

Wyoming State Action Plan 2024



**Implementation of Department of the Interior
Secretarial Order 3362:
“Improving Habitat Quality in Western Big-Game Winter Range and
Migration Corridors”**

**Wyoming Game and Fish Department
October 2024**

*Conserving Wildlife
Serving People*

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INTRODUCTION

The 2024 Wyoming State Action Plan will provide an update and further guide implementation of the Department of Interior Secretarial Order 3362 (SO 3362) in Wyoming. The Wyoming Game and Fish Department (WGFD) has identified five mule deer herds to focus management actions on in the coming years in migratory and winter range habitats. The rationale for prioritization and identification of threats to the priority herds are briefly described and evaluated throughout the Plan. Each priority area has a degree of mule deer movement data from Global Positioning System (GPS) collar studies; conservation practices with partners are ongoing in each herd. The priority mule deer herds for 2024 are Platte Valley, Wyoming Range, Dubois, South Rock Springs, and North Bighorn. WGFD and partners will continue ongoing conservation efforts across the State, including in many areas outside of the 2024 prioritized mule deer herds. WGFD acknowledges that periodically evaluating mule deer herd prioritization within the State Action Plan allows for a wider variety of engaged partners and a better opportunity to leverage private and state funding.

Wyoming has a considerable amount of information on habitat use and seasonal distribution, including migration corridors, due to extensive GPS collar data. The University of Wyoming Cooperative Wildlife Research Unit and numerous partners created the Wyoming Migration Initiative (WMI), with whom WGFD has partnered on many studies. The

priority research herds for 2018 and 2019 Department of Interior (DOI) research funding included Sublette, Medicine Bow-Shirley Basin, and Carter Mountain Pronghorn and North Bighorn, Platte Valley, and Powder River and Pumpkin Buttes Mule Deer. The Dubois Mule Deer Herd recently underwent a public process to identify the area as a migration corridor. GPS collar studies in the South Rock Springs Mule Deer Herd has allowed WGFD to elevate prioritization of the Herd for 2024.

Wyoming contains approximately 62,147,200 total acres, 48% of which is under the management authority of the federal government. The Bureau of Land Management (BLM) manages 18,357,570 acres, the United States Forest Service (USFS) manages 9,237,620 acres, and the National Park Service (NPS) manages 2,393,200 acres. The United States Fish and Wildlife Service (USFWS) manages 93,040 acres, including 24,000 acres at the National Elk Refuge. Other agencies manage the remaining acres, including the Wyoming Game and Fish Commission (WGFC), which manages approximately 450,000 acres, and the State of Wyoming owns 3,696,800 acres through the Office of State Lands and Investments (OSLI). Important habitats also include private lands which are very important to wildlife. This ownership structure requires cooperative partnerships to work across all the habitat categories and ownerships for big game species.



PRIORITY CORRIDORS AND WINTER RANGES

WGFD identified five priority herds with migratory mule deer in Wyoming. These include Platte Valley, Wyoming Range, Dubois, South Rock Springs, and North Bighorn Mule Deer Herds. Managers have collected mule deer movement data in each of these

areas and are currently working with stakeholders and agency personnel to develop proactive conservation actions geared toward managing vital habitats in each of these herd units.



WYOMING MIGRATION CORRIDOR PRIORITY: PLATTE VALLEY MULE DEER

Priority Selection

Known for its complex seasonal migrations and trophy-quality bucks, the Platte Valley Mule Deer Herd is recognized for unique hunting and wildlife viewing opportunities. Delineated through GPS collaring technology and Brownian Bridge Movement Models (BBMM), the Platte Valley Mule Deer Migration Corridor was one of three corridors designated by Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order 2020-1 (Migration EO). The Migration Corridor encompasses migration routes extending from four distinct winter ranges and documents important habitats used by mule

deer migrating from high elevation summer range in Colorado to winter range in Wyoming. These complex, seasonal inter-state movements present a unique set of challenges for the Platte Valley Herd Unit. The Corridor illustrates barriers to migration caused by the development of Interstate 80 (I-80), where as of 2024, only ~400 mule deer utilize one machinery underpass for safe passage to winter range. Invasive annual grasses (IAGs), conifer encroachment, and decadent shrub communities are contributing factors in the overall decline in important mule deer habitats throughout the Platte Valley.



Platte Valley mule deer designated migration corridor.

Spatial Location

The Platte Valley Migration Corridor is located primarily in Carbon County in south central Wyoming

and leads into Jackson County in north central Colorado.

Habitat Types

Habitat types include alpine meadows, subalpine and montane forests, mixed mountain shrub, sagebrush-grasslands, cottonwood riparian, and agricultural croplands. The forests are a mix of subalpine fir, Engelmann spruce, Douglas-fir, lodgepole pine, aspen, and a few ponderosa pines, with as-

sociated grass/forb/shrub understory vegetation. Big sagebrush, antelope bitterbrush, and true mountain mahogany dominate the lower-elevation winter ranges. Elevation within the corridor ranges from over 12,000 feet at Medicine Bow Peak to 6,400 feet along the North Platte River.

Important Stopover Areas Within the Corridor

Important stopover areas have been identified through the BBMM analysis, including areas in the Encampment River Wilderness Study Area (WSA),

Beaver Hills, Bennett Peak, Baggot Rocks, Cedar Breaks, Savage Meadows, and St. Mary's Ridge areas.



Fence modification project in the Platte Valley Mule Deer Herd.

Land Ownership

Land ownership is mixed within the Migration Corridor and encompasses 196 square miles con-

sisting of: Private (50%), BLM (30%), USFS (14%), and OSLI (6%).

Land Uses

Federal lands not designated as Wilderness are managed for multiple uses. Common uses include livestock grazing, timber harvest, motorized and non-motorized recreation, and extractive and renewable energy development. Some BLM lands are designated as WSAs. Mule deer also migrate

through parcels that have been leased for oil and gas or through areas with ongoing energy development. OSLI land is managed primarily for livestock grazing. Private lands along the corridor network are primarily used for agricultural purposes and rural residential development.

Risks and Threats

The Platte Valley Mule Deer Migration Corridor Biological Risk & Opportunity Assessment outlines major conservation challenges impacting the Platte Valley Mule Deer Herd, including zoning and exurban development, barriers to animal movement, energy development, recreation, fire, and invasive species. Barriers to animal movement are among the top threats to the Platte Valley Mule Deer Migration Corridor. Increased traffic on I-80, the Union Pacific Railroad, and Wyoming Highways 30, 130 and 230 pose significant threats to migrating mule deer in the Platte Valley. Migration routes in the northern segments of the Platte Valley Migration Corridor have been altered by the construction of I-80, U.S. Highway 30, and the Union Pacific Railroad. Despite ample crossing opportunities, mule deer migrate under I-80 through a single machinery underpass where game fencing is used to direct animal movement to the structure. The Wyoming Department of Transportation (WYDOT) has documented high numbers of wildlife/vehicle collisions for mule deer, elk, pronghorn, and moose in areas along the I-80 corridor that are not game fenced.

Fence conditions are variable throughout the Herd Unit, and in many places, include woven wire fencing

or designs that pose challenges for migration. Large stretches of woven wire right-of-way fencing exist along Highway 130 and many county roads in Carbon County, creating a significant barrier to movement. While fences are necessary for livestock management, in many cases livestock class has changed from sheep to cattle - allowing for conversion away from woven wire fences.

A lack of natural disturbances in important habitats has led to decadent, late seral stage vegetation. Severe drought, invasion of noxious weeds and IAGs, and conifer encroachment into shrub and aspen communities have reduced overall habitat productivity. Several large wildfires, including the Mullen Fire (2020), have occurred over the past decade. While the fires have diversified the forest communities, increased herbaceous forage quantity and quality, and stimulated aspen growth, they have also led to a proliferation of cheatgrass. Habitat fragmentation from rural residential development, increased disturbance from off-highway vehicle recreation, and human disturbance on winter ranges (e.g. antler hunting) threaten the functionality of the southern segments of the Platte Valley Migration Corridor.

Are the Risks and Threats Immediate or Long-Term

All of the identified threats are current and will

need to be managed long-term.

Actions Necessary to Reduce or Eliminate Risks and Threats

In the northern corridor network, threats to the migration corridor could be reduced with the development of underpasses/overpasses on I-80, Highway 30, and along the Union Pacific Rail-

road. Threats to the southern portion could be reduced by maintaining open habitats on private lands through use of conservation easements and local planning and zoning.

BLM lands could provide protections for corridor and stopover habitats by implementing motorized travel management plans. Implementation of a shed antler season east of the Continental Divide has reduced human disturbance to wintering and migrating mule deer, but additional work could still be done. IAG control and vegetation manage-

ment have been implemented; however additional treatments are needed to improve foraging conditions throughout the herd unit. Fence modification efforts have begun but have great opportunity to be expanded upon, particularly with the collaborative efforts in place with other partners and several private landowners.



Juniper thinning project in the Platte Valley Mule Deer Herd.

Current Efforts

WGFD has partnered with the Saratoga-Encampment-Rawlins Conservation District (SERCD), BLM, USFS, Carbon County Weed and Pest, OSLI, and private landowners to implement vegetation management treatments targeting IAGs, juniper encroachment, shrub communities, and aspen stands. Treatments conducted by WGFD and partners have totaled over 39,500 acres since 2014. Additionally, 82 miles of fence modifications have enhanced the functionality of the Migration Corridor. Large, landscape-level treatments could be implemented on important summer and transitional range habitats through the USFS Landscape Vegetation Analysis project over the next 10 years. WGFD partners with WYDOT, SERCD,

local conservation organizations, BLM, USFS, and OSLI to influence improvements and protections where possible. Underpasses and overpasses can be cost-prohibitive for conventional funding sources, but are being evaluated with stakeholder groups and may be incorporated into future funding requests. The BLM advises they are potentially a decade away from completing a travel management plan in this area.

The Wyoming - United States Department of Agriculture (USDA) Big Game Partnership initiated in 2023 to emphasize wildlife conservation practices on private land. USDA supporting this partnership with a focused application of the Agricultural

Conservation Easement Program, Environmental Quality Incentives Program (EQIP), and Grassland Conservation Reserve Program (CRP). USDA provides support for habitat leasing through a combination of EQIP and CRP, with opportunities for partners to contribute resources. Through

this partnership, USDA programs work in a complementary way to support big game conservation. Implementation is prioritized based on areas identified by WGFD and Wind River Indian Reservation (WRIR) Tribal Leaders to be of particular benefit to big game.

Cost of Current or Needed Habitat Treatments, Road Crossings, Etc.

Large-scale habitat treatments, crossing structures, and fencing necessary to improve the Platte Valley Migration Corridors could be in excess of \$30 million. Over \$2 million has been allocated for habitat treatments, monitoring, fence modifications, and migration work in the Platte Valley Herd Unit over the last five years. At \$69/acre, treating areas infested with cheatgrass, especially those impacted

by wildfires, could cost over \$1 million. Conifer removal in riparian and aspen communities depends on a wide range of conditions, including difficulty of access, terrain, and density. Significant funding will be necessary to treat aspen stands in summer/transitional ranges and juniper encroachment into winter ranges over all land ownerships in the Platte Valley.

Other Species Impacted

Fence modification projects benefit pronghorn, elk, moose and bighorn sheep, as well as sage grouse in some places. Habitat treatments benefit a wide variety of wildlife species by directly improving forage habitat and reducing wildfire risk. Land use

planning including travel management, energy development, and planning and zoning decisions have wide-sweeping impacts by the potential to maintain open space and connected landscapes for many species.

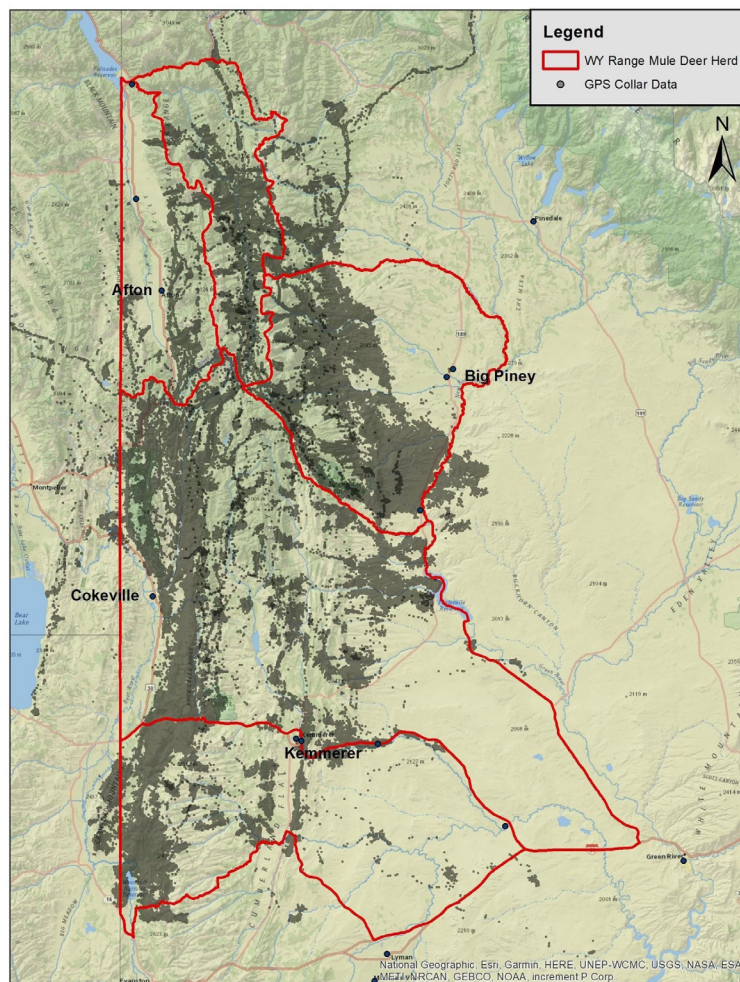


WYOMING MIGRATION CORRIDOR PRIORITY: WYOMING RANGE MULE DEER

Priority Selection

The Wyoming Range Mule Deer Herd is one of the premier mule deer populations for both hunting and wildlife viewing in the Intermountain West. This herd has complex and dynamic movement patterns, with some mule deer migrating extensive distances (150+ miles) between high elevation summer ranges to distinct winter range complexes. GPS telemetry studies demonstrate that individual mule deer have a strong fidelity to the same summer and winter ranges. WGFD will analyze GPS

collar data to identify a draft migration corridor in the future. Proactive management is necessary to ensure persistence of migration corridors as mule deer cross a mix of land ownership and land-use patterns. The Herd experienced a significant winter mortality event in 2022-23, killing over 50% of adults and nearly all the fawns. Conservation work to provide the Herd Unit the best opportunity for recovery is a significant priority for WGFD and partners.



GPS collar data collected in the Wyoming Range Mule Deer Herd

Spatial Location

The Wyoming Range Mule Deer Herd migrates up to 150 miles between seasonal ranges across west-

ern Wyoming, southeastern Idaho, and northeastern Utah.

Habitat Types

Mid to high elevation summer ranges include alpine basins, spruce-fir forests, aspen stands and mountain meadow/tall forb communities. Fall/transition areas at slightly lower elevation contain mountain big sagebrush, mixed conifers, aspen, and riparian communities. Lower elevation foothill and basin habitats are typified by Wyoming and mountain big sagebrush communities, interspersed with areas of antelope bitterbrush and mixed-mountain shrubs.

Sagebrush dominated winter range habitats are primarily located along the southern and southeastern flanks of the Wyoming Range and include some juniper, isolated aspen stands, and limited acreages of antelope bitterbrush. Much of the winter range habitats are sagebrush and desert shrub basins, with rocky outcrops and topographically diverse canyons.

Important Stopover Areas Within the Corridor

Recent research indicates that mule deer spend over 90% of migration in a series of stopover sites where they congregate to feed and replenish energy stores with nutritious forage. In many instances, stopover sites overlap with delineated crucial winter range habitat due to the extensive movement

into and through winter habitats as snow depth and winter severity increases. This is especially true in the Wyoming Range, and illustrates the importance of stopover habitat within migration corridors as foraging habitats. Stopover habitats will be delineated through upcoming BBMM analysis.

Land Ownership

During annual migrations, the Wyoming Range Herd crosses a mix of land ownership patterns. Most summer ranges are located on USFS lands,

while transition areas and winter ranges can include a variety of USFS, BLM, OSLI and private lands.

Land Use

Land use on both USFS and BLM lands include livestock grazing, timber harvest, motorized and non-motorized recreation, and energy development. Some BLM lands are designated as Areas of Critical Environmental Concern (ACEC), Special Recreation Management Areas, Special Management Areas, or WSAs. Some Wyoming Range mule deer move through the Raymond Mountain and Rock Creek ACECs as well as the Lake Mountain WSA. Conservation easements are in place to protect habitats on some private lands. Mule deer

migrate through parcels that have been leased for oil and gas, or areas with ongoing energy development and production. OSLI lands are managed primarily for long-term growth in value and optimum, sustainable revenue production to generate funds for public schools. Accordingly, the primary uses of these lands are livestock grazing and energy development. Private lands along the corridor are primarily used for agriculture and suburban development.

Risks and Threats

Portions of the Wyoming Range Mule Deer Migration Corridor are intact and functional with sig-

nificant conservation work already completed to facilitate habitat enhancements, highway crossings,

and wildlife-friendly fencing. Additional conservation and land use efforts are needed to benefit mule deer in the future. Habitat conditions are critical due to the arid climate and condition of some plant communities. Habitat treatments in aspen communities are especially important to improve understory plants to maximize nutrition for does and fawns on transitional and summer ranges. IAGs in portions of the corridor have decreased habitat functionality, and the invasion of cheatgrass is currently limiting management options in some places. Significant resources must be put into cheatgrass control or proactive habitat enhancements for vegetation communities will not be feasible.

Underpasses and game fencing have been installed

at critical highway crossings at Nugget Canyon and Dry Piney to facilitate movement to native winter ranges. Increasing traffic volumes in the Corridor can impact seasonal movements and may become a more significant barrier. Right-of-way fences and deep snow conditions are a concern for late migrants as they are difficult to cross. Mule deer habitats are often favored recreation areas; protection from excessive human recreation (motorized and non-motorized) would enhance long-term functionality on the landscape. Additional wind energy projects and solar farms seem imminent and subdivision and recreational property development could have adverse impacts. Minimizing or mitigating disturbance in the Corridor will benefit mule deer habitats.



Modifying fences to include crossing structures, such as an “X gate” (pictured), has been prioritized within the Wyoming Range Herd.

Are the Risks and Threats Immediate or Long-Term

Establishment of IAG communities is an immediate and long-term threat. Improving vegetation conditions and fence permeability are long-term threats that have ongoing attention. Managing pub-

lic access and recreation are long-term, as is urban development and energy development. Increasing traffic volume, wildlife vehicle collisions, and wildlife crossing structures are also long-term issues.

Actions Necessary to Reduce or Eliminate Risks and Threats

Maintaining collaborative relationships with private landowners, oil and gas operators, non- gov-

ernmental organizations (NGOs), county governments, federal land managers and the public is

essential to ensure mule deer migration remains unimpeded and functioning at a high level. Management actions in this Herd have proven to be

most successful with a collaborative approach. Conservation easements are strongly supported as an important tool to maintain open space.



Prescribed fire has been used throughout the Wyoming Range Herd to improve mule deer habitat.

Current Efforts

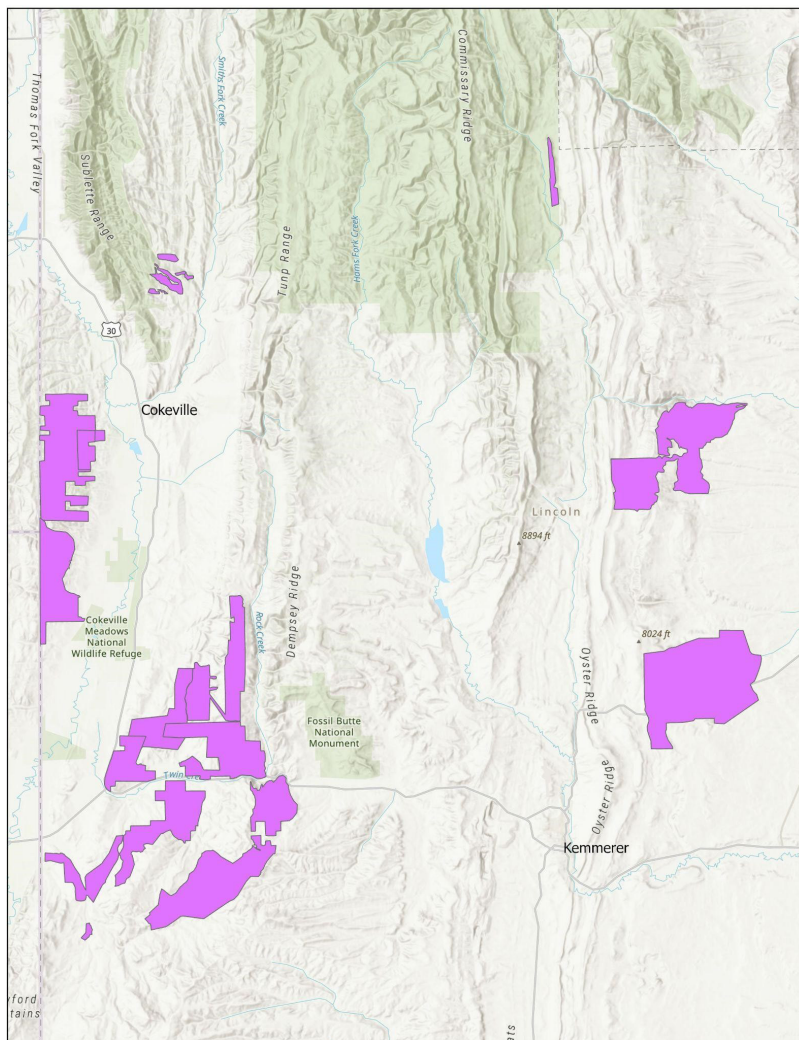
Habitat enhancement in cooperation with federal land management agencies, livestock grazing permittees, and private landowners will continue into the future. Over the last decade, approximately 11,000 acres of sagebrush-grassland habitats were treated with herbicide to control IAGs within the Big Piney to Fontenelle Creek area and additional spot treatments have been completed in prescribed burn areas and mechanical habitat treatments. Just under 19,000 acres of sagebrush improvement has taken place and over 3,000 acres of aspen habitats

have been targeted for enhancement. Along with weed treatments and habitat restoration efforts, partners have worked to defer livestock grazing in treatment areas and to improve grazing rotations in riparian areas utilizing temporary electric fences, additional riders, and virtual fence technology. Habitat enhancement efforts for the southern Wyoming Range area included: 5,388 acres of sagebrush mowing treatments, 15 miles of fence replaced with wildlife friendly specifications, 411 acres of conifer thinning to restore aspen habi-

tat, and 70,700 acres of aerial herbicide treatment to control cheatgrass in sagebrush-grassland and mixed mountain shrub habitats. Cheatgrass control treatments will be essential moving forward in order to maintain the ecological integrity and function along mule deer migration routes and crucial winter ranges.

WGFD is working with WYDOT and other partners to address wildlife crossings throughout the Herd Unit. In 2023, the Dry Piney Wildlife Cross-

ing Project completed the construction of 9 underpasses and 16 miles of high fence. The next large wildlife crossing project on Highway 189, south of Kemmerer, is in the planning and engineering phase after securing \$24.4 million of Wildlife Crossings Pilot Program funds in the first round of applications. This project will improve several existing underpasses, constructing 5-7 underpasses, 1 overpass, and approximately 30 miles of high fence.



Locations of cheatgrass control treatments in the Southern Wyoming Range (2020 - 2023)

Cost of Current or Needed Habitat Treatments, Road Crossings, Etc.

On-going aspen and sagebrush projects on BLM land in the Big Piney to LaBarge area are adequately funded by various partners, however, current efforts have identified new project locations that

will require funding assistance over the next 5 to 10 years. The 10-year project implementation on additional private land and BLM land on the south end of the Wyoming Range is only partially funded

(\$1 million funded by the BLM of an anticipated \$6 million total cost). Cheatgrass management and fence modification projects will require significant funding for many years into the future. Fence reconstruction projects cost ~\$20,000 per mile and

cheatgrass treatments cost ~\$70 per acre. Smaller, locally-led solutions to wildlife/vehicle collisions without structure construction are less costly and are being pursued throughout the Herd Unit.

Other Issues for Awareness

Additional deer winter ranges and migration corridors are suspected between LaBarge and Kemmerer (LaBarge Creek and the Ham's Fork River). With

support from the BLM, mule deer were captured in March 2019 and data collected will be incorporated into upcoming GPS collar analysis.



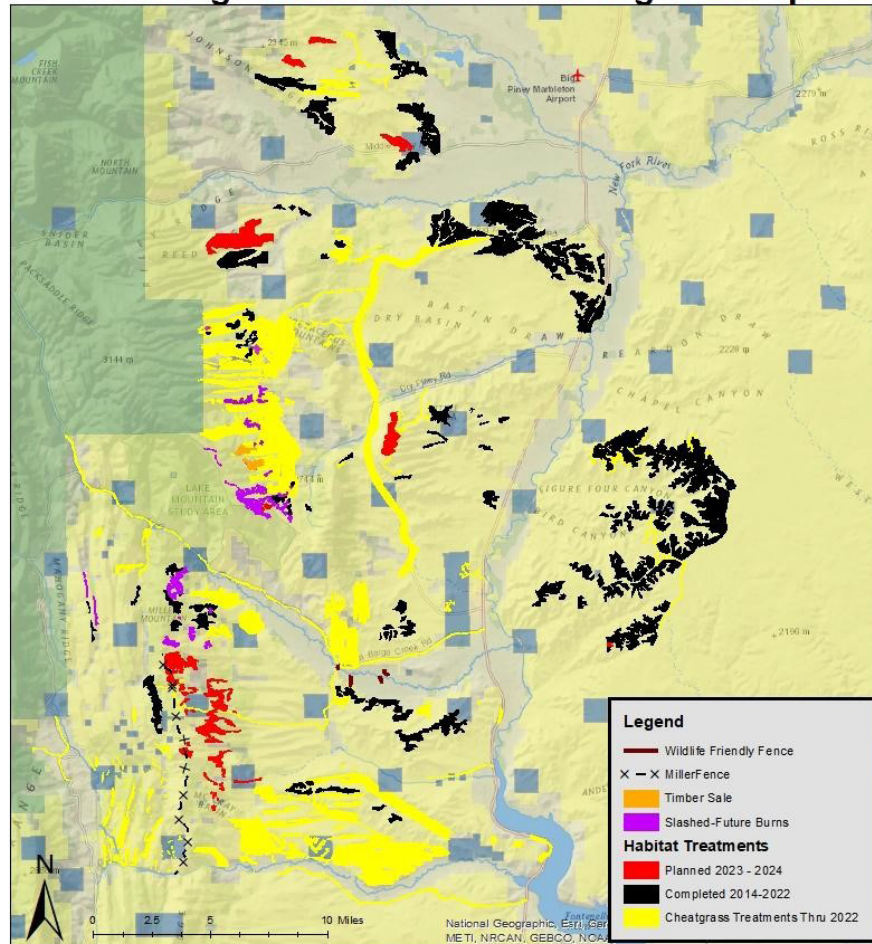
Trail cameras are used to monitor the effectiveness of the Dry Piney wildlife crossing project (Photo credit: WYDOT).

Other Species Impacted

Fence modification projects benefit a variety of big game species, including pronghorn, elk, and moose as well as sage grouse in some places. Habitat treatments benefit a wide variety of wildlife species, by improving foraging habitat and reducing

wildfire risk. Land use planning, including travel management, energy development and planning and zoning decisions, have wide-swept impacts with the potential to maintain open space and connected landscapes.

WY Range Mule Deer Habitat Progress Map



Project Accomplishments 2014-2022

18,963 acres sagebrush thinning	1,800 feet snowfence for mahogany
3,232 acres aspen mechanical prep	19 livestock riders hired
1,451 acres aspen prescribed burn	1 reservoir renovated
57,503 acres cheatgrass herbicide	1.75 miles of fence modified
2,032 acres cheatgrass grubbing	11 miles of fence constructed
	5 miles of electric fence



Habitat treatments implemented from 2014-2023 in the Wyoming Range Mule Deer Herd.

WYOMING MIGRATION CORRIDOR PRIORITY: DUBOIS MULE DEER

Priority Selection

The Dubois Mule Deer Herd Unit area is part of the Eastern Greater Yellowstone Ecosystem Mule Deer Monitoring Project to catalog big game seasonal use patterns in northwestern Wyoming. While the Dubois Herd is identified as a priority, mule deer from the WRIR and the Owl Creek-Meeteetse Herds have seasonal movements through the Dubois Mule Deer Herd. This data, in concert with an analysis of WYDOT crash and wildlife/vehicle collision data from 2010-2018, shows that U.S. Highway 26/287 (milepost 45 to milepost 75) has a high frequency of collisions every year. This stretch of highway was ranked as the highest priority within WYDOT's District 5 at the 2017 Wyoming's Wildlife and Roadways Summit (Lutz et al. 2017). According to WYDOT data, wildlife/vehicle collision rates are highest in the fall coincid-

ing with mule deer migration into and through the area, somewhat lower through the winter and early spring, and low in the summer and early fall. Traffic volume is relatively low and annual average daily traffic is about 1,700 vehicles, with fall and winter months averaging about 1,100 vehicles daily. The high number of collisions relative to traffic makes this one of the worst areas in the state in terms of risk to drivers.

Significant efforts are underway to improve forage conditions through IAG treatments and improvements to aspen and shrub communities. Fence modification projects have also gained momentum and are underway with partners throughout the Herd.

The Upper Wind River Mule Deer Migration Cor-



Dubois Mule Deer Herd Unit

ridor was recently identified by the WGFC per the public process outlined in the Migration EO. This included the development of a Threat Evaluation and a public process with stakeholders. This ele-

vated awareness of the conservation needs in this Corridor and has generated momentum towards project implementation.

Spatial Location

The Herd Unit area is located in northwestern Wyoming, starting in Fremont County near Crowheart and westward to the higher elevations of Togwo-

tee Pass in the Teton Wilderness and Mount Leidy Highlands in Teton County.

Habitat Types

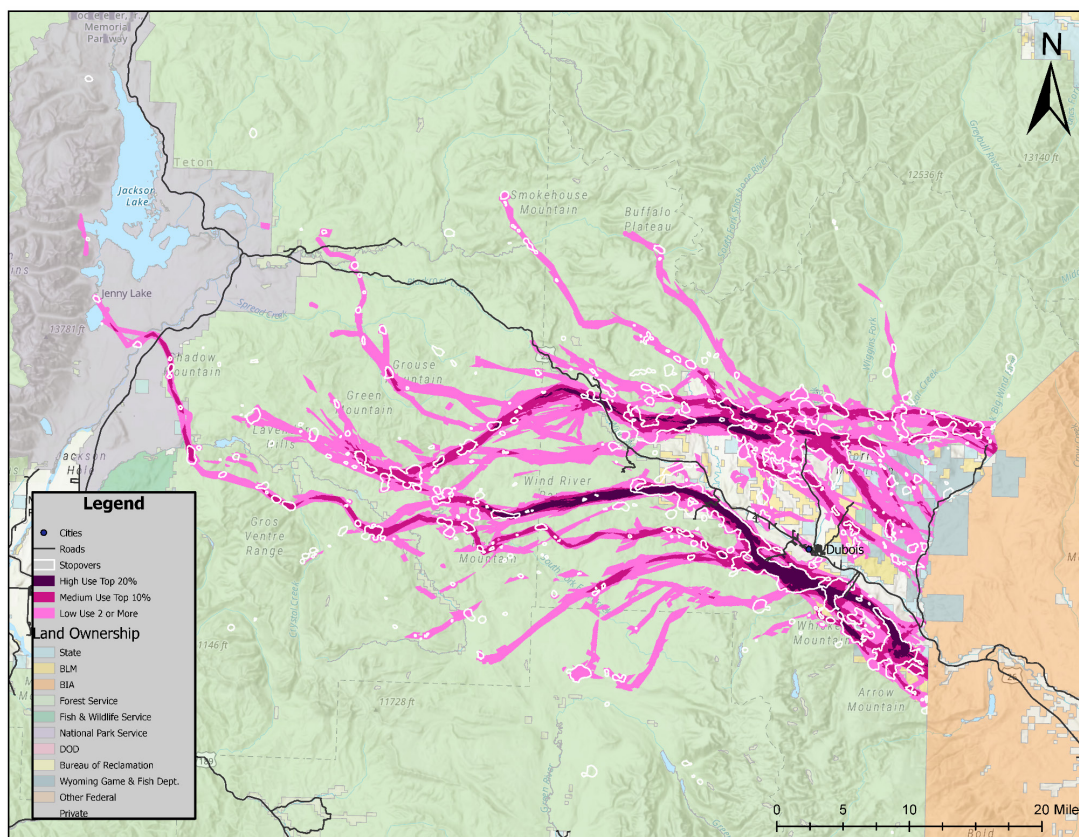
Habitats are best described as mule deer first move during the fall from the mountains into foothills and riparian habitats within the upper Wind River Basin. This is an area of diverse habitats, including mountain big sagebrush, mixed conifers, as-

pen, juniper, and riparian communities associated with the Wind River and its tributaries. Agriculture fields consist primarily of alfalfa and native grass hay production.

Important Stopover Areas Within the Corridor

Research on the Sublette Mule Deer Herd indicates that mule deer spend greater than 90% of their migration period in a series of stopover sites, where they congregate to feed and replenish energy stores

in areas where forage is especially nutritious. This appears to be very similar in the Dubois Herd and some seasonal mule deer movements overlap with delineated crucial winter range habitat as well.



The Dubois, WRIR and Owl Creek Mule Deer Herds migration are captured as the newly identified Upper Wind River Mule Deer Migration Corridor.

Land Ownership

Migration occurs primarily on USFS land (70%) with private (12%), BLM, WGFC Wildlife Habitat Management Areas (WHMAs), NPSe and OSLI

lands making up the remainder. Winter ranges are primarily on WRIR, BLM, WHMAs and private lands.

Land Uses

USFS and BLM lands are primarily managed for wildlife habitat and have been removed from mineral and oil and gas leasing. Conservation easements are in place protecting habitats on some private lands. WSAs on BLM lands provide man-

agement emphasis for wildlife habitats. WGFC lands on the Whiskey Mountain, East Fork, and Spence/Moriarity WHMAs protect wildlife habitats. Small acreage ranchettes and small hay meadows are prevalent in this area.



Mule deer using the Torrey Valley within the Whiskey Basin WHMA near Dubois, which is classified as crucial mule deer winter range. Habitat enhancement work is on-going within this WHMA to improve foraging conditions for wintering wildlife.

Risks and Threats

Increased traffic on this stretch of highway has resulted in an increased wildlife mortality (primarily mule deer, but also includes bighorn sheep, moose, elk and white-tailed deer). Continued private land subdivision and development is a significant concern. IAG invasion, including cheatgrass and other

species, as well as generally late seral vegetation and conifer encroachment has decreased forage conditions throughout the Herd Unit. Fences include a variety of styles, many of which are old and not constructed to wildlife friendly specifications.



U.S. Highway 26/287 included in the wildlife crossing project (photo credit: Jon Altschuld, Chinook Landscape Architecture).

Are the Risks and Threats Immediate or Long-Term

Increasing traffic volume, wildlife/vehicle collisions, and fences are both short and long-term

threats, as are IAGs. Vegetation management is a long-term threat.

Actions Necessary to Reduce or Eliminate Risks and Threats

Fence modifications, IAG control and vegetation management projects have been implemented and need to be expanded. WGFD and WYDOT are collaborating on solutions to the highway crossing

challenges. A report outlining potential solutions has been completed and discussed with stakeholders, US Highway 26 Wildlife Mitigation Strategy, and the next step of fundraising is underway.

Current Efforts

WGFD and WYDOT have purchased and deployed two sets of Variable Messaging Signs for use when wildlife are in the area to warn drivers during key periods of the year when wildlife and motorists are at most risk. The two agencies have also engaged with the Dubois community about the need to mitigate wildlife/vehicle collisions. WYDOT recently submitted a \$17.5 million funding request to the Wildlife Crossings Pilot Program,

accompanied by \$2.7 million raised as private funds for the project. This application included funds for one overpass, four underpasses and nine miles of game-proof fence. Collaborative efforts with USFS and Fremont County Weed and Pest have resulted in vegetation and IAG project plans, many of which are awaiting full funding to implement. Fence modification opportunities exist throughout the Herd Unit. While some fencing has been im-

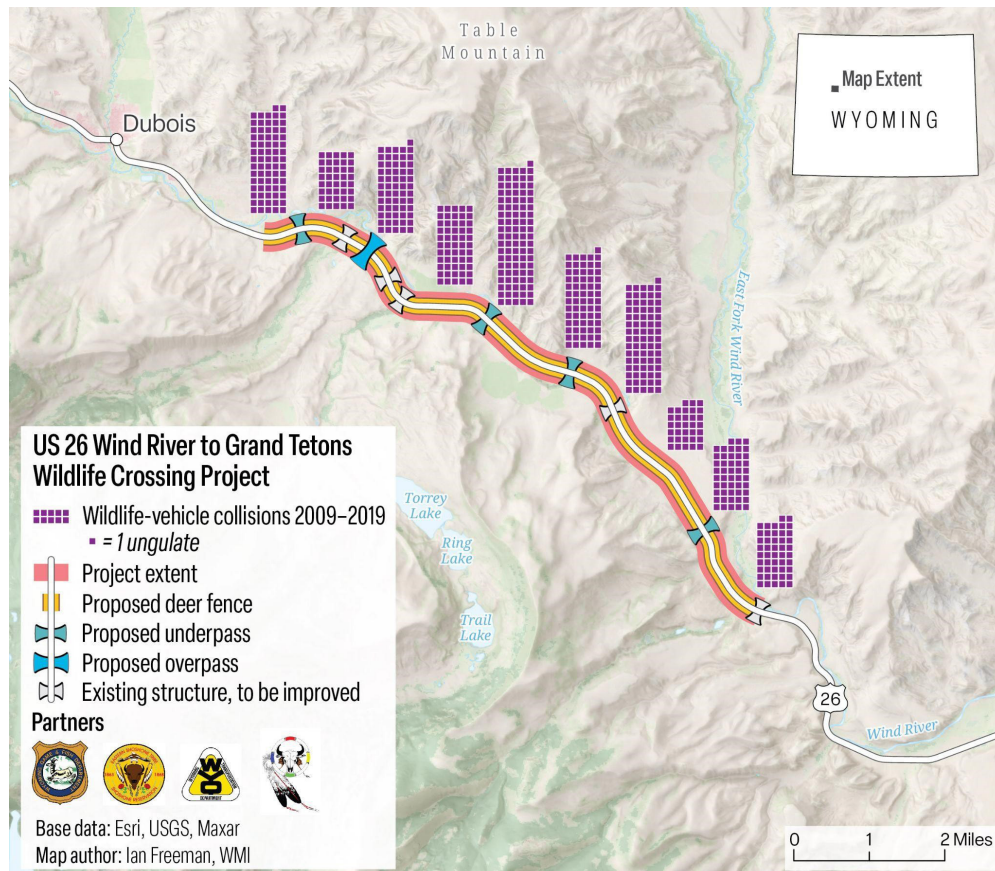
proved, there are still many miles of suitable fences

for modification efforts.

Cost of Current or Needed Habitat Treatments, Road Crossings, Etc.

The cost of completing the proposed wildlife crossing project is likely in excess of \$27.7 million. Fence modification projects are scalable and directly correlated to funding availability. Vegetation

management projects are ongoing and will require additional funding to expand their footprint and effectiveness.



US Highway 26/287 wildlife crossing project including wildlife/vehicle collisions and proposed mitigation solutions in the Dubois Mule Deer Herd (Credit: Wyoming Migration Initiative).

Other Issues for Awareness

Ongoing GPS collar research is evaluating the effects of Chronic Wasting Disease (CWD) on the population both within the WRIR boundary as well as adjacent land. Preliminary information suggests

areas dominated by irrigated agriculture are supporting higher rates of CWD in deer relative to those areas with native habitat.

Other Species Impacted

Fence modification projects benefit a variety of big game species, including pronghorn, elk, moose and bighorn sheep as well as sage grouse in some places. Habitat treatments benefit a wide variety

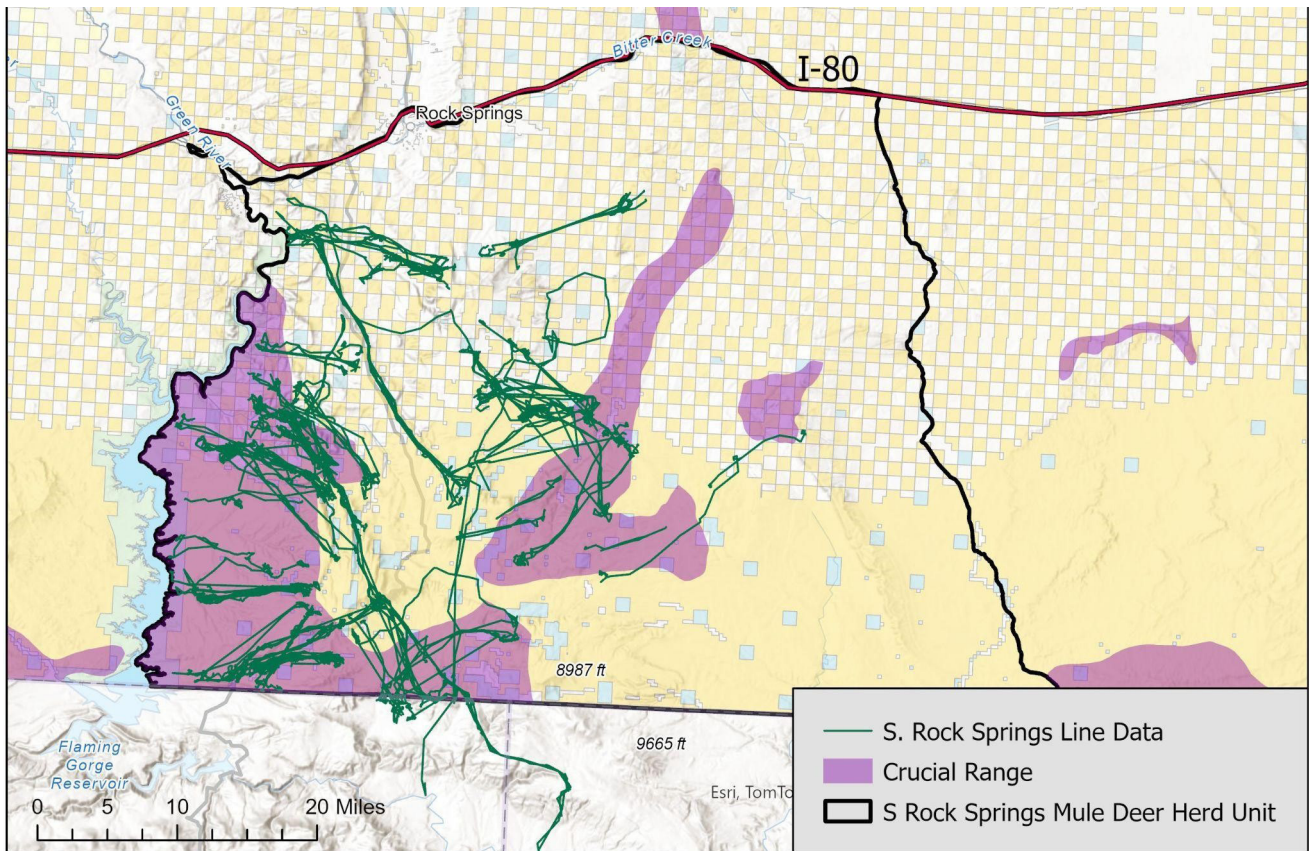
of wildlife species both by a direct improvement of foraging habitat as well as reducing the risk of wildfire.

WYOMING WINTER RANGE PRIORITY: SOUTH ROCK SPRINGS MULE DEER

Priority Selection

The South Rock Springs Mule Deer Herd Unit area is one of the most popular public hunting destinations in Wyoming. Hunting in this Herd Unit is through limited quota licenses, which are in high demand and difficult to draw. The public maintains a keen interest and concern for the well-being of the South Rock Springs Mule Deer Herd. Over the years this Herd has struggled with fawn survival and population recruitment, and drought plays a

pivotal role on this landscape affecting mule deer fitness and winter survival. Winter habitats in this herd are designated as crucial winter yearlong ranges. IAGs and loss of shrub habitats to juniper encroachment are major factors affecting these winter habitat conditions. Maintaining the integrity and function of these winter ranges is essential to the population performance of the Herd.



S. Rock Springs Mule Deer Herd Unit with GPS collar line data.

Spatial Location

The Herd is located in southwest Wyoming, entirely in Sweetwater County. The northern boundary of the Herd Unit is I-80 and the southern boundary is the Utah and Colorado state lines. The eastern

boundary is the Bitter Creek Road, and the western boundary is the Green River and Flaming Gorge Reservoir.

Habitat Types

The South Rock Springs Herd Unit is situated in a high desert ecosystem with elevations ranging from 6,040 feet at Flaming Gorge Reservoir to 9,000 feet at the summit of Little Mountain. Vegetative communities are diverse and transition quickly with ascending elevation over relatively short distances. Lower elevations consist of xeric Wyoming big sagebrush and salt desert shrubs in a 6-9 inch precipitation zone and transition to Utah juniper woodlands, mixed mountain shrub, mountain

big sagebrush-grasslands, aspen and subalpine fir stands at higher elevations (10-15 inch precipitation zone). Riparian areas are a mixture of both herbaceous dominated and willow dominated plant communities, with some higher elevation mesic stream segments exhibiting a diverse mix of riparian shrub species. The higher elevation areas are a few small mountain tops in this xeric landscape serving as oases of diverse habitats attracting numerous wildlife species during summer months.

Land Ownership

The northern half of the herd unit consists of a 50/50 checkerboard land ownership pattern of primarily BLM and private lands. The southern

half of the herd unit is composed of BLM lands (80%), OSLI (12%), private lands (5%), and USFS (3%).

Land Uses

BLM lands are managed for multiple uses including recreation, livestock grazing, oil and gas development, pipeline corridors, coal mining, communications infrastructure, and renewable energy. Most of the extractive resource uses occur on the eastern end of the herd unit. USFS lands are managed as part of the Flaming Gorge National Recreation Area emphasizing fishing, boating, and camping

while allowing some other multiple uses. Private lands in the checkerboard area are used for livestock grazing and extractive energy sources. Private lands in the southern portion of the herd unit are mainly traditional ranching operations, and conservation easements have been established for private lands associated with the Red Creek and Currant Creek ranches.

Risks and Threats

Winter ranges in this Herd Unit are subject to potential establishment and expansion of energy pipeline and transmission line corridors. The development of this infrastructure increases the feasibility for more oil and gas development, and renewable wind and solar energy developments. These energy development activities are more likely to occur in the checkerboard landownership area and the eastern portion of the Herd Unit.

IAGs are a very real threat for winter ranges in this Herd Unit. Cheatgrass has become more common in this area over the past decade, especially at the lower elevations. If left unchecked, cheatgrass could out compete native grass and forb species in sagebrush-grasslands. Eventually, cheatgrass monocultures could persist, increasing flashy fire

fuel loading and increasing the fire return interval outside the natural range of variation. If this occurs, the ultimate threat on mule deer winter ranges would be a scenario where fires burn hot and occur so frequently that sagebrush and other browse species are unable to re-establish before the next fire event occurs.

Juniper encroachment into sagebrush and mixed mountain shrub stands is an issue for mule deer and other wildlife in a large portion of South Rock Springs Mule Deer Herd Unit. Young juniper establishing in deep soil sagebrush sites and eventually advancing to a juniper stand occurs relatively quickly on a vegetative succession time scale. Efforts to control juniper encroachment on shrub stands on winter range is needed to provide deer

with reliable browse sources, while maintaining a diverse mosaic of sagebrush-grasslands, mixed

mountain shrub, and juniper woodlands across the landscape for all wildlife.



Juniper encroaching a sagebrush grassland site in the South Rock Springs Mule Deer Herd Unit.

Are the Risks and Treats Immediate or Long-Term

Threats of cheatgrass invasion are both short and long-term. Juniper encroachment of shrub habi-

tats and energy development threats are long-term.

Actions Necessary to Reduce or Eliminate Risks and Threats

Continued collaborative efforts among land managers and affected interests utilizing cost share funding to chemically treat and control cheatgrass winter range and other key habitats in the Herd Unit. Monitoring will be conducted to evaluate treatment effectiveness and determine when follow-up treatments are warranted. Cheatgrass treatments are viewed as control rather than eradication, and future funding for periodic follow-up treatments through time will be necessary to protect the original investments.

Juniper control strategies will include methods of cut-pile-burn and mastication. BLM and WGFD will collaboratively prioritize locations within mule deer winter range where juniper is encroaching sagebrush and mountain shrub stands for treatment. BLM will complete National Environmental Policy Act compliance to treat these areas and cost share funding will be used to hire contractors to complete mechanical work. BLM will perform prescribed burns on cut juniper piles to finish that phase of those cut- pile projects.



Cut juniper slash piles.

Current Efforts

Cheatgrass control treatments have been a collaborative effort involving BLM, Sweetwater County Weed and Pest District, Rocky Mountain Elk Foundation, Muley Fanatic Foundation, local sage grouse working groups, and WGFD. The Weed and Pest District utilizes partner funding to hire contractors to perform aerial herbicide applications to control cheatgrass. Approximately 13,860 acres have been treated to control cheatgrass in this landscape since 2020.

Efforts to control juniper encroachment of shrub habitats has been a partnership between BLM, Muley Fanatic Foundation, and WGFD. BLM initiated juniper work about a decade ago, and has treated approximately 4,636 acres to date. The USFWS-Wyoming Partners plan to participate in juniper treatments on private lands in the Herd Unit in 2025.

Cost of Current or Needed Habitat Treatments, Road Crossings, Etc.

Over the next 3 years, WGFD and partners anticipate total costs for juniper and cheatgrass control work to be ~\$960,000, based on \$66 per acre for

aerial application of herbicide to control cheatgrass and \$500/acre to cut and pile juniper.

Other Issues for Awareness

Collaborative watershed restoration has occurred in the Red, Sage, Trout, Gooseberry, and Current Creek watersheds over the past 32 years, involving numerous upland and riparian habitat improvements. Efforts include aspen restoration, beaver reintroductions, grazing management improvements, stream habitat improvements restoration, mountain shrub enhancement and conservation

easements. These habitat enhancements targeted ecological benefits for multiple species, but recognized Colorado River cutthroat trout and mule deer as focal species for habitat improvement. These habitat improvements occurred on mule deer summer and transitional habitats with future efforts shifting to include mule deer winter range.

Other Species Impacted

Cheatgrass impacts every mammal, bird, reptile, amphibian, and fish on the landscape within the Herd Unit. Successional loss of sagebrush-grassland habitat to juniper encroachment directly af-

fects pronghorn, sage grouse, sage sparrow, sage thrasher, Brewer's sparrow, pygmy rabbit, and several other species.



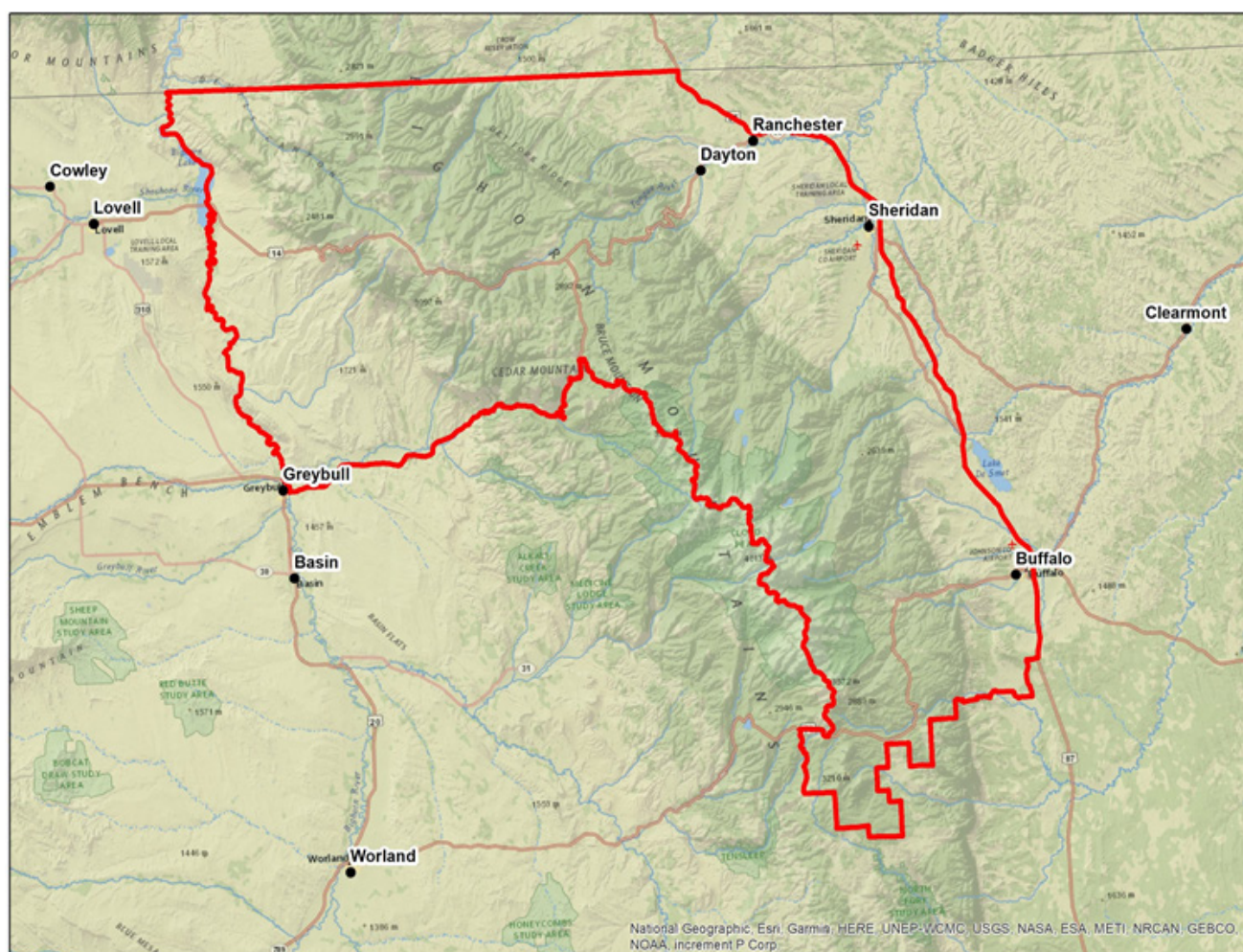
Prescribed burning juniper piles

WYOMING MIGRATION CORRIDOR AND WINTER PRIORITY: NORTH BIGHORN MULE DEER

Priority Selection

The North Bighorn Mule Deer Herd Unit was designated a priority research herd in 2018 and in 2021 was selected as one of five focal herds for a 5-year monitoring program. Through GPS data from several hundred collared animals, WGFD and partners are beginning to understand the diversity of migratory behavior, cause-specific mortality, as well

as seasonal habitat use and potential selection of areas treated for IAGs. This Herd provides important recreational opportunities for wildlife viewers as well as generations of hunters. Disease, competition, and degraded habitat conditions are likely contributing to recent declines in fawn production and annual abundance estimates for this Herd.



North Bighorn Mule Deer Herd Unit

Spatial Location

The North Bighorn Mule Deer Herd Unit area spans the eastern and western flanks of the north-

ern Bighorn Mountains in Johnson, Sheridan, and Big Horn Counties.

Habitat Types

Summer range habitat for the migratory portion of the mule deer in the Herd Unit consists of high elevation montane mixed conifer forest habitat intermixed with mountain meadows and riparian areas, aspen stands, and mountain sagebrush shrublands.

As elevation descends going east, the habitat transitions to large grasslands intermixed with deciduous woody shrublands, mixed mountain shrub and irrigated agricultural habitat.

Important Stopover Areas Within the Corridor

Although no corridors have been officially delineated through the state process, preliminary analysis suggests that stopovers occur infrequently given the relatively short lateral but abrupt vertical migra-

tion animals make. Of the longer migrants, stopovers appear to be largely on the Bighorn National Forest in a wide variety of habitats.

Land Ownership

The majority of the land ownership in this herd unit is federal land (68%), with the majority of the surface ownership managed by the Bighorn National Forest (BNF) at the upper elevations (summer range) of the North Bighorn Herd Unit. On the eastern edge the land ownership changes to private land, with small holdings of OS LI and federal land. To the west, the surface ownership changes

from the USFS to BLM, with smaller holdings of OS LI and private land. Winter range for mule deer wintering on the east side of the Bighorn Mountains is primarily located on private land, while mule deer wintering on the western side of the Bighorn mountains is primarily dominated by BLM managed surface.



North Bighorn Mule Deer Herd Unit habitat

Land Uses

Federal lands not designated as wilderness are managed for multiple uses, including livestock grazing, motorized and non-motorized recreation, and extractive and renewable energy development. WHMAs are managed for big game winter range.

Risks and Threats

Transitional and winter ranges that have deteriorated over time with the invasion of IAGs including cheatgrass, medusahead, and ventenata. Critical habitats that support parturition, spring, and summer ranges include riparian areas, mesic draws, wet mountain meadows and aspen groves are threatened by progressing seral state. These habitat types represent a small proportion of the Bighorn Mountains and are at risk due to browse pressure and conifer encroachment. Mesic habitats are at further risk given the decline in beaver activity over the last 15 years, as documented by the WGFD and BNF. Competition year-round with elk, on summer range with moose and livestock, and on winter range with white-tailed deer could impact browse

OSLI manages primarily for livestock grazing. Private lands are managed for a mixture of agricultural purposes and rural and suburban residential development.

nutritional value and availability.

Other concerns include CWD, non-wildlife friendly fencing, and habitat conversion/development. Surveillance data in adult male mule deer from 2021-2023 (18% prevalence, 95% CI 11%-23%) and mortalities of collared adult deer detected with CWD relative to all mortalities (12/54=22%) suggest that CWD may be having population level impacts. Fencing impedes movement of both resident and migratory deer. Finally, large agricultural operations are being subdivided for housing developments, reducing the footprint of available deer habitats as well as habitat connectivity.



Ventenata invasion in North Bighorn Mule Deer Herd Unit.

Actions Necessary to Reduce or Eliminate Risks and Threats

Habitat improvement actions include IAG treatments, conifer removal in aspen and riparian habitats, installing Beaver Dam Analogs (BDAs), and translocating beaver to suitable habitats. Indirect habitat improvement actions include managing elk, moose, and white-tailed deer herds toward population objectives to reduce competition. Management actions designed to reduce CWD spread and prevalence include managing white-tailed deer and

elk populations toward objective (density reduction), and distribution of carcass dumpsters for disposal of inedible portions from hunter harvested animals. To improve habitat connectivity, fence removal, conversion to wildlife-friendlier designs, and conservation easements will ensure that mule deer habitats remain intact and accessible in perpetuity.



Aerially treating invasive annual grass

Current Efforts

The WGFD is a member of the Northeast Wyoming Invasive Grass Working Group, consisting of multiple partners from local, state, and national organizations. The Group is working to implement innovative methods to predict areas at a high risk of invasion, strategize on treatment methods, and reduce the impacts of IAGs to rangeland ecosystems. WGFD is actively monitoring IAG on WH-MAs and is in various stages of the development and implementation of treatments.

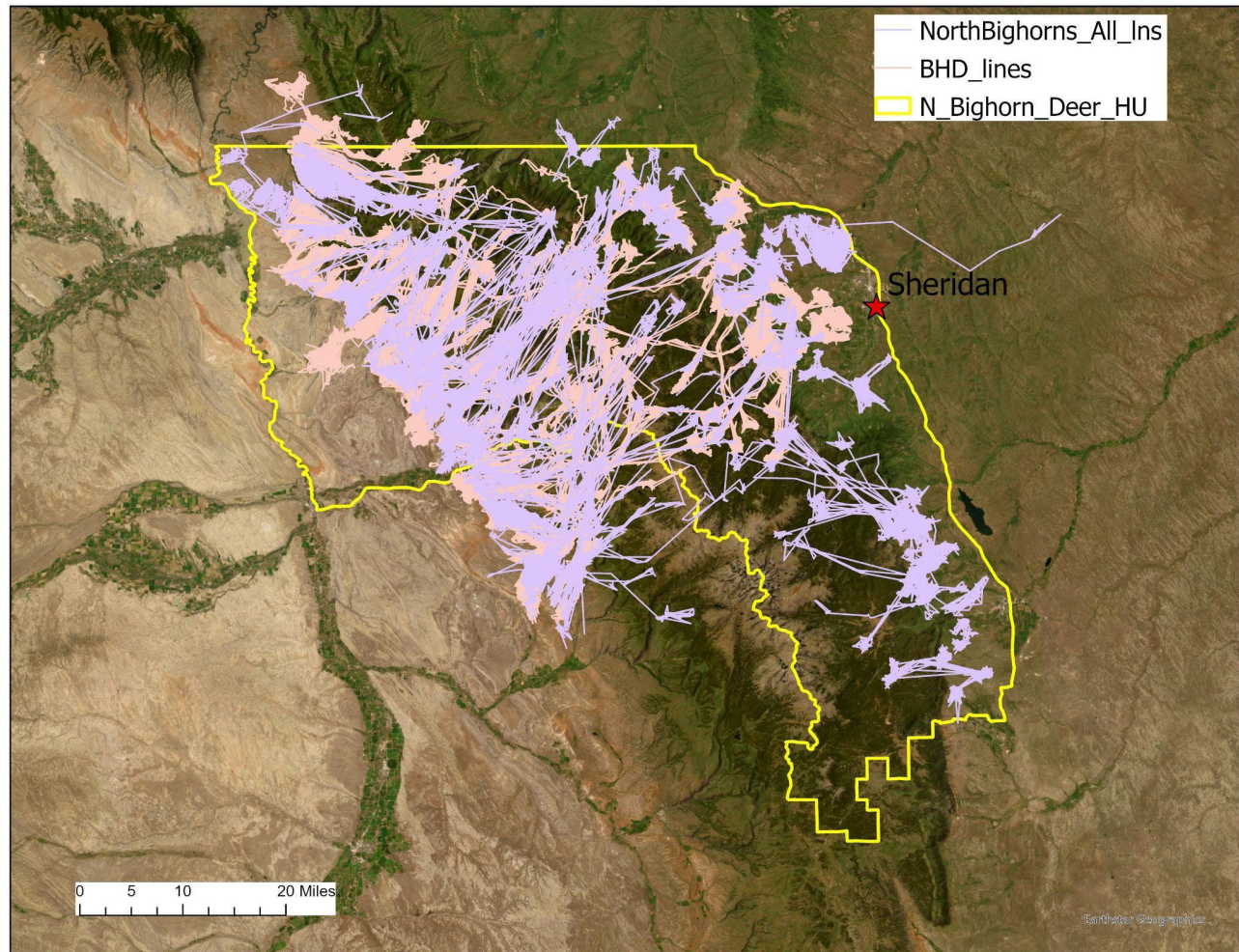
WGFD has partnered with the BNF to map aspen

stands and riparian zones for future conifer encroachment management projects. Conifer removal projects are various stages of implementation, including projects that have been completed in the last three years, projects with funding available to complete, and additional mapped areas that require future funds for treatment. This partnership also includes active work on beaver cache monitoring, strategizing beaver management, building BDAs and beaver translocations.

WGFD wildlife managers are actively managing

elk, moose, and white-tailed deer toward management objectives through hunting season structures. Wildlife and land managers are implementing appropriate hunting seasons targeting elk and white-tailed deer, and providing carcass dumpsters to help control CWD. WGFD has partnered with the Sheridan County Land Trust and partners to lead the Bighorn Fence Initiative with the goal of

removing and converting fences to reduce impediments to movement. WGFD and the Land Trust have also collaborated to provide wildlife data for conservation easement assessments. WGFD and The Nature Conservancy have provided preliminary analysis of GPS-collar data that suggests an increase in use of areas treated for IAGs by mule deer.



GPS collar tracks from the North Bighorn Mule Deer Herd. Peach color lines from 2020-22, purple lines 2023-current, N~500 deer.

Cost of Current or Needed Habitat Treatments, Road Crossings, Etc.

IAG treatments cost ~\$70 per acre with WGFD treating approximately 10,000 acres per year in the Herd Unit area. Riparian and aspen conifer removal costs vary depending on steepness, conifer density, and distance from roads, but current estimates are ~\$300 per acre. Approximately 2,500 acres of conifer encroachment in aspen and riparian areas

have been identified for future treatments, costing ~\$750,000. WGFD anticipates building ~100 BDAs in degraded riparian habitats to improve riparian hydrologic function and associated habitats. Similarly to conifer removal, BDA construction varies due to a variety of factors, but the anticipated cost to build 100 BDAs is ~\$240,000.

Other Species Impacted

Many of the proposed actions will benefit the suite of species that rely on riparian and mesic habitats, including beaver and moose. A wide variety of wildlife species including game and nongame

wildlife will benefit from healthy aspen stands and conifer removal. Fence modification projects have a positive impact on all big game that occupy the affected habitat.



OTHER CURRENT ACTIVITIES AND MANAGEMENT ACTIONS

Ungulate Migration Corridor Strategy

WGFD spent several months working with the public and stakeholders to develop a strategy for conserving ungulate migration corridors. The culmination of that inclusive process was the Ungulate Migration Corridor Strategy, adopted by the WGFC at their January 2016 Commission meeting. Migration corridors are considered “vital” under

this strategy, which also identifies key components of corridor, bottleneck, and stop-over research findings. Additionally the WGFC revised the standard range definitions to include ungulate migration corridor, ungulate stopover, ungulate migration bottleneck, and ungulate movement route use by WGFD personnel.

Wyoming Game and Fish Commission Activities

The WGFC has contributed significantly to improved management of migration corridors through funding research, highway crossing projects and on-the-ground improvement projects. WGFC has committed \$2.5 million dollars over the last seven years towards nine priority Mule Deer Initiative herds. These funds have been matched by outside funding totaling \$14.3 million dollars.

In total, 45 projects have been funded that address either direct habitat challenges or studies that are designated to target future habitat actions. WGFC and partners have contributed over \$50,000,000 towards highway crossing projects. Additionally, from 2020 to 2022 WGFC contributed \$500,000 towards invasive annual grass mapping and management in important habitats.

Wyoming Governor’s Advisory Group for Migration

In 2019, Wyoming Governor Mark Gordon tasked a Migration Corridor Advisory Group with developing recommendations to improve the state’s policies related to big game migration. The Advisory Group’s recommendations begin with an overarching call to pursue an Executive Order related to big game migration corridors and the industries, economies and private landowners that enhance, overlap, and grow from Wyoming’s world-class migrations. The Advisory Group included representatives from oil and gas, mining, and agriculture sectors as well as conservation, recreation, sports-

men groups, and a county commissioner.

This effort was followed up by local stakeholder-based local working groups for the Platte Valley, Baggs and Sublette Mule Deer Herds. The local working groups generated recommendations for the Governor and WGFD to improve future conservation work in these corridors, as well as ways to improve upon the Governor’s then-current Mule Deer and Antelope Migration Corridor Protection Executive Order.

Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order 2020-1

In 2020, the Governor signed into effect the Migration EO. The Migration EO designated the Platte Valley, Baggs and Sublette Mule Deer Migration Corridors and outlined a process for ad-

ditional corridors to be designated or identified in the future. The Migration EO also identified how development and disturbances should be managed in order to ensure functionality of the migration

corridors into the future.

In 2023 and 2024, WGFD identified two migration corridors through the Migration EO public process. The Sublette Pronghorn Migration Corridor was identified and WGFD is currently working to develop a Biological Risk and Opportunity Assessment to determine if the corridor is appropriate for designation. This recommendation will come

from the WGFC as a recommendation to the Governor, who has the authority to designate corridors, if warranted. The Upper Wind River Mule Deer Migration Corridor overlaps the Dubois Mule Deer Herd and includes deer that spend considerable time on the WRIR. This Corridor was deemed appropriate for identification in September 2024 and will continue to be prioritized for conservation efforts.



Wyoming Migration Initiative

The WMI is a model for catalyzing science-based conservation and management of wildlife corridors. Founded in 2012 as a project of the Wyoming Cooperative Fish and Wildlife Research Unit, WMI collaborates to collect data needed to effectively conserve migratory wildlife (Kauffman, 2016). The

Ungulate Migrations of the Western United States Atlas, published annually since 2020, provides the public with an opportunity to access geospatial data through the United States Geologic Survey Science Base-Catalog

Wyoming Wildlife Roadways

A collaborative effort between WGFD and WY-DOT was initiated to reduce wildlife/vehicle col-

lisions as a result of the 2017 Wyoming Wildlife and Roadways Summit. The Wyoming Wildlife

and Roadways Initiative Implementation Team is a multi-stakeholder group tasked with prioritizing and implementing highway crossing projects that were identified at the Summit (Lutz et al. 2017).

In 2021, a second Wyoming Wildlife and Roadways Summit was held to bring stakeholders back

Movement Matters Team

In January 2022, the WGFD Movement Matters Team was assembled to address wildlife and fish migration, a top priority for WGFD. The Team's overall goal is to strengthen the WGFD's position as a national leader in technical expertise and the implementation of conservation efforts for big game migration and fish movement. Team members are responsible for serving as subject matter

together and revive momentum around wildlife crossing projects across Wyoming. Success stories and lessons learned were shared, as well as updates on new scientific information available to encourage the best design features for future projects.

experts for WGFD on fish and wildlife migrations, provide information and recommendations to the WGFD Director's Office and to communicate with their respective divisions as liaisons. The Team developed an Operational Plan in 2023 that includes recommendations and action items to complete in the coming years.

National Fish and Wildlife Foundation Funds

In 2019, WGFD, in collaboration with Mule Deer Foundation, received a total of \$913,000 of National Fish and Wildlife Foundation (NFWF) under the grant program - Improving Habitat Quality in Western Big Game Range and Migrations Corridors Fall 2018. Funds were allocated in the following manner:

- \$150,000 for Platte Valley Herd invasive species and habitat work
- \$719,550 for Sublette Herd Initiative invasive species and fence work

In 2020, WGFD was awarded \$249,000 of NFWF funds through the same grant program. The funds were allocated in the following manner:

- \$60,000 for Dubois Herd invasive species work
- \$75,000 for Baggs Herd fence work
- \$114,000 for Wyoming Range Herd fence and invasive species work

In 2021, WGFD was awarded \$591,000 of NFWF funds through the same grant program. The funds were allocated in the following manner:

- \$130,000 for Dubois Herd invasive species, fence and aspen work

- \$100,000 for Platte Valley Herd invasive species work
- \$340,000 for Sublette Herd fence and aspen work
- \$21,000 for Wyoming Range Herd fence work

In 2022, WGFD was awarded \$280,000 of NFWF funds through the same grant program. The funds were allocated in the following manner:

- \$75,000 for Platte Valley Herd fence work
- \$185,000 for Sublette Herd fence and invasive species work
- \$20,000 for Wyoming Range Herd fence work

In 2023, WGFD was awarded \$732,500 of NFWF funds through the same grant program. The funds were allocated in the following manner:

- \$110,000 for Dubois Herd fence and aspen work
- \$187,500 for North Bighorn Herd fence, conifer removal, aspen and BDA work
- \$100,000 for Platte Valley Herd fence and conifer removal work
- \$150,000 for Sublette Herd fence and invasive

species work

- \$185,000 for Wyoming Range Herd fence, invasive and sagebrush work

In 2024, WGFD was awarded \$961,250 of NFWF funds through the same grant program. The funds were allocated in the following manner:

Partners for Fish and Wildlife Funds

In 2019, WGFD and USFWS Partners for Fish and Wildlife (PFW) Program received a total of \$293,000 to implement projects associated with SO 3362. The funds were awarded in the following manner and the actions are further described in the herd units listed below:

- \$150,000 for Baggs Herd wildlife highway and habitat enhancement work
- \$113,800 for Sublette Herd fence work
- \$30,000 for Platte Valley Herd fence work

In 2020, WGFD and USFWS PFW Program received a total of \$116,500 to implement projects associated with SO 3362. The funds were awarded in the following manner and the actions are further

- \$500,000 for Bates Hole Herd for fence and invasive species work
- \$201,250 for the Dubois Herd for conifer thinning, ROW fence and invasive species work
- \$260,000 for the Platte Valley Herd for fence and invasive species work

described in the herd units listed below:

- \$47,500 for Wyoming Range Herd fence work
- \$49,000 for Baggs Herd grazing management and water development work
- \$20,000 for Dubois Herd fence work

In 2021, WGFD and USFWS PFW Program received a total of \$187,000 to implement projects associated with SO 3362. The funds were awarded in the following manner and the actions are further described in the herd units listed below:

- \$19,000 for Dubois Herd reservoir work
- \$63,000 for Platte Valley Herd fence work
- \$105,000 for Sublette Herd fence work



Department of Interior Secretarial Order 3362 Research Funds

In 2018 and 2019, the DOI provided the WGFD \$300,000 to assist with data collection efforts in Research Priority Herds. In 2018, \$175,000 was provided for Carter Mountain Pronghorn and \$125,000 for Powder River and Pumpkin Buttes Mule Deer GPS collar projects. In 2019, \$125,000

was provided to Sublette Pronghorn, \$40,000 was provided for Medicine Bow Pronghorn—Shirley Basin, \$50,000 was provided for Platte Valley Mule Deer and \$85,000 was provided for North Bighorn Mule Deer GPS collar projects. Research is ongoing in several of these herds.



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LIST OF ACRONYMS

ACEC	- Areas of Critical Environmental Concern
BBMM	- Brownian Bridge Movement Models
BDA	- Beaver Dam Analogs
BLM	- Bureau of Land Management
BNF	- Bighorn National Forest
CRP	- Grassland Conservation Reserve Program
CWD	- Chronic Wasting Disease
DOI	- Department of Interior
EQIP	- Environmental Quality Incentives Program
GPS	- Global Positioning System
I-80	- Interstate 80
IAG	- Invasive Annual Grass
Migration EO	- Wyoming Mule Deer and Antelope Migration Corridor Protection Executive Order 2020-1
NFWF	- National Fish and Wildlife
NGO	- Non-Governmental Organization
NPS	- National Park Service
OSLI	- Office of State Lands and Investments
PFW	- Partners for Fish and Wildlife
SERCD	- Saratoga-Encampment-Rawlins Conservation District
SO 3362	- Department of Interior Secretarial Order 3362
USDA	- United States Department of Agriculture
USFS	- United States Forest Service
USFWS	- United States Fish and Wildlife Service
WGFC	- Wyoming Game and Fish Commission
WGFD	- Wyoming Game and Fish Department
WHMA	- Wildlife Habitat Management Area
WMI	- Wyoming Migration Initiative
WRIR	- Wind River Indian Reservation
WSA	- Wilderness Study Area
WYDOT	- Wyoming Department of Transportation