BLM

Sommers-Grindstone Wildlife Values

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Introduction

This report was prepared to illustrate wildlife values associated with the 19,000 acres Sommers-Grindstone Conservation Easement and associated Conservation Plan. It represents known wildlife values based on various parameters, and for some species is a best representation of known values without a comprehensive wildlife inventory. Most information stems from Wyoming Game and Fish data, although some information, mostly related to nongame and/or sensitive species (e.g. CWCS and/or SWAP) stems from a statewide effort that included numerous partners. Some values are extremely hard to capture, mostly related to the landscape scale needs of many of these species in an area that has and continues to provide for numerous opportunities for mineral extraction, and which has not been analyzed from a cumulative impacts assessment. Narratives are species-specific for sage-grouse and big-game while nongame are lumped together as there is minimal information available for most nongame species and most analyses focus on habitat parameters and/or communities to identify areas of importance for many of these species.

Sage Grouse

Sage-grouse have been described by experts to be a "landscape" species, in that they require large, intact landscapes for their survival.

Key areas for sage-grouse are represented by 2- and 3-mile buffers from their lek areas (breeding grounds). These areas (buffers) represent key nesting and early brood-rearing areas and are one of the most important habitat components relative to sage-grouse.

Figure 1(Appendix A) illustrates leks and buffers related to nesting and early brood-rearing for the Duke and Scott Places. Sagebrush communities within these buffers provide extremely important seasonal uses. In addition, outside of these sagebrush areas are areas affected in one way or another by the addition of water, either through irrigation, from springs and seeps, or along naturally occurring waterways. Mesic sites are valuable early brood-rearing habitats for sage-grouse, as they provide added vegetation diversity and abundance (including forbs), and added insect abundance. These are critical to the survival of sage-grouse chicks during the initial 2-3 week period of their lives when they are less mobile. Buffers capture the majority of nesting/early brood-rearing habitat, and have been used to identify habitats of most importance for protection and management purposes. Also, other areas outside of these buffers are almost sure to provide late brood-rearing habitat; which can include everything from upland sagebrush communities to irrigated hayland.

Figure 2 (Appendix A) illustrates a similar map with 2- and 3-mile buffers from existing sage-grouse leks. As illustrated, these areas are extremely important from a sage-grouse perspective, containing lekking, early brood-rearing and late-brood rearing habitat. Not illustrated are winter concentration areas or the importance of the connectivity between the Mesa and Soaphole area, but this value is also important. As mentioned previously, sage-grouse are a landscape scale species, and in addition, need connectivity between seasonal habitats. Habitat fragmentation in light of ongoing development activities adjacent to the Sommers Ranch and Todd Place could be detrimental to sage-grouse populations. Figure 2 illustrates the importance of the Sommers-Todd area of the easement to grouse during all seasons.

From a statewide perspective, Figure 3 (Appendix A) illustrates the relationship of all areas in this easement to the statewide sage-grouse plan, which included the identification of "Core Areas" for sage-grouse, based to a large extent on existing habitats and associated populations of birds. These maps were based on a 5.3 mile buffer around all leks. Statewide efforts have identified needs related to the "Core Area" concept, one of which relates to conservation easements and is noted below:

"5. Fund conservation easements in areas of crucial habitat. Identify alternative intermediate and long-term conservation strategies, including term easements and habitat leasing. Include management stipulations to meet the mitigation purpose of easements or leases as separate contractual agreements with landowners. Identify lands that could be used as offsite mitigation or set-asides, including impacted lands that may be restored to sage-grouse habitat. "

This strategy was identified by the Governor's Statewide Sage-grouse Implementation Team in 2007.

Big Game

Mule Deer

Figure 1 (Appendix B) illustrates mule deer seasonal ranges and migration corridors for the entire Sommers-Grindstone easement area. These important habitats lie within the Sublette Mule Deer Herd Unit , which is the same population of mule deer that winter on the Anticline. Figure 1 in Appendix B illustrates three important values, including migration corridors, crucial winter range and crucial winter-yearlong range. Not illustrated and not specifically identified by the WGFD are associated parturition areas and/or transitional ranges, but these are reflected somewhat by the illustrated migration corridors. It is very possible that parturition could occur between the Scott Place and Forest boundary. In addition, transitional ranges are extremely important from the standpoint of mule deer health both entering and immediately after winter periods. During mild winters, transitional ranges allow mule deer to depart from their normal winter ranges to some degree, both giving winter ranges a rest, as well as potentially providing greater nutrition during those winters. Transitional ranges that are in good condition can build body fat on mule deer prior to entering into the more severe winter months. They can also provide quick relief during the spring period when does are getting ready to fawn. During this period, good nutrition is important to build the health of pregnant does for later lactation.

Preserving and enhancing mule deer ranges are extremely important in this area, not only to mitigate development impacts, but also to address recent west wide population declines. Deer habitats have been declining in productivity, perhaps over the last half century, and we have witnessed associated declines in populations, in particular over the past 15-20 years. Preserving and enhancing those habitats will aid in assuring future population stability, and associated hunting opportunities, which have, and continue to be extremely important to Wyoming residents.

Pronghorn

Figure 2 (Appendix B) illustrates seasonal ranges for pronghorn in the Sommers-Grindstone easement area. As depicted, the entire area is spring-summer-fall ranges for pronghorn. Migratory corridors, which are also illustrated, are perhaps more important for pronghorn, in particular at the Duke and Scott Places.

Moose

The Sommers-Grindstone easement properties provide valuable habitat for moose as depicted on Figure 3 (Appendix B). All properties provide important habitat in the form of either crucial winter-yearlong range or winter-yearlong range, with some spring-summer-fall range as well, on the Duke Place. In addition, both the Duke and Scott Places contain important migration corridors for moose as illustrated.

Most, if not all of the riparian habitats for moose have been inventoried/assessed by Teton Science School with a contract through the Wyoming Game and Fish Department (Figure 4 – Appendix B). This assessment (Sublette Moose-Habitat Assessment: Upper Green River to LaBarge Creek Study Areas; April, 2010) will lead to future habitat projects for moose in important areas throughout the Upper Green River Basin. The inventories are the result of declining moose numbers in both the Jackson and Pinedale areas. Assessment information is available through the local Wyoming Game and Fish Department.

Nongame

The following was taken from "A Comprehensive Wildlife Conservation Strategy for Wyoming." (WGFD; July 12, 2005). Mapping related to the plan and areas of importance and are delineated on Figures 1 and 2 (Appendix C).

Figure 1 (Appendix C) depicts mapping efforts done by The Nature Conservancy (TNC) and relate to the following narrative taken from CWCS and the State Wildlife Action Plan (SWAP). Determining the "quality" of habitats for SGCN on a statewide basis across Wyoming is difficult. The habitat requirements of many different species vary, and may be impossible to quantify in diverse habitats. As a surrogate measure, "habitat intactness" was used to estimate overall habitat quality. The WGFD believes that "intactness" constitutes an adequate measure of habitat stability. The factors used to calculate "intactness" included: road density; mine presence; oil and gas pipeline presence; oil and gas well presence; residential development; dams; impaired streams; Hilsenhoff's Biotic Index (HBI) score; surface water use; and the occurrence of invasive species. Use of these factors was not intended to be an indictment of any particular land use. Rather, they were included to provide a comprehensive view of ongoing landscape changes in Wyoming. For each criterion, a scale was developed and applied to the ecological systems map (Map 1) within a raster GIS framework. When the scores for each criteria were summed, each habitat patch was assigned an overall quality score between one and 10, with 10 indicating the highest known habitat quality (Map 2). From these scores, an average quality score was generated for each habitat type within each ecoregion (Tables 5 thru 15). The acreage of each habitat type within each ecoregion, and the number of SGCN that exist within each habitat type within each ecoregion, have been included to provide a context for the quality indicator. Using the GIS tools developed for mammals and birds it was possible to calculate the mean number of mammal and bird SGCN that utilize each terrestrial habitat patch within each ecoregion. This process also provided the range of SGCN for each habitat type. Although very small areas may be important for wildlife conservation, habitat types represented by ten acres or fewer were excluded from the individual ecoregional analysis, as they are too small to be represented on a statewide map.

Figure 2 (Appendix C) illustrates key habitats in the Upper Green River Basin and relates to the following:

Key Habitat Number and Name: 8 Green River

Uniqueness: SGCN list includes 23 bird and 10 mammal species. WY Gap classifies a large portion of the area as the highest ranking for species diversity. Provides highly important habitat for the Trumpeter Swan expansion program. Includes significant areas of R.M. Foothill Riparian and Shrubland. Includes Seedskadee National Wildlife refuge and areas of high importance to spring migration of passerines and bird watchers..

Habitat quality ranking 0 – 5.71 **Protective status ranking** 0 –5.71

Total Area: 330,307acres

Key Habitat Number and Name: 9 Pinedale

Uniqueness: SGCN list includes 21 bird and 13 mammal species. WY Gap classifies a large portion of the area as the highest ranking for species diversity. Includes the most significant concentration of breading Long-billed Curlews and Sandhill Cranes in the State Provides highly important habitat for the Trumpeter Swan expansion program. Includes highest density of breeding Greater Sage-grouse.

Habitat quality ranking 0 -5.71 **Protective status ranking** 2.5 –5.69

Total Area: 823,139acres

Key Habitat Number and Name: 7 Wyoming Range

Uniqueness: Records indicate the area was the most important habitat for lynx in Wyoming. Provides significant habitat to other boreal species. WY Gap classifies a large portion of the area as the highest ranking for species diversity.

Habitat quality ranking 6.66 – 10 **Protective status ranking** 5.69 – 10.

Total Area: 806,466acres

Summary of Important Habitat Values

Duke Place

Wetland/Riparian Habitat – 934 acres
Terrestrial and Aquatic Crucial Habitat Area (Cottonwood and Horse Creek Watersheds)- 6147 acres
Terrestrial Strategic Habitat Plan Crucial Area (Hoback) - 5347 acres
Big Game Migration Corridors
- Mule Deer – 2158 acres
- Elk – 679 acres
- Pronghorn – 2332 acres

Seasonal Ranges
- Moose (CRUWYL) – 667 acres
- Moose (WYL) – 3912 acres

Sage Grouse Leks with a 2 mile buffer – 317 acres

Scott Place

Wetland Riparian Habitat – 2043 acres
Terrestrial and Aquatic Crucial Habitat (Green River Corridors) – 956 acres
Terrestrial and Aquatic Crucial Habitat Area (Cottonwood and Horse Creek Watersheds)- 2569 acres
Big Game Migration Corridors
- Mule Deer – 288 acres
- Pronghorn – 839 acres

Seasonal Ranges
- Moose (CRUWYL) – 2229 acres
- Moose (WYL) – 338 acres
- Mule Deer (CRUWYL) – 1641 acres

Sage Grouse Leks with a 2 mile buffer – 1550 acres

Sommers Ranch

Wetland Riparian Habitat – 1297 acres
Terrestrial and Aquatic Crucial Habitat (Green River Corridors) – 1454 acres
Terrestrial Strategic Habitat Plan Crucial Area (Mesa-Jonah)- 2047 acres
Big Game Migration Corridors
- Mule Deer – 63 acres

Seasonal Ranges
- Moose (CRUWYL) – 1134 acres
- Mule Deer (CRUWIN) – 123 acres
- Mule Deer (WIN) – 1319 acres
- Mule Deer (WYL) – 605 acres

Sage Grouse Leks with a 2 mile buffer – 1660 acres

Todd Place
Wetland Riparian Habitat – 2450 acres
Terrestrial and Aquatic Crucial Habitat (Green River Corridors) – 2302 acres
Terrestrial Strategic Habitat Plan Crucial Area (Mesa-Jonah) - 3302 acres
Big Game Migration Corridors
    Mule Deer – 1636 acres

Seasonal Ranges
    Moose (CRUWYL) – 1976 acres
    Mule Deer (CRUWIN) – 947 acres
    Mule Deer (WIN) – 191 acres
    Mule Deer (WYL) – 896 acres

Sage Grouse Leks with a 2 mile buffer – 1460 acres

The Sommers Ranch, Todd Place and Scott Place contain the following aquatic species: Mountain Whitefish, Fathead minnow, Speckled Dace, Flannelmouth Sucker, Mountain Sucker, White Sucker and Mottled Sculpin, Brook Trout, Brown Trout, Rainbow Trout and Snake River Cutthroat. The Sommers Ranch and Todd Place is also home to the Boreal Chorus Frog. The Duke Place contains the following aquatic species: Mountain Sucker and Mottled Sculpin, Brook Trout, Brown Trout, Rainbow Trout and Cutthroat.

Totals habitat acres for whole conservation easement:
Wetland Riparian Habitat – 6723 acres
Terrestrial and Aquatic Crucial Habitat Area – 13428 acres
Terrestrial Strategic Habitat Plan Crucial Area - 10697 acres
Mule Deer Migration Corridors – 4145 acres
Elk Migration Corridors – 679 acres
Pronghorn Migration Corridors – 3171 acres
Moose Seasonal Range – 10257 acres
Mule Deer Seasonal Range – 5723 acres
Sage Grouse Leks with 2 mile buffer – 4988 acres
Wetland/Riparian areas were delineated using 2002 Color Infrared Imagery
CRUWYL = Crucial Winter/Yearlong Range
CRUWIN = Crucial Winter Range
WIN = Winter Range
WYL = Winter/Yearlong Range

APPENDIX A

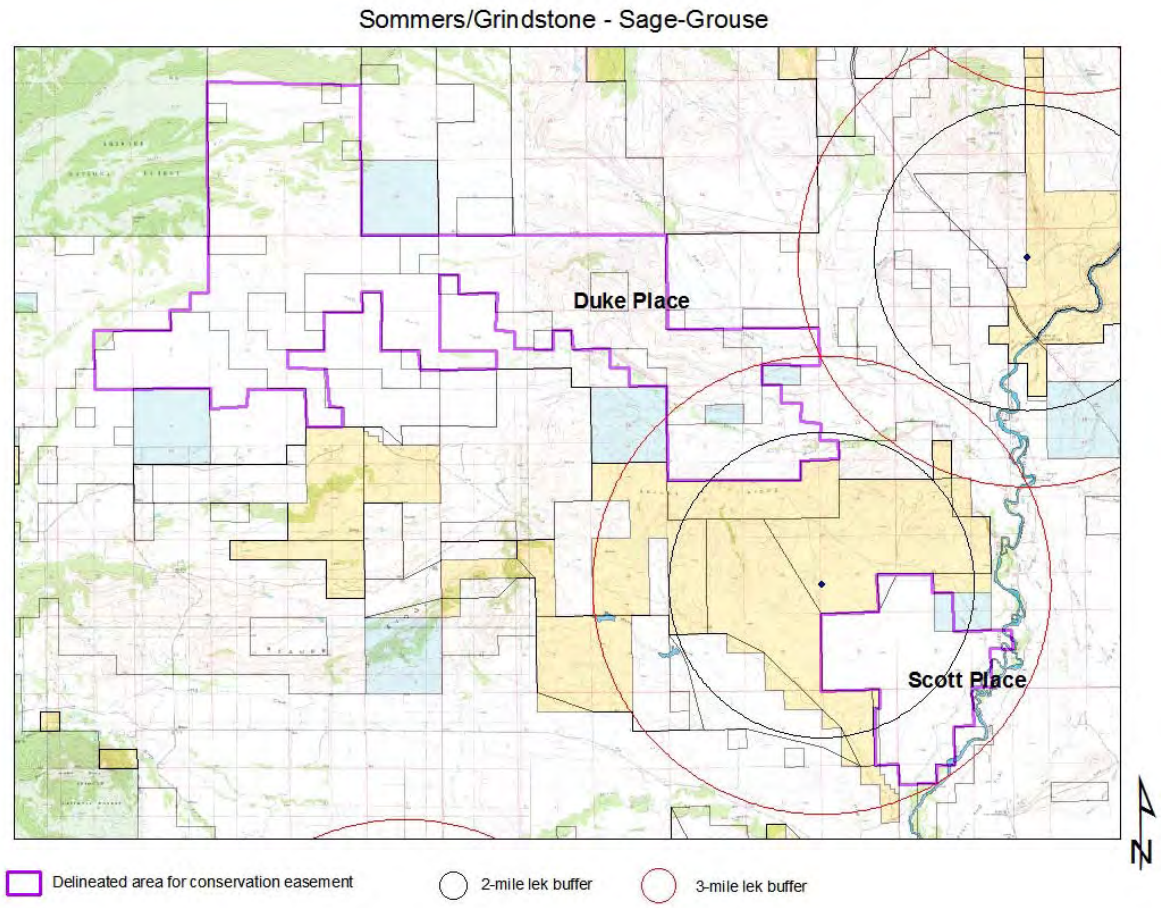

Figure 1. Sage-grouse leks and 2- and 3-mile buffers associated with the Duke and Scott Places.

APPENDIX A

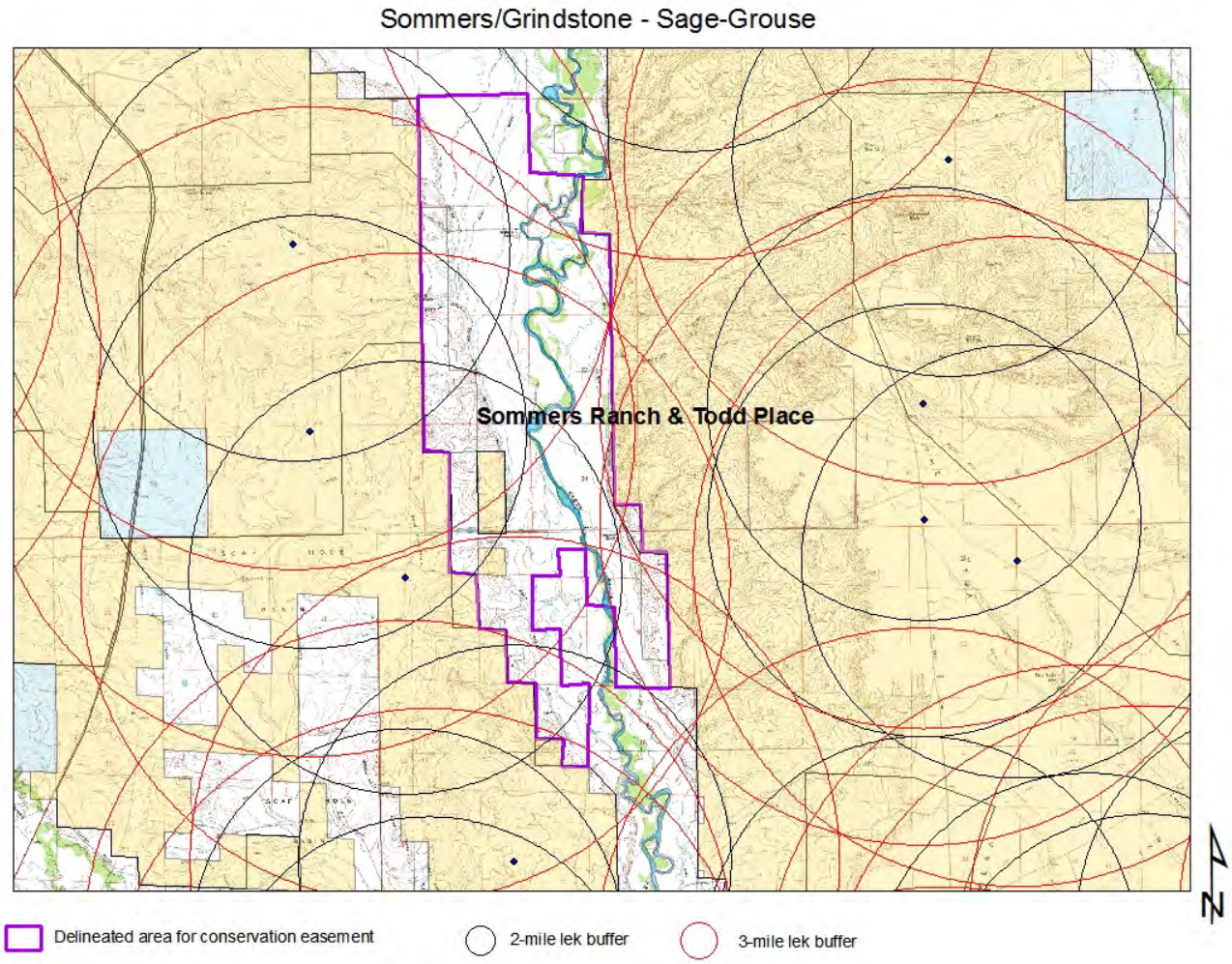

Figure 2. Sage-grouse leks and 2- and 3-mile buffers associated with the Sommers Ranch and Todd Place.

APPENDIX A

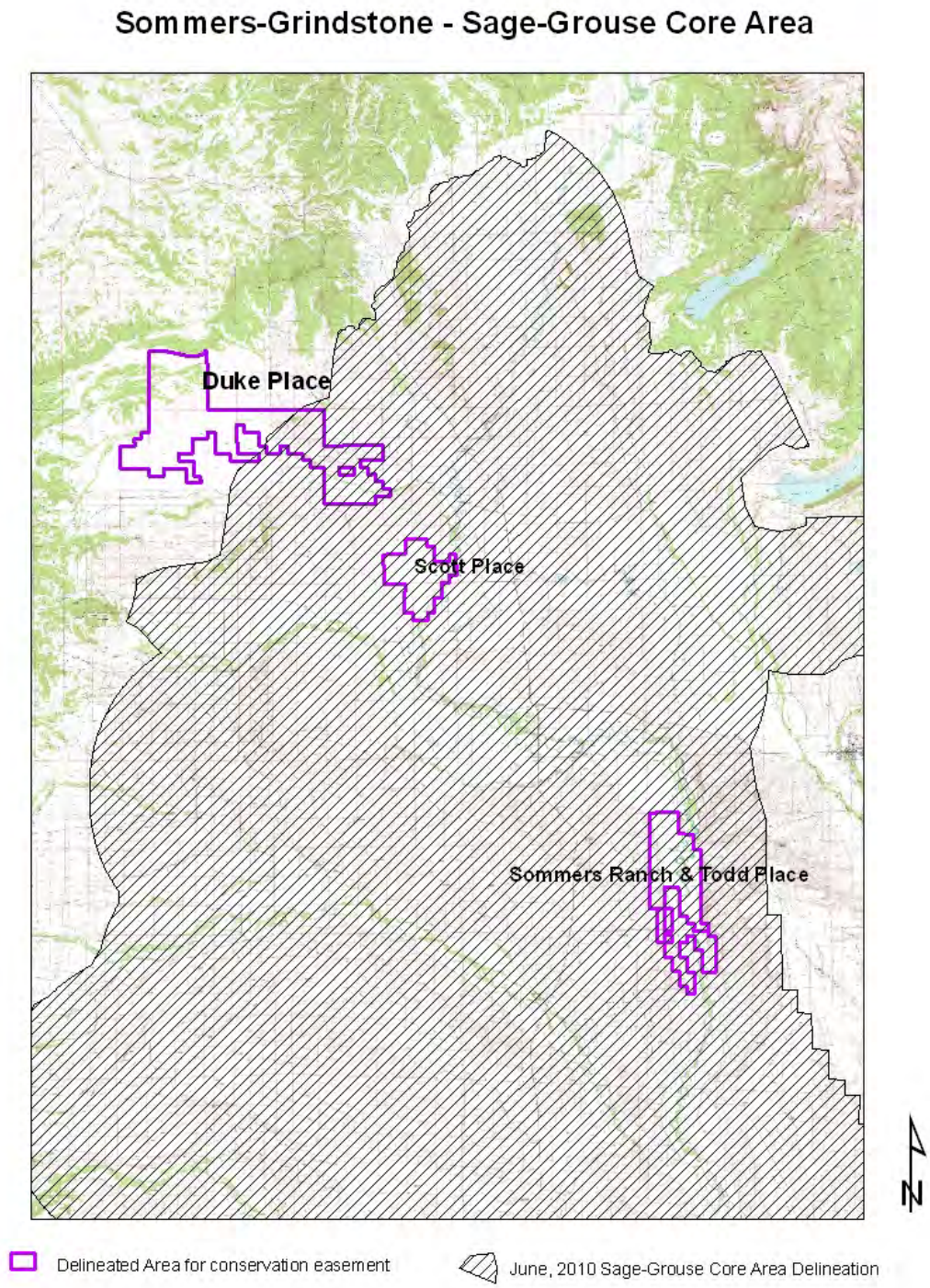

Figure 3 – Sage-grouse Core Areas (Statewide Mapping)

APPENDIX B

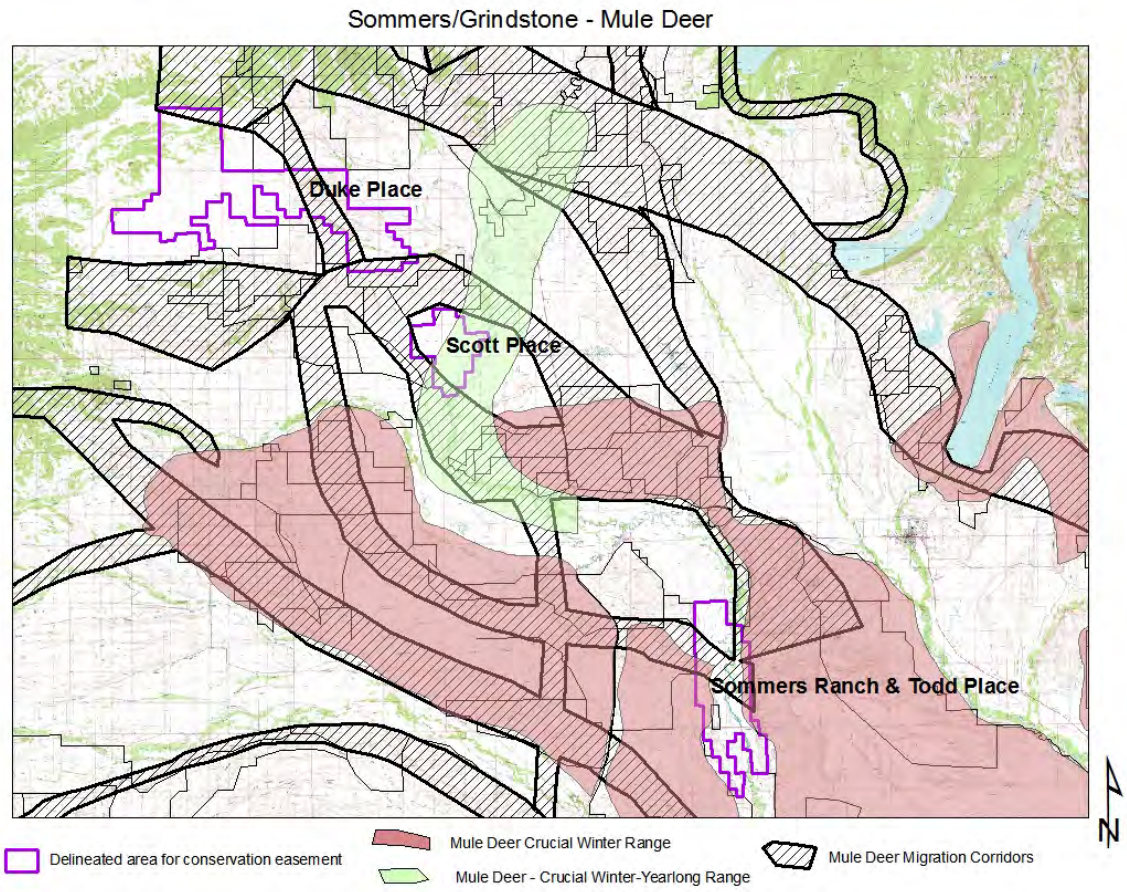

Figure 1. Mule deer seasonal ranges and migration corridors for the Sommers-Grindstone Easement Area.

APPENDIX B

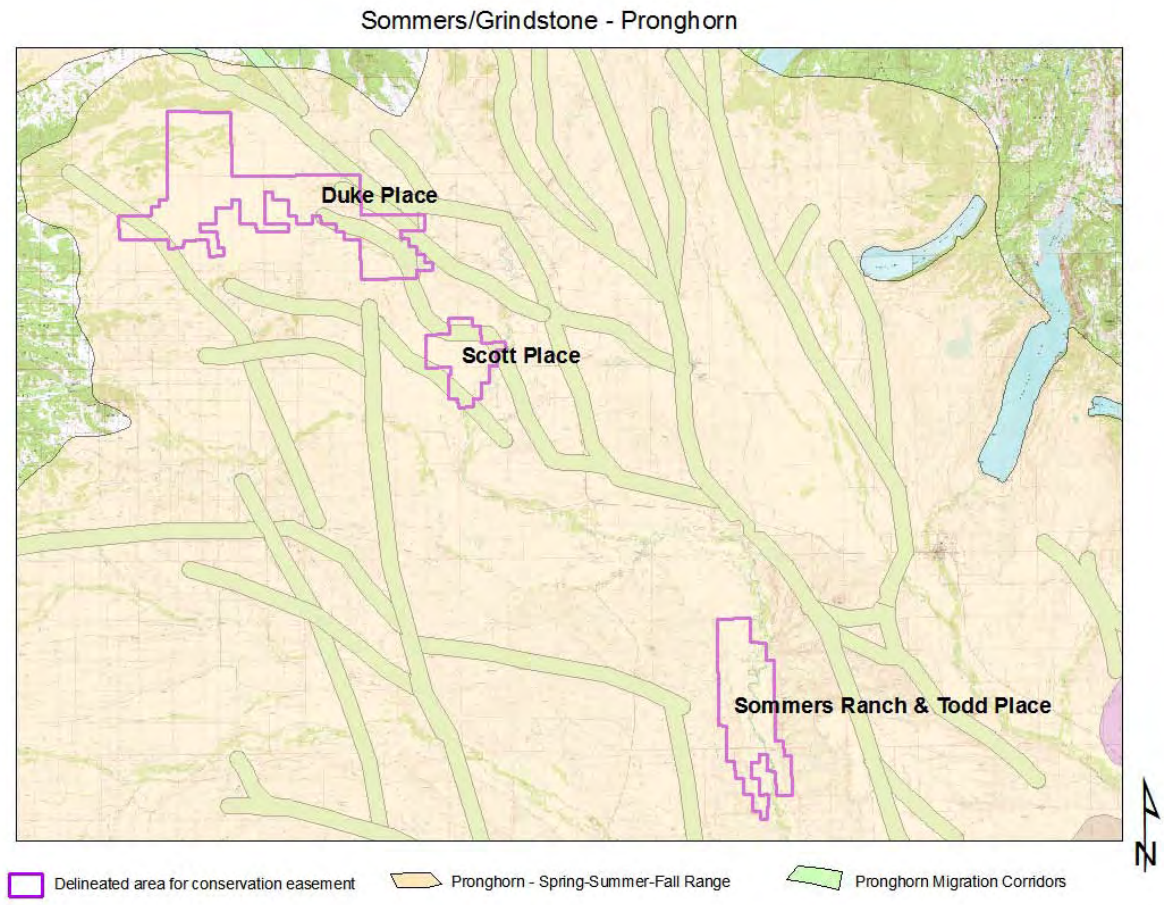

Figure 2. Pronghorn seasonal ranges and migratory corridors for the Sommers-Grindstone Easement Area.

APPENDIX B

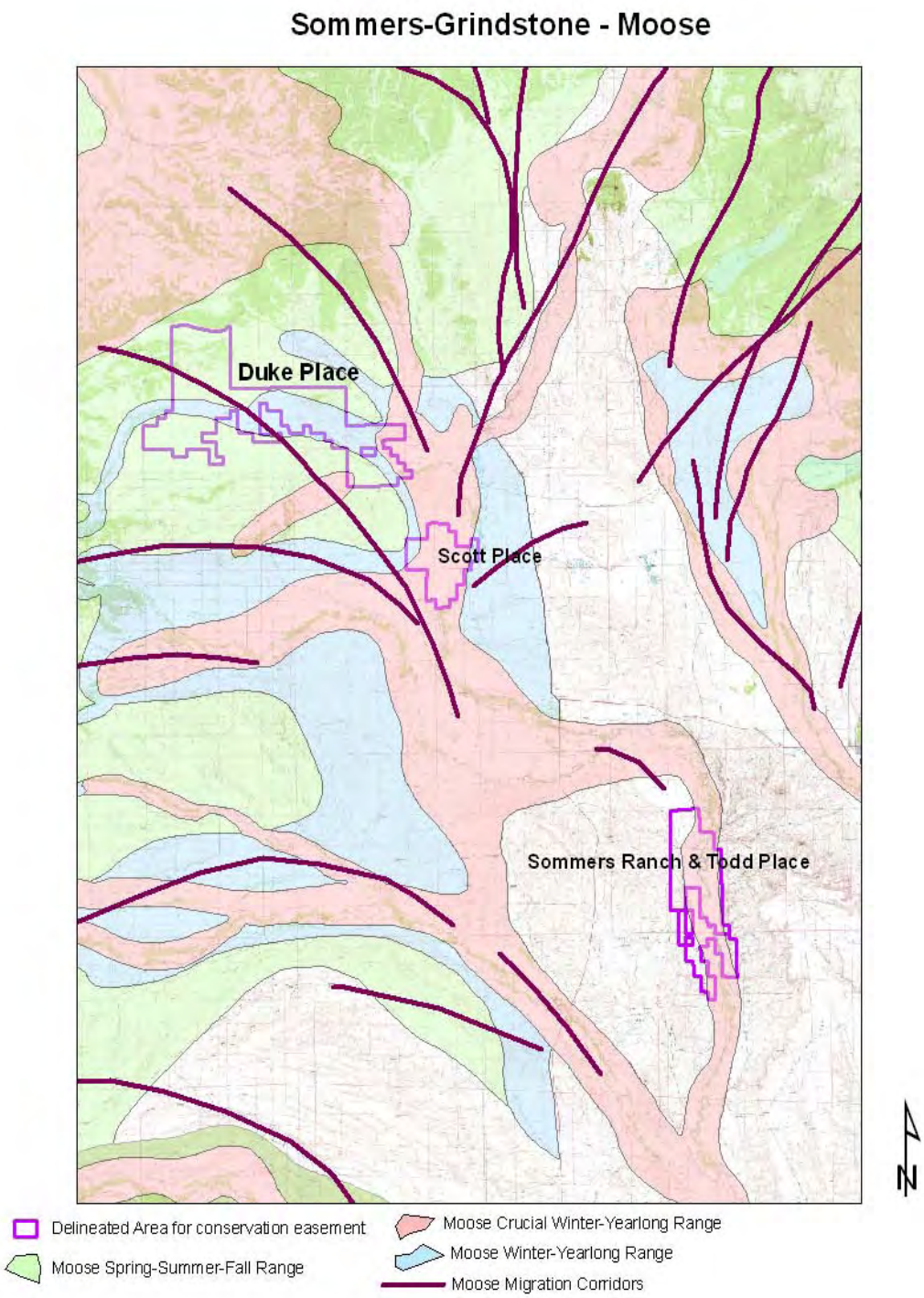

Figure 3. Moose seasonal ranges and migratory corridors for the Sommers-Grindstone Easement Area.

APPENDIX B

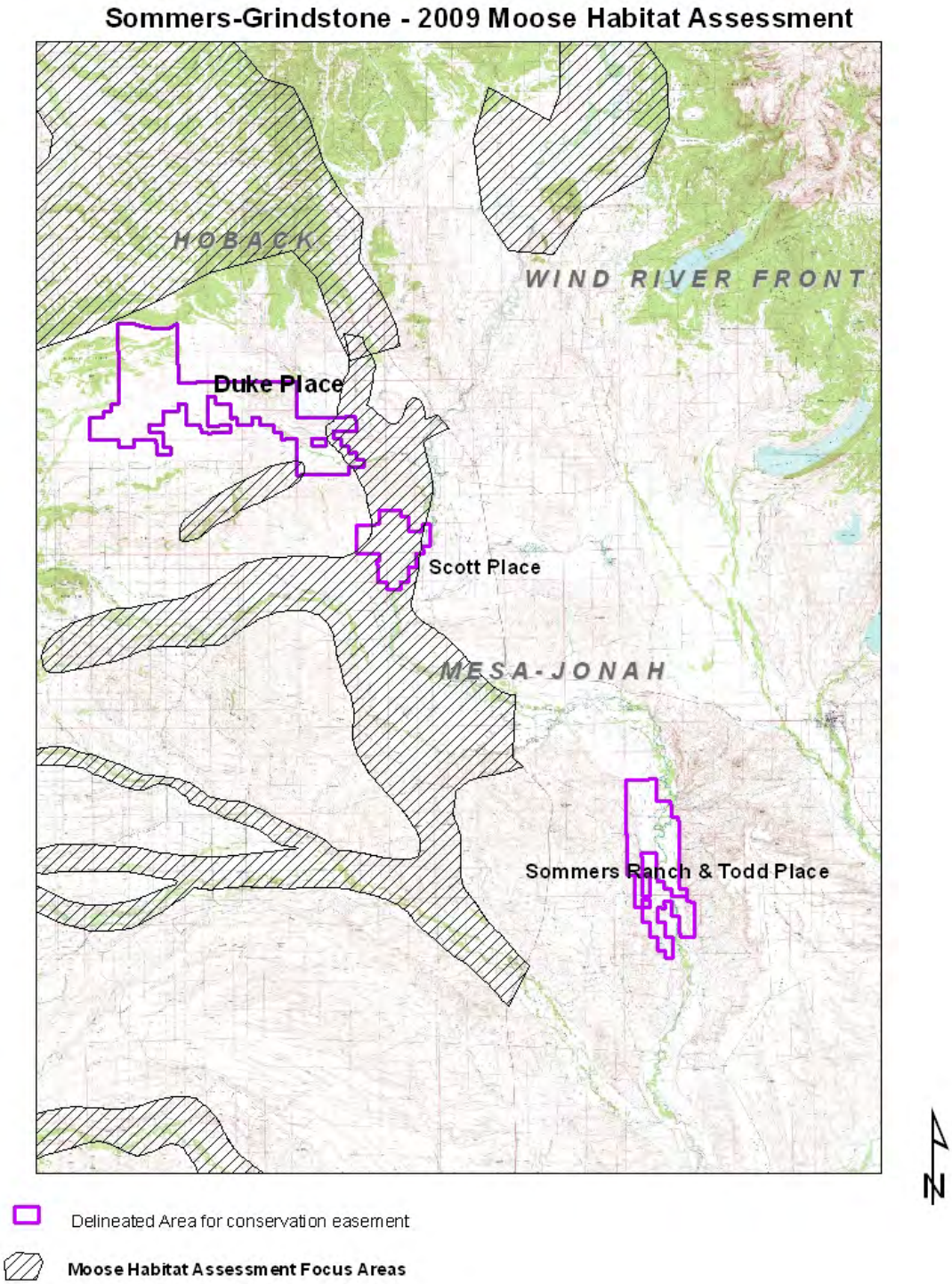

Figure 4 – Area of moose habitat assessment by Teton Science School.

APPENDIX C

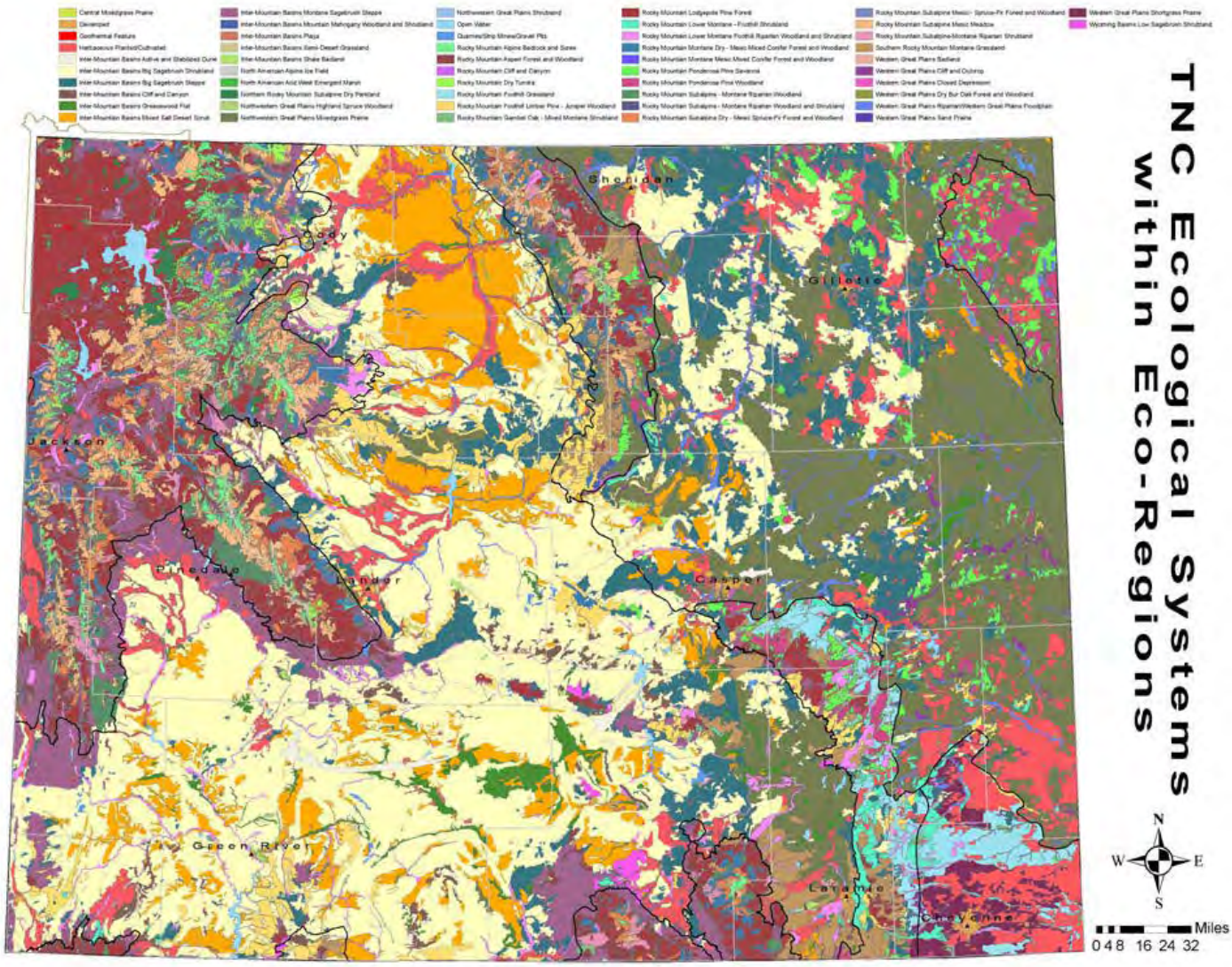

Figure 1 – Map from the WGFD State Wildlife Action Plan (SWAP)

APPENDIX C

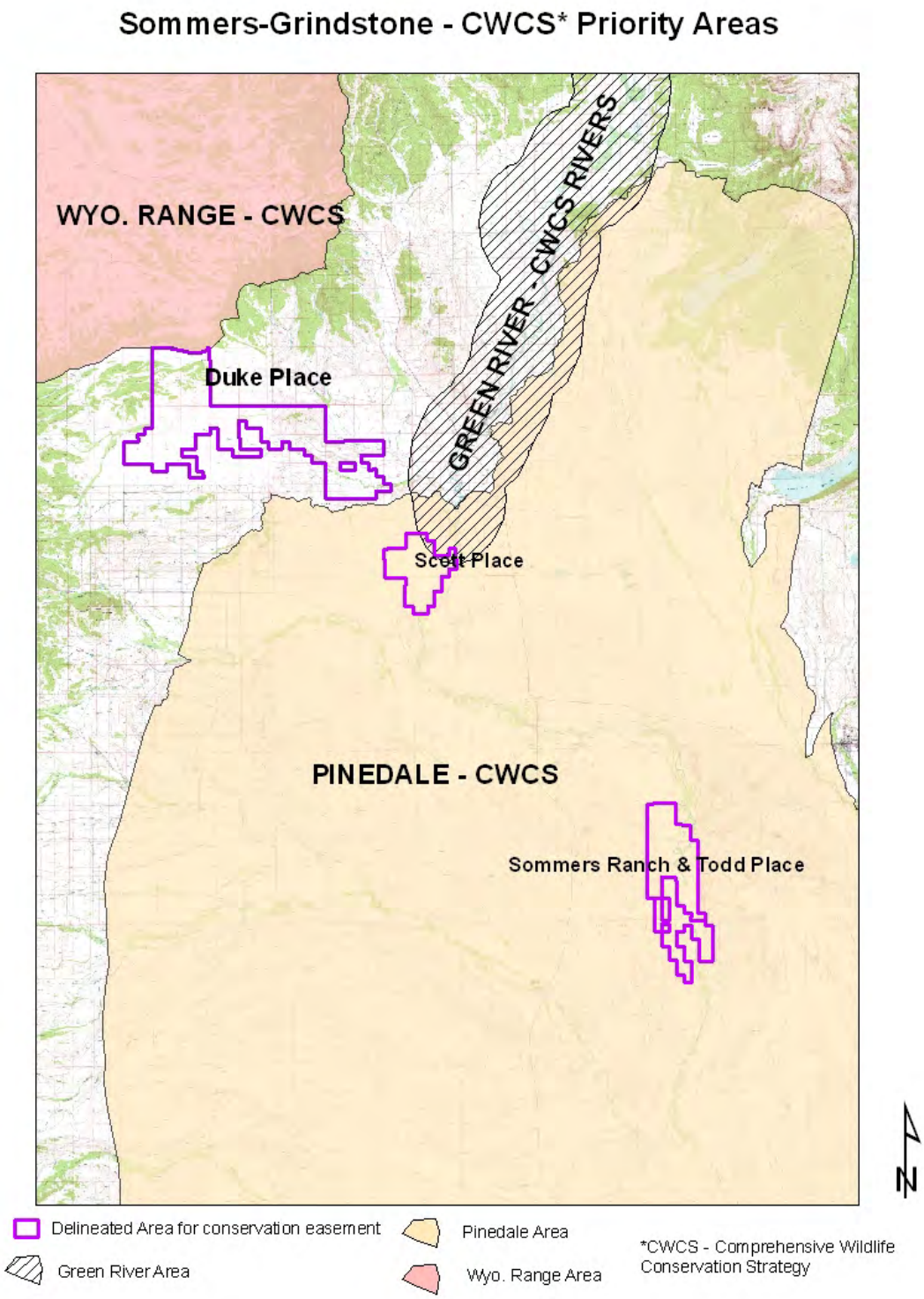

Figure 1 – CWCS* Priority Areas

CWCS **(**"A Comprehensive Wildlife Conservation Strategy for Wyoming." (WGFD; July 12, 2005)**)**, now referred to as SWAP (State Wildlife Action Plan) – Key Habitat Areas.