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TESTIMONY OF JOHN KENNEDY DEPUTY DIRECTOR WYOMING GAME AND FISH DEPARTMENT

BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

“Wyoming’s Work to Conserve, Recover, and Manage Wildlife”

Good morning Chairman Barrasso and members of the Committee. My name is John Kennedy, and I am the Deputy Director of the Wyoming Game and Fish Department. I chair the Association of Fish and Wildlife Agencies’ (AFWA) State/Federal Agency Coordination Committee. AFWA represents the perspectives of the 50 state fish and wildlife agencies across the nation. I sincerely appreciate the opportunity to testify today about wildlife conservation in Wyoming.

I would like to begin by describing the jurisdictional authorities for fish and wildlife management and the state and federal relationships between those authorities. The 50 states have the primary legal authority and management responsibility for a great deal of the country’s fish and wildlife resources. States have specific authority for conservation and management within their borders, including most federal land. The tenth amendment to the United States Constitution, as well as the Public Trust Doctrine, directs that powers not specifically delegated by the Constitution to the Federal Government be delegated to state authority or to the people, including the responsibility to manage most of the nation’s fish and wildlife resources. Furthermore, United States Congress has the sole authority to preempt a state’s authority for fish and wildlife management, and then only for certain federal actions. An example of this is the Endangered Species Act, which affirms the federal authority given to the federal agency that exists concurrently with the pre-existing authority of the state agency. Collectively, the 50 state fish and wildlife agencies own, manage, or administer wildlife conservation in excess of 464 million acres of land and 167 million acres of lakes. Of these, nearly 500,000 acres of land and 48,000 acres of lakes are located in Wyoming.

In the late 1800s, the nation’s wildlife resources were depleting due to unregulated hunting and habitat loss. In order to protect the resource, hunters and anglers advocated for regulations for hunting and measures to protect valuable habitat. These efforts led to the creation of the North American Model of Wildlife Conservation, which has two main areas of focus: 1) fish and wildlife belong to all citizens; and 2) wildlife management for perpetual sustainability. These focus areas encompass seven tenets of conservation: 1) the Public Trust Doctrine, tasking the government with holding wildlife in trust for all citizens; 2) Democratic Rule of Law, which provides the resource to be allocated for use by all citizens; 3) Opportunity For All, which dictates that all citizens in the United States and Canada should have equal opportunity to participate in activities such as hunting and fishing; 4) Commercial Use, which prohibits a

commercial market for dead animal parts; 5) Legitimate Use, which dictates guidelines for appropriate use of the resource, such as killing for food, fur, self-defense, protection of property, and other legitimate reasons; 6) Science and Wildlife Policy, which dictates that science is used and credited as critical to comprehensive wildlife management; and 7) International Wildlife Migratory Resources, which recognizes that migratory wildlife and fish do not operate under state's boundaries, therefore, regulations on wildlife conservation must be realistic. The use of these principles dictates the successful management of our nation's most valuable resource.

To carry out the management charge granted by the Constitution, every state, territory, and the District of Columbia has an agency dedicated to manage wildlife resources within their borders. These agencies are predominantly governed by boards, commissions, or political appointees charged with policy decisions and agency oversight. In spite of limited funding, state agencies have garnered considerable expertise in response to the growing need to address at-risk and imperiled species and to carry out management and conservation responsibilities across the country.

Since 1937, sportsmen have been the driving force for conservation funding in the country. On average, 60 to 90% of state fish and wildlife agency budgets are derived by sportsmen, in addition to countless hours of volunteer time and dollars to national, regional, and local organizations dedicated to conservation. Conservation and management of game species and the habitats that support them is partially funded through excise taxes on hunting and fishing equipment collected under the federal authority of the Pittman-Robertson and Dingell-Johnson Acts, which have been a critical source of wildlife conservation in the United States for over 80 years. Additionally, sales of hunting and fishing licenses to the public significantly contribute to conservation efforts at the state level. In Wyoming, a 2017 decision of the Legislature removed the Wyoming Game and Fish Department from the state's general fund. Therefore, hunters and anglers fund the Department's work almost entirely.

History of the Wyoming Game and Fish Department

The Wyoming Legislature created the Office of State Game Warden in 1899, followed in 1921 by the creation of the Wyoming Game and Fish Commission. The Wyoming Game and Fish Department was created and placed under the direction and supervision of the Wyoming Game and Fish Commission, established under Wyo. Stat. Ann. § 23-1-401. The responsibilities of the Department are defined in Wyo. Stat. Ann. § 23-1-103. The Department is charged with providing..."an adequate and flexible system for the control, management, protection, and regulation of all Wyoming wildlife."

The Department manages over 800 wildlife species for the benefit of all citizens of Wyoming. The Department's core priority is to manage fish and wildlife using sound scientific principles while maintaining stakeholder satisfaction with the wide array of recreation activities and experiences Wyoming has to offer. Activities to achieve this priority include actively monitoring fish and wildlife populations; adjusting regulations to ensure sustained use; maintaining a dialogue with users, conservationists, and other government managers; conducting research; enforcing laws and regulations; assisting in habitat conservation and restoration efforts; maintaining public access to recreation; promoting hunter and boater safety; providing conservation information and education; building effective partnerships; maintaining sound

business management and accounting processes; and more. Fortunately, Wyoming and states across the country have a dedicated and talented staff of game wardens, biologists, managers, statisticians, technology experts, accounting specialists, clerical staff, administrators, and others to make this conservation charge possible and successful.

SUCCESSFUL STATE CONSERVATION, RECOVERY, AND MANAGEMENT OF WILDLIFE IN WYOMING

Sage-Grouse

Wyoming is proud of its leading role in the conservation and management of greater sage-grouse. There are 43 million acres of occupied sage-grouse range in Wyoming (70% of the state). 90% of historic range in Wyoming is still occupied; compared to 56% range wide. 26% of North America's occupied sage-grouse range is in Wyoming. 37% of the world's population of greater sage-grouse inhabit Wyoming.

Wyoming led the creation and refinement of what is now commonly known as the "core area strategy" aimed at ensuring long-term conservation of the species. This strategy focuses on identifying those habitats that are vital for sage-grouse viability and prescribing focused protections for those areas. The strategy serves to allow normal development on those lands outside of the core area. This mechanism became the model for sage-grouse conservation and was used by other states as a basis for their management plans. Ultimately, the implementation of this strategy culminated with a decision in 2015 by the USFWS not to list sage-grouse under the Endangered Species Act by issuing a finding of "not warranted" in response to the petition to list. Conservationists, sportsmen, energy developers and other interests were well served by this state-based and state-led approach.

In Wyoming and other western states, sage-grouse habitats are expansive and relatively intact outside of towns, rural subdivisions and developed natural gas and oil fields. Habitats for sage-grouse occur across mixed land ownership jurisdictions. Most sage-grouse leks (sage grouse breeding grounds) are found on Bureau of Land Management (BLM) lands. Nesting and early brood rearing habitats are also found predominantly on BLM lands, while many birds move to moist meadow habitat located on private or public/private interfaces during late brood rearing and/or during summer. These moist areas include irrigated hay meadows in stream valleys, desert seeps and springs, or mountain foothill meadows. Fall movements away from these moist areas to sagebrush-dominated uplands on BLM lands occur in late September/early October. As winter progresses, birds concentrate on sagebrush upland habitats, which are also located primarily on BLM lands. Because sage-grouse habitats change throughout the year, state managers must develop strong partnerships and work closely with private landowners, federal land management agencies, and state land managers.

As of the spring of 2018, there were 1,815 known occupied sage-grouse leks in Wyoming. Department personnel, together with personnel from other agencies, volunteers, and consultants, surveyed 88% of these leks at least once. The proportion of leks checked in the previous 10 years averaged 87%. In the spring of 2018, 1,169 leks were confirmed active, 303 confirmed

inactive, and 131 unknown or unchecked. The role of volunteers and a multi-agency, collaborative approach to sage-grouse data collection is significant.

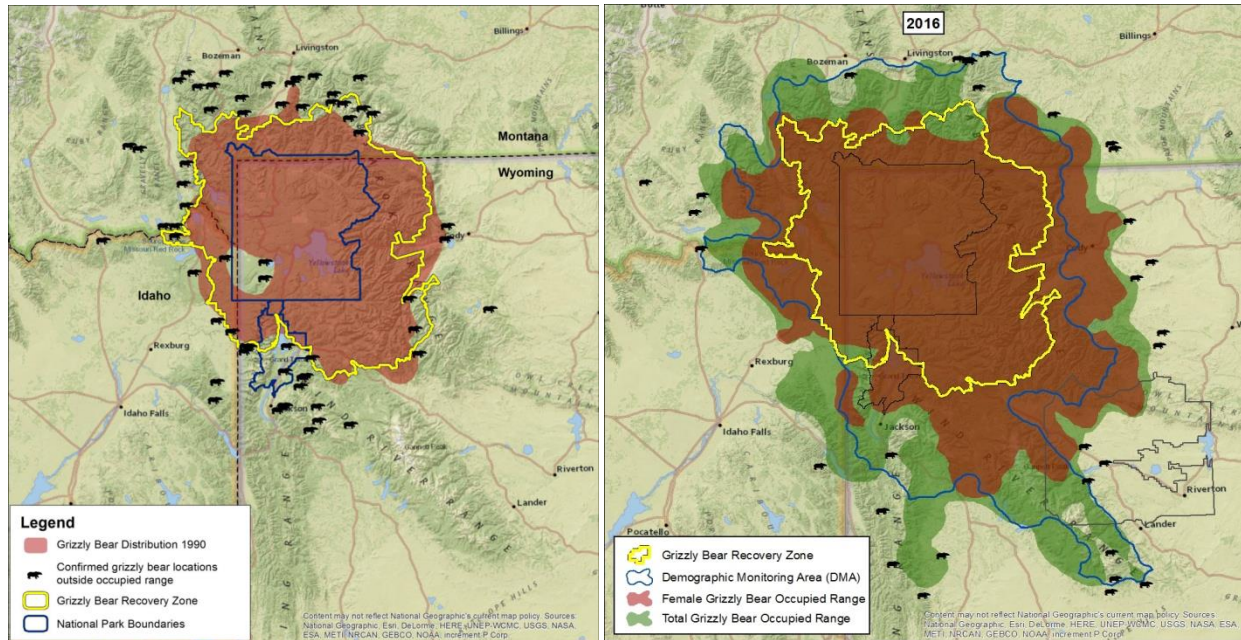
The Wyoming Greater Sage-grouse Conservation Plan (2003) established an objective of a minimum of 1,650 known occupied leks. Monitoring sage-grouse population trends requires knowledge of the location of all or most leks along with the average number of males attending the leks each year. While it is presumed the location of most leks is known, new leks are discovered each year. The numbers of inactive and unoccupied leks has increased due to continued habitat disturbance and fragmentation primarily associated with increasing human infrastructure (subdivisions, roads, power lines, gas wells, compressor stations, etc.) and the associated activity. These impacts continue to be documented and quantified by research in Wyoming and this research informs new decisions on best solutions to mitigate impacts.

The plan also established an objective of an average of 28 male sage-grouse/lek, not to fall below 10 males/lek during cyclical lows. The average number of male sage-grouse observed on leks also indicates population trend if the number of leks is stable. From 1999-2003, the number of known occupied leks increased due to increased monitoring effort. At the same time, the average number of males observed decreased, believed to be in large part due to drought, but also due to increasing disturbance and fragmentation. Monitoring and research suggests sage-grouse populations cycle, similar to rabbits where populations increase and decline regularly over time. While overall numbers vary over time, the trend is positive when comparing information from 1996 to present. The information and analysis that inform Sage-Grouse Management Plan development and implementation is possible because of state led wildlife management.

Collaboration and partnership between states is another benefit of our current model where sage-grouse management is handled by states. Wyoming Game and Fish Department personnel worked with the North Dakota Game and Fish Department, Utah State University researchers, and others to capture and translocate 60 sage-grouse from Wyoming to North Dakota in an effort to prevent extirpation of the North Dakota population. The effort will be repeated in 2018 and researchers will determine not only the success of the translocation, but the effects of translocation on the source population in Wyoming. This study is part of a larger collaborative effort involving translocation projects in Utah, California, and Nevada. As expected, translocated sage-grouse move long distances and suffer high mortality. However, successful reproduction has been documented. Additional translocations are scheduled for 2018.

Grizzly Bears

By many accounts, the biggest conservation success story in North America is the successful recovery of the grizzly bear in the Greater Yellowstone Ecosystem. In 1975, there were as few as 136 bears in this population. Using an ultra-conservative population estimate used by three states and the USFWS, there were over 700 bears in the ecosystem at the end of 2017. More accurate estimates put the population between 1000 and 1200. Today, grizzly bears have expanded to all suitable habitats and have saturated the core habitats in the ecosystem. Grizzly bears have started to occupy less than suitable habitats on the fringes of the ecosystem, further demonstrating their successful recovery.



Grizzly bear occupancy in 1990

Grizzly bear occupancy in 2016

The Wyoming Game and Fish Department has invested enormous fiscal and personnel resources to monitor and manage grizzly bears over a period of decades. Since 1980, the Wyoming Game and Fish Commission has invested over \$50 million in grizzly bear recovery—more than any other single entity. Those funds have been used to monitoring the status of the population, conducting radio telemetry and observation flights, monitoring food sources, handling conflicts between humans and bears, enforcing laws and conducting an extensive public information campaign. In recent years, annual costs of the Department’s grizzly bear program have approached and exceeded the \$2 million mark. These funds are derived primarily from hunting and fishing license sales and federal excise taxes (Pittman-Robertson Act Funds). In 2005, the Department also began implementation of the Wyoming Bear Wise Community Program. Although efforts were focused primarily in the initial demonstration area, the Department also initiated a smaller scale project in the Jackson area to address the increased frequency of black and grizzly bear conflicts. For the past 10 years, the Wyoming Bear Wise Community programs in the Cody and Jackson areas have been effective at educating the public, minimizing human-grizzly bear conflicts, and promoting safe practices for those working, living and recreating in grizzly bear country. Although challenges remain and vary among communities, progress is expected to continue as the Wyoming Bear Wise Community Program effort reaches more people. In an effort to broaden the program, the Department branded this work as the “Bear Wise Wyoming Program” beginning in 2013. This rebranding was in response to increasing distribution of grizzly bears and the realization that interest in Wyoming’s grizzly bears has broadened to statewide, national, and even international scales.

Soon after listing of the grizzly bear occurred under the ESA, a team of scientists and bear managers from Montana, Idaho, Wyoming, the USFWS, and the USGS (research arm of the USFWS) formed a team later identified as the Inter-agency Grizzly Bear Study Team (IGBST). This team used science to develop a recovery plan for the Yellowstone Grizzly Bear population

that was modified over time as the team conducted research and learned more about grizzly bear ecology. Today, the grizzly bear is one of the most studied animals in the world. The science developed by this group as well as other scientists was used to finalize the recovery criteria that are in effect today. These include:

- At least 500 individual grizzly bears to ensure genetic diversity
- Reproducing females across the entire ecosystem (at least 16 of 18 bear management units occupied by reproducing females)
- Mortality limits below established limits by age and gender class and at least 600 individual grizzly bears in the demographic monitoring area (DMA)

These recovery criteria have been met or exceeded for over 15 years. Despite the phenomenal success with the bear population, it remains under federal management under the ESA. In 2007, the USFWS delisted grizzly bears in the Greater Yellowstone Ecosystem. A federal judge reinstated protections in 2009 after finding that the USFWS did not adequately consider the impacts of the decline of whitebark pine nuts— a grizzly bear food source. In 2013, the IGBST determined that the reduction in whitebark pine nuts did not significantly affect grizzly bears and again recommended delisting. In 2017, the USFWS published a rule delisting grizzly bears in the Greater Yellowstone Ecosystem. States gave additional assurances regarding long-term viability. Wyoming, Idaho and Montana adopted Grizzly Bear Management Plans and entered into a memorandum of agreement regarding the allocation of discretionary mortality. Wyoming also conducted significant public outreach regarding public desires for state-led management. In May of 2018, the Wyoming Game and Fish Commission and the Idaho Fish and Game Commission approved conservative and tightly regulated hunting seasons to begin in the fall of 2018.

Since the early 20th century, regulated hunting has played an instrumental role in the recovery and health of wildlife populations. Regulated hunting is not only a pragmatic and cost effective tool for managing populations at desired levels, it also generates public support, ownership of the resource, and funding for conservation as well as greater tolerance for some species such as large predators that may cause safety concerns and come in conflict with certain human uses. Hunting has been used in Montana, Idaho and Wyoming, as well as many other states, to effectively manage other large carnivores like gray wolves, black bears and mountain lions. Today, populations of these large carnivores are thriving by all scientific and qualitative measures.

On September 24, 2018, a Federal District Court Judge in Montana vacated the 2017 rule promulgated by the USFWS that ended ESA protections for grizzly bears in the Greater Yellowstone Ecosystem. Effective immediately grizzly bears are again listed as threatened under the ESA. Accordingly, the grizzly bear hunting season in Wyoming authorized for this fall is not able to go forward. The court listed the grounds for reversal of the delisting decision as follows:

- I. The Service did not fulfill its duties under the ESA because it failed to analyze the threat posed by the Final Rules outside of the Greater Yellowstone ecosystem.

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- A. In the Final Rule, the Service designated the Greater Yellowstone grizzly as a distinct population segment consistent with its long-standing policy.

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- B. The Service violated the ESA under the standards set forth in the APA by delisting to the Greater Yellowstone segment without analyzing the impact of delisting on other continental grizzly populations.

...

- II. The Service's failure to require a recalibration provision in the Conservation Strategy is arbitrary and capricious.

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- A. The Service did not act arbitrarily and capriciously in relying on the states' commitment to manage mortality.

...

- B. The Service acted arbitrarily and capriciously by determining that the final Conservation Strategy need not provide for a recalibration mechanism.

...

- III. The Service's determination that it need not provide for either natural connectivity or translocation is contrary to the best available science.

Crow Indian Tribe et al v. United States of America et al., CV 17-89-M-DLC (D. Mont. Sep. 24, 2018).

Wyoming citizens are extremely frustrated by this decision and the resulting transfer of management authority back to the federal government. This decision is proof positive that the Endangered Species Act is in need of reform.

Black-Footed Ferrets

For over three decades, the Wyoming Game and Fish Department has worked in collaboration with the U.S. Fish and Wildlife Service, state and federal agencies, and private landowners to ensure that populations of black-footed ferrets continue to succeed in the wild, both in Wyoming and throughout the historical distribution of the species. The Department and the State of Wyoming remain committed to the recovery and conservation of the ferret, and efforts continue today within the state toward the ultimate goal of recovering this native species.

The ferret was first listed as endangered under the Endangered Species Preservation Act in 1967, and recovery of the species is under the jurisdiction of the USFWS in collaboration with the 12 western and midwestern states within the historical distribution of the species (Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming).

The recovery and conservation of the black-footed ferret shares a unique history with Wyoming, as the state represents the home of both the rediscovery of the species, thought to be extinct as recently as 1981, and the first and longest surviving reintroduction site.

In 1981, a fortuitous event occurred that irrefutably saved the ferret from extinction and initiated one of the most successful wildlife conservation stories in history. On September 26, 1981, a rancher's cattle dog brought the carcass of a weasel-like animal to the doorstep. A local taxidermist identified the species as a ferret, and soon thereafter biologists discovered a population of ferrets in the surrounding area. On the Lazy BV Ranch, 20 miles west of Meeteetse, Wyoming, the family of John and Lucille Hogg soon learned that their lands supported the last remaining population of ferrets in the world. This discovery forever linked the conservation and recovery of this rare species to Wyoming. As word of this remarkable find spread, biologists from multiple wildlife agencies and organizations convened in Meeteetse to study the newly discovered population. Efforts were led primarily by the Department and the USFWS. In 1982, population estimates suggested that at least 61 ferrets were distributed on the Lazy BV and neighboring ranches, including the Pitchfork and 91 Ranches. By 1984, the population reached 129 individuals. In May 1985, the Department and the USFWS decided to capture a subset of the population to place into a captive breeding program to propagate the species. Six individuals were captured and placed into captivity at that time.

Before the first ferrets were released in 1991, the Department and the USFWS established what is known as a "10(j) rule" throughout the proposed Shirley Basin Reintroduction Area. This rule — a designation under the Endangered Species Act — allows a listed species to be considered a nonessential experimental population within a specific area. This special designation removes the penalties associated with accidental take such as harming or killing of ferrets while conducting an otherwise legal activity. The assurances of the 10(j) rule were critical to the ferret reintroduction effort; they not only helped pave the way for landowners to voluntarily accept an endangered species onto their property, but they also allowed landowners to play a leading role in species recovery efforts without fear of violating the ESA or disrupting their ranching operations. Because of the need to establish more reintroduction sites throughout North America, the Department started to consider additional release sites in the state. Given the assurances granted to private landowners by the 10(j) rule, Wyoming proactively asked USFWS to expand the 10(j) designation to the entire state. The Department and other state and federal agencies engaged interested stakeholders in developing a public outreach strategy to establish support for the expanded designation. As we hoped, many landowners came forward and asked to have ferret populations established on their land, including the Lazy BV and Pitchfork Ranches. When the USFWS approved the expansion of the rule in late 2015, the path opened up to releasing the previously extinct ferrets on the lands where they were rediscovered.

Following the reintroduction in July 2016, the Department returned to Meeteetse that fall to conduct post-release monitoring. To determine how many ferrets survived their first months in the wild, we followed the same protocol—multiple sets of three consecutive nights of spotlight surveys—that had been used for over two decades to monitor ferrets at the Shirley Basin Reintroduction Area and other reintroduction sites across the West. In total, the monitoring team, consisting of state and federal agency personnel and volunteers, conducted 224 survey hours over 8,600 acres of prairie dog colonies, including areas outside of the originally mapped

reintroduction area. Out of the 35 ferrets released, we located 19 (54%). All the released animals had embedded microchips (for radio telemetry work), and we were able to determine that they moved 1.5 kilometers on average and a maximum 5 kilometers. Given these rather large distances and the fact that spotlight surveys inherently do not detect 100% of a population, we are confident that more ferrets likely survived on the Meeteetse landscape than were documented. In fact, these results are quite remarkable and suggest that the Meeteetse ferrets are off to a strong start and on their way to becoming an established population. The post-release survival rates of this group are among the highest reported for all reintroduction sites, which are typically less than 50%.

As of 2017, two populations of ferrets have been re-established in Wyoming: the Shirley Basin/Medicine Bow Reintroduction Site and the Meeteetse Reintroduction Site. Both of these populations contribute toward the recommendations and state-specific population targets for Wyoming set forth by the USFWS in the 2013 Recovery Plan. In addition, site-specific management plans have been created outlining the Department's strategies and goals specific to each reintroduction site.

By all accounts, black-footed ferret conservation efforts have been a resounding success. From 18 ferrets, representing eight genetic founders, approximately 300 individuals now live in the wild, with breeding facilities across the United States providing 150 to 220 more kits annually for reintroduction efforts. However, there is still work to be done. With continued landowner support and participation, the Department plans to release captive-bred ferrets in the Meeteetse area to supplement the established wild-born population. Monitoring efforts will also continue for both ferrets and the prairie dog populations on which they rely. While not surprising, recent confirmation that prairie dogs in the Meeteetse area are challenged with sylvatic plague means that additional disease management strategies will be needed, including dusting the area with insecticide, deploying newly emerging vaccine treatments, or both. In fact, sylvatic plague and a lack of suitable reintroduction sites remain the biggest hurdles to ferret recovery nationwide. With the collaborative framework among state and federal agencies and private landowners and a statewide 10(j) regulation in place in Wyoming, the Department is well prepared to tackle these challenges. Numerous partners have helped provide funding and personnel for continued plague control efforts at Meeteetse, and the multi-agency Wyoming Black-Footed Ferret Working Group is currently developing a statewide management plan for ferrets that will provide recovery objectives, management strategies, and a framework to evaluate additional reintroduction sites in the state. Certainly, black-footed ferrets in Meeteetse have had a long road to recovery. Although the work is far from done, it is reassuring to know that ferrets have finally returned to their last known native home and are fulfilling the role on the landscape that has been vacant for the last 30 years.

Northern Rocky Mountain Gray Wolf

The Endangered Species Act was signed into law in 1973 and the Northern Rocky Mountain gray wolf subspecies was immediately added to the list as an endangered species. In 1978, the USFWS listed all wolves in the lower 48 states under the ESA. Recovery planning in the northern Rocky Mountains began as early as the mid-1970s and by the 1980s several drafts of recovery plans were circulated for public comment. In the early 1990s, an Environmental Impact Statement was prepared for gray wolf releases in Yellowstone National Park and central Idaho.

Gray wolves were reintroduced in Wyoming in 1995 and 1996 in Yellowstone National Park. The Gray Wolf Recovery Plan identified clear and measurable recovery criteria that called for 30 breeding pairs and 300 wolves between the three states of Idaho, Montana, and Wyoming (with 10 breeding pairs and 100 wolves in each state) and genetic interchange between the sub-populations in all three states. Those criteria were met in 2002 and in 2003. The USFWS began to prepare for delisting by issuing a notice of intent to delist. This was followed by years of litigation and disagreements between the states and the USFWS with challenges over state management plans and the establishment of Distinct Population Segments (DPS). Following a 2008 court decision that dismissed a challenge to Wyoming's Wolf Management Plan, the USFWS determined gray wolves no longer needed the protections of the ESA and delisted the Northern Rocky Mountain population.

Environmental litigants immediately challenged the delisting rule and were successful in convincing a district court judge to enjoin the rule, effectively stopping state management. The court ruled that the USFWS failed to show evidence of genetic interchange and that it relied on Wyoming's flawed wolf management plan. The court concluded that Wyoming's wolf plan failed to commit to managing for at least 15 breeding pairs, despite the fact that the recovery plan required only 10. Additionally, the court found Wyoming's plan to manage wolves with dual legal status to be problematic.

In 2009, the USFWS published a new rule establishing the Northern Rocky Mountain DPS and delisting that DPS with the exception of Wyoming. The USFWS stated that Wyoming's plan was not sufficient to ensure a recovered population. In 2010, a federal judge vacated the 2009 rule on the basis that the USFWS could not delist only a portion of a DPS. The court also disagreed with the USFWS assertion that Wyoming's dual status plan was insufficient.

In 2011, Congress intervened by initiating the USFWS 2009 delisting rule which reinstated state management of wolves in Montana and Idaho. This was challenged by environmental litigants, but held as constitutional by the courts. Wyoming entered into discussions with the USFWS which culminated in an agreed upon path forward for delisting in Wyoming. The agreement established 10 breeding pairs and 100 wolves as the minimum threshold Wyoming would manage for outside of Yellowstone National Park and the Wind River Reservation. The state also agreed to provide a "flex" zone where management would encourage wolf movement to other sub-populations to help facilitate genetic interchange. Wyoming agreed to manage for a buffer above this threshold through an addendum to their wolf management plan. In September of 2012, the USFWS issued a final delisting rule and Wyoming took over management of its wolf population for the second time. At this time, the wolf population in Wyoming includes at least 328 wolves with 27 breeding pairs.

All three states manage wolves well above the minimum recovery criteria. The state fish and wildlife agencies conduct biological monitoring to track population trends, assess genetic interchange and ensure that the populations remain far above minimum recovery levels. Additionally, all three states initiated well-regulated hunting and manage wolves that cause damage to private property. Following 2 years of state management in Wyoming, the wolf population continued to thrive and remain far above recovery criteria. At the end of 2013, Wyoming's population included at least 306 wolves in 43 packs with 23 documented breeding

pairs. Wolves were legally harvested in areas defined by both legal statuses and populations continued to thrive.

In 2012, following delisting in Wyoming, environmental litigants filed suit again challenging the USFWS decision. On September 23, 2014 (seven days prior to the opening of the annual hunting season), a Washington D.C. Federal District Court Judge vacated the USFWS rule delisting wolves in Wyoming. The court found no fault in the Wyoming's dual status management scheme or their genetic connectivity analysis. The court concluded the population was recovered, but that Wyoming's "nonbinding and unenforceable representations" to manage for a population above 100 wolves and 10 breeding pairs was not adequate. This conclusion by the court regarding the enforceability of a commitment to manage above recovery criteria was the basis of the court's decision to vacate.

The USFWS appealed this decision to the Washington, D.C. Circuit in 2015. In March of 2017, the appellate court overturned the District Court decision, which effectively returned state management to the state of Wyoming. The Wyoming Game and Fish Department has now reinitiated wolf management activities for the third time and the Wyoming Game and Fish Commission continues to consider new regulations.

Wyoming has contributed in spades to the recovery of this species and has managed gray wolves using sound scientific principles at those times when the state had authority to do so. The state has made significant commitments to maintaining a healthy, viable, and sustainable population of gray wolves into the future, both through its actions and the adoption of effective and responsible regulatory mechanisms. Wyoming citizens have been extremely patient while the USFWS and the courts have wrestled with the status of a recovered population of wildlife within Wyoming's borders for over 15 years. Their patience is waning quickly and the citizens of the state are ready for predictability and commitments that ensure state management into the future.

The state has demonstrated skill and competence in managing gray wolves in an adaptive manner over the two years the state has had management authority. During the period of October of 2012 to September 2014, Wyoming's wolf population thrived and remained far above recovery criteria. In fact, wolf populations and the number of breeding pairs occupying suitable habitats remained over 70% above the minimum requirements of the ESA recovery plan criteria of 100 wolves and 10 breeding pairs. Management included biological monitoring, regulated hunting, and livestock damage control actions.

Wyoming citizens invested in wolf recovery then and now by compensating livestock producers who experienced significant losses to wolf depredation. This compensation program existed while wolves were listed and will continue into the foreseeable future. In 2017, Wyoming livestock producers were compensated \$390,000 (increase of \$80,000 from previous year) for cattle and sheep losses attributed to wolves. In 2018, livestock producers have been compensated \$399,271. Wyoming is home to a diversity of wildlife species including many that cause damage to private property such as elk, mule deer, Canada geese, mountain lions, black bears, grizzly bears and antelope. Gray wolves caused 37% of all damage compensation in the state in 2017. Gray wolves have caused 34% of all damage in 2018.

During periods of time when the state had management authority, a primary management goal was directed at reducing human conflicts and the number wolves that were required to be removed through agency action. During the two years when Wyoming managed the population, there was an average of 35 wolves removed by the agency consequential to livestock damage. Last year federal managers removed at least 113 wolves through control actions in response to livestock depredation.

At the end of 2017, the gray wolf population in Wyoming remained above minimum delisting criteria; making 2017 the 16th consecutive year Wyoming has exceeded the numerical, distributional, and temporal delisting criteria established by the USFWS. At least 347 wolves in ≥ 53 packs (including ≥ 23 breeding pairs) inhabited Wyoming on December 31, 2017. Of the total, there were ≥ 97 wolves and ≥ 11 packs (including ≥ 3 breeding pairs) in Yellowstone National Park, ≥ 12 wolves and ≥ 2 packs (≥ 1 breeding pair) in the Wind River Reservation, and ≥ 238 wolves and ≥ 40 packs (including ≥ 19 breeding pairs) in Wyoming outside Yellowstone National Park and the Wind River Reservation.

Due to successful recovery and delisting, new opportunity arose in Wyoming to hunt wolves. In 2017, the Department instituted a wolf hunting season with the biological objective to reduce the wolf population by approximately 24% in the Wolf Trophy Game Management Area. A mortality quota of 44 wolves was divided between 12 hunt areas in Wyoming. A total of 43 wolves were legally harvested during the hunting season.

Wolves were confirmed to have killed 194 head of livestock (113 cattle and 81 sheep) and one dog statewide in Wyoming in 2017. An additional five cattle were injured by wolves but survived. Of the 29 packs involved in at least 1 depredation statewide, 21 packs were involved in at least 2 depredations and 19 packs were involved in at least 3 depredations. Control efforts lethally removed 62 depredating wolves statewide in an effort to reduce livestock losses due to wolves. A combined minimum of \$528,328 was spent on wolf damage management in Wyoming by Wildlife Services (\$216,714) and livestock depredation compensation by the State of Wyoming (\$311,614) in 2017. The State continues to work with livestock owners to prevent damage and compensate for losses by wolves.

Invasive Species

Aquatic Invasive Species (AIS)

The Wyoming AIS program is funded through Game and Fish license sales and from monies generated from the sale of the mandatory AIS decal required of all watercraft before launch. Decal revenues are used to offset the amount of money from license fees. The total AIS program budget for fiscal year 2018 was \$1.3 million. In 2017, 45,070 decals were sold resulting in receipt of \$707,650. Of the resident motorized decals sold, 7,431 (\$222,930) were three-year decals. Sales of resident and nonresident, nonmotorized decals increased from 2016. From 2016 to 2017, the number of decals sold increased by 1,792, resulting in an increase in sales of \$41,170. Personnel in 2018 include one permanent coordinator, five 12-month contract Regional AIS Specialists, three 9-month contract Regional AIS Specialists, and 45 seasonal technicians (38 funded through the state's general fund; three funded by the Forest Service funded; and four funded by the USFWS).

In 2017, watercraft check stations were operated from April 29 through September 17 at fourteen permanent check stations at port of entries, rest areas, and other border locations to intercept watercraft entering the state. Roving crews also conducted inspections at waters on a rotating basis. 46,164 watercraft inspections were conducted over 212 days, resulting in 28,438 individual boaters being contacted at all check stations. 3,659 high-risk inspections were conducted and 706 watercraft required decontamination. The majority of decontaminations (75%) were performed on watercraft with standing water in the motor. Nine watercraft were intercepted with suspected zebra or quagga mussels attached and were completely decontaminated; on all watercraft the suspect AIS were determined to be dead and not viable. Suspect mussel infested watercraft originated from Lake Michigan, WI (2 watercraft); Lake Winnebago, WI (1); Lake St. Clair, MI (1); Lake Minnetonka, MN (1); Lake Powell, UT (1); Milford Lake, KS (1); and unnamed positive waters in Illinois (1) and Wisconsin (1).

No zebra or quagga mussels were detected by plankton tow monitoring or shoreline surveys in 2017. Current AIS populations in Wyoming include New Zealand mudsnails, Asian clam, rusty crayfish, and curly pondweed. New populations of Asian clam were found in Keyhole Reservoir in 2017.

Annual sampling of existing populations of invasive species in Wyoming is conducted to monitor known populations and determine whether populations have spread. Asian clams were first detected in the Laramie River in 2011. Asian clams were found at Tunnel Road, Monolith and Jelm access points to the river. In 2013, surveys found the highest concentration of Asian clam at Monolith, as far away from the access as one-half mile upstream. Additionally, Asian clams were observed at the Tunnel Road Bridge. Asian clams were also detected in the main stem of the North Platte River in 2013, downstream from Guernsey Reservoir. Asian clam shells were found near Optimist Park access point, however, no live clams were found there and the shells were sparsely distributed. In 2017, Asian clam were found in Keyhole Reservoir and Guernsey Reservoir just upstream of the dam. Brook stickleback are currently widespread throughout Wyoming's warmer water streams.

Curly Pondweed was first found in Wyoming in 2011 in Lake DeSmet. It was subsequently found in additional waters including Keyhole and Boysen Reservoirs. Curly pondweed was also detected in the North Platte River between KorteZ Reservoir and Pathfinder Reservoir, a section of river called the Miracle Mile, and at New Fork Lake at the constriction between upper and lower New Fork Lake. Curly pondweed was detected in the Shoshone River for the first time in 2014. New Zealand mudsnails were first found in the Snake River in 1999. This population persists, and populations have since been found in Polecat Creek, Bighorn River, Shoshone River, and Lake Cameahwait. Rusty crayfish were first found in Wagonhound Creek, a North Platte River tributary, in 2006. Several eradication efforts have been conducted since that time. The North Platte River was sampled for crayfish above and below the confluence with Wagonhound Creek in 2014 and no crayfish were detected. Sampling in 2016 near the North Platte River confluence did not find any evidence of rusty crayfish.

Cheatgrass

Cheatgrass has become more prevalent throughout the arid West, and nearly all of Wyoming's diverse habitat types have been impacted to some degree, excluding some high elevation habitats

(alpine, sub-alpine). The invasion by this annual grass has far-reaching impacts for management of wildlife habitat, agricultural lands, and the wildland/urban interface. Forage quality and quantity is negatively impacted (nutritional content, nesting, hiding and fawning/calving cover), and potential wildfire frequencies are increased. Animal performance can be negatively impacted due to injury (eyes, mouth, nose, ears, and feet) caused by seed awns as well. The presence of cheatgrass ties the hands of habitat managers, as it can severely restrict tools available for habitat improvement, most importantly prescribed or managed wildfire which have historically been one of the most cost-effective methods to rejuvenate mixed mountain shrub communities, and create mixed age classes of timber and shrubs that fulfill nutritional and cover requirements of big game species. Managing cheatgrass has proven to be a costly endeavor. Collectively, managers of rangelands and croplands have tried numerous methods to date, with very mixed results. Ruggedness of terrain and remoteness of infested sites further complicates implementation, increases expenses, and can limit control techniques that may be implemented. In many cases, a single treatment does not appear to be sufficient to provide long-term control of cheatgrass.

Wildlife Habitat Management

Strategic Habitat Plan

Habitat management remains a high priority for the Wyoming Game and Fish Department. The Strategic Habitat Plan (SHP), which was first approved by the Wyoming Game and Fish Commission in 2001, is testimony to the importance of habitat management. The SHP defines how the Department will strive to meet its mission of Conserving Wildlife and Serving People by working together with external partners to conserve and improve habitats. The SHP is updated in five year increments and has remained the cornerstone of habitat management in the state. In 2017, our SHP helped direct restoration, monitoring, and enhancement activities in Wyoming aimed at improving 124 stream miles and over 700,000 acres of terrestrial habitats including planting nearly 37,000 native trees and shrubs.

Aquatic Habitat Program

The Aquatic Habitat Program works to protect, restore and enhance Wyoming's water, watersheds, and waterways. During 2017, the aquatic habitat section was involved in 37 projects involving funding from the Game and Fish Trust Fund, the Department's fish passage budget, the Wyoming Wildlife Natural Resource Trust (WWNRT), USFWS, Wyoming Landscape Conservation Initiative, and other sources. These partners provided over \$1.27 million toward aquatic habitat projects. Department aquatic habitat dollars spent on contracts or grants in 2017 totaled over \$510,000. The number of on-going aquatic habitat projects involving significant funding (37) has been similar the last five years with project numbers ranging from 37 to 42. This level of project management and engagement likely represents a maximum effective level given the number of full-time permanent aquatic habitat biologists engaged in project management.

Terrestrial Habitat

During 2017, Terrestrial Habitat Program was heavily involved with on-the-ground implementation and oversight of 52 projects using Department trust funds and funds granted to

the Department from sources such as the WWNRT, various conservation organizations, local, county, state and federal agencies, conservation districts, weed and pest districts, private landowners, and others. These sources provided approximately \$2,687,400 for implementation of on-the-ground terrestrial habitat projects.

In 2017, Terrestrial Habitat personnel continued to refine and implement a new inventory and assessment methodology for the Department. “Rapid Habitat Assessments” are a landscape level assessment that will be used to help inform mule deer objective reviews as well as provide baseline data for habitat conditions statewide.

Wyoming Landscape Conservation Initiative

The Wyoming Landscape Conservation Initiative (WLCI) is a long-term, science-based effort to assess and enhance aquatic and terrestrial habitats at a landscape scale in southwest Wyoming, while facilitating responsible development through local collaboration and partnerships.

The WLCI had a successful year working with partners. The WLCI found itself operating on a reduced budget; however, the initiative was able to fund many projects through unobligated funds from other BLM sources. In 2017, WLCI allocated \$623,000 to 23 projects and estimated WLCI partner contributions were about \$5,250,000. In other words, for every dollar WLCI contributed, project proponents had \$8.42 in matching funds. These projects and associated activities were accomplished through numerous coordination meetings, field trips, and work sessions. WLCI members met with NGOs, permittees, private landowners, other agencies, and other entities to coordinate WLCI activities. The 23 projects encompassed all but one of WLCI’s focus communities: aspen, mountain shrub, riparian and sagebrush. Eight projects addressed control of invasive species. Six projects involved erecting wildlife friendly fencing to reduce barriers along pronghorn and mule deer migration corridors or involved steel jack fence to protect riparian vegetation. Three projects in riparian communities included stream enhancements, riparian tree and shrub plantings, and improving fish passage by replacing a push-up diversion and installing a new irrigation diversion structure. Three other projects enhanced the sagebrush ecosystem through juniper removal. WLCI funded two projects within aspen communities. Both projects removed conifers through mechanical means. This was the final year for the Sibert Ecosystem Services Project, which was a “pay for performance” type project. The landowner reduced stocking rates, left portions of hay meadows uncut, planted riparian vegetation, and applied herbicide to improve habitat primarily for mule deer and sage-grouse.

The Mule Deer Initiative

Following several decades of declining statewide mule deer numbers, the Department in 2007 implemented the Wyoming Mule Deer Initiative (MDI) in two key deer herds. The MDI focuses on collaborative public involvement processes to develop local management plans to address site-specific population and habitat issues. Based on the success of the initial public outreach efforts, the Department expanded the MDI to eight additional priority deer herds in 2015 across Wyoming. Increased resources and focus have been invested by the Department, Commission and the public to develop future management recommendations for these high priority deer herds. Public participation efforts have ranged from local working groups to strategically place-based collaborative workshops.

In July 2015, the Commission unanimously voted to make a significant investment in projects intended to benefit local mule deer populations. Regional working groups were formed to develop projects that enhance mule deer populations and the habitat that support them. The Commission approved funding of up to \$2.5 million dollars over a five-year period to support projects derived from this effort. The intent of this investment is to serve as seed money for local mule deer projects identified through the MDI process.

In 2016 and 2017, seventeen projects were approved, targeting over 29,000 acres for on-the-ground mule deer habitat projects. The Commission investment of nearly \$1 million to date was matched with approximately \$7.6 million from project partners. Matching project dollars ranged from 5 to 8 dollars for every dollar invested by the Commission. Projects have ranged from cheatgrass and juniper control, aspen rejuvenation and sagebrush thinning treatments to mule deer collaring studies evaluating migration corridors and habitat use.

Ungulate Migration Corridor Strategy

The advancement in Global Positioning System (GPS) technology has enabled the Department to utilize radio-telemetry data collected from collared big game to more precisely document animal movements across the landscape. Over the past several years, the Department has utilized GPS technology to aid in quantifying length and width of big game movement corridors as well as identify important habitats within these corridors. Following GPS data analysis and designation of migration corridors, wildlife managers develop migration corridor assessments to evaluate risks, existing land use prescriptions, appropriate management actions and additional data needs. The overarching goal of the assessments is to collaboratively engage with stakeholders to ensure activities planned in and around designated corridors occur in a manner that maintain habitat function and result in no significant declines in animal distribution or abundance.

The first corridor designation and associated assessment was completed in 2017 for the Sublette mule deer herd in western Wyoming. This corridor is the longest ungulate migration (+150 miles) ever recorded in the lower 48 states. Numerous other big game GPS radio-telemetry studies are underway or recently completed and further migration corridor designations and assessments will be forthcoming throughout Wyoming to aid the Department in proactive management actions for big game populations in the state.

The Future of Wildlife Management

The North American Model of Wildlife Conservation has facilitated the form, function, and successes of wildlife conservation and management in Wyoming. Wildlife management decisions are best made by those who live, work, and recreate closest to the resource. These decisions are best implemented by state wildlife managers who spend lifetimes studying wildlife and building relationships with the citizens who own those wildlife resources. While there are significant challenges to managing certain species and habitats, state wildlife management agencies are the best to address those challenges, just as Wyoming has done with the Greater Sage-Grouse (and their habitats), Black-footed Ferrets, Grizzly Bears and Gray Wolves. It is also worth noting the dozens of wildlife that faced challenges nearly 100 years ago that were brought back to strong populations thanks to citizen conservationists, thoughtful political leaders,

and the state wildlife management agencies. These species include mule deer, moose, elk, pronghorn antelope, and many more.

The 50 state wildlife agencies own, manage, or administer wildlife conservation on more than 464 million acres of land and 167 million acres of lakes, reservoirs, wetlands, and riparian areas. State wildlife agencies employ nearly 50,000 employees and leverage the efforts of 190,000 volunteers. Collectively, state agencies have 11,000 degreed wildlife biologists, 10,100 law enforcement officers, and nearly 6,000 employees with advanced degrees. Annually, state wildlife agencies contribute more than \$5.6 billion to conservation through their collective annual budgets. The contribution of the 50 state fish and wildlife agencies is enormous and integral to wildlife conservation in North America.

State fish and wildlife agencies have a long history of success in restoring many species, both game and non-game. It has long been recognized that the traditional focus of state fish and wildlife agencies has been on the conservation of game species, and that more attention and funding should be directed towards the conservation of non-game species. This need has been the impetus for the development of “State Wildlife Action Plans” (SWAPs) and the State Wildlife Grants (SWG) program. The SWAPs are comprehensive strategies designed to maintain the health and diversity of wildlife within a state including preventing the need for the listing of new species under the Endangered Species Act. Wyoming’s first SWAP was completed in 2005. This plan was revised and approved by the Wyoming Game and Fish Commission in January 2010 and later approved by the USFWS in July 2011. Developing a SWAP is required in order to receive funding through the federal SWG program. The intent of the SWAP is to not only direct the Wyoming Game and Fish Department’s activities, but also to serve as a guide for the combined efforts of government agencies, conservation organizations, academia, tribes, and individuals in conserving Wyoming’s Species of Greatest Conservation Need (SGCN). The 2017 SGCN list identifies 229 SGCN. This includes 80 birds, 51 mammals, 28 fish, 9 amphibians, 24 reptiles, 8 crustaceans, and 29 mollusks. In the 2010 SWAP, 180 species received the SGCN designation. The 2010 SWAP list included 56 birds, 46 mammals, 30 fish, 8 amphibians, 21 reptiles, 5 crustaceans, and 14 mollusks.

The SWAPs are comprehensive strategies designed to maintain the health and diversity of sensitive wildlife. This work is critical to recover listed species and to prevent the need for the listing of new species under the Endangered Species Act. While the Endangered Species Act has contributed to the recovery and prevention from extinction for many species, it has become a major disincentive for many state-led efforts. Many re-listing decisions are made by judges and not based on science and whether or not a species has been recovered, but rather on technicalities in federal rule making. Until states are given some type of grace period to prove their capability to maintain recovery of delisted species without fear of an immediate re-listing by a federal judge, the incentive for states to invest in recovery will likely decline. Citizen support for the ESA is declining and many are frustrated by a process that appears to need overhauling.

To continue their important contribution to conservation, state agencies will need to shore up the logistical and financial underpinnings of the state conservation model. The need for new and broader funding is reflected in both recent recommendations made by the Association of Fish and Wildlife Agencies’ Blue Ribbon Panel on Sustaining America’s Diverse Fish and Wildlife Resources. The first recommendation is to secure an additional \$1.3 billion for the Wildlife

Conservation Restoration Program with existing revenue from the development of energy and mineral resources on federal lands. The second is to establish a forum that would examine the impact of societal changes on the relevance of fish and wildlife conservation and make recommendations on how to transform agencies to engage and serve broader constituencies. The first recommendation broadens participation in wildlife conservation funding. The second aims to attract a broader audience outside of our traditional customers.

States could use these funds to effectively implement their State Wildlife Action Plans (focus on species of greatest conservation need). States could also use these funds on wildlife conservation education and to help recover federally listed species under the Endangered Species Act. States could use these funds to manage, control and prevent invasive species and nuisance species as well as other threats to state species of greatest conservation need. Clearly, this additional funding would allow state wildlife agencies to do the proactive, incentive-based wildlife conservation work that we have a proven track record of success in doing.

Thank you for the opportunity to testify today and to share Wyoming's work to conserve, recover, and manage wildlife and to serve people. I am happy to answer any questions.