

[Graphic: Michigan Department of Corrections Logo]

2019 Wildlife Division Report

[Graphic: Kirtland’s Warbler in a Jackpine]

[Graphic: Illustrations of a beaver, deer, fox and hawk]

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Letter from The Chief

[Graphic: Picture of Dan Kennedy]

Hello,

Thank you for picking up a copy of our annual report. This is our 10th year producing this report and we are pleased to share it with you. DNR Wildlife Division staff are honored to be the public trust managers of one of Michigan’s most vital natural resources – wildlife! We are proud of the work we’ve done and are eager to share our stories. Inside are highlights of some of the work we did during fiscal year 2019, which ran from Oct. 1, 2018 – Sept. 30, 2019.

Our report begins with a significant, even historic, accomplishment achieved through the work of our dedicated staff and many partners and volunteers. The U.S. Fish and Wildlife Service has removed the Kirtland’s warbler from the federal list of threatened and endangered species. The warbler was one of the originally listed species in 1973 and is now the first conservation-reliant species ever to come off the federal endangered species list. This is cause for great celebration.

This year, we continued our work to monitor Michigan’s deer herd for chronic wasting disease and bovine tuberculosis, and to educate and engage with Michigan’s citizens, especially hunters, regarding these diseases that threaten deer health. As always, we are proud that we bring the latest science and the best professionals to the task of maintaining healthy wildlife in Michigan.

Additionally, the division worked tirelessly to support the passage of the Recovery of America’s Wildlife Act at the federal level. If passed, this new funding framework would help fish and wildlife agencies across the country and would fill a funding gap that comes from a decline in the sale of hunting licenses and the resulting decline of Pitman-Robertson funds. This innovative bill would help to ensure the conservation of Michigan’s wildlife now and for generations to come.

We appreciate your support of Michigan’s wildlife, and are honored to work with and for Michigan’s citizens to help move wildlife conservation into a new decade.

Sincerely,
Dan Kennedy

[Graphic: Loon floating in the water]

Special Report

The Kirtland's Warbler: A Conservation Success Story

Forty years ago, the Kirtland's warbler was on the brink of extinction. Today, this yellow-breasted songbird, which lives in northern Michigan's jack pine forests, has made a significant comeback. The bird rebounded from a population low of about 350 in 1987 to more than 4,000 today. The Kirtland's warbler population continues to grow, and has exceeded population recovery goals for the last 16 years. Once thought to be confined to northern Michigan, this species has since been found in Wisconsin and Canada.

On Oct. 8, 2019 the U.S. Fish and Wildlife Service announced removing the Kirtland's warbler from the federal list of endangered and threatened species. This decision recognizes over 50 years of dedication and commitment to Kirtland's warbler conservation by many agencies, organizations, industries and individuals in our state and beyond. Together, we have benefited local economies while providing necessary nesting grounds for the Kirtland's warbler. This decision by our federal partners recognizes a remarkable wildlife success story.

The Michigan DNR manages 90,000 acres of dedicated Kirtland's warbler habitat, about half of all dedicated habitat in the state. We work cooperatively with partners to create an average of 1,500 acres of Kirtland's warbler habitat per year, which equates to planting approximately 1.8 million jack pine seedlings each year. Since the 1970s, we have planted more than 60 million trees for Kirtland's warbler habitat.

Recovering America's Wildlife Act

[Graphic: Illustrated Kirtland's Warbler]

The Recovering America's Wildlife Act (HR 3742) provides a solution for one of America's greatest threats; one-third of the fish and wildlife species in the United States are at risk of becoming threatened, endangered or extinct. This important legislation will provide state fish and wildlife agencies with \$1.3 billion and Native American tribes with \$97.5 million to implement state wildlife action plans and conserve 12,000 species of greatest conservation need. In Michigan, we would receive approximately \$28 million a year for fish and wildlife conservation if the bill passes!

Taking measures to restore species before they are on the brink of extinction and ensuring healthy populations will help prevent these species from needing costly "emergency room" measures under the Endangered Species Act. This proactive approach to conservation is good for wildlife, good for taxpayers, good for landowners and good for business.

Passage of the Recovering America's Wildlife Act will represent the largest investment in conservation funding in more than a generation. This groundbreaking legislation will help ensure that future generations can enjoy the same abundant fish, wildlife and outdoor recreation opportunities that we have today and maybe even more.

Upper Peninsula

Improved Access and Dam Maintenance for Waterfowl

Lake LeVasseur, a management area near Marquette, is a wild rice planting site and is managed for waterfowl, shorebirds, reptiles and amphibians. Many Marquette residents frequent the site for convenient fishing, boating, birdwatching and hunting.

On the lake is a dam with stop logs, allowing for the periodic drawdown of the lake. Originally constructed in 1953, the dam was repaired and reconfigured in the late 1980s after spring flooding overtopped it. Currently, the water control structure consists of a 30-foot wide concrete spillway and 900 feet of soil embankments. To maintain the site, wildlife staff have removed brush, added motor vehicle barriers and installed riprap. The water level was also lowered in 2019 to control vegetation in the lake.

Pheasant Hunt

Wildlife staff have been working with the Menominee County Pheasant Club to create a pheasant hunting opportunity in the U.P. The club and its growing membership, have been stocking pheasants for decades on private lands in Dickinson, Menominee, Iron and Delta counties and reached out to the DNR in search of an opportunity to stock a public land property.

Division staff agreed to make improvements to Berg Farm, a 160-acre parcel of state forest land, to create a quality pheasant hunt accessible to the public. A 50-acre grass opening was improved with a planted firebreak, parking lots were enhanced and hunter walking trails added. The club stocked the property with 150 pheasants; stocking groups of 50 birds throughout the 15-day hunting season. Unique in the region, this quality recreation opportunity continues to grow in popularity.

Mitchell Creek Prescribed Wildlife Burn

Prescribed burning is an important tool for maintaining or establishing wildlife habitat openings. Openings are crucial for a variety of species in the U.P. because of the largely forested landscape. In May 2019, Forest Resources Division and local wildlife staff conducted the Mitchell Creek Burn in central Dickinson County. This 75-acre burn was long overdue, and quite successful.

The newly improved forest opening lies adjacent to a large deer wintering complex and will serve as a spring breakout area, as it is the first area to green up in the spring. The burn also will encourage cherry growth, creating food for bears, turkeys and grouse. Successive burns will be conducted to maintain this opening complex.

New Birding Trails in the Eastern Upper Peninsula

Newberry office staff had the fortunate opportunity to develop a birding trail on state forest land, using the expertise and interest of a local high school birder. The three season Silver Creek Birding Trail is a driving loop which is just over nine miles long. The trail includes nine designated stops and some short hikes. A kiosk marks the start of the trail just northwest of Newberry, and signs mark the locations of the stops. A brochure with a map and interpretive information highlighting bird species that may be seen throughout this self-guided trail can be picked up at the kiosk. Further habitat improvements are scheduled so visitors can enjoy birding opportunities over time on this small, local trail. Staff held an open house in early August and plan to offer birding tours in the future, especially during migration.

Wildlife Habitat Improvements with Partners in the Sault Ste. Marie Forest Unit

In May, Wildlife and Forest Resources division personnel worked with students and staff from two schools, along with volunteers from various organizations to improve wildlife habitat at two locations in the eastern U.P. At one site near Cedarville, 100 oak saplings were planted to improve deer habitat in a northern hardwood stand. In the Drummond Grouse Enhanced Management Site (GEMS) on Drummond Island, sections of a trail were seeded with a clover mixture and shrubs were planted along trail edges. These activities will enhance the food and cover resources for ruffed grouse as well as other wildlife species in the GEMS.

The projects gave students an outdoor, hands-on learning experience, as well as an opportunity for interaction and mentorship with representatives of various sportsmen's clubs and the DNR. Partners played an integral role in these projects, and include the Cedarville High School, Drummond Island Elementary School, Les Cheneaux Sportsmen's Club, Straits Area Sportsmen's Club, Raber Area Sportsmen's Club, Drummond Island Sportsmen's Club, Eastern U.P. Chapter of the Ruffed Grouse Society, Michigan Sharp-tailed Grouse Association and Chippewa-Luce-Mackinac Conservation District.

[Graphic: Man with a dog and harvested pheasants]

[Graphic: DNR staff member with scouts]

[Graphic: Kiosk at Silver Creek Birding Trail]

Northern Lower Peninsula

[Graphic: Prescribed fire in progress]

[Graphic: Worker holding a goose]

[Graphic: Workers at a pollinator habitat project]

[Graphic: Worker in water with waders on]

Creating Forest Openings for Wildlife

Wildlife Division staff partnered with the National Wild Turkey Federation (NWTf), Ruffed Grouse Society (RGS) and Michigan Army National Guard (ANG) to create wildlife openings across hundreds of acres of northern forest. This project, funded by a DNR Wildlife Habitat Grant, was designed to meet the DNR's northern Michigan regional goal of enhancing or maintaining wildlife openings on state lands.

On Grayling State Forest lands, the NWTf district biologist and Wildlife Division staff worked together to identify 175 acres of openings to be planted with rye, clover and buckwheat by local wildlife staff. These openings are planted in a rotation to deter invasive species, provide nectar sources for pollinators, and enhance foraging availability for native wildlife. Additionally, RGS worked with wildlife staff to identify and fund 10 acres of wildlife openings and hunter walking trails within the Grayling State Forest.

On Camp Grayling leased lands, the Michigan ANG, Wildlife Division and NWTf developed a management plan to plant and maintain 350 acres of wildlife openings. This is a continuation of the 250-acre habitat enhancement that occurred as a result of a previous Wildlife Habitat Grant. The additional 100 acres of wildlife openings will be created through 2020. The openings are used during U.S. military training as firing and mortar points and are also open to the public for recreational use and hunting. The ANG personnel prepares and plants the openings using their own equipment with the objectives of reducing opening maintenance costs and fire hazards during military training, improving soil health through annual and perennial plantings, increasing soft mast production, and improving the overall benefit to wildlife and people using the area.

Pollinator Habitat Program

The Pollinator Habitat Program was forged from a partnership, between DNR, Pheasants Forever, AmeriCorps, the U.S. Department of Agriculture, and Michigan United Conservation Clubs to educate communities on the decline of pollinator populations and to help promote local pollinator growth. This year, the Pollinator Habitat Program planted a half-acre plot at the Mid-Michigan College's Mt. Pleasant campus. Wildlife staff tilled the plot and community members planted native seeds in that plot during the event. AmeriCorps presented on a variety of pollinator topics, a local horticulturist discussed beneficial native plants, and the president of Mid-Michigan College spoke about the importance of local conservation efforts.

Third graders from Harrison Elementary School also had the opportunity to participate in the Pollinator Habitat Program. Wildlife Division staff from the Gladwin office and AmeriCorps staff spent a day in the classroom, teaching students about pollinators through presentations and hands-on activities, and finished the day creating pollinator seed balls for students to take home to start their own pollinator gardens.

Fire Management on Public Lands

The variety of habitats in northern Michigan require specific management techniques to meet wildlife management objectives. Fire management, in the form of controlled prescribed burns, provides opportunities to set back forest succession, remove wildfire fuel and support different communities of wildlife. In 2019, 20 prescribed burns were completed across 2,960 acres. Grasslands, jack pine forests, oak barrens, upland shrub communities, marshes and a pine understory in the Pigeon River Country State Forest were burned to meet regional wildlife habitat objectives.

DNR Career Pathways Program

Northern staff spent a June day mentoring high school students interested in the natural resources career field. Through the DNR Career Pathways Program, wildlife biologists invited 20 students to experience a day in the life of a wildlife biologist. Students and biologists met in the field to band geese, learn the importance of the banding program and speak about natural resources career paths. The group visited four sites, banded 150 birds and experienced a day in the life of a wildlife biologist.

Dam Removal

Wildlife staff completed two dam removals this year; the Cannon Creek Flooding #2 Dam in Missaukee County and the Atlanta Sportsman's Pond Dam in Montmorency County. Removing the dams created opportunities to restore natural stream flow, improve and maintain infrastructure, manage beaver populations, and increase accessibility to the waterways. The outcomes of both dam removals were successful and have led to noticeably improved conditions for surrounding habitat and recreational users.

Southeastern Lower Peninsula

Becoming an Outdoorswoman Spring Turkey Hunt

[Graphic: Woman and small girl with harvested turkey]

This spring, staff held the third annual Becoming an Outdoors Woman Turkey Hunt at the Cass City Field Office. Attendance was capped at 16 ladies, an increase from 11 in 2017 and 12 in 2018. Sixteen

mentors were on hand to guide the ladies through their first turkey hunt. DNR staff, National Wild Turkey Federation staff and local volunteers participated and shared their hunting knowledge.

Over two days, the ladies spent time in the classroom learning about turkey biology, hunting tools and equipment, hunting techniques, turkey hunting ethics and safety, and turkey calling. The group also spent some time familiarizing themselves with their firearms.

Later, the ladies spent time afield with their mentors hunting and scouting for the following morning's hunt. Saturday morning, the group arrived at the Cass City Field Office well before dawn for a quick breakfast, and from there, they hit the woods. All of the hunters had an eventful morning. Many of them saw turkeys, and all heard a turkey gobble. Four of the new hunters harvested turkeys.

After hunting, the ladies all returned to the field office to share stories, take pictures and participate in turkey field dressing demonstrations. Staff look forward to hosting this event for years to come.

Holly Turkey Tract Dedication

[Graphic: Turkey hunters in front of the Cass City Field Office Sign]

There are now four Turkey Tracts open to hunting in southern Michigan. Turkey Tracts are public hunting areas where intensive habitat management for turkeys has been conducted. Habitat work like timber harvest, invasive species treatment and removal, and prescribed fire to create and maintain forest openings have all occurred at these areas. You can find Turkey Tracts for your turkey hunting adventures at Allegan, Barry, and Flat River State Game Areas and now Holly State Wildlife Area.

Staff at Holly have worked hard to create this Turkey Tract, which includes outstanding turkey habitat and easy public access to great hunting locations. A dedication ceremony was held in April, just before the turkey season began, to officially open the site as a Turkey Tract.

Lifesaving Awards

Three Wildlife Division employees received lifesaving awards for heroic actions on the job that saved two lives.

Rob Hamilton and Ron Sting are wildlife assistants working in the Cass City Wildlife Field Office. In the course of their work activities on March 14, Hamilton and Sting visited the Geiger Road boating access site on the Saginaw Bay, where they noticed an ice fisherman who appeared to be trapped after falling through unsafe ice into roughly four feet of water. The 82-year-old man was unable to extricate himself from the water.

Sting and Hamilton helped the man out of the water and off the ice, where they noticed him showing signs of hypothermia. Hamilton monitored the man's condition as he drove the man home. The man was refusing medical assistance, but Sting, who was following behind Hamilton in his DNR truck, contacted emergency services to meet them at the man's house. The man was treated and made a full recovery, thanks to Sting and Hamilton's efforts.

Jeremiah Heise, wildlife biologist at the St. Charles Wildlife Field Office, was returning a phone call to a St. Charles citizen on April 12, and he noticed that the woman sounded disoriented. Over the course of their conversation, the woman mentioned that she was diabetic. Suspecting a low blood sugar incident, Heise contacted emergency services and had them dispatched to the woman's house. She then was

taken to the hospital. Heise's keen observation skills and decisive action helped the woman make a full recovery.

[Graphic: Nate Levitte, Ron Sting, Rob Hamilton, Jeremiah Heise receiving life saving awards from Russ Mason.]

Stony Island Habitat Restoration Project

Pointe Mouillee State Game Area was the recipient of the National American Public Works Association Project of the Year in the \$5 million to \$25 million category. The national award was presented Sept. 9 in Seattle, Washington. The project also won the State American Public Works Association Project of the Year Award, which was given in May.

Stony Island is a 52-acre island in the Detroit River, and part of the Pointe Mouillee State Game Area. The Friends of the Detroit River applied and were awarded a \$7 million grant to improve wildlife habitat on and around Stony Island. The grant is funded by the National Oceanic and Atmospheric Administration as part of the Great Lakes Restoration Initiative. All habitat improvement activities on Stony Island were planned and completed with the approval of the Wildlife Division.

Over time, high water, waves and ice scouring have destroyed the protective shoals around the island. The work on Stony Island has restored the shoals, which will help protect the wetlands on the island. The shoals will provide extensive nesting habitat for birds including common terns, a state threatened species since 1978.

Additional habitat structures were built for nesting turtles, hibernating snakes, mudpuppies, mussels and other birds. Work on this project is complete, and now similar habitat work is being conducted on neighboring Celeron Island off the south end of Grosse Isle, which is also part of Pointe Mouillee State Game Area.

[Graphic: Woman hunting]

[Graphic: Ducks in the water]

Improvements to the Echo Point Shooting Range

The Echo Point Shooting Range at Allegan State Game Area was renovated to provide a safe and accessible range in southwest Michigan. Improvements included reshaping and reorienting berms, creating shooting structures with sound abatement measures, producing accessible shooting benches and accessible pathways, and installing a vault toilet and perimeter fencing. There are now 12 shooting stations of varying distances; four at 100 yards, four at 25 yards, and four at 10 yards. Funding for the \$600,000 project was made possible through grants from the Federal Aid in Wildlife Restoration Program and the Michigan Natural Resources Trust Fund.

Cattail and Invasive Species Removal

2019 marked the third of a four-year cattail management project at the Mosquito Creek wetlands of the Muskegon State Game Area. To expand wetland plant diversity and waterfowl use in the wetlands, the Wildlife Division has been using drone technology and aerial photography to identify open water pockets for habitat improvements. These pockets have been the focus of mechanical cattail removal and aerial herbicide treatments, providing improved hunting and birding opportunities.

Units B and F of the Maple River State Game Area also underwent cattail and phragmites removal. Water levels were drawn down in the units to provide access for equipment. A marsh master, complete with a rolling drum, blades, and rotary cutter, cut down 20 acres of cattails in Unit B and five acres of phragmites in Unit F, enhancing open water availability for waterfowl and opportunities for hunters. Thank you to the Maple River Wildlife Association for providing financial assistance to complete this project.

Edmore Woodcock Openings

In 2012, a partnership with the Ruffed Grouse Society resulted in 18 forest openings on the Edmore and Langston State Game Areas. These openings were created to provide breeding and roosting habitat for woodcock and other wildlife. This year, eight of these openings were revisited and mowed, totaling over 50 acres of high-quality woodcock and wildlife habitat.

Managed Waterfowl Hunts at Michigan's Wetland Wonders

Southwest Michigan is home to two of Michigan's Wetland Wonders, the Muskegon County Wastewater System and the Fennville Farm Unit of the Allegan State Game Area. These areas provide recreation opportunities for west Michigan waterfowl hunters and birders during the seasonal migration spectacle.

During the 2018 hunting season, Muskegon Wastewater hosted 473 waterfowl hunting trips and hunters harvested 148 geese and 182 ducks. Just as importantly, the wastewater provided a critical stopover site for migrant birds with thousands of ducks and geese feeding and resting on the unit from late summer to early winter. Ruddy duck (12,500) and northern shoveler (4,600) numbers are among the highest counts reported for those species in the Midwest. The Fennville Farm Unit hosted 2,411 hunter trips in 2018, with 554 geese and 117 ducks harvested.

Forest Accomplishments

Timber sales in the Southwest Region totaled 807 acres across 19 individual sales. The objectives of these sales varied from regenerating aspen, converting aging pine plantations to hardwoods, regenerating oak and mixed upland stands and mimicking natural disturbances to set back forest succession. The result of these sales benefit the native wildlife and ecological integrity of the forests, while providing additional funding to the DNR. In addition, 15 sites from previous timber sales were revisited to evaluate regeneration and to update corresponding inventory data. Several forest tours took place in which students from Grand Valley State University and Michigan State University attended to learn about the DNR, state game areas and forest management.

[Graphic: Cleared forest opening]

[Graphic: Regrown forest opening]

Biological and Social Sciences

2019 Research Projects

The Biological and Social Sciences Section is responsible for developing and interpreting the best available science for managing Michigan's wildlife resources. DNR researchers provide a path from science to management by working with field staff and other resource professionals to incorporate research findings into management practices. To make the best use of scarce resources, research

projects to answer specific questions are often done in partnership with universities that are on the cutting edge of analytical and technological advances. In 2019, 23 active research projects were conducted through university partnerships, with additional resources and expertise provided by other organizations.

Staff also conduct internal investigations. In 2019, staff continued to develop and pilot techniques to evaluate public use of southern Michigan game areas. The section has also been testing the ability to detect and examine abundance of secretive wildlife species using trail cameras. Finally, staff have been assessing existing deer datasets from high density urban areas to determine impacts to management options compared to areas of lower deer densities.

To increase capacity for developing, interpreting, and providing the best available science to managers and policy makers, staff also continued to maintain the Partnership for Ecosystem Research and Management program and cooperative agreement with the Quantitative Wildlife Center at Michigan State University. Through PERM and QWC, DNR funding supports six professors to assist in the efforts of science to management, study design, advanced statistical and quantitative analyses, and training/consultation services for staff. Through these programs, MSU is able to provide students with invaluable real-world experience and education to train tomorrow's conservation leaders.

Researching Russian Boar

In 2019, DNR and Michigan State University completed a multi-year, collaborative study to determine the best techniques for controlling and ultimately eliminating Russian boar in Michigan. Russian boar are not native and can cause widespread damage to a variety of habitats through their "rooting" and digging behavior. This damage can lead to the loss of plant species and plant cover wildlife depend on for habitat. Sensitive areas along rivers and streams can be particularly vulnerable. Additionally, Russian boar can be a vector for maintaining and spreading diseases that can impact domestic pork production.

This research project was initiated in 2015 to develop management protocols with the goals of quantifying distribution and resource use of Russian boar, creating sampling protocols for detecting Russian boar, and developing effective lethal removal techniques. The Michigan Wildlife Services Office of the US Department of Agriculture also collaborated on this project and gave invaluable field assistance. The Michigan Pork Producer Association and the Michigan Involvement Committee of the Safari Club International provided additional support.

Wildlife Services initiated control efforts before this project began and the close, real-time collaboration between the researchers and their staff allowed them to quickly incorporate findings into their control activities while providing data to the researchers. Over the course of the study, Russian boar populations, particularly in the Lower Peninsula, were greatly reduced. The results of the study were used to develop recommendations to keep the population low or even undetectable. The project partnership also included the University of Michigan Flint to examine disease impacts. The Flint researchers also used environmental DNA (deposited on the landscape in Russian boar droppings) to determine boar presence in an area from stream and river water samples.

Mute Swan Project

Mute swans are an invasive species that is aggressive to native waterfowl and can impact habitat quality by eating large amounts of aquatic plants. The DNR has established a population goal of fewer than 2,000 swans by 2030. To develop effective population control approaches, a research project began in

2016 to determine if current management strategies would be sufficient to meet the goal and then maintain the population below the goal.

The project was completed in 2019 and provided reproductive parameters, the sub-adult life cycle, and how the breeding age changes in relation to population densities and management activities. This information is being used to estimate the population response to different management strategies. One of the key findings is that egg destruction alone will not be enough to meet the population goal by 2030.

Research Projects Completed in 2019

Research Investigation	Partners	Period
How do landscape changes affect the amount and distribution of trophy bucks?	MSU QWC, USFWS WSFR	2016-2019
Do our habitat grant programs help partners build successful relationships?	MSU F&W, USFWS WSFR	2018-2019
How do we improve our techniques for controlling invasive mute swans and achieve our population goals?	MSU F&W, USFWS WSFR, SCI MIC	2015-2019
How can we remove feral swine from Michigan?	MSU F&W, USFWS WSFR, SCI MIC, USDA MI WS, MPPA	2013-2019

MSU QWC – Michigan State University’s Boone and Crockett Quantitative Wildlife Center
 USFWS WSFR – U.S. Fish and Wildlife Services’ Wildlife and Sport Fish Restoration Program
 MSU F&W – Michigan State University’s Department of Fisheries and Wildlife
 SCI MIC – Safari Club International’s Michigan Involvement Committee
 USDA MI WS – U.S. Department of Agriculture’s Wildlife Services Michigan Office
 MPPA – Michigan Pork Producers Association
 [Graphic: Illustration of a trumpeter swan]

Planning and Adaptation

[Graphic: Massasauga Rattlesnake in the grass]

Eastern Massasauga Rattlesnake Conservation

The eastern massasauga rattlesnake (EMR) Working Group developed Michigan’s EMR Recovery Implementation Strategy (RIS) at their annual meeting this year. The EMR RIS is a planning document that details how the specific, prioritized actions outlined in the range-wide draft recovery plan will be implemented across Michigan in the next five to 10 years. The EMR Working Group membership includes land conservancies, nature centers, zoos, universities, and DNR staff. The group also discussed future directions, including meeting regionally to work on issues specific to an area.

Staff collaborated with Michigan Natural Features Inventory to host three habitat management workshops for land managers. Workshops were held in Springfield Township and at Seven Lakes State Park in southeastern Michigan, the Huron-Manistee National Forest in northern Michigan, and the Pierce Cedar Creek Institute and Barry State Game Area in southwest Michigan. Participants discussed

rattlesnake ecology, habitat requirements, threats, habitat management needs and effective strategies for maintaining or enhancing habitat. They were also provided with habitat best management practices and given guidance to create a site-specific management plan.

The DNR's "Eyes in the Field" reporting system received 191 reported sightings in 2019. Of these sightings, 31 were confirmed to be EMR and 10 were other rare snakes.

Chronic Wasting Disease Hunter Survey

A survey was sent to deer hunters to learn about their current hunting practices that may impact chronic wasting disease (CWD) management, to determine opinions about CWD management options and possible outcomes, and to determine whether hunters are confident in the DNR's ability to manage CWD.

The survey results showed about 24% of hunters used urine-based scents and 51% used bait while hunting. Most Michigan deer hunters wanted the DNR to attempt to control CWD, but they also were unwilling to accept outcomes that resulted in fewer deer, fewer bucks and fewer bucks with large antlers. Hunters generally accepted liberalized hunting seasons but did not support using trained shooters to kill deer or issuing permits to landowners to shoot deer outside the hunting season. Overall, hunters had high levels of confidence in the DNR's ability to provide information about CWD. About 33% of the deer harvested were processed outside the county where they had been killed. Meat processors play a vital role in deer hunting because they handle over 50% of the deer harvested in Michigan. Both the DNR and meat processors have a mutual interest in identifying deer infected with CWD and these partnerships between the DNR and meat processors benefit both groups.

Partnerships Delivering Habitat on Private Lands

With nearly 97% of southern Michigan's landscape in private ownership, conserving wildlife populations requires cooperation with private landowners. In addition to Wildlife Division staff, funding is provided annually to local conservation districts to support five Farm Bill Biologists (FBBs) who assist private landowners within priority counties identified in the Michigan Pheasant Restoration Initiative. FBBs provide on-site technical assistance to landowners, as well as expertise enrolling landowners in state and federal cost-share programs, including U.S. Department of Agriculture Farm Bill Programs such as the Conservation Reserve Program, Wetland Reserve Easements and Environmental Quality Incentives Program. Last year, FBBs assisted 441 landowners to enhance more than 8,000 acres for wildlife habitat. Habitat workshops organized by the FBBs were attended by more than 500 landowners.

Hunting Access Program

Michigan's Hunting Access Program (HAP) began in 1978 to provide critical hunting access on private land in areas of the state with limited public land. In 2016, a new U.S. Department of Agriculture grant helped fund a full-time coordinator and enabled program expansion into the northern Lower Peninsula. This year over 5,500 acres of new opportunity was provided to hunters on HAP lands.

HAP not only provides vital recreational opportunities in areas with limited access, but also is a tool to address critical wildlife management priorities. Priority areas within HAP include CWD and bovine tuberculosis management areas, sharp-tailed grouse hunting areas in the eastern U.P. and pheasant hunting areas within the primary Michigan Pheasant Restoration Initiative counties. 200 HAP properties provide 27,000 total acres throughout the state.

[Graphic: People standing in a grasslands field.]

[Graphic: Wildflowers]

Policy and Regulations

Privately-Owned Cervidae

Raising deer in captivity is jointly regulated by the DNR and the Michigan Department of Agriculture and Rural Development. The seventh annual DNR-MDARD-Captive Cervid Industry meeting took place August 2, 2019, in Mount Pleasant and 100 attendees were present.

- Total number of facilities permitted: 328
- Total acreage fenced: 63,102
- Number of facilities by wildlife region
 - 26 Upper Peninsula
 - 12,057 acres of fencing
 - 124 Northern Lower Peninsula
 - 29,404 acres of fencing
 - 95 Southwest Lower Peninsula
 - 11,790 acres of fencing
 - 83 Southeast Lower Peninsula
 - 9,851 acres of fencing

MiConnect Outdoors

The DNR is currently engaged in a large project to upgrade the technology system that sells hunting/fishing licenses and ORV/ snowmobile permits online and through 1,600 retail agent locations throughout Michigan. The system serves about two million customers a year, issuing nearly four million licenses and permits and processing roughly \$77 million in revenue.

Overall project oversight is provided by a steering committee with staff from the Executive, Finance and Operations and Marketing and Outreach divisions. The project team includes subject matter experts from all DNR divisions, including two staff members from Wildlife's Policy and Regulations Unit. These two staffers are providing expertise and guidance to the Marketing and Outreach Division in the development of system functions to manage hunter licensing for special hunting opportunities using license quotas and hunt drawings.

The new system became operational in early 2020 and offers features that benefit customers, license agents and the DNR. These features include new mobile capabilities that allow customers to interact with the DNR and buy licenses, permits and applications on the go.

The new system is expected to reduce manual work for DNR staff in the processing of certain types of licenses and replace worn-out point-of-sale equipment. Enhanced reporting capabilities will give the department higher-quality data that benefits our customers and Michigan's natural resources. The system also opens the door for improved marketing and sales opportunities to help keep our customers enjoying the outdoors.

Bill Analysis

The Policy and Regulations Unit leads bill analysis for Senate and House bills that affect Michigan's wildlife and other natural resources to articulate the DNR's position on the subject. When the Wildlife Division is not the lead in completing the bill analysis, we provide feedback and data to other divisions and agencies to help complete the analysis. The Policy and Regulations Unit works with the appropriate subject matter experts from the Wildlife Division and with experts from other divisions when necessary.

The Legislative and Legal Affairs Office uses the bill analysis to educate the Legislature on the DNR's position. If the bill makes it to the governor for approval, she uses the enrolled analysis to consider whether to sign the bill into a Public Act.

The Policy and Regulations Unit was the lead on, or provided expertise for, analysis on 22 bills.

Wildlife Permits

The Wildlife Division has nearly 40 different permit types and of those 40, 25 are processed or the data is managed in the Policy and Regulations Unit. Our unit is continuing to look at ways to streamline permitting processes and database solutions that could potentially make the application process easier for the public and for our staff.

Permit Type	Total New FY19	Total Current FY19
Permits to Hold Wildlife in Captivity	14	319
Wildlife Damage and Nuisance Control Businesses	59	623
Game Bird Hunting Preserves	5	255
Scientific Collector's	32	290
Threatened and Endangered Species	104	192
Falconry	3	129
Falconry-Trapping	80	80
Wildlife Rehabilitation	10	139
Special Dog Training Areas	14	211
Fox Hound Training	301	301
Project Control	115	115
Field Trials on State Land	125	125
Private Land Field Trials	27	27
Out of State Dog Bear	59	59
Goose Contractor	3	13
Canada Goose Round-up	0	272
Canada Goose Nest/Egg	7	579

[Graphic: Illustration of Mallard Duck]

Public Lands Administration

[Graphic: Butterfly on a leaf]

[Graphic: DNR employees at an award ceremony]

Lease Activities

The Public Lands Administration Unit manages 30 leases of state land. Half of the lessees are local governments, while the others include commercial interests, conservation groups, and the federal government. The DNR only leases lands for activities that support DNR purposes and specify the receipt of rent or other valuable services. In 2019, the Wildlife Division completed an agreement to lease five recreation sites to Peaine Township on Beaver Island. Considering the isolated nature of the island, the local township was in a better position to manage these sites, which include a campground, a beach access site, two boating access sites and a scenic overlook. All such leases are essentially partnerships, providing opportunities to better serve Michigan's citizens and visitors.

Purchasing Public Land for Wildlife

In 2019, the division was successful in obtaining three Michigan Natural Resources Trust Fund Grants, totaling almost \$2.5 million. These grants will provide for land acquisition totaling 650 acres. Purchases in progress include additions to the Cornish State Game Area, and the Beaver Islands State Wildlife Research Area and the creation of the new Potterville State Game Area in Eaton County. Real estate appraisals will be conducted, and offers will be made to the landowners. If negotiations are successful, this land will be available to the public for hunting, trapping and other wildlife-related recreation in the future.

Penney Wright (Outstanding Young Professional Award)

Penney Wright was the former supervisor of the Public Lands Administration Unit and retired in 2018 with 30 years of service. Penney brought a youthful exuberance to her career. She rose quickly through the division ranks from a wildlife technician to division field coordinator. Along the way, Penney never lost her enthusiasm for Michigan's wildlife or for those who served beside her in the management of our resources. The Outstanding Young Professional Award was established in her honor, and Penney presented it to the first recipient, Melissa Nichols, at the 2019 Wildlife Division professional development training.

Obenauf Unit Land Acquisition

The Wildlife Division acquired a new 40-acre parcel for additional hunting and recreational opportunities at the Muskegon State Game Area.

The property was generously donated to the DNR from the family of Dr. Walter Obenauf, a fellow conservationist and Muskegon native. A celebration was held on the unit to honor Dr. Obenauf and to recognize his family, who share his passion and appreciation for wildlife.

Quoted from a letter by the Obenauf family, "It is our wish to have the land managed as a State Game Area, serving citizens who enjoy hunting, fishing and hiking in a beautiful place. We deeply appreciate current Muskegon State Game Area management policies that seek to maintain healthy ecological diversity while providing well-managed public use. We know that our conservationist father and grandfather would heartily agree with our intent."

The property will be managed for wildlife habitat and public outdoor recreation. The impressive parcel is covered in a variety of habitat types, including mature mast-producing oak stands, large hemlock and white cedar patches and the Little Cedar Creek - a tributary of the Muskegon River watershed.

[Graphic: People at land acquisition ceremony.]

[Graphic: People at land acquisition ceremony.]

Spotts Land Acquisition

Feb. 12, 2019, the Wildlife Division purchased 72 acres from Justin and Samantha Spotts for inclusion in the Petersburg State Game Area in Monroe County. The acquisition increased the size of the area by 13% and provides wildlife habitat, public wildlife-related recreation opportunities and has potential as a wetland mitigation bank site. The parcel features open fields, woodlots and the Stacy Drain running through the east end. Existing features can be improved to achieve habitat and restoration goals for Eastern wild turkey, deer, pheasants and waterfowl.

Public Outreach and Engagement Unit

Web, Social Media, Video and Podcast Analytics

[Graphic: Globe Illustration]

Top Visited Websites (Hunting and Non-Hunting)

Michigan.gov/Deer – 894,289 visits

Michigan Mammals – 53,352 visits

[Graphic: Youtube Logo]

Top Three YouTube Videos (2019 views)

60-Second Snakes:The Eastern Massasauga Rattlesnake – 40,828 views

60-Second Snakes: The Black Rat Snake – 26,541 views

Michigan Deer Baiting, Feeding and Food Plots – 25,499 views in one day, Sept. 30, 2019

Top Wildlife YouTube video of all-time

60-Second Snakes: The Eastern Massasauga Rattlesnake – 289,053 views

[Graphic: Twitter Logo]

Wildlife Division Twitter Account

4,219 Followers

159 Tweets

323 Engagements

[Graphic: Instagram Logo]

Instagram Wildlife Content

32,900 Followers

17 Posts

19,294 Likes

[Graphic: Facebook Logo]

Facebook Wildlife Content

198,000 Fans

63 Posts

24,120 Reactions (likes, etc.)

11,060 Comments

20,848 Shares

[Graphic: Wildtalk Podcast Logo]

Wildtalk Podcast

25,477 plays

Top 3 Episodes: Bird Is The Word, The Fire Starter, Ticked Off

Top 3 Listening Countries: United States, Canada, United Kingdom

Top 3 Cities: Cleveland, OH; Grand Rapids, MI; Lansing, MI

Wildlife Classroom Curricula

During the 2018-2019 school year, five different wildlife curricula were offered for students from kindergarten through high school students.

- Elk University (9-12 grades) - 102 registered educators, reaching over 5,400 students.
- Michigan's Wondrous Wetlands and Waterfowl (6-8 grades) - 109 registered educators, reaching over 6,200 students.
- A Year in the Life of a Michigan Black Bear (6-8 grades) - 161 registered educators, reaching over 8,180 students.
- Deer Camp (2-4 grades) - 142 registered educators, reaching over 4,500 students.
- Go Wild for Michigan's Wildlife (K-5 grades) - 688 registered educators, reaching over 32,000 students, 15,000 sets of Critter Cards were distributed. 68 copies of the game "What in the Wild" were given to teachers free of charge.

A Day in the Life of a Michigan Black Bear Comic

[Graphic: Cover of Day in the Life of a Michigan Black Bear Comic]

Pow! Boom! Wham! This year, the Wildlife Division printed a comic book! Designed to accompany the middle school curriculum about black bear biology, *A Day in the Life of a Michigan Black Bear* lets readers explore the adventures of a bear and her two cubs as they try to navigate a human-impacted landscape to safely find their way between the forested patches they call home. A choose-you-own-adventure comic book, readers get to choose: do the bears head into the farm field or the neighborhood? Climb a tree or stand their ground? The scenarios in the story are realistic and let readers explore the choices bears face when living with people and the actions they can take to be better neighbors to bears. Copies of *A Day in the Life of a Michigan Black Bear* are being distributed to teachers who have registered their classrooms to use the Wildlife Division's bear curriculum in the 2019-2020 school year.

MiBirds

MI Birds, an outreach and engagement program founded by Audubon Great Lakes and the Wildlife Division in 2016, aims to increase all Michiganders' engagement in the understanding, care, and stewardship of public lands that are important for birds and local communities.

In the past year, MI Birds:

- Led 16 field trips, eight of which were co-hosted by partners;
- Reached 911 people, including 242 youth;

- Recruited over 290 volunteers for the Adopt-A-Nest osprey Monitoring Program and secretive marsh bird survey effort;
- Increased social media following by 2,401.

DMU 487 and 452 Hunter Meetings

Staff involved in addressing bovine Tuberculosis (TB) in the Northeast Lower Peninsula have partnered with Michigan Department of Agriculture & Rural Development's Animal Industry Division to transform bovine TB public engagement. New goals for engagement were jointly created, and Herd & Hunter: TB Connections meetings have been developed to fulfill them. Public meetings are now regularly scheduled and include brief programmatic updates from MDARD, DNR, and USDA Wildlife Services, a presentation that interests both cattle producers and hunters and a question and answer period moderated by a local Michigan State University Extension educator.

In addition, staff utilized the expertise of the Consensus Building Institute to conduct a stakeholder assessment of deer hunters in DMU 487. A small number of local sportsmen were included in developing the format of the public meetings. Four meetings, facilitated by CBI and the DNR, enabled hunters to share their diverse perspectives and interests on deer herd characteristics, information sharing and the hunting experience in DMU 487 and suggest solutions and opportunities for collaboration and partnerships.

Coastal Marsh Posters/Kiosks

POE Unit staff assisted with the development of a coastal wetlands communication strategy, which included the design of four coastal area kiosks and three coastal wetland habitat posters. The kiosks were designed for Fish Point, Epoufette Bay, Munuscong Bay and Seiner's Point to showcase the importance of these coastal marsh habitats on public lands and the management plans for these four areas. The posters highlight three of the unique Great Lakes coastal wetland habitat types – Great Lakes marsh, coastal dunes and lakeplain prairie, and are being distributed to DNR offices, partners and educators throughout the state.

[Graphic: Coastal Marsh Posters]

Wildlife Health/Disease Lab

[Graphic: Wildlife Disease Lab Staff]

Wildlife Disease Lab by the Numbers

- 12 Lab Staff
 - Wildlife Veterinarians
 - Wildlife Pathologist/Biologist
 - Lab Scientists
 - Lab Technicians
 - Department Technician
 - Lab Assistants
 - Student Assistant (seasonal)
 - Non-career Lab Assistants (seasonal)
- Testing and Diagnosis

- 29,000+ CWD Tests
- 34,000+ TB Tests
- 1,100+ bird and mammal necropsies
- Top Five Primary Diagnoses of FY19
 - Trauma – 362
 - Canine distemper (confirmed and probably cases) – 88
 - Pneumonia – 80
 - Malnutrition/Starvation – 60
 - West Nile Virus – 50

Canine Distemper

Since 2015, the Wildlife Disease Lab has seen a drastic increase in canine distemper cases in wildlife statewide, with most cases occurring in raccoons. Canine distemper is a fatal virus that causes neurological disorders (e.g., seizures, lethargy, activity in daylight hours, lack of fear of humans) and is often mistaken for rabies. All animals displaying these signs are tested for rabies prior to being examined by the lab. Eighty-eight animals from 37 counties were confirmed positive including raccoons (66), striped skunks (9), gray fox (7), coyotes (3), red fox (2), and gray wolf (1). While humans are not at risk of contracting canine distemper, domestic dogs are susceptible but can be protected by being vaccinated.

Lead Poisoning

Lead poisoning has been recognized as a mortality factor in waterfowl since the late 1800's. Lead poisoning cases today are the result of ingestion of bullet fragments, spent lead shot, fishing sinkers or jig heads during normal feeding activities. When the lead reaches the acidic environment of the gizzard (loons, ducks, geese and swans) or the ventriculus (eagles), it is worn down, dissolved and absorbed into body tissues. Once the lead reaches toxic levels in the tissues, muscle paralysis and associated complications result in death.

Eagles, loons, ducks, geese, mourning doves and swans are the animals most commonly affected by lead ingestion; however, upland game birds including wild turkeys, pheasants, and quail are also affected occasionally. Twenty cases of lead poisoning were diagnosed at the lab including 14 bald eagles, five trumpeter swans and one Canada goose.

Arboviruses

Each year the lab receives animals that are neurologically abnormal for testing of mosquito borne viruses, primarily West Nile virus and eastern equine encephalitis. While we saw far fewer cases of WNV during the summer of 2019, Michigan experienced an unusually high number of EEE cases in wildlife, domestic animals and humans.

Eastern equine encephalitis is one of the most severe mosquito-borne disease in the United States. The disease causes inflammation in the brain and is fatal in approximately one-third of humans who become ill with the virus. It can cause serious disease in horses and white-tailed deer also are susceptible. During the summer to early fall of 2019 MI experienced its largest and most widespread die-off in white-tailed deer from EEE, diagnosing the virus in 13 deer from nine counties in the southern Lower Peninsula. Many of these deer were displaying neurological abnormalities prior to death or euthanasia, with the most common clinical signs being the inability to stand, stumbling and lack of fear of humans.

Wildlife Disease Lab Publications

1. Cosgrove, M.K., D.J. O'Brien, D.S. L Ramsey. 2018. Baiting and Feeding Revisited: Modeling Factors Influencing Transmission of Tuberculosis Among Deer and to Cattle. *Front. Vet. Sci.* <https://doi.org/10.3389/fvets.2018.00306>
2. Cosgrove, M.K., D.J. O'Brien, A.L. Lim, S.R. Bolin, S.M. Schmitt. 2018. Serosurvey for Select Pathogenic Agents, Particularly Eastern Equine Encephalitis and West Nile Viruses, in Free-Ranging Michigan White-Tailed Deer. *EC Vet. Sci.* 4(2): 114-121.
3. Grade et al. 2019. Lead poisoning from ingestión of fishing gear: A Review. *Ambio* <https://doi.org/10.1007/s13280-019-01179-w>
4. Kumar, A., J.R. Melotti, T.M. Cooley, S.D. Fitzgerald. 2019. Mortality due to toxoplasmosis in suburban Eastern fox squirrels (*Sciurus niger*). *Journal of Wildlife Diseases*, 55(1): 213-217

[Graphic: Animal x-ray]

[Graphic: DNR staff working in the lab]

Wildlife Program Support

[Graphic: Bulldozer pushing rocks by water's edge]

In 2019, Program support Staff:

- Administered 28 federal grants
- Employed over 200 seasonal short-term workers
- Administered 6,400 timesheets
- Administered 150 partnership agreements

2019 Partnership Agreements

- Private Land-Landowner Grants in southern Lower Peninsula (43; \$103,937)
- Farm Bill Biologist Conservation District Agreements (5; \$375,000)
- Hunting Access Program Conservation District Agreements (31; \$101,000)
- Other- including Memorandum of Agreements, Memorandum of Understanding, Subrecipient, Cooperative Service Agreements, and Grant Agreements (77; \$8,042,110)
- Deer Private Land Assistance Network (PLAN) - landowner grants, northern Lower Peninsula (10; \$46,200)
- Deer Habitat Improvement Partnership Initiative (DHIP) - landowner grants, Upper Peninsula (13; \$116,166)
- Deer Habitat Improvement Program (DHIP) - numerous projects with Alpena-Montmorency Conservation District (\$50,000)
- Wildlife Habitat Grants (14 Statewide; \$1,037,900)
- These conservation partnership agreements assisted in improving wetland, grassland, barrens, savanna, fen, jack pine, mesic conifers, and early successional forest habitats across the state.
- These habitats support several species throughout the state, including deer, turkey, pheasant, grouse, woodcock, rabbit, waterfowl, grassland birds, pollinators, monarch butterflies, Karner blue butterflies, Mitchell's satyr butterflies, eastern massasauga rattlesnakes, and many other game and nongame species.

Career Development University

Making strategic investments in employee development is vital for strengthening teams and guaranteeing the continued success of the division. The Career Development University program was created and implemented in 2013 as a way to focus, shape and ensure that we retain a highly qualified and diverse workforce. The CDU Program offers and implements a variety of educational courses for employee personal and professional growth, based on employee classification, skill level and division/department priority.

In FY19, the Wildlife Division Management Team approved 50 recommended training course offerings for employees, and employees completed a total of 63 training events, conferences or workshops. In addition, many employees attended sessions relating to employee professional growth.

Employees are encouraged to pursue continued learning, enrichment and leadership opportunities. The CDU program strives to enhance employee success and growth and offers regular feedback for employee success. CDU also offers opportunities to increase team-building efforts to grow productivity and encourages networking and cross-training opportunities.

[Graphic: Short-term workers banding ducks]

[Graphic Short-term workers releasing ducks]

Wildlife Species Management

[Graphic: Ruffed grouse in a tree]

Cougar Team

The Wildlife Division's cougar team was formed to investigate and respond to reports of cougar observations. The team is made up of the large carnivore specialist and wildlife biologists trained to identify cougars and their sign. Cougar observation reports can be submitted by the public through the DNR's "Eyes in the Field" web application. Any submissions that contain evidence are reviewed by the cougar team. If evidence appears to be from a cougar, a field visit is conducted to determine the exact location where the observation occurred. Biologists assess whether the scale of objects in photographs are consistent with the actual location, and they look for any additional evidence. Photographs, videos, tracks, scat, carcasses and DNA are used by the cougar team to evaluate reports of cougar observations in Michigan.

The cougar team confirmed 11 cougar observations in 2019. All of these were in Upper Peninsula counties; four in Delta, two in Gogebic, one in Marquette, two in Schoolcraft and two in Ontonagon. These sightings bring the total count of confirmed observations since 2008 up to 49. Currently, there is no conclusive evidence of a breeding population of cougars in Michigan.

Michigan Pheasant Restoration Initiative

The Michigan Pheasant Restoration Initiative is a conservation initiative to restore and enhance Michigan pheasant habitat, populations, and hunting opportunities on private and public lands. The initiative works by acquiring state, federal and other partner resources to help landowners in cooperatives improve wildlife habitat on their properties and by improving habitat on selected state game areas, recreation areas or other public lands.

Twelve pheasant cooperatives are currently actively working to improve habitat. On state game areas 2,338 acres of grasslands were enhanced, 389 acres of grasslands were established, 1,540 acres of food plots were planted and 1,048 wetland acres were enhanced. Coalition partners helped to enhance 111 acres of grasslands, establish 4,406 acres of grassland, plant 9,989 acres of food plots, enhance 1,307 wetland acres and restore 437 wetland acres. The Adopt-a-Game-Area Program helped to enhance 207 acres and restore 116 acres of grassland habitat.

West Nile Virus Monitoring in Grouse

Ruffed grouse hunters in Michigan were asked to collect blood samples and provide breasted-out carcasses of harvested birds for a study to determine the presence of West Nile virus. The blood samples were analyzed for antibodies that would indicate if the grouse had been exposed to WNV. Heart tissue was tested for the presence of the virus.

During the 2018 season, Michigan hunters submitted 213 samples from four study areas in the Upper and Northern Lower Peninsulas. Of these, 28 (13%) tested positive for exposure, with antibodies to West Nile virus confirmed in nine (4%) birds and likely in 19 (9%). Four birds (one adult and three juveniles, all from the Northern Lower Peninsula) tested positive for the presence of viral material in their hearts.

[Graphic: Image showing Michigan's number 4 ranking in the nation for turkey harvest according to National Wild Turkey Federation study results]

Wetland Restoration and Permanent Protection

The DNR Wildlife Division has partnered with the Michigan Municipal Wetland Alliance, a nonprofit entity created to facilitate the restoration of wetlands on public and private land. The restored sites will be permanently protected with conservation easements and serve as wetland mitigation bank sites. These high-quality, high functioning wetlands will offset wetland impacts from public-works projects and agricultural production. Each site will have an endowment established for the long-term monitoring and maintenance of the wetland.

State game area mitigation projects are underway at Allegan, Gratiot/Saginaw, Grand River and Petersburg. The sites will remain open to hunting and provide additional opportunities for waterfowl hunters across southern Michigan.

In addition to the work on public lands, the DNR has restored and protected 168 acres of wetlands on four separate private lands. The sites are located in the Muskegon, Maple, Lower Grand river, and St. Joe watersheds. The long-term plan is to restore additional sites across Michigan.

[Graphic: Aerial view of wetlands]

Financials

Goals

The Wildlife Division plans work according to specific strategic plan goals. Below are the amounts spent for each goal.

Goal 1

Manage for healthy and sustainable populations of wildlife.

Goal 2

Manage habitat for sustainable wildlife populations and wildlife-based recreation.

Goal 3

Administer and promote effective stewardship of lands for wildlife habitats and wildlife-based recreation.

Goal 4

Enhance sustainable wildlife-based recreation use and enjoyment.

Goal 5

Improve and maintain public communication, strong relationships, and partnerships.

Goal 6

Foster and adopt effective business practices.

Goal 7

Develop and implement systems that lead to continuous improvement in how we work.

Total Expenditures

\$43,283,737

Expenditures by Goal

Goal 1

\$12,998,972

Goal 2

\$12,558,154

Goal 3

\$1,286,688

Goal 4

\$1,115,603

Goal 5

\$4,184,237

Goal 6

\$10,676,745

Goal 7

\$463,338

Expenditures by Fund

General Fund

\$4,733,718

Federal (Annual)
\$19,131,696
Federal (Competitive)
\$1,436,309
Game & Fish
\$13,921,554
DRIP
\$1,637,282
Turkey
\$941,109
Nongame
\$166,737
Other State Funds
\$1,315,332

Funding Sources

Federal Apportioned Funds

These funds are automatically apportioned to states, provided they meet certain eligibility requirements. Although transferred to the states in the form of grants, the states do not have to compete for these funds. These funds are particularly important because states can count on the monies being available and can plan for funding staff and long-term projects, as the level of funding is relatively predictable.

- Pittman-Robertson Wildlife Restoration Act Grants
- State Wildlife Grants
- Cooperative Endangered Species Conservation Fund, Traditional Conservation Grants

Federal Competitive Funds

These are funds that certain federal agencies make available through a competitive application process. The types of funds and the funding programs available can vary from year to year. These opportunities pose planning and budgeting challenges because of the uncertainty in the Wildlife Division's abilities to secure them; however, some have become very important to the division's ability to accomplish certain aspects of its mission. Once successful in competing for these funds, most are available to be expended over multiple years so long-term projects can be supported. These funds, however, are difficult to use to assist in planning and supporting permanent staff positions and also add additional administrative and reporting responsibilities.

- Competitive State Wildlife Grants
- Cooperative Endangered Species Conservation Fund, Nontraditional Grants Program
- National Coastal Wetlands Conservation Program
- Great Lakes Fish and Wildlife Restoration Act
- Great Lakes Restoration Initiative

- USDA Natural Resources Conservation Service – Voluntary Public Access and Habitat Incentive Program
- USDA Wetlands Mitigation Program

State Funds

Game and Fish Protection Fund

This legislatively established fund is principally derived from the sale of hunting and fishing licenses; the cost of licenses is set legislatively.

Game and Fish Protection Fund – Deer

This legislatively established fund comes from \$1.50 of each deer license sold.

Game and Fish Protection Fund – Turkey

This legislatively established fund comes from a portion of each wild turkey license and application sold (\$9.50 resident, \$1 senior resident and \$3 application).

Game and Fish Protection Fund – Waterfowl

Historically known as duck stamp revenue, this legislatively established fund comes from the \$12 for each waterfowl license sold.

Nongame Fish and Wildlife Fund/Non-game Fish and Wildlife Trust Fund

This legislatively-established fund comes through Michigan's Conserve Wildlife Habitat license plate, the sale of certain merchandise by the Wildlife Division, and donations.

General Fund-General Purpose

General Fund-General Purpose revenues, collected in the main state operating fund, are not dedicated to a specific purpose by statute. The Wildlife Division's GF/GP is used primarily for wildlife disease monitoring and privately owned cervidae oversight.

Thank you

DNR Mission

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use and enjoyment of the state's natural and cultural resources for current and future generations.

Wildlife Division Mission

To enhance, restore, and conserve the state's wildlife resources, natural communities, and ecosystems for the benefit of Michigan's citizens, visitors, and future generations.

www.Michigan.gov/DNR