

Wyoming Game and Fish Department Migration Corridor Threat Evaluation Worksheet

Upper Wind River Mule Deer

The Department is making a recommendation to the Commission to identify this migration corridor based on the information provided in this report. Corridors that are high risk due to known threats may be moved forward in the designation process, others are appropriate for identification. If conditions change, this threat evaluation can be updated and the corridor's status may be changed through the process as outlined in the Migration Corridor Executive Order 2020-01.

WGFD Corridor Identification-Designation Recommendation: Identification

Date: 08/13/2024

Range of distance collared individuals migrated: < 5 to 90 miles

Longest migration distance: 90 miles

This herd is > 75% migratory

Counties that overlap the corridor: Fremont, Teton, Sublette

Methods for data analysis: Brownian Bridge Movement Model for Stopovers and 300 m. Line Buffer for High, Medium and Low Corridor footprints

Number of individuals: 147

Number of Sequences: 494

Years completed: 2014 to 2023

Acreeage Table: *Please fill in acres and (percent of total) within the corridor for each use level, by land ownership.*

	BLM	USFS	OSLI	WGFC	Private	Other*	Total
Low Use	23,251 7%	218,615 70%	11,120 4%	14,972 5%	36,574 12%	8,331 3%	312,863
Medium Use	10,782 12%	57,283 62%	3,508 4%	4,559 5%	14,581 16%	1,386 2%	92,099
High Use	3,095 15%	9,834 48%	448 2%	1,952 10%	5,148 25%	7 <.1%	20,484
Stopovers within High Use	2,757 20%	5,705 41%	401 3%	1,720 12%	3,346 24%	5 <.1%	13,934
Stopovers within Other Use	5,861 9%	44,979 67%	2,274 3%	2,432 4%	10,965 16%	600 1%	67,111

*Includes USFWS, NPS, local government, etc.

Threats:

Consider existing and potential (10 years) threats and indicate Yes or No if they exist or potentially exist in the corridor. Indicating 'yes' to a potential threat would capture discussed or planned projects or proximal development affecting the corridor. Your narrative below should explain if these threats or protections exist throughout the corridor or in an area that only influences a portion of the herd.

	Existing	Future
Subdivision or suburban sprawl	Yes	Yes
Fence impacts (all fence conditions or not wildlife-friendly design)	Yes	Yes
Road impacts (state, county or other improved)	Yes	Yes
Oil or gas wells or APDs	No	No
Wind	No	No
Solar	No	No
Mining - coal, trona, bentonite, gravel	Yes	Yes
Transmission lines, compressor stations or pipelines	No	No
Other energy or resource extraction (Logging?)	Yes	Yes
Human recreation during migration (motorized)	Yes	Yes
Human recreation during migration (non-motorized)	Yes	Yes
Wildfire threat due to cheatgrass invasion of sagebrush ecosystem	Yes	Yes
Closed canopy or late succession reducing herbaceous forage	Yes	Yes
Other:		

Protections:

	Existing	Future
Wilderness, WSA, ACEC, SMA or NPS land	Yes	Yes
Specific county zoning protections that overlap corridor	No	No
Conservation easements	Yes	Yes
NSO, CSU, or other land use plans from RMPs, Forest Plans, etc	Yes	Yes
USDA habitat leases (G-CRP)	Yes	Yes
Projects in development to mitigate threats	Yes	Yes
Other: WHMAs, Sage Grouse Core Area (BTNF, GTNP)	Yes	Yes

Narrative: Include a description of the corridor and explain answers or justify determination. Also, please submit maps along with this application. At least one map is needed for this entire corridor showing land ownership.

The Upper Wind River Mule Deer Migration Corridor is encompassed primarily by the Dubois mule deer herd, but also includes mule deer movement into and out of the Sublette herd and Grand Teton and Yellowstone National Parks. The Dubois herd has declined over the past twenty years, but not to the degree mule deer numbers have statewide. This may partly be due to the continual, intact, migration routes and winter ranges this herd utilizes as it has for generations. It also provides one of the most sought after trophy hunting opportunities in Wyoming.

Mule deer in this herd migrate varying distances (5-90 miles) between their winter and summer ranges across federal, state, and private lands. Each year, thousands of mule deer migrate between distant high-elevation summer ranges and lower winter ranges near Dubois and the Wind River Indian Reservation (WRIR). Wildlife in this region attract visitors year-round and garners worldwide attention. The upper Wind River valley and Highway 26 provides a key access route to Yellowstone and Grand Teton National Parks and is crucial for trucking and commerce into Jackson Hole. Winter ranges for this herd consist mainly of Wyoming Game and Fish Commission (WGFC), Bureau of Land Management (BLM), WRIR, private, State of Wyoming, and Shoshone National Forest (SNF) lands surrounding Dubois in the upper Wind River Valley. Deer migrating out of this winter range in the spring travel from east to west and parallel the Wind River drainage and U.S. Highway 26. This migration route's close association with Highway 26 results in hundreds of wildlife/vehicle collisions (most involving mule deer) during the spring and fall migrations. As individuals migrate west in the spring, many travel over the Continental Divide to summer ranges in the Gros Ventre River drainage, Mt. Leidy Highlands, Teton Wilderness, and Upper Green River drainage on the Bridger-Teton National Forest (BTNF), Grand Teton National Park (GTNP), and to a lesser extent Yellowstone National Park (YNP).

Threats:

The majority of the migration corridor and stopover areas for this herd are on public land with a smaller percentage on private land (12%). Impacts occurring on public land that could negatively affect this migration now and in the future include fences, roads, mining, recreation, and late-stage vegetation succession that reduces herbaceous forage for mule deer. Although invasive species such as cheatgrass are not commonly found throughout this corridor, they are expected to increase in the future. These same threats can also exist on private lands, however the most concerning threat on private land is subdivisions and other residential development.

The demand is increasing for residential development, particularly in the Dubois area, as more people relocate to western Wyoming. Since property values in Jackson Hole have driven many people out, Dubois and other surrounding towns are experiencing more residential development pressure due to people seeking solitude, access to public land, and a relatively lower cost of living. In the last 10 years there has been a noticeable increase in development in the area. There are several large tracts of private land in the Dubois area that are at risk of being subdivided and developed at a higher density, which overlap with the herd's migration routes and stopover areas. More buildings, roads, fences, human activity, and general disturbance in these areas are a major concern for mule deer migration. These disturbances can directly impede migration connectivity and fragment habitats. They can also have broader reaching impacts, such as causing deer to move more quickly through these areas to avoid the disturbance(s), and therefore preventing them from utilizing available forage opportunities along the way.

Currently the BLM Resource Management Plan (RMP) precludes industrial development in the Upper Wind River area. While the RMP can be amended in the future, protections are in place in portions of the corridor and it is anticipated that functionality can be maintained under current conditions. To date the upper Wind River area has not experienced either industrial-scale solar or wind energy development, and as such, these are currently not a threat to this migration. Several gravel quarries or mines that are either idle or active occur in several locations throughout the area. Much of the BLM managed public lands and federal minerals in the area are withdrawn from mineral entry, and mining claims cannot be staked in these areas. The Mineral Potential Reports prepared for the Lander BLM as part of the mineral withdrawals in this area generally conclude that potential for valuable minerals of interest to occur as mineral deposits is low, which means development potential is also low. All of the BLM managed public lands in the Dubois area are closed to mineral material sales (sand and gravel mining) in the Lander RMP; however, most federal minerals with private surface are open to mineral material sales in this area, and it is reasonable to expect the BLM will receive applications sometime in the next ten years for sand and

gravel development of these federal minerals. Increased housing development and continued road and highway maintenance will require an ever increasing source of dirt, gravel and other roadway products.

The demand for recreation has intensified on public lands (both motorized and non-motorized) due to growing human populations and visitation levels in the towns of Dubois, Jackson, and surrounding areas. The construction of new trails and increased traffic on existing trails and roads could disrupt mule deer migration. Increased presence of people, dogs, and vehicles recreating within mule deer migration corridors, especially in stopover areas, could cause mule deer to avoid those areas, negatively impacting their ability to gain important nutrition at stopover areas and successfully navigate their migration routes. Roads and trails can also serve as a vector for the spread of invasive plants such as cheatgrass, which impact mule deer habitat. Avoiding migration corridors when building new trails and/or instituting seasonal closures during spring and fall migration time periods on new or existing trails could be potential solutions to mitigate these impacts. Developing weed monitoring and treatment plans when building new trails would also help prevent weed infestations and their negative impacts to migration corridors. Wildlife-vehicle collisions on Highway 26 continue to be a concern and, if left unmitigated, collisions will become more common as recreation and commercial traffic increases. Future potential development or activities on State of Wyoming lands could also negatively affect portions of the corridor.

Existing Protections:

In the eastern part of the corridor, existing protections include winter range closures on WGFC lands, BLM, State, and SNF. These closures are typically in effect December 1st through May 16th within identified crucial winter range, which encompasses the majority of the eastern half of the corridor.

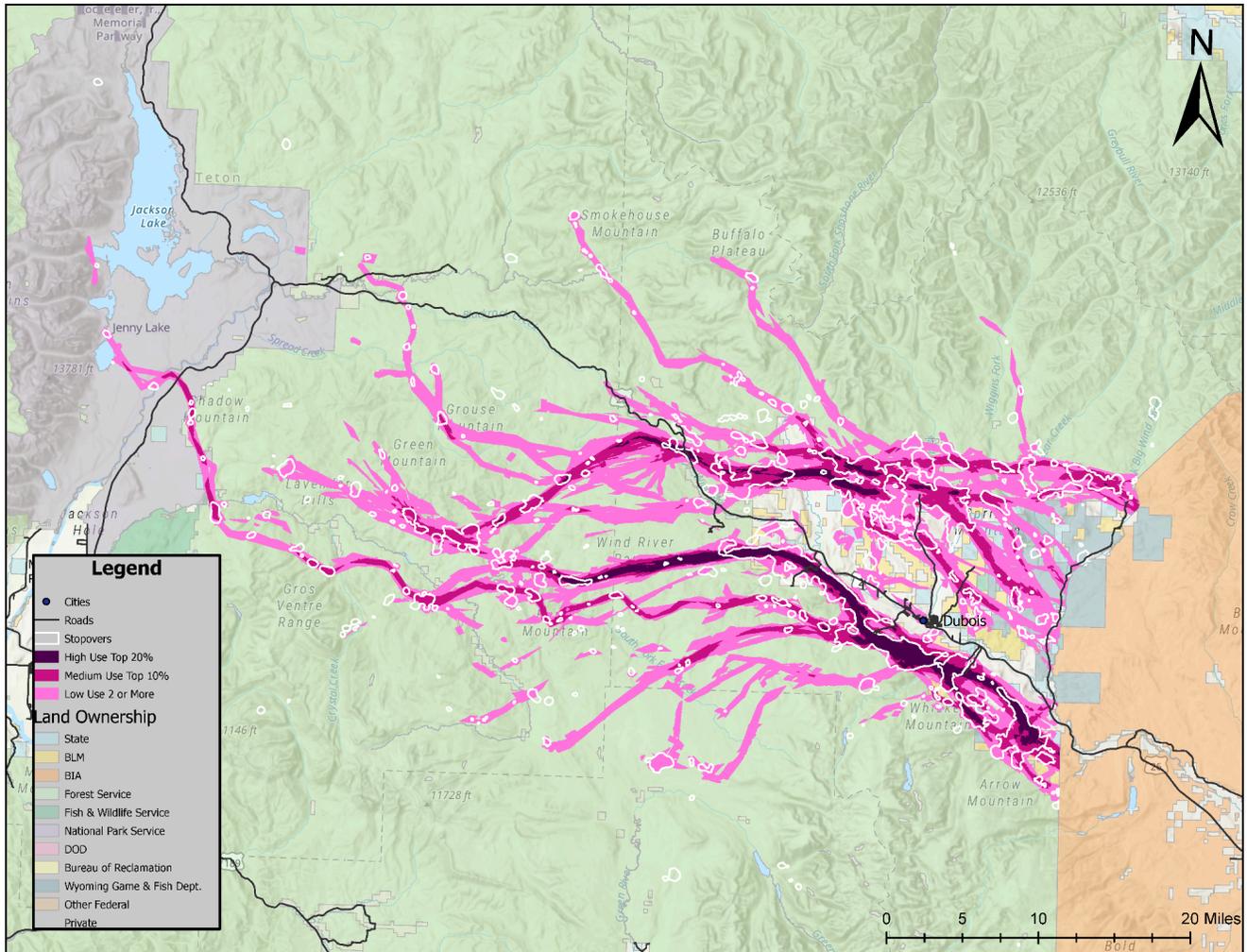
There have been numerous habitat enhancements within the corridor including: conifer removal, aspen enhancement, cheatgrass and invasive species treatments, beaver restoration, both highway right-of-way and pasture fence modification and removal, mobile variable messaging signs on Highway 26, and vegetation removal adjacent to and under the Little Red Creek bridge enabling wildlife to use it as an underpass of Highway 26. The Highway 26 wildlife crossing project is the top priority for the state and funding is underway to move these crossing projects forward. The USDA has provided significant financial opportunities to private landowners through multiple efforts that enhance habitat in migratory habitat including the Regional Conservation Partnership Program and the Migratory Big Game Initiative. Projects have been funded throughout the state, including in this corridor, and contracts to complete fence modifications, treat invasive species such as cheatgrass and conservation easements have been the most common practices implemented through these efforts.

In the western part of the corridor near summer range, existing protections include portions of the corridor in GTNP, Gros Ventre Wilderness and Teton Wilderness within BTNF boundaries, and sage-grouse core areas in the Gros Ventre drainage and GTNP. The corridor also crosses conservation easements on private lands.

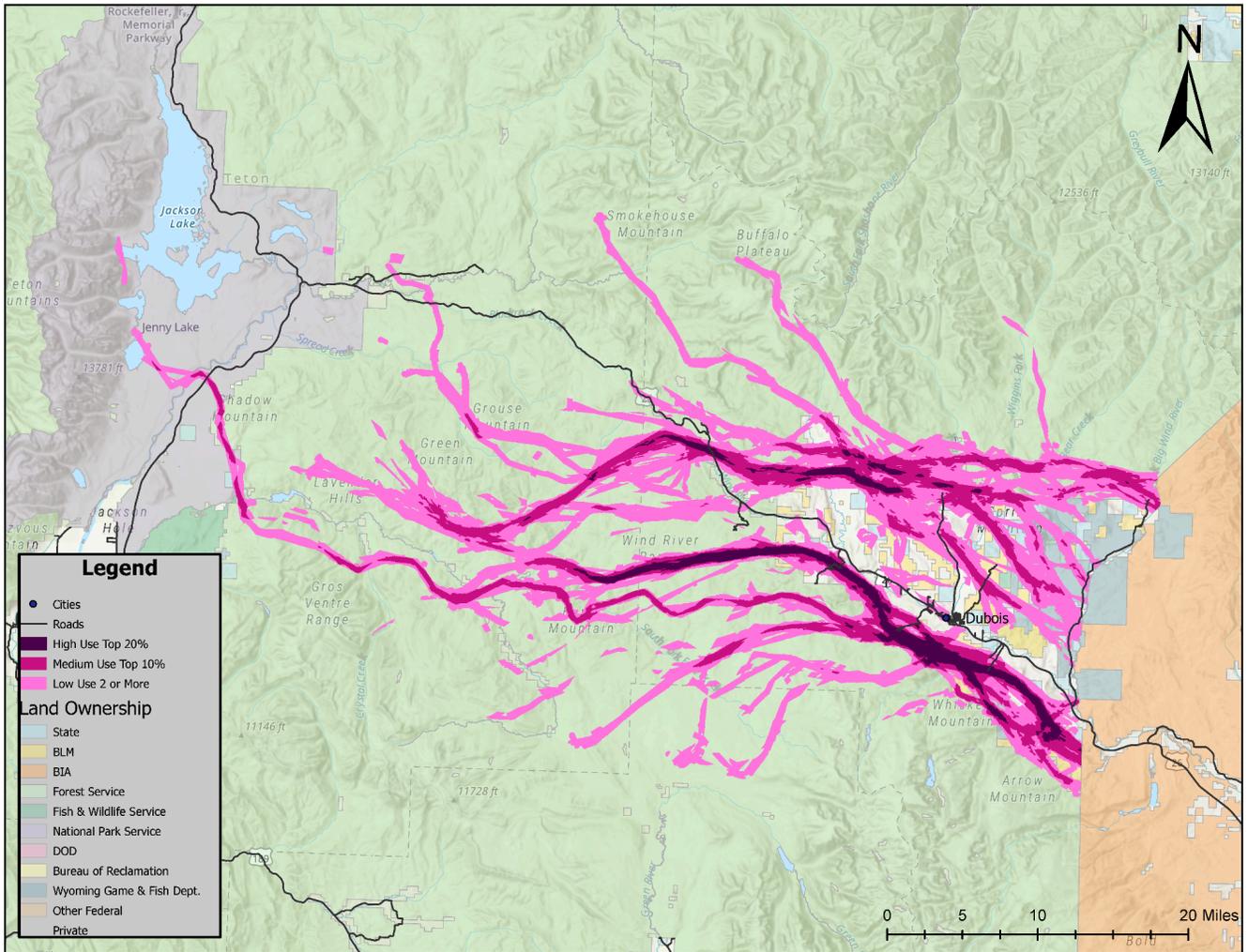
Recommendation:

Based on the current and anticipated threats to this corridor and in consideration of the existing protections, the Department recommends identifying the Upper Wind River mule deer migration corridor because the cumulative current and reasonably anticipated threats are low. Identifying this migration corridor will help prioritize locations, secure funding, and implement projects that would improve functionality of the corridor. This could include more permeable fencing, habitat enhancements, conservation easements, and wildlife crossing projects to reduce wildlife/vehicle collisions, on both public and private land. Identification of the corridor could benefit private landowners by prioritizing funding availability for projects on private land.

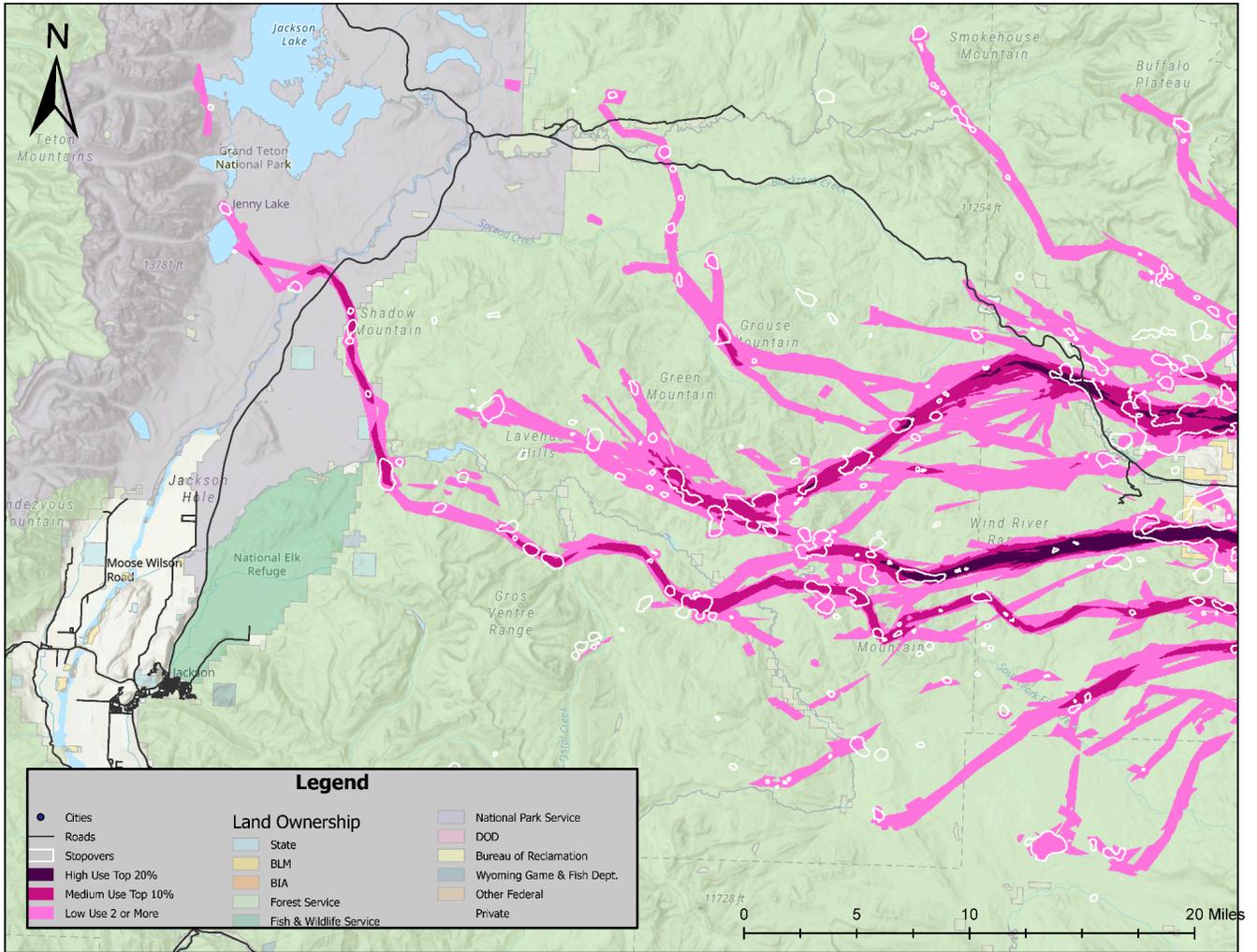
Furthermore, identifying this migration corridor would allow local governments and other partners to voluntarily reduce and minimize impacts from any proposed projects, using a publicly available dataset that identifies high medium and low use areas as well as stopovers. In summary, the Department recommends the Upper Wind River mule deer migration corridor be identified in order to help guide future management of this corridor.



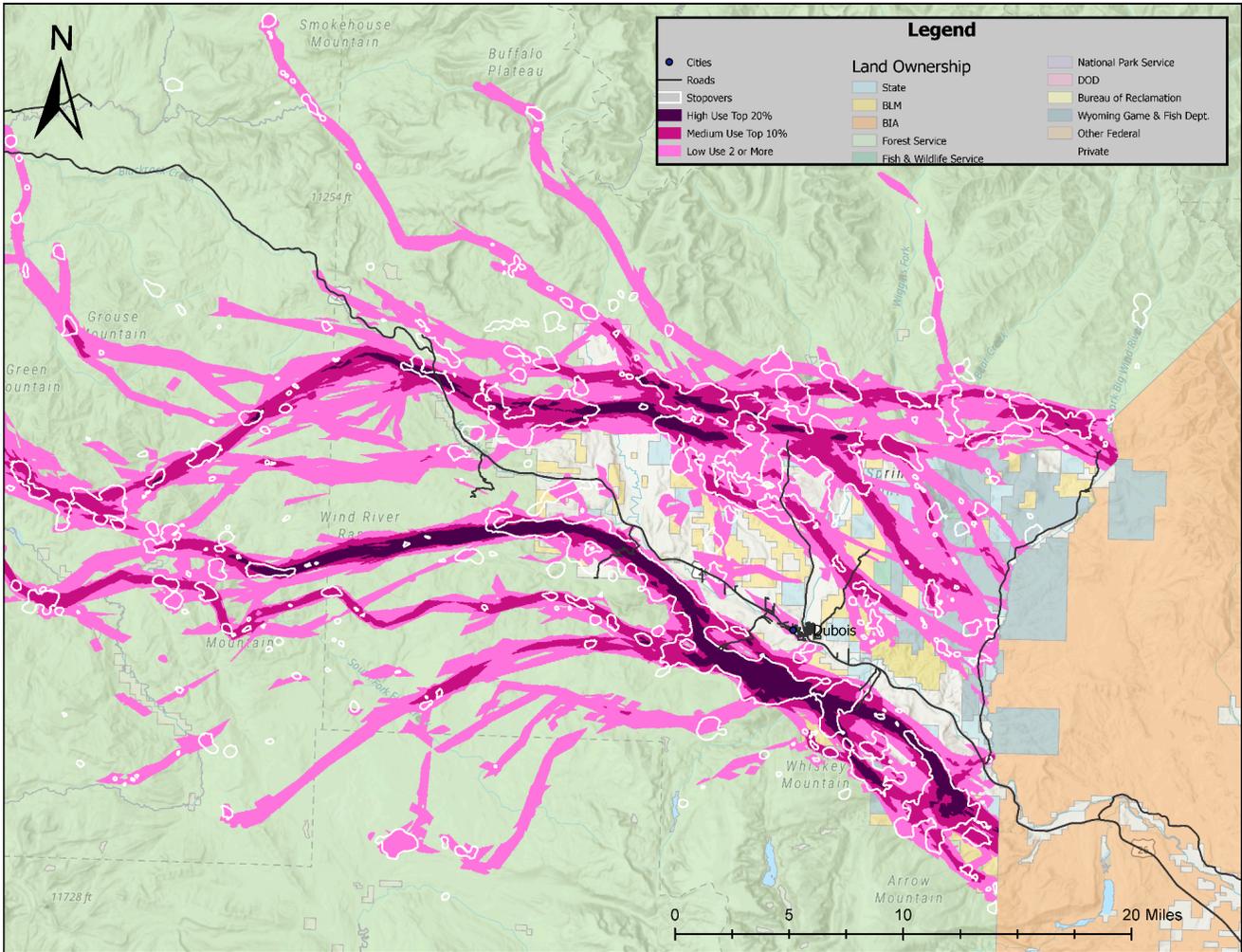
Upper Wind River mule deer migration corridor with stopovers



Upper Wind River mule deer migration corridor without stopovers



Upper Wind River mule deer migration corridor with stopovers, West portion



Upper Wind River mule deer migration corridor with stopovers, East portion