRADITIONS INITIATIVES FOR 2019

- Hold internal and external meetings on the state's R3 efforts including consultations for conservation partners; and conduct an inventory assessment of current programs, events, and resources to identify program gaps geographically that will allow better distribution of resources.

- Apply for the Recreational Boating and Fishing Foundation *Vamos A. Pescar* Outreach Grant to engage Ohio's Hispanic communities on fishing opportunities.
- Continue to promote and develop programming for a Free Range Day at all of our Class A ranges to increase customer engagement.

EXCELLENCE

EXCELLENCE ACCOMPLISHMENTS FOR 2018

- Implemented multiyear and lifetime Hunting and Fishing licenses for customer service. The Division issued 900 Lifetime licenses and over 4,700 multiyear licenses.
- Submitted requests for federal reimbursement totaling \$44,468,293.17 from 14 federal grants and reconciled expenditures with those reimbursements. Identified additional operational costs for reimbursement.
- Hired 10 wildlife officer cadets from an applicant pool of 600 within a reduced hiring timeline. The cadets began peace officer basic training and district operations duties prior to the wildlife officer training academy program
- Initiated the development of Wild Ohio Harvest Community web pages, which include information for the public to learn how to hunt, fish, or shoot.
- Conducted a survey of magazine readers and implemented updates to photos and increasing the frequency of popular topics. Magazine memberships grew to 26,621 (May/June) and continued to climb through the end of the fiscal year. This marks a high point after the re-launch of the magazine in 2012.
- Developed a Shooting Range vision document and assembled an ad-hoc committee to improve our shooting range programming. Conducted a statewide shooting range survey to provide feedback on our facilities. We had over 1,800 respondents which will assist in future range renovations.

EXCELLENCE INITIATIVES FOR 2019

- Host national and regional meetings including Midwest Fish and Wildlife Conference, Midwest Association of Fish and Wildlife Agencies Director's meeting, and American Fisheries Society National Conference.
- Implement a process to allow internet customers to opt to have their hunting and fishing license automatically renewed each year.
- Development of marketing and communications plans for recruitment, retention, and reactivation efforts.

South Dakota

**SOUTH DAKOTA
STATE REPORT**
May 23, 2019

Kelly Hepler, Secretary
South Dakota Game, Fish and Parks
523 East Capitol Avenue
Pierre, SD 57501

Second Century Initiative

Governor Noem announced her Second Century Initiative during the State of the State Address stating; *"The first century of pheasant hunting put South Dakota on the map as a destination for every hunter. Now we must conserve and expand habitat to ensure that the second century of pheasant hunting will be as great as the first."* The Second Century Initiative has an overall focus on creating habitat and ensuring South Dakota's hunting heritage remains strong for the next 100 years. It is comprised of new programs that are geared towards getting families outdoors and ways to generate additional funding for habitat development.

Second Century Habitat Program: The department has worked with the Governor's office and the Second Century Habitat Fund (501c3 non-profit organization) to develop and implement a working lands approach to attract producers in establishing wildlife habitat while providing a program that fits within their operation. The program provides an up-front \$150/acre incentive to enroll the acres for 5 years. Seed to establish the habitat will be provided at no charge (\$50/acre value). Producers will be able to hay or graze the acres enrolled with only half allowed each year if haying or all hayed every other year. Haying and grazing is only allowed between August 1 and March 1. A minimum of 10 acres per site can be enrolled and there is a maximum of 160 acres to be enrolled per participant. The focus of the program is to enroll acres with saline soils, marginal acres, and less productive acres.

Hunt for Habitat: Hunt for Habitat is an approach to generate habitat funding using highly coveted licenses (elk, deer, antelope) in a raffle concept. State statute and administrative rules have been passed to allow and authorize the department to carry out these fund raising efforts. It is limited to a total of 10 tags under the structure of three 3-tag licenses that include a tag for an elk, deer, and antelope. One additional tag is for a bison hunt in Custer State Park. An individual will have the ability to choose from two calendar year hunting seasons to use the tags. Chances to win one of these licenses will be \$10 for residents and \$20 for nonresidents. A maximum of one license may go to a nonresident.

Trap Giveaway Program: GFP held an online registration process for South Dakota residents to register for up to three free live traps. This effort was intended to engage and encourage people to get outside and trap as well as enhance nest success of pheasants and duck via predator removal. On March 1, within 12 hours of opening, more than 5,500 people successfully registered for more than 16,000 live traps. Two companies are currently manufacturing these live traps and GFP plans to have all live traps distributed to registrants by October 15, 2019.

Bounty Program: GFP implemented the Nest Predator Bounty Program in conjunction with the Live Trap Give Away Program. This program offers a \$10 bounty for tails of five primary nest predators (raccoon, striped skunk, opossum, red fox and badger) that are submitted at GFP offices. While the focus of this program is engaging youth and getting families in the outdoors it is also focused on enhancing duck and pheasant nest survival by utilizing predator control (a management tool that has been used for decades in South Dakota). Participants have the opportunity to learn about predators, trapping, obtaining landowner permission, habitat and how all the different components work together across the landscape. In the end, this program is building broader support for habitat and outdoor recreation by people across South Dakota and from a broader group of people than our traditional users. As of May 20, approximately \$160,000 has been paid out in bounty payments. The program runs from April 1 through August 31, or if a \$500,000 cap is reached.

Trapping Classes: Education and wildlife damage specialist staff teamed up to offer fifteen Live-Trapping 101 education classes across the state from April 3rd-May 4th, 2019. The classes reached approximately 300 participants interested in learning trap placement, target species, ethical and humane treatment of wildlife, trap baiting and setting, laws and regulations, humane dispatch, and various uses and benefits of trapping. Classes were open to all ages, with youth requiring an adult accompaniment. Participants who did not successfully participate in the state live-trap giveaway program were given a live trap during the class. Interest and demand will drive future in-depth trapping class development and scheduling.

Crowdsourcing Habitat Solutions: Good ideas can come from any one; anywhere. The crowdsourcing for habitat solutions began in mid-February, per the direction of Governor Noem, and the effort sparked a conversation leading to over 750 emails and an online dialogue that has over 300 group members thinking, talking and exploring habitat solutions. This is all taking place through the Habitat Pays website – which has traditionally been marketed towards ag producers - however, providing a platform where sportsmen and women and the ag community can come together to find habitat solutions is important. This crowdsourcing effort is one way to bring a shift to the conversation and help people understand all sides of the issue while finding common ground. If an idea or two is implemented, the department will waive the hunting license or park entrance license fee to those whose ideas are being put to work.

2018 Walk-In Area Program for Hunter Access

Through the use of a grant from the Voluntary Public Access & Habitat Incentive program, 24,605 acres of private land not previously open to public hunting were added to the existing 1.25 million acres enrolled statewide in the Walk-In Area (WIA) program providing public hunting access by 1,474 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 of the number of hunters using the area. Thirteen CHAP areas totaling over 23,000 acres were enrolled statewide providing 1,200 hunter days of use.

Effort to Gain Access to Landlocked Parcels of Public Hunting Lands

There are just over 300,000 acres of landlocked public lands in South Dakota, primarily in the western half of the state. The Department's goal is to open or improve access to 50,000

acres of previously inaccessible public lands by 2020. As of May 2019, we've finalized agreements with 15 new private land cooperators signing a total of 25,727 acres of new Walk-In Access Areas which have unlocked 21,743 acres of formerly inaccessible public land parcels. In addition, discussions were initiated with the other public land management agencies affected (Office of SD School & Public Lands, US Bureau of Land Management, and the US Forest Service) towards achieving this shared goal of gaining public access to landlocked public lands. We have also gained support from the major conservation NGOs in South Dakota to potentially pool resources and work on any cooperative projects in the future where their help would be beneficial.

Reducing Waterfowl Regulatory Complexity

Despite abundant duck and goose populations and accompanying hunting opportunity, the number of waterfowl hunters across the U.S. has steadily decreased. In SD, duck hunter numbers have declined from over 25,000 in the late 1990's to just over 10,000 in 2017. While the full impact of regulatory complexity is not fully understood, regulatory complexity is one factor inhibiting duck hunter recruitment. Research has documented that while regulatory complexity has little effect on duck hunter retention, it was twice to three times more of a barrier to waterfowl hunting participation by big game and small game hunters and anglers who didn't hunt waterfowl.

In 2012 the Central Flyway Council adopted a 2-tiered licensing system that would have allowed avid hunters the ability to continue to enjoy liberal duck harvests by species and sex while providing novice and lapsed duck hunters less restrictive but conservative bag limits (3-duck splash). The concept was not approved by the USFWS. It is time to bring this or a similar concept back for consideration and SD will be leading this effort.

Wildlife Damage Management Program – Independent Review

During Governor Noem's campaign, constituents raised concern over current programs and services as well as efficacy of program operations. These programs offer assistance to South Dakota landowners and producers with all types of wildlife damage and predator control needs. As a result, Governor Noem suggested an external review of GFP's WDM/ADC program with an outside entity to review the programs and services to evaluate if changes are needed to better serve South Dakota landowners and producers. The Governor's Office will facilitate the process throughout the entire review and evaluation. After a 30-day request for proposals, the Governor's Office awarded the project to the Wildlife Management Institute (WMI) and is in the contract development stage. WMI has conducted similar reviews for other state wildlife management agencies as well as completing a review of GFP's Big Game Management Program in 2013.

Over the course of the next six months, WMI will complete the review looking back at the past 10 years of the program's services and operations. The review will evaluate the following areas: policies and procedures, administration and organizational structure, budget and revenue sources, communication and outreach (internally and externally), transparency and accountability, and strengths and weaknesses. WMI will also conduct public surveys of specific audiences and host interviews with GFP staff, ADC Policy Advisory Committee members, GFP

commissioners and other stakeholders. At the end of the project, WMI will present their final report and findings to the GFP Commission at the December 2019 meeting.

Pheasant Population Status & Harvest

During the 2018–2019 pheasant hunting season, 53,577 resident and 69,018 non-resident hunters harvested an estimated 950,000 rooster pheasants. Total pheasant hunters increased by 2.4% while total harvest increased 15% from the previous year. Harvest averaged 1,383,000 during the previous ten years. The pre-hunt population estimate was 7.1 million, a 54% increase from the previous year estimate of 4.6 million. The previous ten years' average was 7.7 million. An increase in hunter numbers and harvest was expected given the 47% in August roadside survey results. However, survey results were still 41% below the 10-year average and nearly 50% below the 20-year average. Long term declines in hunters and harvest remains a concern.

SD Deer Collaring Effort

Annual rates of change within a deer population are influenced primarily by adult survival and the number of fawns that reach one year of age. Thus, the primary objective of these efforts is to estimate annual survival rates of whitetail and mule deer adults, juveniles, and fawns in agricultural, prairie and forested landscapes throughout South Dakota. These data were used to model deer populations and rates of change, and ultimately assisted GFP staff and the Commission in developing the 2019-20 deer season structure. In 2018, survival monitoring for white-tailed deer was conducted in 6 study areas. White-tailed deer survival rates varied depending on study area and age class, and preliminary rates documented as follows: adult females (n=593) ranged from 84-85%, juveniles (n=569) ranged from 58-81%, fawns (n=101; 1 study area) averaged 82%, and adult males (n=200; 2 study areas) ranged from 66-70%. Survival monitoring for mule deer was conducted in 4 study areas – Black Hills, White River, Belle Fourche River, and Upper Missouri River. Preliminary survival estimates for mule deer were documented as follows: adult females (n=348) ranged from 83-84%, juveniles (n=345) ranged from 44-85%, and fawns (n=68; 1 study area) averaged 83%. Adult and juvenile deer were again captured and radio-collared in the winter of 2019 in order to supplement sample sizes and replace mortalities. Overall, winter captures added 430 radio-collared deer to the survival monitoring efforts across the state.

Chronic Wasting Disease Action Plan Update

In South Dakota, CWD was discovered in seven captive elk facilities during the winter of 1997-98 and in wild populations in 2001. Over the past two decades, samples have been submitted from hunter harvest, sick surveillance, and other mortalities to monitor this disease. These efforts have resulted in the testing of 12,742 white-tailed deer (125 positives), 5,764 mule deer (79 positives), and 6,689 elk (194 positives) from across the state, including Wind Cave National Park and Custer State Park. Additional information on CWD can be found at <https://gfp.sd.gov/wildlife-disease/>.

Public comment of the draft action plan has been completed. Department staff and a CWD stakeholder group have recently met to discuss and incorporate any relevant comments. A revised draft will be shared with the Commission in June and likely another 30 day public comment period will occur. The Commission will be asked to formally adopt the plan and any modified or new rules will be presented in July and finalized in September, with new rules going

into effect for the 2020 hunting seasons. A targeted outreach and communication plan will be implemented immediately on best management practices and new regulations.

Deer License Drawing Structure Change

For the past two years, the department and commission have been working on alternative drawing structures with an end goal of getting more people in the field on an annual basis. Hundreds of public comments were received throughout this process and at moments became very contentious. The commission made several proposal considerations and adjustments based on public input, and a new structure was ultimately adopted. In the spring of 2019 the GFP Commission finalized rule that allows applicants to apply for two of the six firearm deer seasons in the first draw. These seasons consist of East River Deer/Special Buck, West River Deer/Special Buck, Refuge Deer, Muzzleloader Deer, Refuge Deer and Custer Deer. Before this change, applicants would apply for all of the deer seasons. Now, applicants who are successful for drawing two licenses in the first draw cannot apply for additional licenses until the third draw, and only in those seasons they do not already hold a license. One other change that the commission passed was to allow applicants the abilities to use preference for their second choice in the first draw, and also for their first and second choices in the second and third draws. One of the conditions from the commission directed at the department was the necessity for a thorough review to occur after the third year of implementation to assure the structure was accomplishing the desired goals and to bring forward any necessary changes at that time.

Development of an Environmental Review Tool

A customized Environmental Review Tool (ERT) is currently in development for SDGFP by NatureServe, an international network of biological inventories known as natural heritage programs. When completed, the tool will host and share data on rare and unique species and habitats to improve awareness of these resources and for environmental review and conservation planning. NatureServe has completed the development of ERTs in nine other states with several others expressing interest, indicating this will likely become a standard tool for facilitating environmental review.

Potential users of the tool include the general public, environmental consulting firms, and staff within state, tribal and federal agencies to help inform resource and land management activities. The highlight of the ERT is that users can submit a project for review and have an automated report produced that is customized based on the project type and location. This will significantly improve SDGFP staff efficiency and allow more time for staff involvement in environmental review requests that require additional coordination because of potential resource impacts or associated permit requirements.

Hunt Safe in the Public Schools

In 2019, South Dakota Game, Fish and Parks (GFP) will begin a pilot HuntSAFE program in schools across the state. The goal of the course is to teach students the responsible, respectful and safe handling of firearms. The course is also intended to encourage a lifelong activity of hunting and/or target shooting while providing HuntSAFE certification to students who choose to hunt. In addition, this course offers the opportunity for students and staff to have a positive interaction with their local Conservation Officer. The course was created using International Hunter Education Association standards. The certification standards are intended to

prescribe the minimum body of knowledge necessary to affect safe, legal and enjoyable hunting. There is a lot of flexibility in how the course is offered to best fit into existing school schedules. The students are required to have 10 contact hours with instructors and take a final exam to get their hunter safety card. The course is designed to meet content standard requirements the schools have in place like physical education, science and environmental science. The classes are best taught hands-on, but they can be taught in a standard classroom with non-gun props. No functional guns are used in the course and all the materials, training and curriculum are provided by GFP.

Outdoor Archery Range and Facility – Outdoor Campus West

In October of 2018, SDGFP completed construction on a new 19 acre, \$1.3 million archery park and hunter education building. The public, outdoor archery park includes a fourteen station practice range (targets from 20-80 yards) with two ADA accessible lanes and a fourteen station walking course (targets from 11-80 yards) with four ADA accessible lanes. The hunter education building was built specifically for archery, BB gun, game cleaning, and similar classes. The project was funded with a combination of Pittman-Robertson funds, hunting license dollars, and private donations. The first few months of the archery park have been very busy. Average daily use is approximately fifteen people per day from January-May. Usage during March-May has averaged nearly 20 people per day, with multiple days topping over 90 people per day.

State Parks celebrate a Century

South Dakota's state park system is 100 years old in 2019. Custer State Forest became Custer State Park in 1919. Since then, South Dakota's legislature has added 12 more state parks, 43 recreation areas, 5 mature areas, 1 historic prairie, 69 lakeside use areas, and a 114-mile rail-trail. The park system also manages a 400 mile snowmobile trail system in the Black Hills and oversees 1,100 miles of club maintained snowmobile trails in eastern South Dakota. Last year, 7.5 million visited state park areas and 332,000 camping units were hosted. Game, Fish and Parks will celebrate the park system's centennial with contests, events, prize-giveaways, concerts, merchandise, history-themed programs and more. Several parks will host birthday bashes. The 100 Year Scavenger Hunt encourages visitors to follow the clues to find markers in each of 30 participating parks. By sending in selfies with the markers, participants are entered into the drawing for that park's prize package, which include items such as kayaks, lawn games, hiking gear, tent camping equipment and mountain bikes.

Blood Run Bi-State Advisory Committee

A Bi-State Advisory Committee continues to meet and discuss what could become a rare "bi-state park". The Blood Run National Historic site straddles the Big Sioux River just south of Sioux Falls. Both South Dakota and Iowa own land that was home to the Oneota Indian culture over 600 years ago. In 2013 South Dakota christened its property as Good Earth State Park and has since constructed a visitor center, amphitheater and hiking trails. The advisory committee is made up of officials from Iowa and South Dakota, citizen representatives from each state and Tribal Historic Preservation Officers from the primary tribes who descended from the people that occupied the site centuries ago. The focus of recent meetings has been to review accomplishments and the status of each state's respective master planning efforts. A key project

being promoted is a pedestrian bridge across the Big Sioux River that would connect South Dakota and Iowa Blood Run properties and greatly enhance the “bi-state park” concept.

Palisades State Park Expansion

The South Dakota Parks and Wildlife Foundation, using private donations, has acquired and transferred 267 acres of adjacent property at Palisades State Park to Game, Fish and Parks. Palisades, located 20 miles northeast of Sioux Falls, is one of our state’s smallest and most popular state parks. The deal involving purchases from four adjacent land owners will provide for significant park and recreation opportunity expansion. The Foundation is committed to continue raising private funds to supplement a \$500,000 special appropriation requested by the Governor and approved by the legislature. The new acres will accommodate much demanded campground expansion, stream access, day use facilities, hiking trail expansion, additional camping cabins and a new visitor center to greet the public and administer interpretive and educational services – all in the center of South Dakota’s most urban area.

Eco-Sun Prairie Native Grasses Partnership

The department is finalizing the terms of a partnership arrangement with Eco-Sun Prairie for the use of 100 acres of ground currently being farmed at Good Earth State Park beginning in 2020. Eco-Sun Prairie is a non-profit group that offers expertise in the planting and management of native grasses and habitat. They seek to develop sustainable habitat based plantings that offer landowners alternative land-use practices on marginal lands or with lands that are not being utilized for row crop production. Native grass seed harvest, forage production and grazing options will all be implemented to demonstrate both sustainability and their economic benefits. Eco-Sun Prairie would serve as a partner for GFP in managing existing native grass stands at Good Earth while showcasing alternative land use practices. The research site will include 100 acres that has been farmed for the last 20+ years. Eco-Sun Prairie will incur the expense of land use conversion as well as the annual maintenance of the 100 acre research site. Future plans also call for the development of an educational center on or near this site.

Wisconsin



Wisconsin Department of Natural Resources 2019 State Report *June 3, 2019*

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

DEPARTMENT OF NATURAL RESOURCES STRATEGIC ALIGNMENT EFFORT

WDNR continues its efforts regarding a strategic alignment effort with the purpose of designing an organizational structure and allocating its limited resources to excel at delivering on all elements of the department's mission while improving customer service and enhancing resource protection.

The department is continually evaluating the success of the strategic alignment implementation through key metrics to achieve identified goals.

BUREAU OF WILDLIFE MANAGEMENT

Wisconsin Elk Translocation and Management

In 2017, the Wisconsin Elk Translocation project shifted its focus to northern Wisconsin, near the site of the original 1995 elk reintroduction in Clam Lake. Following a translocation of Kentucky elk, 32 animals were released into the Flambeau River State Forest in July of 2017. These additional animals are expected to diversify herd genetics, quickly fill quality habitat, and provide the herd with a population boost. As a result of these efforts, the Clam Lake elk herd reached just over 200 animals following the 2018 calving season. No elk were translocated in 2018, however, trapping and translocation efforts resumed in the winter of 2019 with 48 animals being captured and transferred to the quarantine pen in the Flambeau River State Forest. Following the calving season, the herd will be released into the area immediately surrounding the pen.

Since the Clam Lake elk herd reached 200 animals in 2018, the department authorized Wisconsin's first elk hunting season in modern history. A total of 10 elk hunting licenses and tags were issued for the season with five allocated to the Ojibwe tribes in the ceded territories of Wisconsin, four were awarded to Wisconsin residents through a department drawing, and one was raffled through the Rocky Mountain Elk Foundation to another WI resident with a total of 9 bull elk being harvested. Wisconsin's second elk hunt will be held in 2019 with over 23,000 people applying for tags through the DNR in 2019. Out of every \$10 application fee, \$7 will be earmarked for elk management in Wisconsin.

Deer Management

In 2018-19, the department completed its fourth full year of working with County Deer Advisory Councils (CDAC) to assist with local deer management decisions. During the 2017 meetings, the CDACs made recommendations on 3-year deer population objectives (increase, maintain or decrease the herd), revising deer management unit boundaries, and discussed chronic wasting disease impacts. The department continues to see increased public interest and participation in the CDAC process and is pleased with the progress of this relatively new effort to involve the public in deer management decisions.

Another program, the Deer Management Assistance Program (DMAP), completed its fifth year of enrollment in March 2019. The program involves wildlife biologists and foresters working with private landowners and public land managers to improve habitat for deer and other wildlife on their properties. The program currently has over 309,000 acres enrolled across the state. DMAP cooperators are invited to get involved in the program by networking with local landowners, developing cooperatives with neighboring landowners, participating in citizen science opportunities, and attending DMAP workshops. The program also provides DMAP cooperators the option to provide mentored hunting and trapping opportunities to novices by working closely with conservation organizations.

Chronic Wasting Disease

The Wisconsin Department of Natural Resources (DNR) began monitoring the state's wild white-tailed deer for chronic wasting disease (CWD) in 1999. Three positive deer were identified from Dane County through random testing of hunter harvested deer in November 2001. Since 2002, over 227,000 deer have been tested in Wisconsin for CWD, with over 5,200 testing positive as of June 2019. CWD was detected in the wild in Marquette County in 2018-19, the county's first wild positive.

A number of new counties were included in the list of counties where baiting and feeding of deer is restricted, specifically Waushara, Racine, Kenosha, Green Lake and Marquette counties and a baiting and feeding ban in Wood County was re-established following the identification of another positive in Portage county within 10 miles of Wood County. A wild positive in Walworth County caused the feeding ban in Racine County and a wild positive in Illinois within 10 miles of the Wisconsin/Illinois border caused a two-year ban in Kenosha County. The first CWD positive deer was detected in Marquette County, which will result in a three-year ban in Marquette County and a two-year ban in Green Lake County. Two wild deer harvested in southern Portage County will initiate a two-year ban in Waushara County, while CWD-positive detections at two Portage County captive deer farms will re-instate a two-year ban in Wood county.

Surveillance continued in the southern farmland zone as well as other select locations in CWD-affected counties. New in 2018 was disease detection surveillance of the entire West Central District as the start to a statewide surveillance sweep outside of the southern farmland zone over the next several years. No targeted surveillance occurred in the four-county surveillance area surrounding the Washburn County CWD positive after six consecutive years of surveillance not detecting any additional positives. The DNR sampled deer around CWD-positive wild deer locations in Adams, Juneau, Portage, Eau Claire, Lincoln and Oneida counties and captive deer

CWD positive locations in Marathon, Eau Claire, Oneida, Shawano, Waupaca, Marinette and Oconto counties. New for the 2018 season were “adopt-a-kiosk” and “adopt-a-dumpster” programs, which were created in response to good will of individuals desiring to help in the fight against CWD, enhance CWD sample numbers and provide adequate options for deer carcass waste disposal.

Since 2002, CWD prevalence within Wisconsin’s western monitoring area has shown an overall increasing trend in all sex and age classes. During the past 17 years, the trend in prevalence in adult males has risen from 8-10 percent to over 35 percent and in adult females from about 3-4 percent to over 15 percent. During that same time, the prevalence trend in yearling males has increased from about 2 percent to about 13 percent and in yearling females from roughly 2 percent to about 10 percent. It is important to keep in mind that annual prevalence estimates are subject to sampling variation, and that trends over time give better information.

Wolves

In 2017-18, monitoring efforts detected an overwinter minimum wolf count of 905-944 and 238 packs – though the number of packs increased, this represents a 2.2 percent population decrease from 2016-17 following three years of growth, including a 6.8 percent increase last year. Data available include the 2017-18 overwinter minimum wolf count and packs identified during the monitoring period. These data were collected through the assistance of over one hundred [volunteer trackers](#) - these volunteers surveyed over 16,000 miles in 2017-18.

This leveling off has been anticipated and may suggest that wolves are beginning to occupy less-suitable habitat as their range has expanded in the state. Wolf count efforts are conducted in winter when the population reaches its annual low point. Wolf pups born in spring cause population increases, followed by reductions resulting from pup and adult mortalities.

In March, the U.S. Fish and Wildlife Service published a rule in the Federal Register that would delist wolves across the lower 48 states. The rule is available for public comment through July 15. After public comment, the Fish and Wildlife Service has until March 15, 2020 to publish the final rule, though that could be delayed or prevented by legal challenges from special interest groups.

2019-2029 Bear Plan

In May, staff presented the 2019-2029 bear plan to the Natural Resources Board. The updates to the plan are Wisconsin’s first since the early 1980s and involved years of development with 11 stakeholder groups. Since then, the state’s bear population has tripled, with an estimated population of 24,000 bears in spring of 2019. With that, hunter interest has increased as well, with over 120,000 applicants for preference points or permits in 2019.

The plan provides an up-to-date approach to bear management with new population management tools and a better understanding of bear ecology and populations.

BUREAU OF FISHERIES MANAGEMENT

Trout Habitat and Fishery Management

From July 1, 2016 through June 30, 2017 over 65 stream reaches were improved or maintained with multiple partners and cooperators. These projects ranged from brushing and improving access to fixing eroded banks and restoring stream channels. The development projects totaled over 25 miles of habitat work and many more miles of streams were maintained and brushed for access. Beaver management on trout streams was ongoing throughout the year.

The Wisconsin fisheries program initiated an effort in 2017 to write a trout management strategy and in the fall of 2017, the DNR trout team developed a trout management public involvement plan. This included the formation of a stakeholder group and the public process was presented to the Natural Resources Board in December 2017. The DNR trout team began selecting diverse stakeholders to represent anglers, businesses, non-consumptive groups, landowners, Wisconsin Conservation Congress and other partners. Members of the public were also invited to apply to become a member-at-large. Based on the applications, a member-at-large was randomly selected from each district of the state. The first stakeholder meetings were held in January and March 2018. The management plan was drafted using input through the stakeholder meetings and the plan will be available for public review in late spring of 2019, on line surveys and input will be available along with four public meetings to be held around the state.

Fish Propagation

Fisheries staff raised and stocked over 6.1 million fish this past year. Our walleye stocking continues to exceed 800,000 large fingerlings (>6 inch) per year and we are meeting stocking goals for most of the stocking in the Great Lakes. Walleye continue to be stocked in conjunction with Tribal and private aquaculture partners. The Department has taken bids for the construction of a new recirculation aquaculture facility at the site of the current Kettle Moraine Springs Hatchery in Sheboygan County, Wisconsin so that we can meet stocking goals for steelhead in Lake Michigan. During construction steelhead will be raised at state facilities as well as under public private partnerships. Where private partners will be raising 50,000 yearling steelhead for Lake Michigan. Construction is due to begin in spring of 2019 with expected completion in spring of 2020.

Great Lakes

The Wisconsin Fisheries program initiated an effort in 2018 to update the over 30-year-old Lake Superior Fisheries Management Plan. In late summer and fall of 2018, meetings were held with the Lake Superior advisory panel and other interested stakeholders to form the basis for the updated plan. The program also finalized the ten-year Lake Michigan Integrated Management Plan as well as the Lake Michigan Stocking Strategy for the next three years. We have been working closely with many external partners - particularly within the Green Bay area. These projects include use of acoustic telemetry with the assistance of UW-Stevens Point, collaboration between commercial fishers and department staff to study by-catch, and a guide reporting system to better characterize the winter angler ice fishing season.

OFFICE OF APPLIED SCIENCE (Wildlife and Fisheries Research)

Chronic Wasting Disease Research

The Office of Applied Science along with collaborators from the University of Wisconsin and the USGS National Wildlife Health Center have initiated multiple studies on Chronic Wasting Disease. These include research on 1) advanced CWD diagnostics, 2) CWD forecasting which aims to understand long-term impacts on the growth and spread of CWD across landscapes, and 3) prion persistence in the environment. In addition to those projects we recently concluded the 3rd field season of the Southwest Wisconsin CWD, Deer and Predator Study. The study is principally concerned with the potential for chronic wasting disease to negatively impact deer populations. To date we have trapped and radio-collared over 550 adult deer, nearly 200 fawns, and 100 predators as part of this study.



Stocked Brook Trout Survival in Driftless Area streams

The Wisconsin DNR's 'wild' trout stocking program was designed to propagate, and stock trout derived from eggs of wild parentage. This program is based on studies that have shown first filial generation (F1) Brown Trout (i.e., fertilized eggs from wild parents) to exhibit survival rates 2-4 times greater than trout derived from domestic hatchery brood stock. Program constraints for the 'wild' Brook Trout stocking program led to the propagation of second filial generation (F2) Brook Trout to supplement F1 Brook Trout propagation. Preliminary results confirmed F1 Brook Trout survival was more than 2 times greater than F2 Brook Trout and that F1 and F2 survival were 7 times and 3 times greater, respectively, than domestic Brook Trout survival. This study will help inform strategies to maximize the cost effectiveness of trout stocking practices to maintain stocked or to re-establish self-sustained fisheries.

BUREAU OF NATURAL HERITAGE CONSERVATION

Proactive Monarch Butterfly Conservation

In 2018 Natural Heritage Conservation staff continued to support the MAFWA-led Mid-America Monarch Conservation Strategy initiative. NHC staff partnered with over 70 representatives from agriculture, transportation and utility rights of way, urban and suburban landowners, and public and private conservation lands to form the Wisconsin Monarch Collaborative and draft the Wisconsin Monarch Conservation Strategy that will be finalized in 2019. NHC hired a full-time coordinator for the Collaborative in early 2018 who facilitated the drafting of the state strategy and entry of data from all sectors into the USFWS Monarch Conservation Database in preparation for the listing decision.

Habitat Management Gets a Boost from Volunteer Stewards

A significant amount of habitat management and restoration work was achieved on department lands managed by the NHC program in 2018. Major accomplishments by NHC Field Ecologists and Technicians included 2,200 acres of woodland prescribed burns and 5,600 acres of prairie, barrens, and grassland prescribed burns; 5,500 acres of invasive species control; 580 acres converted to native habitats; 428 acres of conservation grazing; and 1,400 acres of forest management. In addition to program field staff work, volunteers provided over 5,000 hours of time (valued at \$127,000) completing habitat work at 43 department properties. Volunteers helped control invasive species, clear brush, and collect seed on prairie, oak, and barrens habitats. This work benefits both rare and game species and the people who enjoy these unique landscapes for hunting, hiking, and other recreational activities.

Lake States Forest Management Bat Habitat Conservation Plan

Michigan, Minnesota, and Wisconsin are working collectively on the Lake States Forest Management Bat Habitat Conservation Plan (Lake States HCP). The HCP, on schedule for 2019 completion, will streamline permitting under the federal Endangered Species Act while maintaining quality forest habitat across the three states. The HCP will cover Northern long-eared bats, little brown bats, tricolored bats and Indiana bats (not found in WI) for forest management activities.

Investment in Citizen Science Successes

More than 12,000 volunteers now participate in citizen-based monitoring projects coordinated by the department each year. They contribute significantly to our understanding and are essential to many projects on plants, animals, and important habitats. For example, the Wisconsin Breeding Bird Atlas started over 20 years ago to document distribution and abundance of the state's breeding birds. During the most recent phase of this effort (2014 – 2019) 1,700 volunteers have confirmed breeding behavior of 6.6 million birds of 242 bird species across the state. NHC's newest citizen-based monitoring project, the Bumble Bee Brigade, launched as a pilot year in 2018 to resounding success: nearly 100 volunteers submitted over 1,000 photo vouchered bumble bee observations from across the state, documenting 17 of our 20 native species, including the endangered rusty patched bumble bee in 7 new counties.



Wisconsin's Cave Bat Population in Trouble

In the 2018-19 hibernation season (Nov-April) NHC staff visited 50 caves, mines, and other suitable hibernation sites for white-nose syndrome (WNS) surveillance and to understand the local and regional effects of the deadly disease on Wisconsin's cave bat population. All sites visited had evidence of infection, and WNS is known in 26 of 28 counties with hibernacula in Wisconsin. Three species affected by WNS are experiencing sweeping declines in Wisconsin: northern long-eared, little brown, and tricolored bat. At sites in year five of disease progression, populations have declined 93% when compared to pre-WNS averages. NHC continues to assist in two on-going WNS-treatment projects - one evaluating vaccine candidates (UW-Madison and USGS NWHC) and the other using Ultra-Violet light as a treatment for WNS infected bats

(Bucknell, UW-Madison, USFS). Ongoing surveillance and WNS treatment research will be crucial for bat populations going forward in Wisconsin and across North America.

Wood Turtle Habitat Improvement and Hatchling Research Project

In 2018, NHC Biologists continued work to improve turtle nesting success, reduce adult turtle road mortalities, and assess the effectiveness of conservation actions for river turtle populations including the state-threatened wood turtle. We also launched a hatchling wood turtle survival research project in cooperation with University of Wisconsin-Madison researchers. Project goals were to decrease nest predation and road mortalities, improve potential nesting sites, and investigate survival of hatchling wood turtles. Conservation results included: creation of three new turtle nesting areas, maintenance of 17 existing nesting areas, nesting surveys within five



different watersheds, and documentation of 30 wood turtle nests in three watersheds. Biologists successfully captured and radio-tagged 20 hatchling wood turtles in late August. Eleven hatchlings survived through late October and were held in overwintering structures placed in nearby rivers for the winter.

Wisconsin Bird Conservation Initiative

The Wisconsin Bird Conservation Initiative (WBCI) is a partnership of 180 entities collaborating on bird conservation activities across the state. In 2018, WBCI created a new strategic plan intended to guide bird conservation action through 2022. The plan identifies six major areas of emphasis: 1. Optimize organization capacity; 2. Promote an active, engaged partnership; 3. Maximize habitat quality and quantity for birds; 4. Maximize public awareness of and connection with birds; 5. Minimize or mitigate threats to birds; 6. Support research and monitoring. Efforts are underway to utilize Wisconsin's Important Bird Area (IBA) Program, a product of earlier WBCI efforts, to achieve progress within the six major areas of emphasis.

BUREAU OF LAW ENFORCEMENT

Law Enforcement Squad Marking

To improve BLE marketing and with increased law enforcement presence on state properties selected staff began to mark some law enforcement vehicles. In addition, magnets with the law enforcement logo have been purchased for wardens to selectively mark their vehicles while patrolling as opportunities were presented.

Succession Planning

Due to some anticipated retirements of staff in management and promotional positions within the Bureau of Law Enforcement, the Bureau held a succession planning event with interested staff (over 80 people participated as mentors and learners). In summary, the event was an internal career fair. Attending staff participated in both group and one on one discussion specific to

particular positions. The planning session ended with an open session of Q and A. Staff comments following the training were positive and showed continued interest for future sessions.

Strategic Planning

The BLE began strategic planning for FY 2020 and 2021. The two-year plan cycle will coincide with legislative sessions and biennial budgets into the future. A team of 20 BLE staff from all levels and disciplines began planning in late February and will conclude the process by June 30, 2019.

Conservation Congress Voting

The department uses an independently run citizen input process to collect feedback and recommendations about conservation issues (thus the Conservation Congress). In the past, input has been collected by in-person voting. This year the Congress opted to allow electronic (on-line) and in-person input. Results will be reported after the Congress meeting to be held April 8, 2019.

About the Conservation Congress -

<https://dnr.wi.gov/About/WCC/Documents/DelegateResources/WCCBrochure.pdf>