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Agency History

The creation, in 1930, of the North Dakota Game and Fish Department was a continuation of efforts to preserve fish and game species in the state. At its inception, the enforcement of game and fish laws was the Department's primary conservation tool. Over the years, the legislature has increased enforcement authority and assigned regulatory powers to the agency aiding its efforts to preserve fish and wildlife and their habitats.

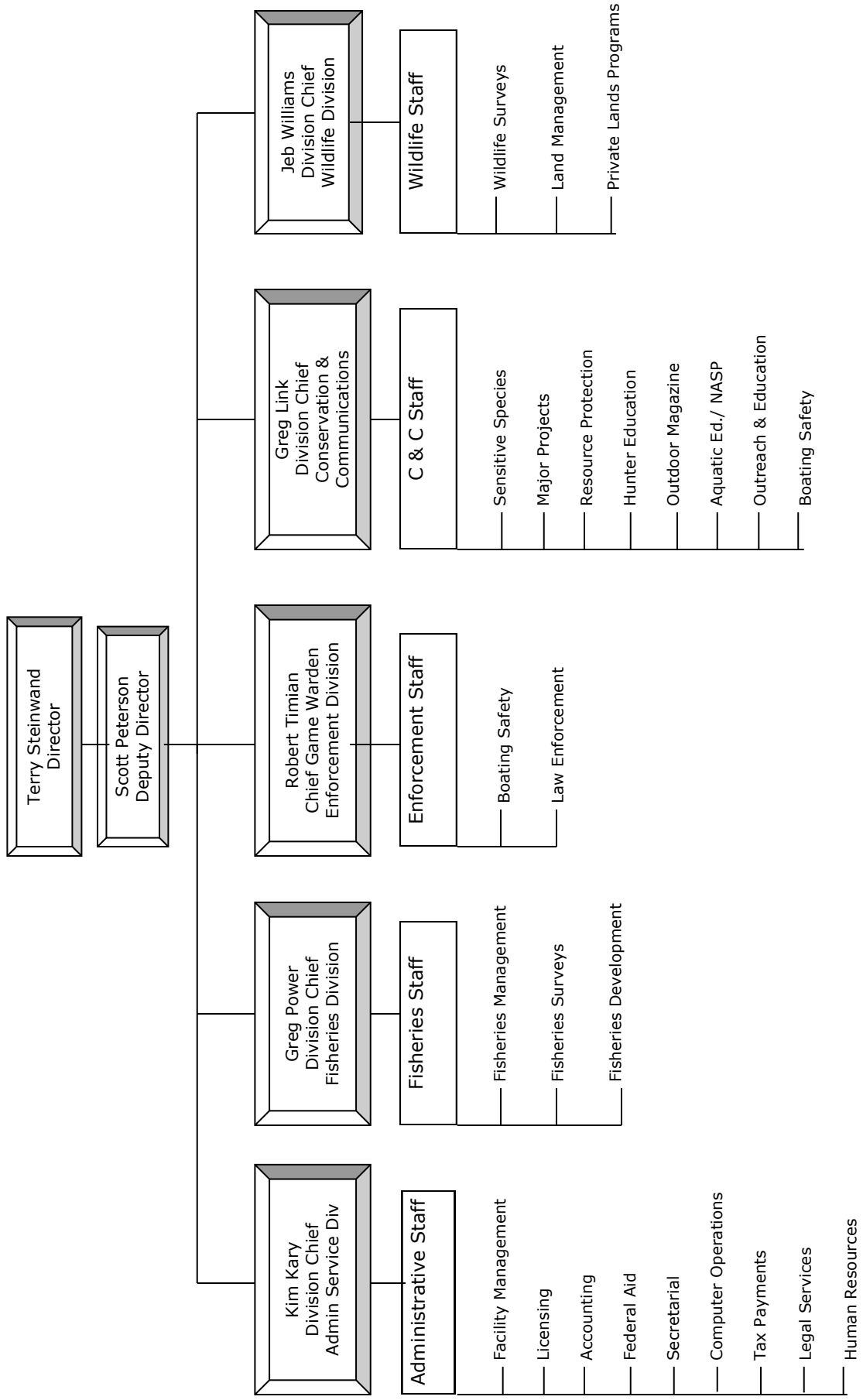
The availability of federal funds for wildlife management programs through the Pittman-Robertson Act (1937) enabled North Dakota and other states to begin scientific management of wildlife resources on a large scale. The Federal Aid in Fish Restoration Act, or the Dingell-Johnson Act (1950,) enabled fisheries restoration. In the 1980's, an amendment to the act expanded the tax to motor boat fuels and imported equipment, making more money available to states.

Since 1983, the Game and Fish Department has had regulatory powers over game, fish, and wildlife resources in North Dakota (S. L. 1983, Ch. 261). Specifically, under the direction of the Commissioner (Director), the Department has authority to promulgate rules and regulations governing management of game and fish resources; collaborate with the USFWS on the two federal hatcheries (Riverdale and Valley City) to produce fish to stock across the state's wildlife management areas; administer the state's habitat improvement program; survey and research fish and wildlife species; issue hunting and fishing licenses; enforce hunting and fishing laws; inform and educate the public on the Department's wildlife management programs; and publish the agency's magazine, North Dakota OUTDOORS (first issue published in 1930), and other informational publications as required by state law.

In 1991, the Commissioner was renamed the Director (S. L. 1991, Ch. 231). The Director was required to submit a proposed wildlife and fish restoration program and project plan and to update segments involving the proposed acquisition of area wetlands, water and land by purchase, lease, easement, or servitude. The Director was given authority to establish a statewide acquisition plan (S. L. 1991, Ch. 42). The Director was charged to appoint a deputy director, a chief state warden, biologists, and technicians all of whom were to enforce the rules and regulations of the Department. Under the supervision of the Director and the advisement of the State Game and Fish Advisory Board, the Department administers regulatory powers over game, fish, and wildlife resources in North Dakota.

The mission of the North Dakota Game and Fish Department is to protect, conserve, and enhance fish and wildlife populations and their habitat for sustained public consumptive and appreciative use. The Department is currently headquartered in Bismarck and consists of five major divisions: Administrative Services, Fisheries, Enforcement, Conservation and Communications, and Wildlife. There are seven district offices: Dickinson, Williston, Riverdale, Devils Lake, Lonetree, Jamestown, and the Bismarck Shop/Lab.

North Dakota Game And Fish Department



ADMINISTRATIVE SERVICES DIVISION

The Administrative Services Division, through the Director, sets policy for the entire Department. It also provides organizational and administrative support for all other divisions of the Department. It consists of the director, deputy director, administrative staff, an accounting section, a licensing section, information technology section and facility management.

The licensing section handles hundreds of thousands of applications and licenses each year. Effective April 1, 2016, paper license booklets were eliminated and sales were purchased electronically through the Department's web based system through a computer or mobile device. Some licenses are issued through lottery drawings, for example, deer. Lottery applications are still available by paper, but the percentage of paper lottery applications is decreasing each year. For example, general deer lottery applications submitted by paper was only 12% for 2016. The Department is in the process of phasing out paper lottery applications, which will significantly improve the lottery process.

Sales of resident general game licenses slightly increased and resident small game licenses have slightly decreased for 2016. Deer hunting license sales significantly decreased due to fewer licenses being issued by the Department. There were over 101,000 licenses sold in 2010 and only approximately 40,600 sold in 2016. The number of pronghorn licenses sold for 2015 and 2016 was 409 and 730 respectively. Fishing licence sales have remained high.

Nonresident small game hunting licenses slightly decreased from approximately 29,000 to 28,000 in 2016. Nonresident waterfowl licenses slightly decreased from approximately 24,000 to 23,000 in 2016. Nonresident fishing license sales have remained high.

Graphs showing license sales data are attached.

The Department made In Lieu of Tax payments of \$1,229,619 for 2015-17 for land owned or managed by the Department as required by law.

Legislation:

Key Game and Fish related bills from the 2017 legislative session:

HB 1017 – Appropriates \$83,227,498 for the Game and Fish Department for the biennium beginning July 1, 2017 and ending June 30, 2019.

HB 1025 – Relating to wild turkey hunting licenses for individuals receiving hunting expeditions from a nonprofit organization and authorization for issuance of special allocation hunting licenses.

HB 1150 – Relating to bonus points awarded to participants in lotteries for hunting licenses.

HB 1204 – Relating to youth hunting and to repeal a section relating to the protection of bald eagles.

HB 1207 – Relating to the disposition of property abandoned on certain public lands.

HB 1367 – Relating to personal watercraft and towing an individual on water skis or similar devices.

HB 1419 – Appropriates \$250,000 for the Game and Fish Department for the purpose of establishing and administering a shooting sports grant program for the biennium beginning July 1, 2017 and ending June 30, 2019.

SB 2239 – Relating to fees charged for watercraft for hire and to repeal annual inspections for watercraft for hire.

SB 2284 – Relating to agent fees for distribution of hunting licenses.

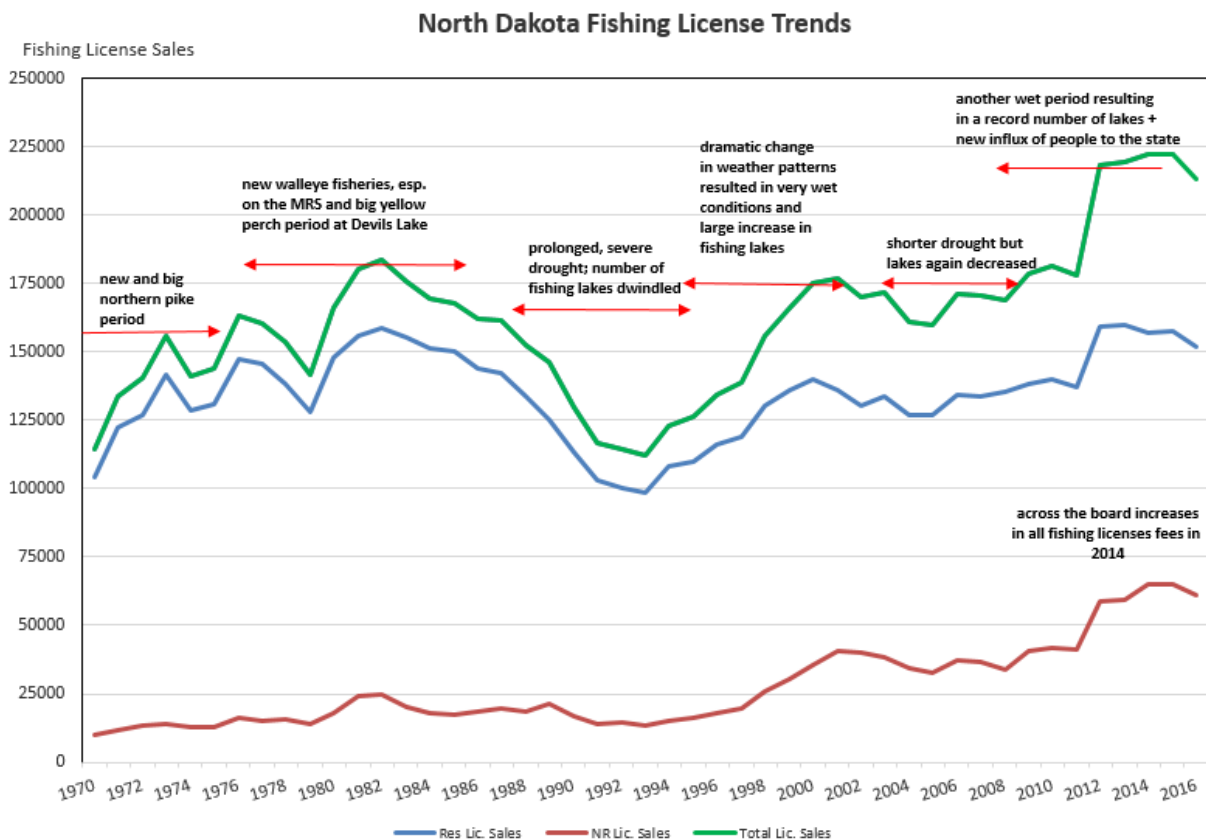
SB 2308 – Relating to identification of fish houses and coyote snares.

SB 2318 – Relating to the opening date of pheasant season.

FISHERIES DIVISION

The Fisheries Division is responsible for managing fish populations in nearly 440 public waters scattered across the state. As such, “The goal of the fisheries program is to manage North Dakota waters in cooperation with other interests to provide the maximum sustainable quality and quantity of fishing opportunities for the enjoyment of the public.”

Decades of relatively wet weather has caused a transformation of sloughs into recreational lakes. The more than doubling of fishable waters caused by years of rising water, and an aggressive approach toward fish management in North Dakota have helped produce record fishing license sales. In 2015-16, a record number (222,500) of fishing licenses were issued (records for both resident and non-resident sales). In recent years, more than 200,000 licensed anglers fished approximately nearly two million days in North Dakota.



The Fisheries Division of the North Dakota Game and Fish Department includes several sections that protect, regulate, and enhance fishing opportunities throughout the state. These sections include administration, fisheries management, production (stocking, etc.), development (access, infrastructure), habitat and aquatic nuisance species. These different sections work together to ensure good fishing. In addition, the Fisheries Division has established strong working relationships with other Department divisions, as well as various public and private entities, resulting in the creation and maintenance of some of the finest fishing that can be found anywhere. Specific section results can be found in the following narratives:

FISHERIES ADMINISTRATION

The number of wholesale and retail bait vendor's continue to slowly grow as there are more anglers and water bodies to fish. For example, in 2017 there were approximately 320 bait vendors compared to 293 vendors in 2014. The number of licensed private fish hatcheries are few (~3) and has remained steady over time. With the increase in fishing lakes statewide, the number of fishing tournaments have also trended upward with about 160 permitted annually compared to 110 ten years ago.

Group home fishing licenses have remained relatively stable with about 850 per year provided annually. Cormorant predation on desirable fish stocks continues to be a problem in some waters across the state with a long-term solution remaining elusive. Intensive take in select waters continues by fisheries staff (permitted by the USFWS) with mixed results. There was one administrative rule change during the 2015-17 biennium dealing with aquatic nuisance species (ANS). Fishing proclamation changes were few and minor.

FISHERIES MANAGEMENT SECTION

With the number of fishing waters reaching a record high (>400) in recent years, the number of water bodies sampled annually to assess fish populations increased by roughly 55% since 2008, with many lakes being sampled twice a year. In general, these surveys are used to assess the adult population (the first sampling effort annually, with an average of 238 annual samples in 2015 and 2016) and reproduction (the second sampling, with an average of 141 samples annually in 2015 and 2016) of various species in various lakes. In addition, other activities such as water quality monitoring, research, fish tagging, fish spawning, and creel surveys are conducted as needed. Approximately 31 reported fish kills were investigated during the 2015 – 2017 biennium, but only 8 of these were classified as significant or total fish-kills. Mostly on smaller and/shallower waters, these fish kills are primarily the result of uninhabitable conditions during both winter and summer. The abundant water that North Dakota has experienced in recent years has generally increased the amount of quality fish habitat and tempered the frequency of fish kills statewide. However, dry conditions in 2017 will increase the risk of fish kills in the future.

FISHERIES PRODUCTION SECTION

A strong demand for hatchery production with all the new fishing waters across the state continues to push for maximum production output. During the 2015-2017 biennium, over 27 million 1.5" fish, representing 11 species, were stocked into more than 300 North Dakota waters. Most of the stockings were walleye, and most of the brood fish needed for spawning originated from Lake Sakakawea and Lake Oahe. In addition, approximately 223,000 adult fish (generally panfish) were trapped from one water body where surplus existed and transported/stocked into a water body in need. A total of 41,000 pounds of fish were stocked into new water bodies. The primary water supply strainer at Garrison Dam National Fish Hatchery (GDNFH) was replaced in the salmonid building to replace the original strainer that had functioned very poorly in recent years. Four additional ponds at the East Rearing Unit at GDNFH were lined to improve production and reduce pond leakage (as the ponds age). One of the collection drains was replaced to correct the collapsed drain conduit. The main

electrical switch to one of the three electric boilers was replaced. At both GDNFH and Valley City National Fish Hatchery, spot graveling was completed to keep roadway surfaces safe for travel during wet weather.

FISHERIES DEVELOPMENT SECTION

During the 2015–2017 biennium, precipitation throughout the state varied greatly which resulted in some lakes remaining at full pool with other lakes declining 2-5 feet. Where water levels had declined, many existing boat ramps required extensions, repairs or relocation. There was a continued focus to develop access to newly developed prairie walleye lakes which has been quite a challenge as many landowners are reluctant to grant easements to those areas. The state has an extensive inventory of facilities and the department continues to upgrade, replace and modernize many boat ramps, docks, toilets and fish stations that have deteriorated and have outlived their useful life. Additional equipment was purchased and three new seasonals were hired to help form a second crew to address the growing needs of statewide maintenance and development of facilities within the program. Approximately, 110 new development projects were completed during this time period along with 400+ individual maintenance activities. Twenty-four boat ramps were constructed or upgraded during this period and around 48 new courtesy docks were built and installed. Eight new vault toilets were installed and five road/parking area projects were undertaken and completed. Five shoreline stabilization projects were carried out and six fish cleaning stations were upgraded by replacing the old table/grinder units with new, larger tables and grinders.

FISHERIES HABITAT PROJECTS

The Department’s “Save Our Lakes Program” (SOL) was created to address aquatic habitat issues (e.g. water quality) facing all of the state’s fishing water bodies. During the 2015-17 biennium, 13 in lake projects and 13 long term agreements were completed/signed protecting approximately 710.5 riparian acres (generally rotational (cell/paddock) grazing systems). A total of 170 long term easement checks were conducted. There was 2,200 feet of riparian fencing completed. One alternate water source was installed, one fish ladder was repaired, and eight earthen piers were repaired while four were created. Approximately 7,200 linear feet of shoreline was opened up to access for shore anglers. An additional 200 feet of eroding bank was protected with rip rap.

AQUATIC NUISANCE SPECIES PROGRAM

One of the biggest threats to North Dakota’s aquatic ecosystems is the establishment of aquatic nuisance species (ANS). In the 2015-2017 biennium, 305 North Dakota waters were inspected for ANS, many of them annually. New initiatives during this biennium included hiring a full-time program coordinator, engaging North Dakota marinas and pet stores for the first time, adding targeted vegetation sampling, developing outreach messaging for waterfowl hunters, updating signage at all boat launches, and conducting boater surveys and inspections. Over 1,500 inspections took place in 2016-17, with no ANS found on watercraft. Annual targeted zebra mussel sampling on over 30 waters led to the discovery of the state’s first population of zebra

mussels in the Red River in 2015. New administrative rules went into effect shortly after this finding to further strengthen requirements for preventing the introduction and spread of ANS.

CONSERVATION AND COMMUNICATIONS DIVISION

The Conservation and Communications Division is comprised of three sections; communications, conservation, and education. The Communications Section functions as the Department's liaison to the general public, providing the most up-to-date, department-wide information through all media formats. The Conservation Section reviews development related projects and offers recommendations to both private and government for minimizing impacts to our state's wildlife and their habitats. This Section's focus also includes management of nongame wildlife and species-of-conservation-priority. The Education Section is responsible for all facets of educating the public, e.g. hunter education, fishing, archery, fur harvester education, boating and water safety, etc., offering state-wide, hands-on conservation and skills learning opportunities for outdoor enthusiasts of all ages.

COMMUNICATIONS SECTION

The Communications Section includes the North Dakota OUTDOORS magazine, weekly television broadcast news feature, weekly online webcast and other video products, weekly news release, website (internet), internal website (intranet), social media, including Facebook and Instagram, and Game and Fish Department hunting and fishing regulations guides, media relations, and public information projects.

Telephone and Written Correspondence

The Communications Section is responsible for handling telephone information calls, answering and/or distributing emails that come into the Department's main email account, and responding to written inquiries. Section staff handle several hundred calls per week, depending on the season, and thousands of emails, letters, and requests annually. The section also maintains fisheries Whopper and Catch and Release files, and compiles and distributes bi-weekly news clippings to staff.

Publications

The Game and Fish Department produces a four-color magazine, North Dakota OUTDOORS, published 10 times per year and ranging from 24 – 40 pages. OUTDOORS had a mailing list of more than 31,000 on July 1, 2017. About 23,400 subscriptions were paid, generating approximately \$344,000 during the biennium.

Media/Public Information

The Communications Section is responsible for weekly and special news releases distributed to about 170 media outlets, and another 10,000-plus individuals and organizations; an online legislative newsletter compiled and updated daily during the 2015 legislative session; and a seasonal spring snow goose hunting information hotline. Section staff answer hundreds of phone calls and emails weekly, and are also responsible for developing the various hunting and fishing regulation guides.

Photography

Section personnel take thousands of photographs each biennium for illustrating articles in North Dakota OUTDOORS, and for use on the agency website, social media channels and use by all staff for slide shows, power point presentations, newspapers, media and other private and public publications.

Videography

North Dakota OUTDOORS, a weekly television news feature, maintained its appearance on major North Dakota stations with a weekly audience of approximately 100,000 viewers. The weekly online news webcast, OUTDOORS Online, also has consistent broadcasts on cable access channels in most major cities. The webcast attracts several thousand viewers per week.

Game and Fish Website

The website includes most of the basic Game and Fish Department information such as season regulations, lake and species information, the Department's magazine and video features, and a variety of other topics. It attracts between 5,000 and 10,000 individual visits per day, and also handles a great majority of license sales in the state. During the 2015 – 17 biennium, Game and Fish also developed an internal intranet website for staff, and added the social media channels Facebook and Instagram to further promote and distribute the agency's message and diverse content.

Outreach Biologists

In June 2014, Game and Fish administration reassigned the outreach biologists, stationed in Fargo, Grand Forks, Minot, and Bismarck, from the Education Section to the Communications Section to promote more suitable functionality within the division. The outreach biologists are vital, local experts for interacting with wildlife clubs, local leaders, local media, and assisting other Department divisions with local issues.

CONSERVATION SECTION

Coordination, Technical Assistance, and Special Projects:

Conservation section staff continued their primary task of reviewing development related projects and offering recommendations intended to lessen the severity of such projects on fish and wildlife resources. During the 2015 – 17 biennium, staff reviewed and commented on approximately 700 proposed development related projects. These projects range from construction of roads, oil wells, wind turbines and transmission lines, to drainage projects, dams, and changes in land use practices. In addition to written requests, staff receive and respond to numerous informal inquiries via phone, email and walk-in traffic.

Staff spent a considerable amount of time this past biennium dealing with issues impacting public lands in North Dakota. The majority of the efforts involved lands administered by the US Forest Service (USFS) and the US Bureau of Land Management, which total about 1.3 million

acres. These lands are located primarily in western North Dakota. The primary purpose of the Department's involvement is to ensure adequate consideration of natural resources and the interests of state sportsmen and women in public land management policies and actions. Examples of conservation section involvement includes the review of oil well placement, road and pipeline alignments, wildlife transplants such as bighorn sheep, land trades and divestitures, grazing issues, unique or rare species, access and natural resource protection. During the past biennium, staff also continued to provide input on issues related to the Forest Plan for USFS managed lands. This includes review and comment on various pasture allotments throughout the grasslands.

Flooding and water management has been a major issue during the past biennium. Department personnel have worked diligently with the Corps of Engineers and communities of Fargo and West Fargo on the Fargo Moorhead Diversion Project. The diversion has numerous environmental challenges including the crossing of five tributaries, loss of river channel and riparian forest, construction of two in-channel control structures and numerous fish by-pass structures. Additional efforts have and will be expended working on Missouri and Souris river flood related projects (i.e. high water diversion channels, stabilization measures).

Department staff work with project sponsors and regulatory agencies to minimize the opportunity for aquatic nuisance species to spread to uninfested waters. Additionally, fishery and conservation section staff inspect equipment coming into the state to assure they are free of aquatic nuisance species.

A new area of emphasis this past biennium has been the review of proposed 'wind farms' around the state. As wind projects become more and more numerous, the Department decided to take a more active stance in reviewing and assessing their impacts on fish and wildlife resources. This includes consultation with companies proposing wind projects, the general public, environmental groups and permitting authorities. It's hoped that the collaborative process that has been initiated, results in voluntary incentives that maintain and protect native fish and wildlife habitats in areas impacted by wind projects.

Considerable staff time was also spent on integrating 'wildlife crossings' in the design of Highway 85. Although new to our state, incorporating passageways that allow wildlife the opportunity to cross major highways (e.g. Highway 85) have been used in other states for quite some time. Staff provided valuable technical assistance in the development of proposed sites to place wildlife crossings and the type of design.

The Department has continued its efforts to ensure that mitigation commitments associated with development projects are carried forth and maintained. These efforts have focused on three major areas: roadside mitigation along major highways for Department of Transportation commitments, mitigation for Corps of Engineers Section 404 permits and State Engineer Sovereign Land permits.

Nongame and Species of Conservation Priority:

In North Dakota, nongame wildlife represents more than 80 percent of the state's vertebrate fauna, with more than 300 bird species, roughly 80 mammal species, 75 fish species, 15 reptile

species and 11 amphibian species. Freshwater mussels, insects and many other small organisms are also considered nongame. Oftentimes, they are the rarer and/or less studied species. Many of these species serve as biological indicators, reflecting the general health of our environment.

In order to focus its management of nongame species, the Department developed a strategic planning document called the Wildlife Action Plan in 2005. North Dakota's Wildlife Action Plan focuses on those species of fish and wildlife considered to be species of conservation priority or the most at risk in terms of extirpation from the state. The plan includes information relating to the distribution, abundance, habitat requirements, threats, conservation actions, and monitoring techniques for species of conservation priority. Recently, there has been increasing direction for states to consider climate change in their implementation strategies and a requirement that the Wildlife Action Plan be updated by the end of 2015. As a result, section staff recently completed a 2-year revision process of the Plan and submitted a copy of it to the US Fish and Wildlife Service's regional office in July of 2015.

Prior to 2001, funding to manage nongame species was limited. Since that time, however, federal funding has been made available to states with approved Wildlife Action Plans through the State Wildlife Grant (SWG) program. The SWG program is a matching grants program, meaning all federal dollars awarded must be matched with nonfederal dollars. All projects require at least 35 percent nonfederal match. The Department receives an annual federal apportionment of approximately \$500,000. The knowledge gained from projects funded with SWG has proved invaluable in revising the State Wildlife Action Plan.

Much of the emphasis of the SWG program has been gathering baseline information on species of conservation priority to get a better understanding of their status, distribution and relative abundance. During the past decade, studies have been initiated on prairie dogs, fringe mammals, bats, raptors, snapping turtles and leopard frogs. Considerable effort has also been made to implement projects to conserve or enhance habitat. Some SWG projects focus on determining the effectiveness of a conservation action, such as monitoring grassland bird use of prairie restoration sites funded through SWG.

Section staff also spend considerable time handling phone calls, emails and walk-ins from the public regarding nongame and/or rare wildlife. Staff conduct field surveys such as monitoring bald eagle nests, shorebird counts, studying grassland bird use of PLOTS, and monitoring key habitat.

EDUCATION SECTION

Conservation and Outdoor Skills Park (State Fair Area)

For nearly 20 years, the Game and Fish Department has partnered with the North Dakota State Fair (NDSF) to showcase the outdoors during the nine days of the fair. Activities include fishing, hunting, trapping, archery and a chance to visit with Department staff. During the nine-day event, the Department has roughly 30 staff members on hand, and nearly 50 volunteers who assist with this effort. The Conservation and Outdoor Skills Park averages 18,000 visitors.

In addition to the areas use during the fair, it is also a big hit locally from April to October as an urban fishery with local school groups and also the general angling public. The area has become a great spot for youth and women's pre-hunt meetings. Many of the local wildlife clubs and Boy Scouts use the area for meetings and other outdoor activities. The area is approximately 5 acres, which includes a fishing pond, several cabins, a large meeting area, and plenty of grass and trees. Following the 2011 flood, fair officials offered the Department more land and an additional building that was refurbished, which the Department heats and cools. It is a very popular site for wildlife club meetings and various other outdoor events year-round.

Hunter Education

State law requires those born after December 31, 1961 to successfully complete an approved hunter education course before buying a North Dakota hunting license. Approximately 16,000 youth and adults took hunter education during the biennium. The course is offered through a network of more than 715 volunteer instructors in both the traditional and online courses. The home study (online) course is increasing in popularity; instructors are offering this option as long as the Department maintains the practical portion of the final exam. To date, more than 215,000 North Dakotan's have become Hunter Education certified.

A free online hunter education study guide continues to be offered through a link on the Department's website, which offers students and adults the opportunity to study and refresh their hunter education knowledge.

During the biennium, the Department held four Hunter Education Academies, certifying approximately 190 instructors. The Academy is now the standard to fully complete the instructor certification process. All new instructors must complete the Academy within three years of starting the instructor application process.

In 2016, the Department hosted its first mentored youth deer hunt. Ten youth and twelve mentors attended the event. The intent behind the mentored youth hunts is twofold. We are providing opportunity for youth that do not have a mentor to experience deer hunting, and we are training instructors to host their own youth deer hunts throughout the state.

In addition to managing its four WMA-based public shooting ranges, the Department also distributes \$220,000 of grant funds during the biennium to local shooting range facilities for range improvements or expansions. Major enhancements are being made to the Williston range. Work should be completed in the spring of 2018.

Boating and Water Safety

In 1985, a state law was passed that required individuals between 12-15 years of age who would like to operate watercraft with a motor greater than 10 horsepower to complete a state-approved boater education course. The Department provides an in-classroom, online and home study option for students to take the Department's boater education course. Since the North Dakota boater education was developed, over 20,000 students have successfully completed the course

with roughly 1,000-1,200 annually. North Dakota is at an all-time high with over 62,000 boats registered in the state.

Department staff annually holds the Missouri River SPLASH (safety, prevention, learning, and summertime happenings) campaign to promote boating safety, lifejacket usage, and navigation rules.

The Department's partnership with the United States Army Corps of Engineers to provide life jacket loaner stations around Lake Sakakawea continues to expand. This program provides life jackets to boaters at boat ramps who do not meet the legal number of life jackets. Individuals are able to borrow the life jackets for the day and return to the stations when their day on the water is complete. To date, there are 19 life jacket loaner stations around Lake Sakakawea.

Several radio advertisements were developed to promote and remind boaters of the navigation rules and safety issues. Staff continue to work with the Department's Communication Section to promote safe boating messages statewide.

In addition to providing the recreational boating educational programs, the Department provides \$40,000 a year in grants to county entities to provide additional recreational boating education programs and enforcement efforts.

Becoming an Outdoors Woman & Recruitment, Retention, and Reactivation Efforts

In 2015, the Game and Fish Department completed its 21st Becoming an Outdoors-Woman (BOW) Summer Workshop and its 13th Winter BOW event at Lake Metigoshe State Park. In addition, several one-day events were offered for adult women including darkhouse spearfishing, an overnight backpacking trip, and multiple Stand Up Paddleboard workshops.

Our Department has begun the process of expanding our efforts to reach a wider demographic with our educational programs. We developed several pilot workshops designed to teach skills and build the confidence of the participants in a variety of outdoor activities. Our efforts will focus on North Dakota's needs while maintaining the goals of the national R³ plan.

North Dakota Hooked on Fishing

Department instructors teach about the basics of fishing including bait and tackle, fish biology, aquatic habitats, and where to find a variety of North Dakota fish species. Classes are often taught near a body of water for hands-on opportunities. 4,000 – 5,000 hours are donated annually by aquatic volunteer instructors who participate in a wide variety of fishing events around the state to include small community events sponsored by groups such as Lure Em' For Life, and the North Dakota State Fair.

In addition to dozens of smaller community fishing events, four major fishing events were conducted throughout the state utilizing a variety of partnerships. Three kids fish camps; one in the spring, conducted in partnership with the ND National Guard specifically for the kids of our soldiers, and two open enrollment camps, one in the spring and one in the summer were

conducted. The Department supported the fourth event called Warriors on the Water, an annual event where active and retired military members are taken fishing.

Family Fishing Days program was continued this biennium. This project's intent is to encourage residents of Bismarck and surrounding communities to participate in fishing by providing equipment and expertise in an accessible location. To accomplish this, from June through August the Department's OWLS pond is staffed with instructors every Wednesday and Saturday to assist anglers. Fishing equipment, bait, and tackle are also provided at no cost. By having both equipment and assistance available at regular intervals throughout the fishing season, we are able to target both new and seasoned anglers who don't participate regularly. This program's popularity increases each year. A fishing rod loaner program was also implemented at a local bait and tackle shop. Several libraries in the state have a rod check out program, but placement in a bait and tackle gives them access to bait, other equipment, and expert knowledge of the pond in addition to the basic equipment 7 days a week. The shop checks the equipment out free of charge and has indicated they are very happy with the amount of interest the program received.

Fur Harvester Education

Game and Fish furbearer hunting and trapping instructors teach the history of furbearer hunting and trapping and their role in future wildlife management, ethical hunting and trapping, use of trapping equipment, techniques of hunting and trapping, and proper preparation and marketing of furs.

During the 2015 – 2017 reporting period, instructors volunteered 304 hours, teaching 8 courses to 122 students. This represents all fur harvester classes and presentations including the full 16-hour certification workshop. Students who successfully complete the course are certified in trapper education and receive a unique number. This number is recognized by all states that require completion of a trapper education course before trapping, using certain types of equipment or trapping certain species. North Dakota does not require this certification to trap, snare or hunt furbearers. The demand for the certification course varies widely depending on fur prices.

National Archery in the Schools

NASP is a widely popular, in-school archery program operating in 47 states, Australia, Canada, Mexico and Africa. NASP is a two-week introductory archery program designed to be taught by physical education teachers in grades 4–12, coordinated on a state level in most cases by state wildlife conservation agencies.

In 2008, the Department became the coordinating agency for NASP in North Dakota. To date, one staff member is trained as an Archery Instructor Trainer Specialist, five staff members have been trained as Basic Archery Instructor Trainers and 10 staff members are certified as Basic Archery Instructors.

Currently, about 175 schools participate in the program in North Dakota. In 2017, NASP implemented a mandatory on-line reporting tool where instructors enter their archery

instructional activity throughout the school year. The report showed nearly 8,000 kids participated during the school day and 2500 participated after school. With a goal of implementing the project in 50 percent of North Dakota schools, the grant program continued with nearly \$80,000 available to schools and other archery organizations purchase equipment and expand the program during the 2015 – 2017 biennium.

The state tournament series continues to grow in popularity with 700 kids now participating. Each year around 100 youth from several North Dakota schools travel to Kentucky to represent North Dakota in the national tournament, an event that now attracts more than 16,000 students from 37 states. Several regional tournaments have continued to grow in popularity with a local tournament somewhere in North Dakota nearly every weekend from Mid-January through Mid-march.

During 2015 – 2017 biennium, a non-profit organization called the North Dakota Youth Archery Advisory Council formed. Its mission is to assist the Department with the growth of the NASP program in North Dakota. Its board members consist of teachers, school administrators, and community members all certified as NASP instructors and active in a school program. Over 1,000 volunteer hours were reported from the members of this organization for the reporting period. In the first 2 years of existence, they raised \$41,000 in college scholarships that were awarded to the top five boys and girls at the 2016 and 2017 state tournaments.

Habitats of North Dakota

The Habitats of North Dakota program continues to be an important component in the fourth-grade studies curriculum and life science curriculum for kindergarten through 12th grade. The program that was initiated in 2008 has grown to encompass topics such as habitats, wildlife of North Dakota, elementary science resources provided by the Department, preschool methods of teaching life science, integration of the visual arts into life science curriculum, and graduate credit courses offered through the University of North Dakota (UND). A partnership has also been formed presenting the Habitats program, Project WET and Project Learning Tree to teach environmental education to teachers of the State. This partnership was well received by area educators.

Habitats of North Dakota workshops are provided at the University of Mary, Valley City State University, Jamestown College, Minot State University, North Dakota State University, Dickinson State University (both Bismarck and Dickinson campuses), and the University of North Dakota for all pre-service elementary education majors. Additional graduate credit workshops are offered for licensed teachers in Minot, Bismarck, Valley City, Devils Lake, Williston, and Dickinson.

Continuing education in-service workshops are offered statewide, and presentations are made at the North Dakota Science Teachers Conference each year. The Habitats of North Dakota program has expanded to Roosevelt Zoo in Minot. Approximately 140 teachers received graduate credit for completing in Habitats of North Dakota related workshops. Additionally, approximately 300 more receive information through shorter training opportunities.

Habitat presentation requests throughout the state continue for classrooms, scout groups, and pre-service teachers. Habitats of North Dakota is presented at the Gateway to Science Environmental Festival in Bismarck, serving students from the region. Approximately 240 students are reached at this event. Habitats of North Dakota is also part of the annual Earth Day celebration in April, reaching approximately 100 students. The Rough Rider Institute, a summer field biology class through Williston High School and offered at Buffalo Gap Campground near Medora also has a Habitats component. Students study the five habitats of the State that are located in the immediate area using field biology methods.

Additional duties of the Education Section include judging local and regional science fairs, assisting with the Envirothon Teaching Training in Washburn, lesson plan development for Prairie Matters, curriculum development for the Urban Pollinator Program, and working with the Hunter Safety Education program to ensure the Academy presentations are educationally sound, which includes how to effectively teach to your audience at the Hunter Education Academy.

WILDLIFE DIVISION

The Wildlife Division functions within three sections. The Game Management Section is responsible for all surveys, research, and developing regulations for North Dakota's game species. The completed surveys consist of ground and aerial observations, and harvest surveys completed by hunters. The Wildlife Resource Management Section is responsible for the management of approximately 210,000 acres of wildlife management areas for wildlife production and public hunting opportunities. These areas offer a wide variety of public hunting opportunity across North Dakota. The Private Lands Section is responsible for the Private Lands Open to Sportsmen program where the Department works directly with private landowners who are willing to open their property to public walk-in hunting. The landowner is compensated in return for the access provided along with the habitat associated with his/her property.

GAME MANAGEMENT SECTION

The Game Management Section is responsible for managing populations of wildlife species that are hunted and trapped in the state. The overall goal of the section is to provide maximum quality hunting and trapping opportunities while minimizing human/wildlife conflicts. This work is accomplished through a series of surveys, censuses, and inventories to monitor the population status and the harvest of these important resources. Research studies provide new information to help better understand the biology and ecology of the species and their habitats. The information and knowledge gained from these activities are used to guide management decisions, to make hunting and trapping season recommendations to the Director and the Governor, and to provide information to the public and other agencies and organizations.

The section staff of 13 includes 4 big game biologists, 2 upland game biologists, 2 migratory game bird biologists (1 of which also serves as the section leader), a furbearer biologist, a wildlife veterinarian, a survey and data coordinator, a pilot, and a game management technician. Throughout the year, a number of temporary/seasonal employees assist with a significant portion of the section's workload. Because of this minimal staffing, section staff work cooperatively on many surveys and projects, and other department personnel often provide assistance.

During the 2013 – 2015 biennium, we saw significant declines in some game populations. Severe weather during three consecutive winters had significant impacts on the number of deer, pronghorn, pheasants, grouse, and turkeys. Ducks and geese continue to benefit from the exceptional water conditions provided by the exceptional winter snowfalls and spring rains. Reductions in the acreage of CRP across the state have also impacted grassland dependent species such as deer, pheasants, grouse, and ducks. Sage-grouse numbers remain at an all time low because of habitat loss, poor production, and mortality due to West Nile virus. Moose, elk, and bighorn sheep provide special "once in a lifetime" hunts for hundreds of hunters each year. Special seasons (spring light geese and resident Canada geese) were conducted to increase the harvest in an effort to bring populations back into balance with management objectives.

Summaries of activities by group follow:

Big Game

The overall goal of big game management in North Dakota is to maximize hunting opportunities, while maintaining populations within landowner tolerance levels, and the carrying capacity of the land. To achieve this goal we have both short-term and long-term objectives. The long-term objective is to develop predictive models for managing each of our big game species through adaptive harvest management techniques (i.e., a process of continually updating and evaluating new survey and harvest data and incorporating the results into updated models). To achieve these long-term goals our short-term goal is to evaluate all historical data bases for each of the species. This analysis will allow us to decipher which variables provide the greatest predictive value as to future changes in big game populations.

On a national basis, we have contributed tissue samples for a number of genetic, parasite, and disease research projects. In recent years, we have worked cooperatively on research and management projects with other agencies in Alberta, Georgia, Iowa, Manitoba, Minnesota, Mississippi, Montana, Oregon, South Dakota, and Wyoming. The big game staff has been actively involved with a number of professional regional workshops including the Annual Midwest Deer and Turkey Workshop (hosted 2011), Biennial Pronghorn Workshop (hosted 2004), Biennial Northern Wild Sheep and Goat Symposium, North American Moose Symposium, Elk and Mule Deer Working Group, International Association of Natural Resource Pilots, and other professional meetings and symposiums as they are available.

In recent years, we have presented professional papers and published articles on all six big game species found in North Dakota. Peer reviewed papers on the status of bighorn sheep in North Dakota (*Journal of Wildlife Management*, 2017), white-tailed deer (*Prairie Naturalist*, 2017), mule deer (*Journal of Wildlife Management*, 2015), pronghorn (*Biological conservation*, 2015; *Journal of Wildlife Management*, 2017) and moose (*Alces*, two articles in press) have been published. Articles on mule deer, white-tailed deer, bighorn sheep, and pronghorn are in preparation.

The big game staff developed a contact list for landowners wanting deer harvested on their land and continues to work with landowners to focus harvest in areas with high densities of big game on private land. These effort are intended to focus hunting pressure on areas with chronic depredation problems. We routinely provide big game population and hunting information to the public and media.

White-tailed Deer:

- The regular deer-gun hunter harvest survey monitors the success rates, composition, and distribution of the harvest for each license type, in each hunting unit in the state. In 2005, we implemented a review of all available data on white-tailed deer. Based upon this review, we set management goals for each hunting unit (see PR Report W-67-R-47: No. A-172). In 2010 and 2015, we reevaluated and modified these goals for each hunting unit. We are currently conducting four research projects. These research projects are as

follows: (1) evaluating North Dakota deer hunter attitudes towards deer management, (2) comprehensively evaluating all white-tailed deer telemetry research conducted in North and South Dakota between (2001-2016), (3) comprehensively evaluating all survey and harvest datasets collected on white-tailed deer (1962-2016) to determine the primary drivers influencing white-tailed deer populations in North Dakota, and (4) developing predictive models, based upon the previously mentioned research, for setting white-tailed deer harvest rates. Once we have completed these analyses, we will be reassessing deer management goals for 2020. This process of revisiting management goals for each hunting unit will be reoccurring on five-year intervals.

- In 2016, questionnaires were sent to 19,134 (39%) of the 49,000 deer-gun licenses issued. We mail questionnaires to hunters immediately after the deer-gun season closes. Note: these questionnaires go out to both white-tailed deer and mule deer hunters.
- We mail questionnaires to archery hunters immediately after the season closes. This survey monitors the success rates, distribution, and composition of the harvest in the state. In 2016, deer-bow questionnaires were sent to a random sample of 4,633 (20%) resident and 570 (29%) of the nonresident bow hunters. In 2013, we implemented a new program where all archery licenses will be issued either at the Bismarck office, Game and Fish website, or by calling (800) 406-6409, or at license vendors, participating in the Department's online licensing system. Nonresident any-deer licenses are only issued from the Department's Bismarck office. Prior to this new system, questionnaires were sent out based on a list of who had purchased a license the previous year.
- The muzzleloader hunter harvest survey monitors the success rates, composition, and distribution for each license type. Each year, every muzzleloader hunter is mailed a questionnaire immediately after the muzzleloader season closes. In 2016, a total of 928 muzzleloader licenses were issued.
- The youth hunter harvest survey monitors the success rates, composition, and distribution for each license type. Each year every youth hunter is mailed a questionnaire immediately after the regular deer-gun season closes. In 2016, we mailed a total of 4,554 questionnaires out to youth hunters.
- When snow conditions permit, we conduct winter white-tailed deer surveys on a series of established study areas. Historically, this job was based on the aerial coverage of 109 permanent survey areas located within each of the ten major deer management units in North Dakota. These areas include 17 river systems, 81 small block-type study areas, and 11 larger monitoring blocks. After reviewing historical data, and considering input from staff that conduct these surveys over the past year, we eliminated a number of the smaller survey areas in favor of larger monitoring blocks. This reduced the number of survey areas to 26 block-type study areas and river system segments within six hunting units. Because of these changes, each of the 32 hunting unit outside of the badlands units now has a designated census area. We digitized the boundaries of each survey area into a GIS format. We now enter data directly into the Department website. During the winter of 2016 – 2017, snow conditions permitted aerial surveys within 26 of the 32 hunting units with winter white-tailed deer survey units.
- We are continuing to evaluate the use of hunter observation questionnaires as a means of providing population indices (deer sighted per hour of effort, and buck/doe/fawn ratios). In 2004, we expanded this questionnaire to cover all of North Dakota. This questionnaire serves as a bridge for monitoring deer population trends during years when winter aerial

survey data is not available. Additionally, this questionnaire monitors observation rates of elk, moose, mountain lions, and feral pigs. In 2016, we received a total of 1,570 useable hunter observation questionnaires. From these questionnaires, hunters classified a total of 31,064 white-tailed deer and 16,978 mule deer.

- In May 2005, a research project was completed on movements, survival rates, mortality factors, and habitat use of white-tailed deer in central North Dakota on Lonetree Wildlife Management Area. Results of this research were published in the *The Journal of Wildlife Management* in 2007. We have summarized all historical radio-collar data collected for white-tailed deer in North Dakota. In 2009, we implemented a white-tailed deer research project in hunting unit 2J1 near Wing, North Dakota. We received the final report in May 2013. A similar research project got underway in hunting unit 2C in January 2012. We received the final report in November 2015. A new project, with similar methodology, began in January 2014 with studies in hunting units 3D1 and 3F2 in North Dakota and Perkins County South Dakota. We expect to receive the final reports in fall of 2017. We are currently collaborating with South Dakota State University to evaluate home range, habitat use, dispersal movements, and survival rates on a regional landscape scale (i.e., western Minnesota and eastern North and South Dakota). This dataset will evaluate the home ranges of more than 800 adult females and 380 neonate white-tailed deer across a three state area.
- We annually tabulate historical weather data (1948 to present) to evaluate and derive a winter severity index across the state using established methodology (Brinkman et al. 2005. Movement of female white-tailed deer: effects of climate and intensive row-crop agriculture. *Journal of Wildlife Management* 69(3):1099-1111).
- The 2017 North Dakota deer-gun hunting season will include 54,500 licenses, 5,500 more than 2016, and hunters will be allowed only one license for the gun season.

Mule Deer:

- Mule deer populations are monitored in the western badlands by annually conducting a fall production survey and spring population index.
- Twenty-four study areas covering 306.3 square miles are flown during the fall production survey and the spring population index. Mule deer numbers increased from low levels in 2012 following the three severe winters of 2008 – 2010. The number of antlered hunting licenses has been gradually increasing since 2013, and a conservative number of antlerless mule deer licenses were issued in 2016 and 2017. The 2017 spring index was 16% higher than 2016, and 58% above the long-term average.
- Mule deer fawn production continues to increase toward long-term average level following record low fawn-to-doe ratios in 2009 – 2012. The 2016 fawn/doe ratio was 90 fawns per 100 does which was higher than 2015 (0.84:1.0), and same as the long-term average of 90 fawns per 100 does. The 2016 buck/doe ratio was 48 bucks per 100 does, which was similar to the 2015 ratio and long-term average (0.43:1.0).
- The North Dakota Game and Fish Department collaborated with Dr. Josh Millsbaugh, from the University of Missouri, the Mule Deer Foundation (MDF), and the ND Industrial Commission Oil and Gas Research Council to assess the effects of Oil and Gas Development on Mule Deer Populations in Western North Dakota. In August 2015, the final report was completed for this project.

Pronghorn:

- Pronghorn abundance, distribution, reproduction, and sex ratios are determined by aerially surveying selected survey units (from a total of 51 survey units) covering 30,142 square miles of pronghorn habitat. The annual aerial survey consists of approximately 25 survey units covering 15,000 square miles.
- Pronghorn numbers have dramatically declined due to the severe winters of 2008 – 2010, but have gradually increased since 2013. The July 2017 statewide pronghorn survey indicated a population of 6,038, with a buck-to-doe ratio of 38 bucks per 100 does and a fawn-to-doe ratio 74 fawns per 100 does. Fawn production in 2017 was the highest since 2002.
- A limited pronghorn hunting season has occurred since 2014 following season closures during 2010-2013. Hunting units 2B (30 ANY), 3A (25 ANY), 3B (80 ANY), 4A (225 ANY), and 4C (50 ANY) were open during the 2017 season. All license holders are mailed a questionnaire to determine harvest statistics.

Moose:

The North Dakota moose population has declined in what is considered traditional habitat in the Pembina Hills, Turtle Mountains, and Red River Valley region and remains stable to increasing in what is considered nontraditional habitat in other areas, especially the northwest portion of the state. Moose hunting units M1C (Pembina Hills) and hunting unit M4 (Turtle Mountains) remain closed due to low observed numbers. The number of hunting licenses issued statewide has increased since 2015 due to the addition of licenses in hunting units M9 and M10. Additionally, moose unit M10 was split in 2017 into units M10 and M11 using North Dakota State Highway 2 as the north south boundary. The creation of M11 will help focus hunter harvest in an area of increasing moose abundance and to address landowner concerns for nuisance moose. The license numbers in units M5 and M8 remain the same as previous years. The boundary of moose unit M6 was expanded west to the Missouri River in 2016 and the number of licenses available in this unit have increased slightly from previous years. The regular season opener was aligned for all moose units in 2017. Previously moose units M5 and M6 had a later regular season opening date.

- Annual aerial surveys are conducted on 400 square miles of primary moose range as well as 2,700 square miles of secondary moose range when snow conditions are adequate.
- All moose license holders are contacted after the annual hunting season for harvest statistics.
- A total of 200 moose licenses were available in 2016, and 245 are available in 2017.

Elk:

North Dakota elk populations are being managed at stable to decreasing numbers because of depredation concerns and low landowner tolerance.

- Annual aerial surveys are conducted on 500 square miles of primary elk range as weather conditions permit.
- All elk license holders are contacted annually for harvest success.

- Mobile check stations are conducted annually on opening weekends of the elk seasons. A total of 335 licenses were made available in 2016, and 387 were available in 2017.
- The elk population in units E1 and E2 continue to remain stable. Elk numbers in unit E3 and E4 appear to be increasing as herds expand outside the park. Elk unit E1 was split in 2017 west and east by State Highway 20 to focus management and better direct harvest on the two separate elk herds in the Turtle Mountains and the Pembina Hills. Elk unit E1W will be west of State Highway 20 and elk unit E1E will be east of State Highway 20.
- Elk unit E6 was also created in 2017. This new unit encompasses all land east of highway 31 in Sioux county. The creation of this unit was necessary to manage the growing elk herd in the Porcupine Hills. Management efforts are being coordinated among NDGF, private landowners and the Standing Rock Sioux Tribe. The number of elk licenses in unit E6 will be 7 with 2 any and 5 antlerless.

Bighorn Sheep:

The North Dakota Game & Fish Department has been active in the management of the state's population of bighorn sheep since the inception of its management partnership with the Wild Sheep Foundation – Midwest Chapter (WSF – Midwest) in 1999.

Recent projects have included:

- An all-age pneumonia-related die-off occurred during summer 2014 and has persisted through 2017. Approximately 15 percent of the state's adult population has been lost; however, the rate of mortality has declined substantially since 2014 and some herds are showing signs of recovery. The virulent pathogens have now spread to all sub-populations in the state. The Department continues to document and assess the impacts of the die-off.
- The hunting season was closed in 2015 due to the loss of a significant number of mature rams.
- Eight adult rams were harvested in 2016 (100% success). All rams were horn-plugged and biological samples and measurements were collected.

The Department has continued to collect and analyze telemetry data from radio-collared bighorn sheep in an effort to gather data pertaining to home range, lambing areas, adult survivability, and providing empirical data to land management agencies. One research article was accepted for publication by the Journal of Wildlife Management in 2017.

One bighorn sheep license is auctioned annually by the Wild Sheep Foundation (WSF) – Midwest, with \$93,000 being raised in 2016 for bighorn sheep management projects in North Dakota. No auction license was offered in 2015. 10,380 applications were submitted for seven bighorn licenses in 2016.

Upland Game

The upland game section is responsible for maintaining population trend data for 16 species of upland game. Population trend data are gathered through use of long-term established surveys

that include counts made in winter, spring and summer. These surveys form the basis of population trend estimates that are used to establish annual hunting seasons. Upland game hunters are one of the largest contingents of hunters in North Dakota. Resident license sales rebounded from a low of 57,912 in 1989 to a high of 105,820 in 2008, an increase of over 80 percent. During the period 2015-2016, over 90,000+ licenses were sold to residents each year. Non-resident sales increased nearly 500 percent from 7,441 in 1989 to a high of 46,508 in 2002. Non-resident small game license sales peaked in 2008 at 36,370. From 2015 to 2016, nonresident license sales have been around 30,000. A substantial portion of Department income is received from small game license sales.

Ring-necked pheasant:

Ring-necked pheasant numbers have slowly declined in North Dakota since 2015. The combination of a harsh winter and drought conditions spring in 2017 has resulted in lower numbers of pheasants over much of the primary pheasant range in North Dakota. Changes in land- use due to high commodity prices and removal of grassland acres from the Conservation Reserve Program (CRP) continues to occur. The number of pheasant hunters (both resident and non-resident) increased during 2015, slowly again surpassing the 80,000 mark, and decreased below the 80,000 mark in 2016. Most of the increase in numbers of small game hunters can be attributed to higher pheasant numbers during the 2015 season as compared to 2014.

Pheasants and pheasant broods are counted along 20-mile standardized transects from mid-July to September 1. Around 100 survey routes (approximately 5,000 miles) are run annually to measure pheasant production. From 2010 to 2015, total number of pheasants seen on roadside counts has declined from the record numbers observed during 2003 – 2008. Birds observed per 100 miles increased from a low of 57.1 birds per 100 miles in 2001 to 204.9 birds per 100 miles in 2007, only to decline to 62.1 birds per 100 miles in 2011 (67.1 in 2013). A total of 108.9 pheasants per 100 miles driven were observed in 2015, a good increase from previous years. Likewise, total number of broods seen increased between 2001 and 2007 (peaking at 24.1 broods per 100 miles in 2007) but declined to 6.9 broods in 2011 (13.2 broods in 2015). Pheasants observed per 100 miles driven declined in 2016 (93.9 birds/100 miles driven) and 2017 (37.1 birds/100 miles driven). This decline can be attributed to poor nesting conditions in 2016 and severe drought conditions in 2017.

Hunter harvest questionnaires are mailed out annually to estimate number of hunters, hunting trips, and harvest. Harvest of ring-necked pheasants showed a steady increase since 1997; peaked in 2007; and has slowly decreased since. In 1997, a total of 136,076 roosters were harvested as compared to over 900,000 roosters harvested in 2007. From 2009 – 2012, harvest has been around 600,000 roosters annually. In 2015, harvest was 590,739 but declined to 501,131 in 2016. The number of hunting trips over the same period has slowly increased while pheasants harvested per hunter has slowly decreased. But as pheasant numbers declined, so did hunting activity. As the number of non-resident hunters increased during the mid-2000's, the Department began sampling those hunters on an annual basis, rather than every 3-5 years. Presently, Conservation Reserve Program acres are about one-half what they were in the mid-2000's. This will continue to suppress our pheasant population in North Dakota from its peak high.

Ruffed Grouse:

Ten drumming routes are run annually in three separate districts to determine the breeding population of ruffed grouse in North Dakota. Results of this survey show ruffed grouse numbers remaining low after dropping to a cyclic low in 2002-2004. Drumming counts increased in 2015, and have continued to show some improvement in 2016 and 2017. Wing envelopes are sent to approximately 100 ruffed grouse hunters, with additional samples coming from wing barrel collection sites. Wing envelopes with bird parts help estimate hunting activity and success. Harvest data are collected from the same questionnaires as used for estimating harvest for other upland game bird species. Ruffed grouse harvest was estimated at 193 birds (probably an all-time low) in 2002, jumped to 2,163 birds in 2008 (a recent high) and has remained around 1,000 birds through 2016 (exception was 2015 when only 306 birds were harvested). Ruffed grouse habitat continues to decline in all aspen habitat areas of the state as trees are cleared for cash grain operations and to create livestock pasture. Habitat is also continuing to become fragmented by the establishment of home sites scattered throughout the limited woody acreage left in North Dakota.

Tree Squirrels (gray, fox, red):

The rural mail carrier survey is used to determine population trends for tree squirrels. Rural mail carriers record population data for squirrels during four time intervals throughout the year. Counts are made in April, July, September, and January. Cooperators and mileage driven are similar during each survey period. They observed fewer tree squirrels in July 2016 (0.91) than in July 2015 (3.00 squirrels/mile); September data was unavailable in 2016; a smaller number of squirrels in January 2017 (1.41) than in January 2016 (1.71); and fewer in April 2017 survey (1.41) than in April 2016 (1.43).

In addition, tree squirrels are also recorded on the late summer roadside counts though squirrel data is very sparse. The small game harvest questionnaire used to estimate hunter activity for grouse, partridge and pheasant is also used to estimate tree squirrel harvest. In addition, known squirrel hunters are sent a harvest survey card at the end of the hunting season which asks about their squirrel hunting activity, success and harvest by species. Tree squirrel harvest ranged between 8,889 and 13,634 for the period 2015 – 2016. Most of the harvest was comprised of fox squirrels.

Rabbits and Hares (snowshoe, cottontail, and jackrabbit):

Population surveys to determine trends of cottontail rabbits are similar to those used for tree squirrels. Rural mail carriers census cottontails during four periods of the year (January, April, July, and September). They observed less cottontails during the July 2015 survey (0.35 cottontails/100 miles) than in July 2015 (0.61); September data was unavailable in 2016; more cottontails during the January 2017 survey (0.63) than in January 2016 (0.40); and more cottontails during the April 2017 survey (0.56) compared to the April 2016 count (0.17). In addition, cottontails are also recorded on the late summer roadside counts though population data is very sparse. No license is required by hunters to hunt or harvest rabbits or hares.

Harvest estimates for cottontails are obtained from the small game harvest questionnaire. During the period 2006-2010, the cottontail harvest ranged from 11,107 (2009) to 27,907 (2008); dropped to 8,533 cottontails in 2011 but rebounded to 9,852 cottontails in 2012 and increased

again in 2013 to 10,402 rabbits. Harvest increased from 14,241 cottontails in 2015 to 32,307 cottontails in 2016. Only ancillary data is gathered on jackrabbits while no data is collected on snowshoe rabbits.

Wild Turkeys (Merriam's, Eastern, and Rio Grande):

Three species of wild turkeys have been introduced into North Dakota. There has been no attempt to manage each species separately. Season recommendations are based upon population trend data gathered on summer brood surveys and a questionnaire distributed to approximately 1,000 landowners in March. The questionnaire asks for the number of wild turkeys that wintered on their land. The winter landowner survey was discontinued in 2016 due to declining response. Two hunting seasons are held each year; a spring 'gobbler only' season and a fall season where any turkey is legal. Prior to the fall 2005 turkey season, only North Dakota residents were eligible to apply for licenses for both hunting seasons. The 2005 Legislature amended the N.D. Century Code, and it now allows nonresident licenses to be available after the resident lottery is held. In 2015, the Legislature made available to the Outdoor Adventure Foundation up to two spring turkey licenses for youth who have been diagnosed with cancer or a life-threatening illness. In 2017, the Legislature passed a bill making available a total of three spring wild turkey license to the National Wild Turkey Federation for raffle or auction.

Hunter harvest questionnaires are sent to a sample of hunters after the close of each season to estimate hunter activity and harvest. Turkey numbers steadily increased from 1993 to 2007, but starting in the spring of 2008 and continuing through the summer of 2017, turkey numbers have declined in most areas of the state. This is the result of several long, snowy winters and poor production, which has resulted in fewer young birds being added to the fall population. Fall license numbers increased from 3,154 in 1994 to 10,980 in 2004, but since have decreased to 3,515 in 2016. Fall harvest shows a similar trend with 1,484 birds harvested in 1994 compared to 3,773 harvested in 2004 but harvest has steadily decreased to 1,212 birds in 2011, 1,012 birds in 2013, 1,108 birds in 2014, 1,114 birds in 2015, and 929 birds in 2016. Fall hunter success has declined from 64 percent in 2003 to 39 percent in 2016. Spring license numbers steadily increased since the first season in 1976 as has the area open to spring turkey hunting. In the last ten years, spring license numbers have increased from 1,435 in 1996 to over 7,000 in 2008 and 2009. However, the last five years (2013 - 2017) license numbers have decreased to below 7,000 for the same reasons fall licenses have decreased. Approximately 5,600 to 5,800 licenses were issued for the spring 2015-2017 hunting seasons. Spring harvest increased from 641 gobblers in 1996 to 2,859 in 2008. Since then, harvest has decreased to a low of 1,698 gobblers in 2011. Harvest was 2,029 gobblers in 2015, 2,309 gobblers in 2016, and 1,952 gobblers in 2017. Spring hunter success declined to around 36 percent in 2009 and 2011, improved to 47 percent in 2016, then dropped to 42 percent in 2017.

Prairie Chicken:

The Wildlife Division invested time and funds into a prairie chicken restoration project in Grand Forks County. From 1992 through 1998, 414 wild trapped prairie chickens were released on this area. Initially these transplants helped the population increase to a level capable of supporting a hunting season. Recent severe winters and wet springs have resulted in a dramatic decline in North Dakota's prairie chicken population. Over 200 historic and active leks are censused annually in the prairie chicken range in North Dakota. Both prairie chicken booming grounds

and sharp-tail dancing grounds are included in the survey, and some breeding grounds include both species. A prairie chicken hunting season in North Dakota was opened in 2004 and was continued until 2009. This was the first hunting season on prairie chickens in North Dakota since 1945. Since 2010, the hunting season on prairie chickens has been closed due to significant decrease of all booming ground counts. During the period 2015-2017 prairie chicken numbers decreased on the Sheyenne grasslands from 51 males counted in the spring of 2015 to 6 in 2017. In Grand Forks county prairie chickens decreased from 49 in 2015 males to 25 in 2017.

Sharp-tailed Grouse:

The Wildlife Division annually censuses sharp-tailed grouse in the spring on over 700 square miles to determine the breeding population. Brood surveys (150 routes, 4,700 miles) are run in July and August to determine reproduction. Hunter questionnaires (sample size 9,000 resident questionnaires; 4,500 non-resident questionnaires) are used to estimate number of hunters, hunting trips, and harvest. Wing envelope surveys are used to gather age and sex data as well as distribution data on sharp-tails. Envelopes are mailed each year to approximately 1,600 hunters (8,000 envelopes). The spring sharp-tail population has decreased from 2015-2017.

In 2016, our spring grouse survey counted 4,183 males on dancing grounds and in 2017 NDGF staff counted 3,137 which is a decrease of 25%. This decrease can be attributed to poor weather conditions during nesting. But with the loss of CRP acres, new sign-ups, and particularly extensions of current CRP contracts, will be critical in maintaining sharp-tail numbers in most of North Dakota. Sharp-tailed grouse harvest has averaged roughly 74,000 birds over the past three years. North Dakota has averaged roughly 21,000 sharp-tailed grouse hunters over the past three years. 2016 and 2017 have been poor years for grouse hunters and participation has decreased as a result of improved grouse numbers.

Sage-Grouse:

Sage-grouse have declined in North Dakota, and over their entire range, over the past 50 years. Over the past three years, the sage-grouse population in North Dakota has decreased by roughly 5% each year except in 2012 when the population increased roughly 14%. North Dakota is on the fringe of the sage-grouse range in North America, and small changes in habitat composition apparently have not been kind to sage-grouse. This loss of habitat influenced wildlife managers to write a management plan in 2005. The 2005 plan was revised in 2014 and the final draft is available on the Department's website. Beginning in 2008, the sage-grouse season was closed due to lek counts falling below management objectives. Division personnel count all known sage-grouse strutting grounds in North Dakota, visiting each active ground (15 to 20 grounds) 2 – 3 times and checking inactive grounds as time permits. Sage-grouse lek numbers have been steadily decreasing since an outbreak of West Nile Virus in 2007 – 2008. In 2015, biologists counted 30 males. In 2016, the count was 71 males compared to 5 males in 2017. The record high was recorded in 1980 when biologists counted 380 males on 23 leks.

In 2017, research began in North Dakota in attempt to enhance the existing population of sage-grouse in the state. To do so, we will focus on enhancing reproductive success of translocated females and survivorship of their broods, as well as their fidelity to the release area and integration into the extant population. The primary objectives of this research are to 1) Translocate a minimum of 30-45 female sage-grouse annually for a minimum of 2 years, with

the frequency and size of supplement translocations evaluated annually based on observed vital rates and population performance, 2) Artificially inseminate ~50% of females prior to translocation to help bolster the probability of successful nesting and fidelity to release sites, 3) Conduct at least 3-years of post-translocation monitoring to quantify population growth (lek counts). Collect additional data for intensive analyses of vital rates (e.g., hatch, nest, brood success) movements and habitat associations on all radio-marked sage-grouse (translocated, resident, and new recruits), 4) Collect blood and feather samples for collaborative genetic analyses that assess changes in neutral and functional genetic diversity, 5) Develop an integrated population model from empirically derived data that will allow: a) identification of specific vital rates driving observed and projected patterns in annual population growth, and b) the number of new recruits necessary for population growth to stabilize near K-carrying capacity, 6) Ultimately develop a translocation protocol that integrates lessons learned from this study along with those from past and ongoing efforts elsewhere in the species range. The study site is located in North Dakota's core habitat which is separated into two general areas (Slope County and Bowman County) split by highway 12. Slope County is naturally fragmented by rough terrain and historically had relatively low sagebrush densities with no energy development. Bowman County contains 80% of the sage-grouse population and has the majority of sagebrush habitat. Land ownership is mixed with private and federal land. The proper release site needs to provide habitat necessary to support all life stages. Sixty sage grouse were live-captured in Wyoming, fitted with GPS or VHF satellite radio collars, and translocated to North Dakota in April 2017. The radio collars use collected locations of the sage grouse on programmed schedules, which will then be transferred via satellite signal to our database. Mortality signals from radio collars were investigated to determine known causes of death. As of 30 June 2017, we have located 55 out of 59 (One died in transit to ND) and are currently tracking their movements and survival. Originally, 8 hens initiated nests, three were successful.

Gray Partridge:

Several surveys are used to determine population trends of gray partridge in North Dakota. In addition to brood surveys (350 routes, 8,800 miles), hunter questionnaires (9,000 resident questionnaires, 4,400 non-resident questionnaires) and a wing survey (8,000 envelopes mailed to 1,600 hunters), the Department also utilizes rural mail carriers to estimate the spring breeding population. Cooperating carriers travel sixty to seventy thousand miles during a three-day survey period in mid-April. All surveys have shown a steady increase in partridge populations in North Dakota beginning in 1993. In the past 3 years the partridge population has increased in most of the state. In 2015, biologists counted 77 broods, surveying roughly 9,500 miles, and in 2016 biologists counted 75 broods over the same mileage. Partridge numbers are well below the historic levels but can recover if suitable habitat and weather conditions exist.

Migratory Game Birds

Migratory game birds in North Dakota include ducks (18+ species), geese (4 species), tundra swans, coots, sandhill cranes, mourning doves, snipe, and woodcock. Because these game birds are migratory, they are protected by international treaties and their management is shared by the states, provinces, and countries throughout their range. Thus, migratory game bird management activities encompass a great deal of coordination and cooperative work with government and non-government organizations, officials, and biologists throughout North America. In addition,

the migratory game bird staff handles all endangered whooping crane coordination because of the close associations between whooping crane management and migratory game bird management.

The migratory game bird staff conducts 11 regular surveys to measure the population status and harvest of more than 27 species of migratory game birds, including 4 races of Canada geese that breed, migrate, and winter in 3 populations. These surveys along with work on many other annual efforts are part of the cooperative continent-wide management of migratory game birds. This year, 2017, marked the 70th year of our statewide breeding duck survey. To our knowledge, this is the longest running, systematic breeding waterfowl survey in the world.

In addition to these regular surveys and projects, migratory game bird staff work on and contribute to a number of research and management projects including Giant Canada goose population management, trapping and banding, a book providing historical perspectives of waterfowl hunting and management in North Dakota, the operational Central Flyway duck banding project, a band wear/loss study on diving ducks, a comprehensive study of effects of oil and gas development on breeding ducks, a study comparing migration chronology between mallards and lesser scaup, a study examining factors to redhead duck recruitment, Arctic nesting light goose research, Arctic nesting Canada goose research, the national waterfowl parts collection survey, Adaptive Harvest Management and other harvest strategies for waterfowl, sandhill crane surveys, national mourning dove banding program, national mourning dove harvest management strategy, waterfowl rest area establishment, hunting proclamations and guides, informational presentations and work with media, wildlife, university, and school groups and citizens throughout North America, peer review and publication of professional literature and presentations, and work on various other committees and projects within the Department and with other agencies and organizations.

A high priority for the migratory bird staff is cooperative work with all governmental and non-governmental agencies and organizations that are stakeholders in the migratory bird resource. We have significant responsibilities in the Central Flyway Council, the Central Flyway Waterfowl Technical Committee (including 15 subcommittees), the Central Flyway Webless Migratory Game Bird Technical Committee (including four subcommittees), the Central Management Unit Dove Technical Committee, the Bird Banding Lab ad-hoc group, the Association of Fish and Wildlife Agencies (including the Waterfowl Working Group, the Harvest Management Working Group), and the Prairie Pothole Joint Venture. Work with all of these entities is vital to the continued successful management of migratory game bird hunting in North Dakota.

During the past 23 years, duck numbers reached record numbers in North Dakota due to the abundance of CRP provided nesting cover and persistent record high water conditions. However, recent losses of wetland and grassland habitats have resulted in breeding duck numbers in North Dakota dropping to their lowest level in more than two decades. Locally breeding Canada goose numbers remain at near-record levels and are well above the population objective. Populations of migrant Canada geese, snow geese and Ross's geese are all above objective levels. We now expend considerable effort managing a permit program (under a U.S. Fish and Wildlife Service Special State Canada Goose Permit) that allows agricultural producers and other entities to take

adult and gosling Canada geese, and their nests and eggs to manage crop depredations, human health and safety issues and nuisance concerns. Sandhill crane numbers remain stable and mourning dove numbers appear to be slightly declining in the Central Management Unit.

In response to high waterfowl populations, numbers of non-resident waterfowl hunters have remained high with significant guiding and outfitting activity and leasing of private land for hunting. This increased demand for places to hunt, coupled with increased posting and the resultant reduced public access to private lands has caused significant difficulties and dissatisfaction with resident hunters. This may be a primary reason that the number of resident waterfowl hunters has declined. In 2016, active resident waterfowl hunters dropped below 18,500 for the first time ever, 50.5% below the 1975-2015 average.

Furbearer Management

Our overall goal is to monitor the status of all furbearers in the state. Common furbearing species include (but not limited to) badger, bobcat (south and west of the Missouri River), beaver, coyote, mink, muskrat, raccoon, red fox, and striped skunk. Furbearing species that are less common include American marten, black bear, bobcat (north and east of the Missouri River), grey and swift fox, gray wolf, fisher, mountain lion, river otter, and spotted skunk. More specifically, our annual objectives for furbearers are to estimate population trends, numbers of commercially important fur species that are sold, and harvest of furbearers statewide.

In order to meet our annual objectives, we conducted 3 surveys. First, the April rural mail carrier survey was used to obtain population trends by physiographic region. Second, we required fur buyers to turn in their fur buying records in order to be eligible to purchase a fur buying permit the following year. We have been collecting and compiling these annual fur buyers' reports since 1937. And third, we mailed furbearer harvest questionnaires in April of each year to a random sample of hunters and trappers who bought either a furbearer or combination license during the previous harvest season. For those furbearers that are difficult to monitor using the above methods, including bobcats, mountain lions, and fishers, we require mandatory tagging and carcass collection of harvested animals.

Additionally, we continued to investigate reports of less common furbearer occurrences (e.g. sightings, incidental captures, road kills, etc.) to monitor changes in distribution and abundance. Furbearer carcasses that were collected through mandatory tagging, incidental trapping, automobile collisions, depredation removals, etc. were examined and necropsied to monitor population health and reproduction. Furbearers that were routinely necropsied by the Department included American marten, bobcats, fishers, mountain lions, river otters, and swift fox, as well as the occasional black bear or gray wolf.

We communicated with many organizations and agencies when gathering and interpreting information on furbearers in North Dakota, including USDA-Wildlife Services, USGS-Northern Prairie Wildlife Research Center, Theodore Roosevelt National Park, Three Affiliated Tribes, Fur Takers of North Dakota, North Dakota Fur Hunters and Trappers, Delta Waterfowl, Midwest Furbearer Workgroup, and Swift Fox Conservation Team.

We sold an average of 14,548 (resident and non-resident) furbearer licenses and 56,996 combination licenses each year during 2015 and 2016. The rural mail carrier survey indicated upward trends for beavers, foxes, mink, and weasels during the past 2 years, while other species of common furbearers trended downward in one or both years. Fur buyers' reports indicated that during the past 2 years, coyotes were the most commonly bought furbearer. Number of pelts bought during the 2015-2016 season was 18,954. Prices paid per pelt were highest among bobcat and coyote. Coyote pelts were the highest income generator to the state annually. Results from the questionnaires indicated that coyotes, muskrats, and raccoons were the most commonly harvested furbearers. More furbearers were harvested during the 2015-2016 season compared to the 2016-2017 season, primarily due to a higher muskrat harvest. Bobcat harvest during the past two seasons (22 in 2015-2016, 24 in 2016-2017) were below the long-term average. Mountain lions and fishers also had limited open harvests the past two seasons.

Wildlife Health Management

This section is responsible for monitoring and managing disease status and trends. Disease related projects and work during 2015 – 2017 concentrated heavily on chronic wasting disease (CWD), bovine tuberculosis (TB), rabies and other disease outbreaks as they occurred. Since 2002 CWD surveillance has been conducted in ND. Two types of CWD surveillance were conducted by the Department. Targeted surveillance was conducted statewide and year-round. It is used for early detection of initial infection and new foci. Targeted animals include free-ranging deer, elk, and moose that show signs consistent with CWD, died of unknown causes, road kills, and free-ranging cervids removed from farmed facilities. Hunter-harvested surveillance is used to estimate prevalence over time and space. Hunter-harvest surveillance is conducted in selected units. In 2007, the CWD surveillance units were reevaluated and redesigned to allow for increased efficiency and a more appropriate strategy for detecting this disease. There are now six surveillance units comprised of individual deer hunting units that are sampled on a rotating basis with two surveillance units being sampled each year. This rotation allows the entire state and all six units to be sampled every three years.

The combined totals of hunter harvested animals sampled and tested for CWD in 2015 (Units 5 and 6) and 2016 (Units 1 and 2) was 2103 White-tailed deer, 502 mule deer, 72 elk, and 60 moose. The combined totals of targeted animals sampled and tested for CWD in the 2015 – 2017 biennium were 131 white-tailed deer, 30 mule deer, 5 elk, and 82 moose. To date, CWD has been identified in 8 mule deer in deer and 1 white tail deer in unit 3F2. A special CWD monitoring block has been created in 3F2 and yearly surveillance will continue into the future in this unit.

Carcass transportation guidelines and baiting bans were updated and signed by Governor's Proclamation. Newly identified units within states and provinces were added to the list of areas with CWD as test results were confirmed.

Investigations of die-offs and numerous necropsies have been performed on various species including waterfowl, upland game birds, nongame birds, big game animals, furbearers, and nongame mammals. Causes of death and illness were identified. Assistance was provided to the Law Enforcement Division to determine the cause of death in potential criminal investigations.

Serology has been performed on various species to determine the level of exposure of wildlife to certain disease agents. All reports of dead or dying moose in ND were investigated due to the population crash in northwestern MN moose.

The Wildlife Disease Program works with a variety of state and federal wildlife and livestock related agencies. All meetings of the ND Board of Animal Health were attended and we continue to work with their non-traditional livestock committee on farmed cervid issues and toward the elimination of contact between free-ranging and farmed cervids. We are also a part of the feral swine eradication working group. Updates on wildlife disease in ND were given to various groups, including the Midwest Fish and Wildlife Health Committee.

PRIVATE LANDS INITIATIVE SECTION

The Private Land Initiative (PLI) is the Department's single largest program and has been receiving more attention as the issue of the loss of hunting access continues to grow. A total of \$10,959,700 (program payments and depredation only) was spent from the Private Lands Initiative during the 2015-2017 biennium to improve wildlife habitat on private land and to provide hunting access through various Private Land Open To Sportsmen (PLOTS) programs, and to alleviate big game depredation problems on private livestock feed supplies. Some of the accomplishments of these programs during the 2015-2017 biennium were the following:

Depredation:

The Department spent \$721,150 during the biennium on big game depredation problems. Of this amount, \$36,644 was spent to cost-share with landowners for the construction of deer-proof hay yards. Another \$228,378 was used on materials for deer-proof hay yards. The balance, \$456,128, included, deer repellents, scare devices, and grain for short-stop feeding deer to alleviate depredation. This amount also includes salaries and expenses for Department personnel when working on depredation problems

PLI Programs:

- Worked with cooperators on approximately 202 acres of wildlife food plots per year on private lands, totaling \$15,680.
- Habitat Plot Program: Provided cost-share and annual cash rent payments for 298 farmers and ranchers located in 46 counties in North Dakota. \$965,100 went directly to farmers and ranchers to rent these habitat plots averaging 100,500 acres each year of the biennium. These areas are open to walking public access for hunting, fishing, and other types of walking outdoor recreation.
- Working Lands Program: Provide annual payments of \$1,082,350 to 625 landowners for opening up 347,885 acres to public access for hunting, fishing and other types of walking outdoor recreation.
- CRP Access Program: Provided cost-share of \$237,835 to landowners for CRP grass planting on 6,066 acres and \$2,406,200 paid to landowners in exchange for public access for hunting, fishing and other types of walking outdoor recreation for the life of the CRP contract. The Department also spent \$10,794 on fees to have these agreements recorded.

- Wetland Reserve Incentive Program: Provided \$596,814 to landowners who enrolled their land in the Wetland Reserve Program and provided public access for the term of their WRP contract.
- Provided \$85,920 to Pheasants Forever to fund joint PF/NDGFD/NRCS Farm Bill Biologists stationed at Jamestown, Dickinson, Hettinger and Forman ND.
- Provided \$227,500 to the ND Association of Soil Conservation District to fund joint Farm Bill Biologists stationed around the State.
- Provided \$2,580 to landowners for cost-share on tree and shrub plantings.
- Developed and made available two PLOTS Guide publications (60,000/year) to license vendors, resident and non-resident sportsmen.
- Provide \$80,000 to the US Fish & Wildlife Service to fund a joint USFWS/NDGFD Private Lands Biologist at Lake Ilo National Wildlife Refuge (NWR).
- The Department received an Outdoor Heritage Grant in 2014 for \$1,900,000. Of this amount \$400,000 was for Save Our Lakes. The Private Lands Initiative portion of \$1,500,000 has been obligated in 6-10 years agreements. A total of \$866,270 has been spent thru the PLI section.

In 2015, the Department received a second grant from the Outdoor Heritage Fund for \$3,000,000 to use towards the Pheasant Habitat Initiative. This was in conjunction with the Department's CREP program with the USDA. During the spring of 2017, the agreement with the USDA was completed. \$159,085 was spent on projects before the end of the biennium.

WILDLIFE RESOURCE SECTION

The Wildlife Resource Section's primary responsibility is to manage approximately 214,563.69 acres of habitat contained within 220 of the State Wildlife Management Area (WMA) system. These lands are incredibly diverse in terms of habitat type and provide extensive hunting and other compatible recreational and educational opportunities. WMA's, in unique places such as the Killdeer Mountains, Turtle Mountains, Pembina Hills, Missouri River, and the prairie coteau, offer the public the chance to experience the variety of North Dakota's wildlife habitats. Providing public access, controlling noxious weeds, managing boundaries, and enhancing and maintaining habitat are just a few of the responsibilities associated with the WMA system.

A major challenge continues to be the control of noxious weeds. The Department spends approximately \$500,000 per biennium on chemical, biological, and mechanical weed control efforts. The Department is also a member of the North Dakota Weed Control Association and cooperates with private landowners and other state and federal agencies to find innovative and effective methods of controlling noxious weeds.

The Department's management objectives for specific WMA's are met by conducting various management techniques on these WMA's. Management techniques are based on sound biological practices and may include prescribed burning, rotational haying, grazing, and in some cases, wildlife food plots.

Prescribed burning is conducted on grasslands primarily for the purposes of controlling the spread of exotic invasive species, controlling noxious weeds, or removing dead or decadent herbaceous growth to stimulate new and more vigorous growth. All personnel involved in prescribed burning have met the Department's prescribed fire training needs.

Rotational haying is generally conducted on tame grass stands or dense nesting cover plantings on certain WMA's. This practice is done in an effort to remove old growth so that these fields can be opened up to stimulate new growth. Haying practices are generally not conducted on the same planting in consecutive years. Haying is conducted on approximately 7,200 acres per year and is usually conducted by a local cooperator.

Grazing is generally conducted on native grass stands to control invasion by exotic (non-native) species, to prevent a build-up of decadent grass, and to remove old growth so that these native stands can be opened up to stimulate new growth of native grasses. Grazing practices are generally not conducted on the same stands in consecutive years and are usually not set up as season long grazing agreements. Grazing prescriptions vary for each WMA depending on soils, existing vegetation, and goal. Grazing is conducted on approximately 7,300 acres per year and is usually done by a local cooperator.

Wildlife food plots are established in an attempt to help sustain local wildlife populations through the winter months and to help alleviate wildlife depredation problems to adjacent private landowners. Approximately 10,900 acres of wildlife food plots are established through crop share agreements with local cooperators, contracted, or by Department personnel each year. The practice of utilizing wildlife feeders has gradually been phased out on WMA's statewide due to potential disease issues.

ENFORCEMENT DIVISION

The Enforcement Division report is printed annually in the North Dakota OUTDOORS magazine. The most recent publication was February 2017. It can be found on our website at: <http://gf.nd.gov/publications>

ND GAME AND FISH DEPARTMENT
DEPARTMENT REVENUE REPORT
JULY 1, 2015 THRU JUNE 30 2017

ACCOUNT NAME	15-17 NET AMOUNT
Conference Registration Fees	14,540.00
Donations	549,801.36
Easements - Test Holes - Right of Way	756.00
Fines-Forfeitures-Escheat	33,399.21
Game & Fish	135,000.00
Misc. Unclassified Revenue	276.90
Game & Fish Collectors Stamp	7,582.00
Game & Fish-Fishing Licenses	8,056,075.50
Game & Fish-Hunting Licenses	16,832,413.99
Game & Fish-Lottery	2,591,188.00
Game & Fish-Other Licenses	5,277,831.23
Interest Income	1,908.06
Interest On Investment	129,707.92
Lease-Rental Of Land	119,540.08
Mineral Royalties	168,651.77
Insurance Recoveries	3,466.00
Misc Refunds	113,127.65
Misc Sales and Service	81,566.00
Motorboat License Fees	1,971,500.68
Non-Game Contributions	998.07
Other Reimb. - Jury Pay, Etc.	5,435.62
PLI Sportsmen Habitat Stamp	3,173,785.00
Postage	1,097.50
Refund Of Prior Bienn Expen	4,872.43
Reimbursement from Other State	572,416.75
Revenue From Fed Government	30,152,386.96
Sale Of Agriculture Products	106,019.14
Sale of Confiscated Property	500.00
Sale Of Noncapital Asset-Surpl	8,922.00
Sale Of Publications	334,988.75
Sale Of Salvage & Scrap	1,534.06
Tsfr Fm Highway Tax Dist. Fund	302,177.50
Wildlife Habitat Stamp	2,542,313.50
Tsfr Fm ND Outdoor Heritage Fund	687,863.56
TOTAL REVENUES	73,983,643.19

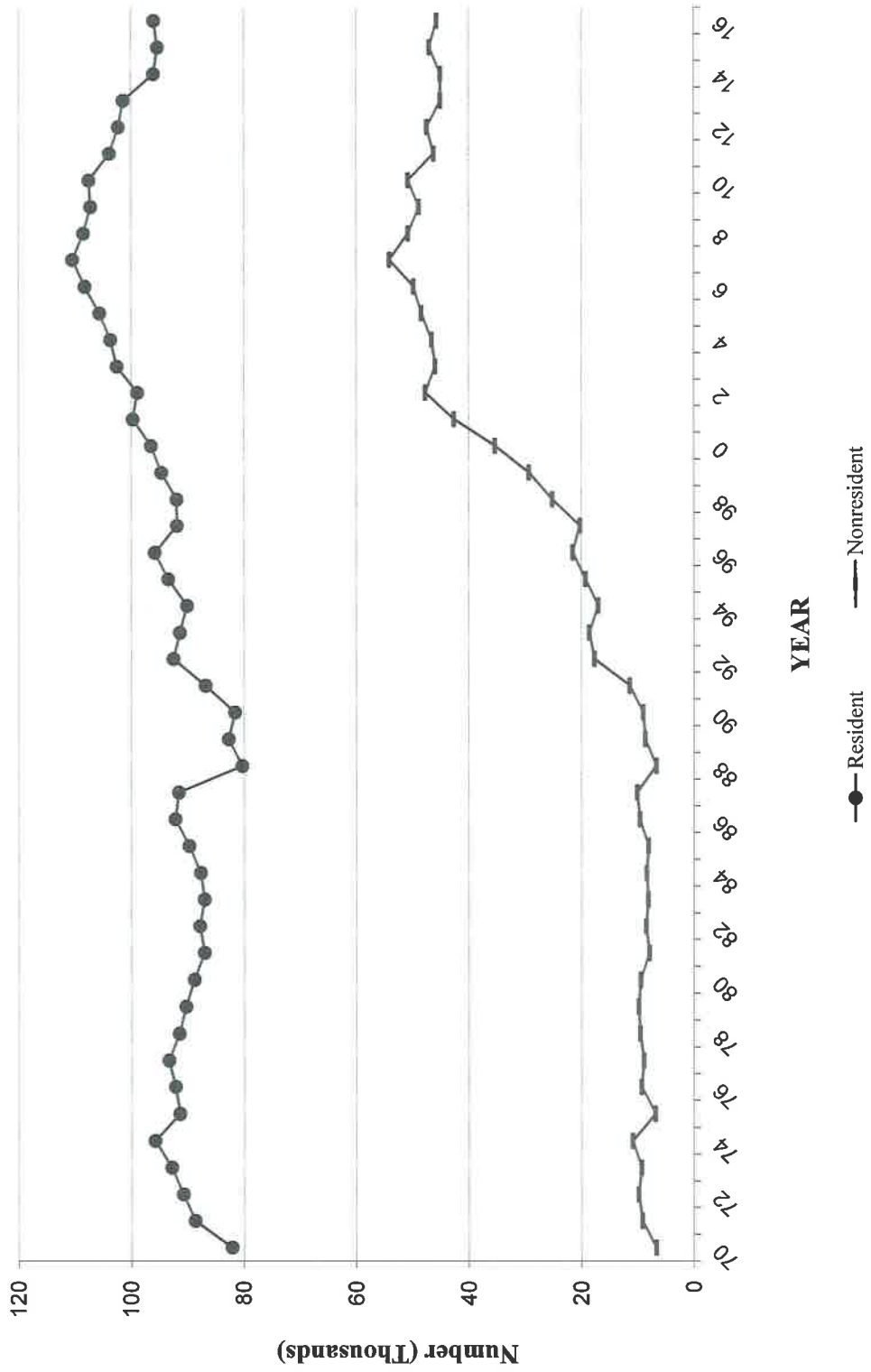
NORTH DAKOTA GAME AND FISH DEPARTMENT
DEPARTMENT APPROPRIATION REPORT
JULY 1, 2015 THRU JUNE 30, 2017

	ORIGINAL 2015-17 APPROPRIATION	ADJUSTED 2015-17 APPROPRIATION	BIENNIUM EXPENDITURES	UNEXPENDED BALANCE
Salaries & Wages	29,670,242.00	30,020,383.20	27,922,467.73	2,097,915.47
Operating Expenses	13,668,944.00	13,986,973.00	11,488,788.22	2,498,184.78
Capital Assets	5,497,996.00	5,497,996.00	4,128,618.93	1,369,377.07
Construction Carryover	0.00	244,996.00	244,996.00	0.00
Grants-Game And Fish	7,334,412.00	7,334,412.00	6,251,962.38	1,082,449.62
Habitat & Deer Depredation	16,922,681.00	17,804,257.00	15,129,515.40	2,674,741.60
Noxious Weed Control	700,000.00	700,000.00	600,240.39	99,759.61
Missouri River Enforcement	282,540.00	282,540.00	279,119.82	3,420.18
Grant-Gift-Donation	827,519.00	827,519.00	442,622.69	384,896.31
Nongame Wildlife	120,000.00	120,000.00	32,501.58	87,498.42
Lonetree Reservoir	1,823,005.00	1,823,005.00	1,637,437.80	185,567.20
Wildlife Services	384,400.00	384,400.00	384,400.00	0.00
Total Expenditures	77,231,739.00	79,026,481.20	68,542,670.94	10,483,810.26

NORTH DAKOTA GAME AND FISH DEPARTMENT
 EXPENDITURES BY PROGRAM
 JULY 1, 2015 THRU JUNE 30, 2017

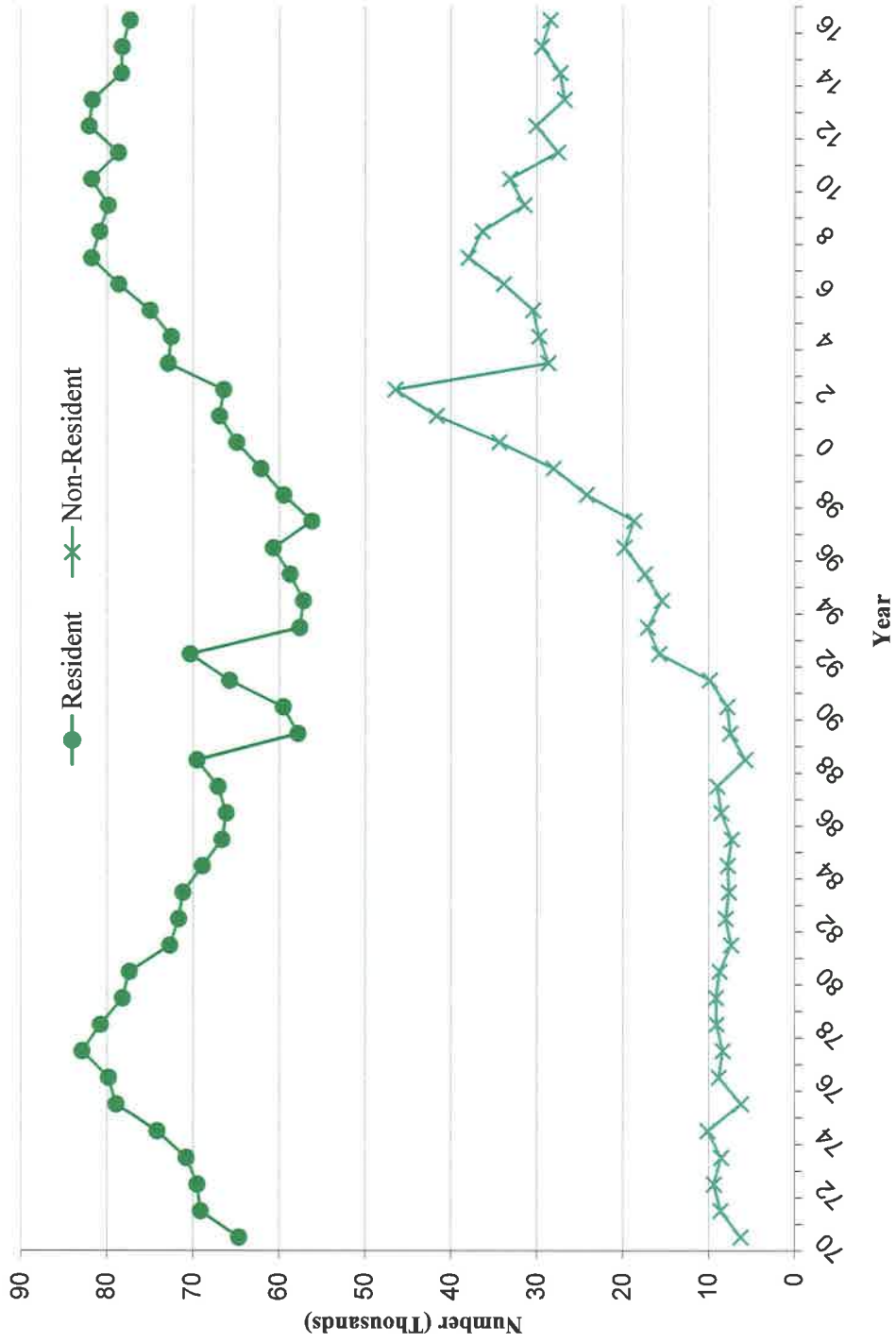
	DEPARTMENT TOTALS	ADMINISTRATION	FISHERIES	ENFORCEMENT	CONSERVATION & COMMUNICATION	WILDLIFE	DIFFERENCE
Salaries & Wages	27,922,467.73	8,690,265.43	3,965,927.39	6,385,823.92	3,872,852.02	5,007,598.97	0.00
Operating Expenses	11,488,788.22	3,755,513.13	1,598,685.60	1,769,175.17	1,569,414.66	2,795,999.66	0.00
Capital Assets	4,128,618.93	1,695,292.62	1,171,914.92	149,887.00	118,619.81	992,904.58	0.00
Construction Carryover	244,996.00	151,266.00	0.00	0.00	0.00	93,730.00	0.00
Grants-Game And Fish	6,251,962.38	251,994.02	2,213,806.59	0.00	1,330,199.70	2,455,962.07	0.00
Habitat & Deer Depredation	15,129,515.40	0.00	706,878.56	0.00	0.00	14,422,636.84	0.00
Noxious Weed Control	600,240.39	0.00	0.00	0.00	0.00	600,240.39	0.00
Missouri River Enforcement	279,119.82	0.00	0.00	279,119.82	0.00	0.00	0.00
Grant-Gift-Donation	442,622.69	250,021.57	14,540.00	0.00	0.00	178,061.12	0.00
Nongame Wildlife	32,501.58	0.00	0.00	0.00	32,501.58	0.00	0.00
Lonetree Reservoir	1,637,437.80	0.00	0.00	0.00	0.00	1,637,437.80	0.00
Wildlife Services	384,400.00	0.00	0.00	0.00	0.00	384,400.00	0.00
TOTAL	68,542,670.94	14,794,352.77	9,671,753.06	8,584,005.91	6,923,587.77	28,568,971.43	0.00

NORTH DAKOTA GENERAL GAME LICENSE SALES



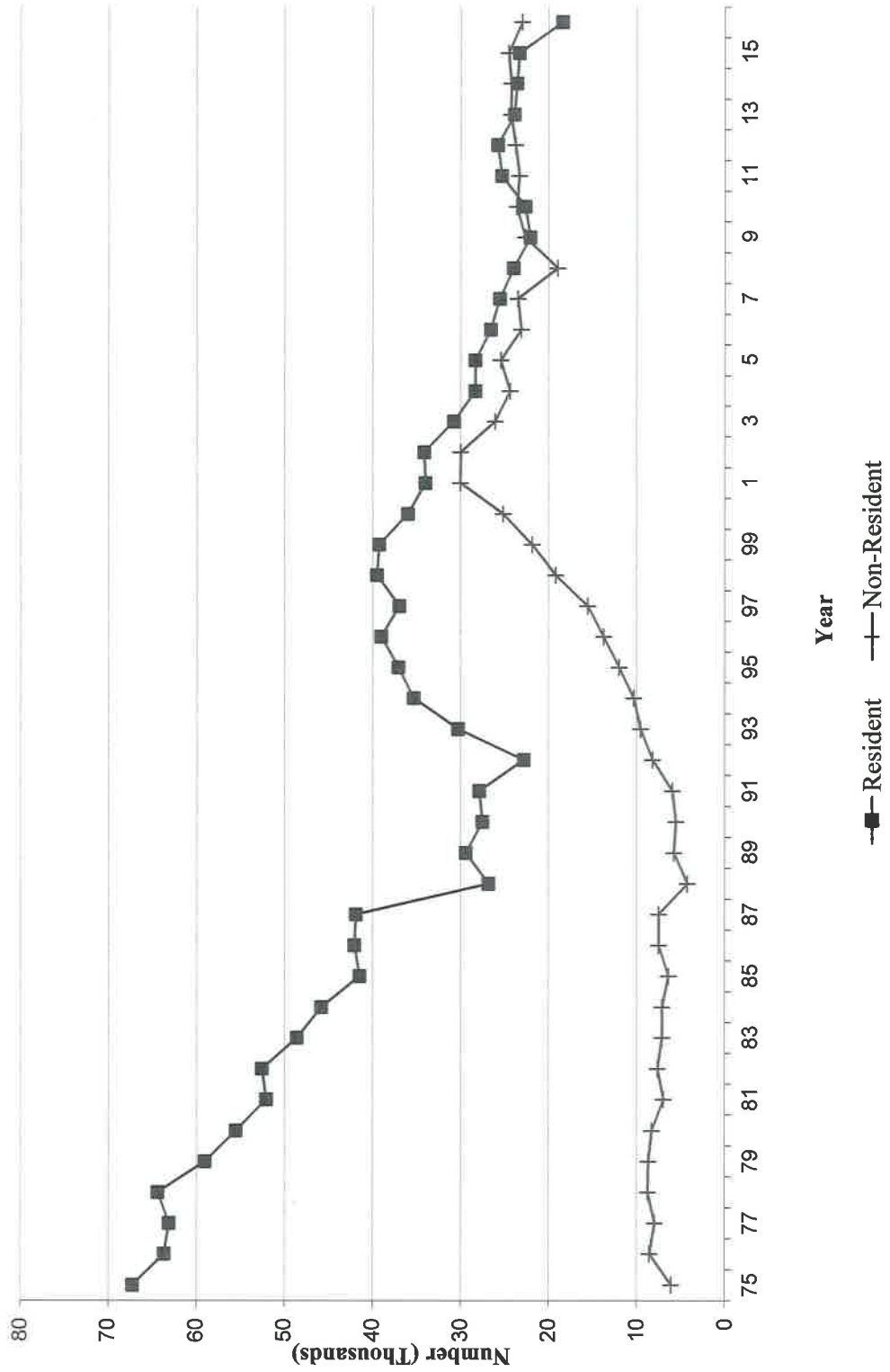
SMALL GAME LICENSE SALES

North Dakota

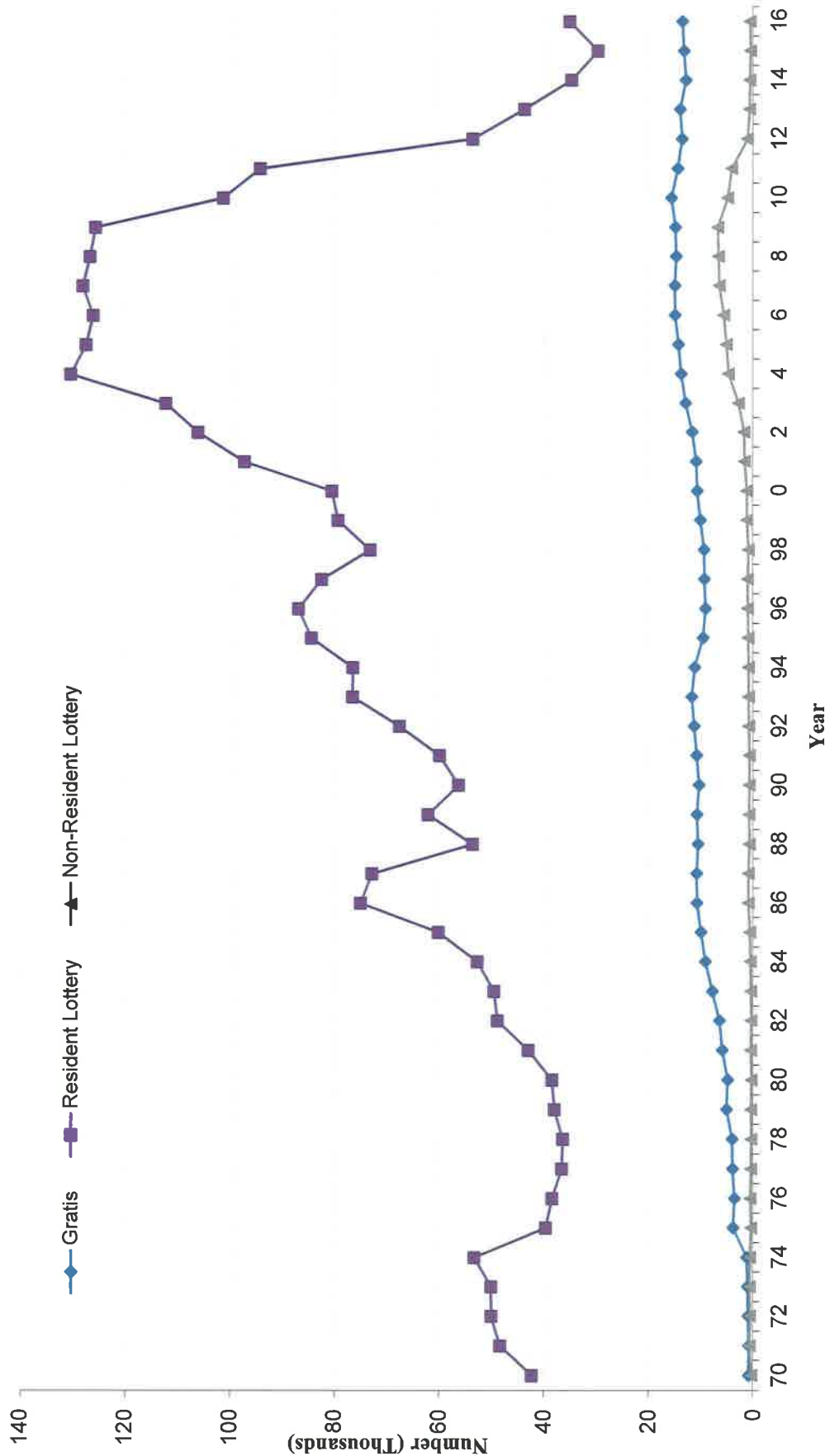


There was a major non-resident license system change in 2003.

Waterfowl Hunters North Dakota

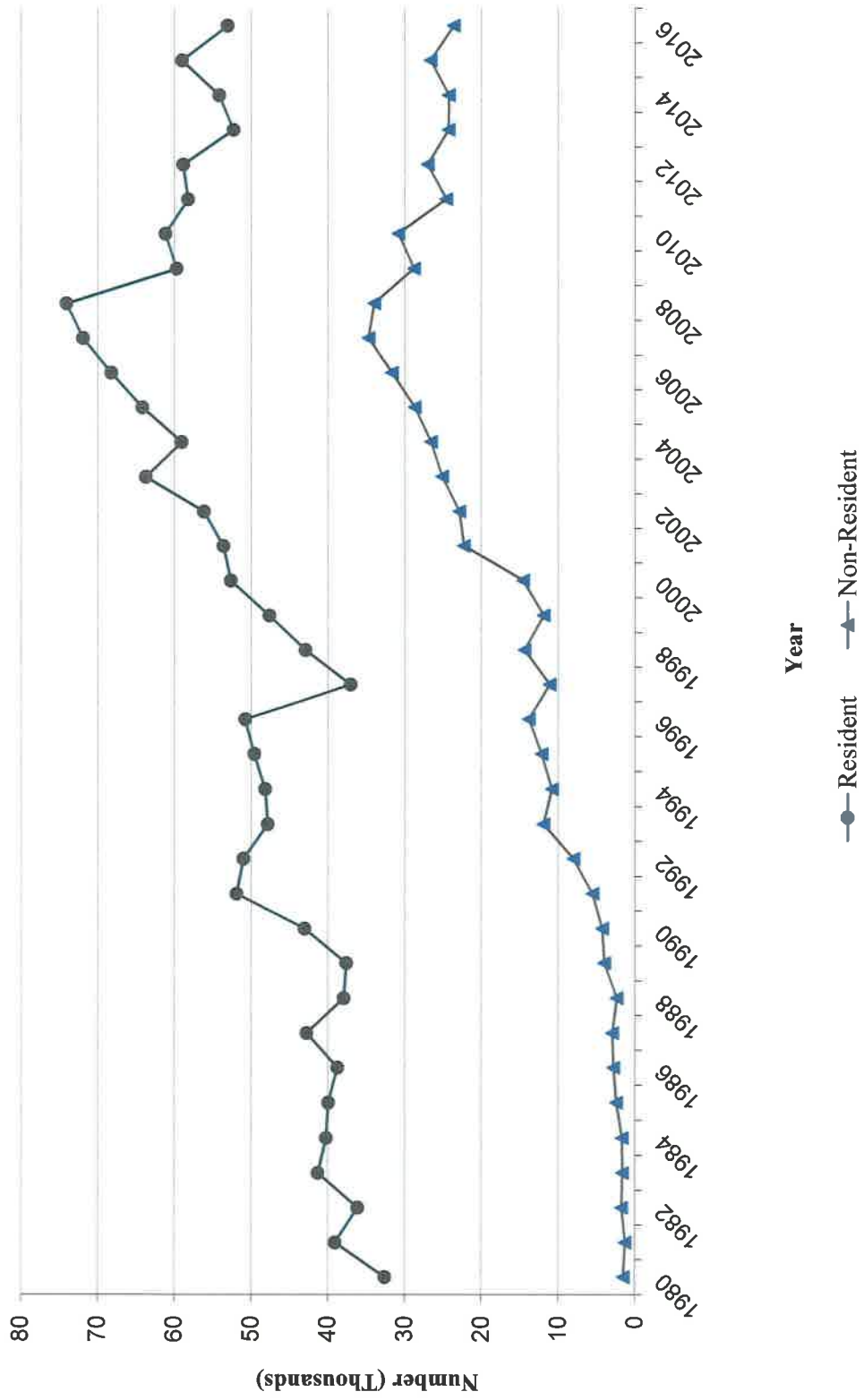


North Dakota Deer Gun Licenses Issued

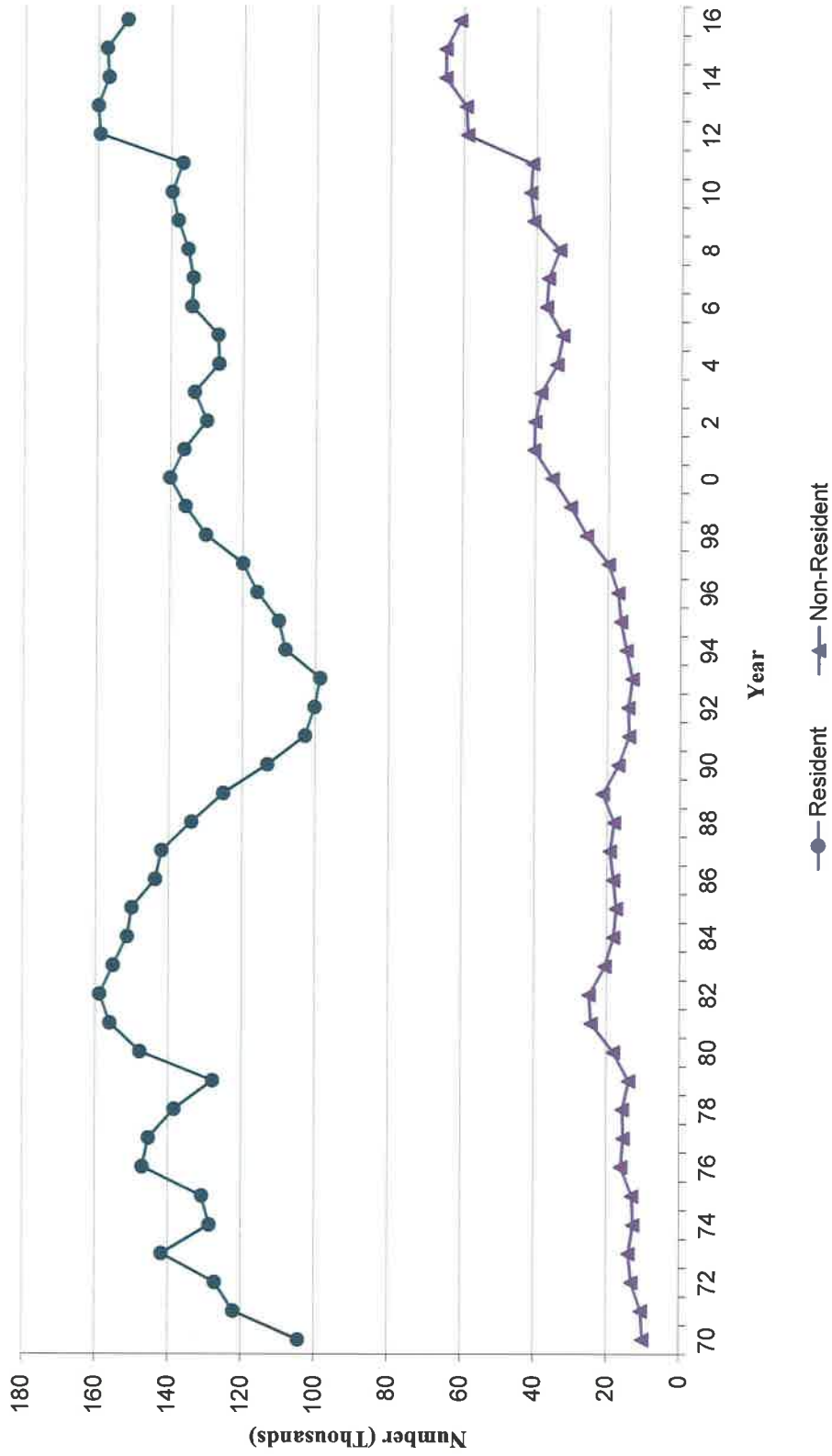


Licensed Pheasant Hunters

North Dakota



North Dakota Fishing License Sales



RESOURCES AVAILABLE FROM THE DEPARTMENT

Copies of the minutes from meetings conducted by the Department are available at the Game and Fish Department's Bismarck office. Requests should be sent to: Director, North Dakota Game and Fish Department, 100 N. Bismarck Expressway, Bismarck, ND 58501-5095.

Wildlife survey results and fish and wildlife status reports are published annually. Single copies of these reports (Progress or Job Completion) are available at the Bismarck office.

The Department publishes a magazine, North Dakota OUTDOORS, available at the address listed above. Single copies of the magazine are available at \$2 per copy. The yearly subscription rate (10 issues) is \$10. The three-year subscription rate is \$20.

A variety of pamphlets, brochures and booklets pertaining to fish, wildlife, lakes, wildlife habitat, and other topics are available for free distribution at the Bismarck office. The Department's web page is: <http://gfnd.gov>. The Department's email address is ndgf@nd.gov.