PINEDALE ANTICLINE PROJECT OFFICE (PAPO)

1625 West Pine
PO Box 768
Pinedale, Wyoming 82941
Attention: Project Coordinator 307-367-5386

APPLICATION FOR FUNDING

(use additional sheets if necessary)

1. GENERAL PROJECT INFORMATION

Project Name: North Cottonwood Ranch Conservation Project

General Location (distance and direction from nearest city/town, attach map at a scale not less than ½" = 1 mile):

The ranch is located 14 miles west/southwest of Daniel, Wyoming on North Cottonwood Road 23-129.

Legal Location of Project (attach map at a scale not less than 1" = 2,000').

Map attached

Total: approximately 15,340 deeded acres located in:
T33N R113 W: Sections 2-12, 14, 15, 17, 19-22, 27-30, 32-34
T33N R114W: Sections 1, 12, 23-27
T34N R113W: Sections 31, 32
T34N R114W: Section 35

County: Sublette

Surface Ownership (check all that apply): Federal _____ State _____ Private__X__

**If project includes a mosaic of land ownerships (e.g., mix of federal, state and/or fee lands), provide a breakdown for each specific owner by acres and percent of total project area.

Contact Information for Affected Parties or Agencies:

North Cottonwood Ranch
Wind River Pastoral, LLC (Kelley family)
c/o Greg Betterton, Esq.
1327 North Cottonwood 23-129
Daniel, Wyoming 83115
(941) 488-4422

2. APPLICANT INFORMATION

Name/Organization: Luke M. Lynch/ The Conservation Fund

Mailing Address: P.O. Box 4441

City: Jackson *State:* WY *Zip Code* : 83001

Daytime Phone # 307-733-2360 *Fax #* 307-733-2365

Email Address: llynch@conservationfund.org

Point of Contact (if different from above)

3. PROJECT DESCRIPTION

General Project Type (check all that apply): Wildlife __X__

Land Use/Livestock __X__ Land Use/Recreation _____

Cultural _____ Other _____

Describe Project Proposal (e.g., mechanical treatment, water improvement, etc.)

The North Cottonwood Ranch Conservation Project meets PAPO Wildlife and Livestock Mitigation goals through acquisition of a conservation easement on 15,340 acres of private land. The project is designed to permanently protect and enhance important wildlife habitat and ranchland in the PAPO priority mitigation area west of Daniel, Wyoming in the Upper Green River Valley.

Total Project Acres (if applicable)

15,340 acres (100% private)

Acres Indirectly Affected (if applicable, explain)

The North Cottonwood Ranch Project will benefit the entire Cottonwood Creek watershed and region by ensuring wildlife habitat connectivity and large scale conservation of the most important and most diverse habitat types for the Upper Green River Valley's wildlife. The species most likely to indirectly benefit are those terrestrial species that depend on the Ranch as a migration and transitional range corridor. Those species include moose, mule deer, elk and pronghorn. Other species indirectly affected include migrating avian that indirectly benefit from spring and fall transitional habitat on the property, including extensive wetland and riparian habitat.

The North Cottonwood Ranch is located between the Wyoming Range and the Upper Green River corridor. The property is a crucial linkage or bridge to wildlife movement between public lands and seasonal big game ranges. Protecting the North Cottonwood Ranch ensures wildlife will continue to move freely between seasonal ranges and public lands, including the Pinedale Anticline Project Area (PAPA). Protection of the Ranch will inhibit habitat fragmentation and provide continuous habitat connectivity.

In addition to other large blocks of federally managed lands, the North Cottonwood Ranch is adjacent

to and surrounds Wyoming State Lands used for wildlife management, elk winter feedgrounds and other conserved properties. The 15,340 acre North Cottonwood Ranch and these lands comprise an expansive landscape for wildlife habitat connectivity to other ecologically important lands in the vicinity and region.

4. OBJECTIVES OF PROJECT, AND BENEFITS TO PAPO OFF-SITE MITIGATION STRATEGIC GOALS.

A primary objective of the North Cottonwood Creek Ranch Conservation Project is to provide off-site compensatory habitat mitigation within the same landscape planning unit as the PAPA.

The objective will be accomplished by permanently conserving the 15,340-acre private property and enhancing its habitat function through habitat enhancements. These enhancements are being studied by the JIO/PAPO team, and may include the following:

- Fence Conversion: Modification of fences to wildlife –friendly standards with an overall goal of a net reduction in miles of fence and reducing impediments to wildlife travel. This effort could include marking fences in key sage-grouse areas.

- Spot/ Mosaic Burning: Assess the feasibility of conducting small-scale sage-brush burning to enhance forage production for wildlife species and improve overall land health.

- Water Efficiency: Opportunities exist, with over 3,500-acres of wetland and irrigated meadow on the property, to improve water efficiency to provide a significant net benefit for forage conditions in transitional seasons for wildlife.

- Monitoring: Spatial and temporal monitoring and rating of habitat conditions to measure the net improvement of habitat conditions over time to quantify the direct offsite mitigation benefits.

Recent recommendations (March 2010) by WGFD for development of oil and gas resources within important wildlife habitats described a "landscape unit" as a geographic area encompassing all the major ecological components, functions, and processes that are essential to sustain species populations or biotic communities.

The proposed conservation property contains crucial ranges and migration routes for the same mule deer and pronghorn antelope herd units that use the PAPA. WEST Inc's antelope and mule deer migration studies conducted for JIO-PAPO verified the importance of the North Cottonwood Ranch crucial habitats and connectivity to the PAPA herd units. The property also provides seasonal habitats required by sage-grouse as identified by Matt Holloran, wildlife biologist, in his 2006-07 Ryegrass Sage-grouse Seasonal Habitat Selection and Demographics presentation at JIO-PAPO 2008 Wildlife Workshop. Protecting the 15,340 acre ranch will preserve a substantial habitat-rich property from development and fragmentation within the same "landscape unit" as the PAPA.

The North Cottonwood Creek Ranch Conservation Project benefits the PAPO off-site compensatory mitigation strategic goals through the following project objectives:

AFFECTED PAPO MITIGATION RESOURCE: WILDLIFE

Applicable PAPO Strategic Goals:

1- Actively pursue projects to benefit wildlife on a landscape scale within the Upper Green River Basin with a focus on those populations impacted by development on the Pinedale Anticline Project Area (PAPA).

2 - Evaluate and respond to population trends to benefit wildlife species impacted by development on the PAPA.

Project Objectives and Benefits to Strategic Goal

The PAPA is within winter range utilized by mule deer in the Sublette Herd Unit. According to the most recent research conducted by WEST Inc. and presented at a October 2010 JIO/PAPO annual wildlife meeting, mule deer numbers of this herd on the Mesa area and within the PAPA have declined 60 percent in 2009 compared to 2001, and the deer numbers are 28 percent lower in 2009 than in 2005. This decline makes it increasingly important to preserve lands that provide important mule deer habitat in the vicinity of the PAPA and within the PAPO Mitigation Focus Areas.

Mule deer that occupy the Wyoming Range Front and winter ranges within the PAPA and vicinity migrate through the North Cottonwood Ranch to summer ranges in the Greys River, Salt River, and Hoback River watersheds; distances that span 80 miles or more. (Information provided by Gary Fralick, Wildlife Biologist, WGFD Thayne, WY) Mule deer in the Sublette Herd Unit will directly benefit from the proposed North Cottonwood Ranch conservation project. The project permanently protects:

- Approximately 191 acres of WGFD designated crucial winter/yearlong range for mule deer on the property and in the vicinity of the Pinedale Anticline and Jonah Natural Gas Field crucial winter ranges.
- Approximately 15,170 acres of WGFD designated spring/summer/fall range for mule deer on the property.
- Multiple WGFD designated mule deer migration routes on the property.

Sagebrush-steppe Habitat: The acquisition of a conservation easement on the North Cottonwood Ranch will permanently protect and enhance approximately 9,800 acres of sagebrush-steppe and sagebrush/perennial grasslands (Source: BLM, GIS Layer – Sage Grouse Habitat for Wyoming, 2010). This single mitigation project will deliver roughly 10% of the 90,000 acres PAPO sagebrush maintenance, preservation and/or enhancement goal.

Sage-Grouse: The acquisition of a conservation easement on private lands will permanently protect and enhance thousands of acres of important sage-grouse habitat within the PAPO/JIO Ryegrass/Bench Focus Area and WGFD Daniel Sage Grouse Breeding Core Area. This area is known to have one of the highest concentrations of sage-grouse in Wyoming. The vast majority of the property is designated by WGFD as nesting and brood-rearing habitat for sage-grouse. The project will benefit the following sage-grouse resources within the PAPO Mitigation Focus Area:

- Directly benefits lands within the 2-mile buffer for four active and well-documented

sage-grouse lek sites. These four sage-grouse leks are located on BLM lands immediately to the northeast of the project area. Numerous Greater sage-grouse leks have been identified and documented by WGFD in the direct vicinity of North Cottonwood Ranch. Nine leks are within 3 miles of the property boundary. Historically, lek assessments have not occurred on the North Cottonwood Ranch and thus leks are not identified by WGFD in their mapping efforts. The recent BLM sagebrush/grouse habitat mapping efforts mentioned above have identified over 9,800 acres of sagebrush and perennial grass/sagebrush vegetative cover on the property similar to habitat and land use in the vicinity that supports numerous leks. This suggests sage-grouse leks are likely to exist within the sagebrush habitat on the North Cottonwood Ranch.

- Indirectly benefits approximately 25 active sage-grouse leks within 10 miles through protection and management of sagebrush-steppe habitat.

Antelope: The project will maintain and enhance important sagebrush-steppe habitat and migration routes used by pronghorn antelope. Permanent protection of the North Cottonwood Ranch will ensure habitat conditions are maintained or enhanced for antelope within the project area. The project will benefit the following antelope resources within the PAPO Mitigation Focus Area:

- Directly benefits 15,340 acres of WGFD designated spring/summer/fall range for antelope through permanent protection of private land.
- Directly benefits antelope migration within a WGFD designated migration route from winter to summer ranges through the North Cottonwood Creek corridor and project area. According to Gary Fralick, WGFD Wildlife Biologist, antelope that spend the winter in the Muddy Creek/Bench Corral and Calpet winter ranges to the east of the property migrate through the property to summer ranges in the head of Greys River and Hoback Basin.

Species of Greatest Conservation Need (SGCN): The project will benefit the following WGFD identified SGCN within the PAPO Mitigation Focus Area.

- The project directly benefits 15,340 acres of habitat for numerous upland, riparian and aquatic SCGN that reside on or seasonally use the property. The species identified by the WGFD 2010 Strategic Habitat Plan include:
  - Colorado River cutthroat trout, mottled sculpin, mountain whitefish, mountain sucker, boreal chorus frog, tiger salamander, northern leopard frog, boreal toad, moose, pygmy rabbit, sage thrasher, sage sparrow, sage grouse, long-billed curlew, greater sandhill crane northern goshawk and boreal owl
- The project directly benefits approximately 4,676 acres of WGFD designated crucial winter range and a designated migration route for Shiras moose, a SGCN, in the Wyoming Wildlife and Natural Resource Trust's Shiras Moose Conservation Initiative area. The Killpecker and North Cottonwood Creek corridors on the property provide extensive scrub-shrub wetland and riparian habitat highly important for moose winter forage and cover.
  - According to Gary Fralick, WGFD Wildlife Biologist, the Sublette Moose Herd that uses the project area is the largest moose herd (Shiras subspecies) in Wyoming, Intermountain West, and Lower 48 States. The WGFD population

objective for this herd is 5,000. WGFD estimates there are currently 4,000 moose in the herd. Approximately 45-50% of 4,000 moose occupy the east slope of the Wyoming Range. The percentage of moose counted annually in the Cottonwood Creeks drainages where the project area is centered is 24% (n=114-178 moose) of the moose that occupy the east slope of the Wyoming Range; the highest moose concentration of on the east slope of the Wyoming range.

- WGFD designated parturition areas are located to the south and west of the property in the Cottonwood Creek corridor on private and public lands. The parturition areas possibly extend onto the North Cottonwood Ranches' extensive willow riparian plant community, but are not designated by WGFD range mapping efforts.

AFFECTED PAPO MITIGATION RESOURCE: LIVESTOCK

Applicable PAPO Strategic Goal: *Maintain rangelands according to Standards for Healthy Rangelands & Guidelines for Livestock Grazing Management for the Public Lands associated with PAPA development area and mitigation sites.*

Project Objectives and Benefits to Strategic Goal

Livestock Pasture: This conservation project permanently protects existing livestock pasture and irrigated hay meadows on lands outside of the PAPA. Management and annual monitoring of pasture condition in the project area will provide for improved vegetation health for livestock. The project will benefit the following livestock resources within the PAPO Mitigation Focus Area:

- Directly benefits 15,340 acres of alternative livestock pasture and hay meadows on private lands outside of the PAPA and within the PAPO Mitigation Focus Area.

5. DIRECT/INDIRECT EFFECTS ON OTHER RESOURCES. (if applicable)

Elk Migration Routes and Ranges

While not listed as a SGCN by WGFD or considered a priority by the PAPO Strategic Plan, elk are an important hunting and wildlife viewing resource in the Upper Green River Valley. The project directly affects and permanently protects:

- Approximately 692 acres of WGFD designated crucial winter range for elk on the property. The WGFD Jewett Elk Winter Feedground is within and adjacent to the property.
- Approximately 14,541 acres of WGFD designated spring/summer/fall and 129 acres winter/yearlong range for elk on the property.

The project indirectly affects:

- Multiple WGFD designated elk migration routes in the direct vicinity, possibly extending onto the property.
- WGFD designated parturition areas are located to the west of the property on forest service lands. Aspen stringers on the North Cottonwood Ranch may provide elk parturition habitat, but are not designated by WGFD range mapping efforts.

Wetland, Stream and Riparian Habitat

The Ranch is within the Wyoming Joint Ventures Steering Committee's Upper Green River primary wetland focus area and is a "Designated Bird Habitat Conservation Area." This area is ranked in the top six priority wetland complexes out of 31 in the state.

The project directly affects and permanently protects:

- Approximately 3,500 acres freshwater emergent and scrub-shrub wetlands on the (USFWS, National Wetland Inventory database) adjacent to North Cottonwood Creek, Killpecker Creek, Spring Creek and other areas influenced by flood irrigation practices. These wetlands provide foraging, nesting and brood rearing habitat for waterfowl and shorebird species, including migratory bird species. They also provide flood attenuation, water storage and water quality improvement functions.
- More than 16 total stream miles, including approximately 10 miles of North Cottonwood Creek, an important Colorado River cutthroat trout fishery and tributary to the Green River. Other smaller springs and creeks include Spring Creek and Killpecker Creek. An additional 3 miles of springs and seasonally flowing draws exist on the property.

Wyoming Landscape Conservation Initiative (WLCI) Projects in the Vicinity

The WLCI has identified conservation easement acquisitions as a tool to preserve habitat-rich properties from development and fragmentation, while supporting sustainable agriculture and historic way of life. Opportunities exist on the North Cottonwood Ranch to provide needed restoration, reclamation, and mitigation activities, as well as locations where conservation benefits may be maximized, as identified by the WLCI. In addition, the North Cottonwood Ranch is adjacent to an important WLCI habitat project, the *WY Front Aspen Treatment Project.* The project was designed to restore aspen across a large landscape to healthy, vigorous conditions, establish a multi-age class diversity; and improve both wildlife habitat and grazing conditions. Protecting the North Cottonwood Ranch will diminish fragmentation of enhanced habitat associated with the *WY Front Aspen Treatment Project.*

Wyoming Wildlife & Natural Resources Trust Investment in Vicinity

The Wyoming Wildlife & Natural Resources Trust has identified this area as a top priority for conservation investment through its Shiras Moose Conservation Initiative and overall conservation investment, funding over 30 projects in the immediate area since 2007, including the adjacent Maki Creek burn, Cottonwood Creek conservation easements, and numerous other large-scale habitat enhancement, conservation easement, and habitat modification projects.

6. POTENTIAL FOR FUTURE EXPANSION OF PROJECT. Explain

This project builds on the success of other related nearby efforts funded by the JIO, including the Cottonwood Ranches Projects (phases I-III), Budd Ranches, Sommers-Grindstone, Aspen Ridge, and others. These projects have catalyzed increased momentum for conservation in this area – with new opportunities emerging regularly. Because of the unparalleled importance of wildlife habitat in this part of Wyoming's Upper Green River Valley, funders are attracted to this region. Numerous opportunities will exist to expand upon this effort, if it is successful. This project represents the largest single conservation easement purchase attempt in the Green River Valley, and stands on its own in

terms of scope, scale and habitat connectivity benefits.

7. LIST ALL PROJECT PARTNERS/COOPERATORS, THEIR ROLES AND/OR CONTRIBUTIONS

- Kelley Family and Merril Dana, landowners and ranch management.
- Luke M. Lynch, The Conservation Fund. Real estate project management, conservation easement development, partnership coordination, fundraising.
- Wyoming Stock Growers Agricultural Land Trust. This organization will be responsible for long-term monitoring and stewardship of the conservation easement.
- Dan Stroud, Wyoming Game & Fish Department – JIO/PAPO. Terrestrial habitat consultation and project development, coordination with PAPO office.
- Paul Shelton, Natural Resource Conservation Service. Farmland Protection Program funding and project administration.
- Scott Yates and Cory Toye, Trout Unlimited. Scott and Cory will continue to be consulted with on potential habitat enhancement and water development projects on the Espenscheid Ranches properties.
- Brenda Younkin and Morgan Graham, Conservation Research Center, Teton Science Schools. Brenda and her team will be hired to collect baseline data and grazing monitoring and coordinating with the PAPO on future habitat enhancement projects. Morgan does mapping and map analysis and conducts baseline inventories.

8. PROJECT MONITORING AND REPORTING (Describe how monitoring and reporting will be done, and how it relates to the objectives)

The conservation easement will be monitored by the Wyoming Stock Growers Agricultural Land Trust at least annually. The management plan and any associated habitat enhancement projects will be monitored by the Wyoming Game & Fish Department, Dan Stroud or others associated with the PAPO and Jonah Interagency Office.

9. RESEARCH POTENTIAL

This project is not a research project. Numerous research opportunities exist here to study the effects of grazing practices and habitat enhancements, but no plans exist at this time to conduct research.

10. PERMITS AND AUTHORIZATIONS REQUIRED PRIOR TO PROJECT IMPLEMENTATION (including but not necessarily limited to the following):

PERMIT OR AUTHORIZATION	REQUIRED		SUBMITTED		APPROVED	
	Yes	No	Yes	No	Yes	No
Cultural Resource Inventory		X				
COE Section 404 Permit		X				
Cooperative Agreement(s)		X				
NEPA Analysis		X				
Pesticide Application Permit		X				
Private Landowner Agreement(s)	X					
Sensitive Species Clearance		X				
Surface/Ground Water Permits		X				
T/E Species Clearance		X				
Other (explain)						

11. TOTAL PROJECT COST (Attach detailed budget)

Project Planning and Design $ 84,750

Project Implementation $ 12,000,000 (CE Value)

Project Operation and Maintenance $ 52,500

Total Required $ 12,137,250

12. MATCHING FUNDS ANTICIPATED IN CASH (list source and amount)

Source	Amount	Status
NRCS Farmland Protection Program	$6,000,000	Committed
Landowner donation through bargain sale	$3,000,000	Committed
Total Committed	**$9,000,000**	
Wyoming Wildlife & Natural Resources Trust	$1,000,000	Application in process
Total Matching Funds	$10,000,000	
Amount Requested	$2,000,000	Seeking a total investment of $2 M combined from JIO/ PAPO

13. ANTICIPATED "IN KIND" MATCHING FUNDS (list source, valuation, and valuation method)

All funding has been included in budget above, except for $137,250 in expenses and stewardship endowment, which will be contributed by landowner.

14. PERCENTAGE OF FUNDING ON HAND OR COMMITTED

75% ($9,000,000)

15. TOTAL PAPO FUNDING REQUESTED: $ 2,000,000

16. EXPECTED/ANTICIPATED LIFE OF PROJECT (LOP)

Perpetual ___X___ > 50 Years_____ 25-50 Years_____ < 25 Years_____

Explain Basis for Projected LOP: The conservation easement being proposed is perpetual, so the positive impact to mitigation goals will be perpetual.

17. PROJECT TIMELINE AND ESTIMATED COMPLETION DATE. Explain

18. ATTACHMENTS AND SUPPORTING DOCUMENTATION

Project Design _____

Letters of Support _____

Management Plan _____ Long Term _____ Short Term _____ [1]

Monitoring Plan _____ Long Term _____ Short Term _____ [1]

Relevant Past Experience_____ Other _____ Explain:

- Location Map ___X___
- Site Map ___X___
- Habitat Maps ___X___
- Project Budget ___X___
- Photos ___X___

[1] Long term is defined as greater than (>) 5 years; short term is less than (<) 5 years.

19. ADDITIONAL INFORMATION FOR PAPO CONSIDERATION

Conservation Easements and PAPO Mitigation Value

In 2010, The Nature Conservancy completed an assessment of priority areas for offsite mitigation for the PAPO. In 2009, the PAPO provided project funds for three conservation easements on 19,546 acres of the Sommers-Grindstone Ranch in the PAPO Mitigation Focus Areas. The Nature

Conservancy's objective was to provide a rapid quantitative assessment of the contribution of the Sommers-Grindstone Ranch to the PAPO mitigation goals. Their analysis found the Sommers-Grindstone easement contributes significantly to many PAPO conservation goals and supports acquisition of the easement to meet mitigation goals. The proposed North Cottonwood Ranch Conservation Project is within close vicinity of the Sommers-Grindstone easement and has many of the same important wildlife habitats and migration corridors.

Economic, Agricultural and Hunting Values

Maintaining this historic working ranch in agricultural production and open space, and enhancing the wildlife habitat will provide several economic benefits to Sublette County and the State of Wyoming:

1. Eliminating rural residential subdivision potential. This property is located in an area with exceedingly high wildlife values, and much of the ranch is located far from most infrastructure services (i.e. schools, municipal water and sewer, emergency services, health care, etc.). Large tracts of land in the immediate area are currently being subdivided for recreational development. Provision of services to these new residents costs Sublette County more than it receives in tax revenue. If successful, this project will save Wyoming and Sublette County taxpayers money, as compared to rural residential development.

2. Maintenance of an agricultural operation. Agriculture is an important component of Sublette County's economy, lifestyle, and heritage. This project will help insure that the North Cottonwood Ranch stays in agricultural production, providing valuable agricultural products to the nation.

3. Wildlife. Hunting and wildlife viewing are significant components of Wyoming's tourist industry, and economy as a whole. With an approximate 60% decline from 2001 - 2009 in the nearby Pinedale Anticline Mule Deer Herd, it is increasingly important for Sublette County to preserve lands that provide important mule deer habitat.

20. ACKNOWLEDGEMENT: this project and requested funding is subject to approval by the PAPO Pinedale Anticline Mitigation Management Board.

Signed

Luke M. Lynch

Printed Name

Wyoming State Director

Title

October 26, 2011

Date

FIGURE 1- FOCUS AREAS

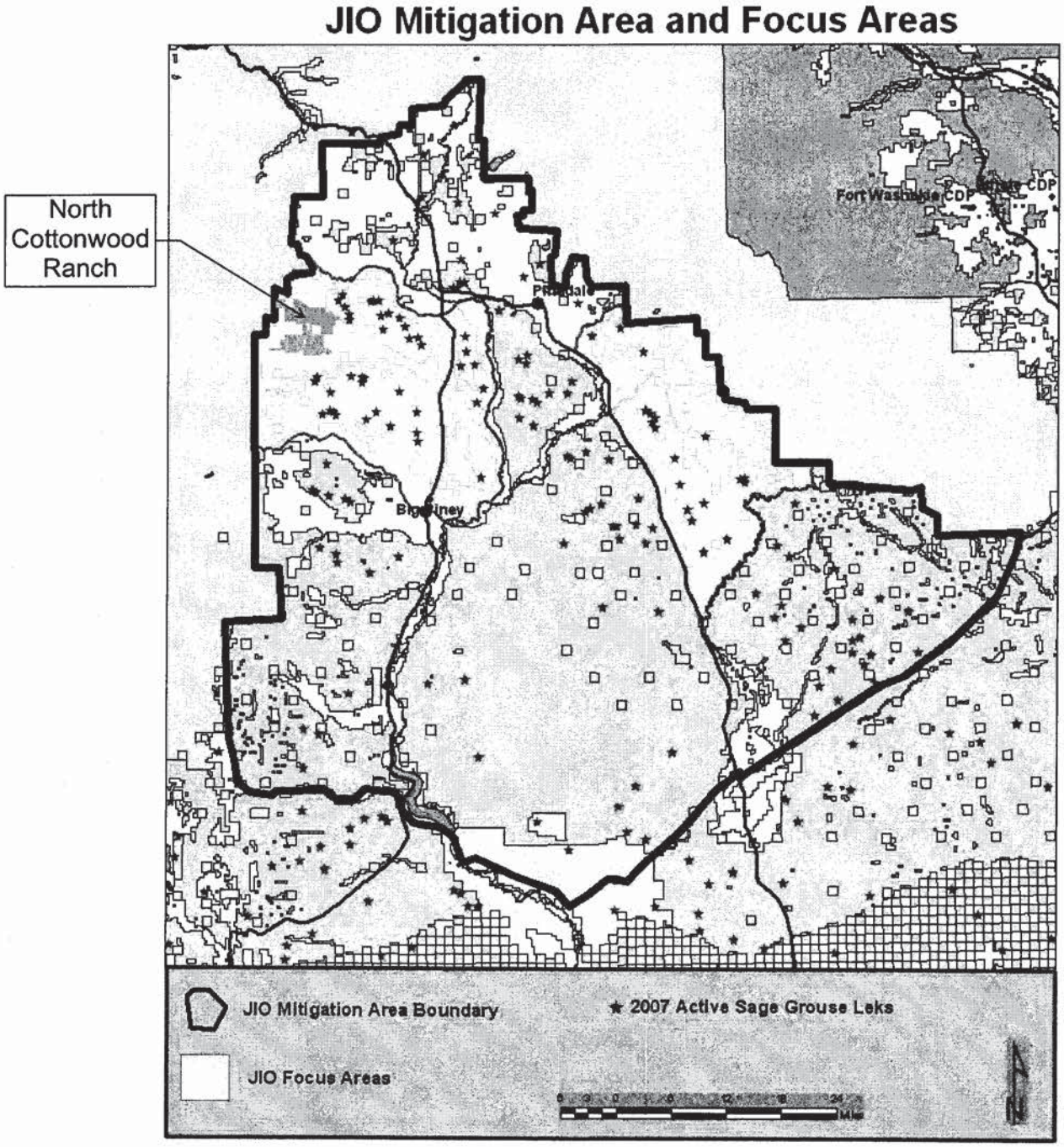
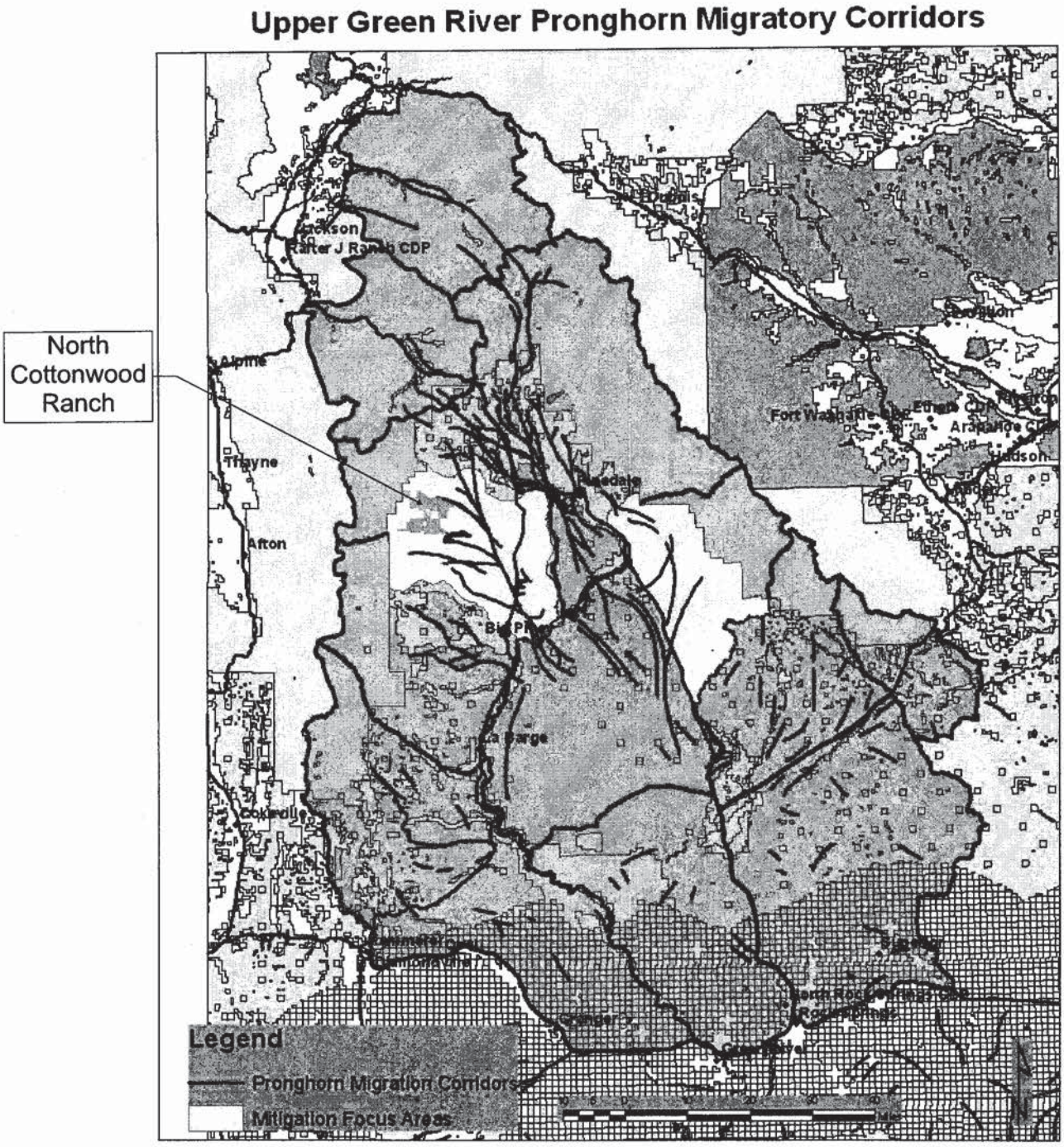


FIGURE 2- PRONGHORN MIGRATORY CORRIDORS



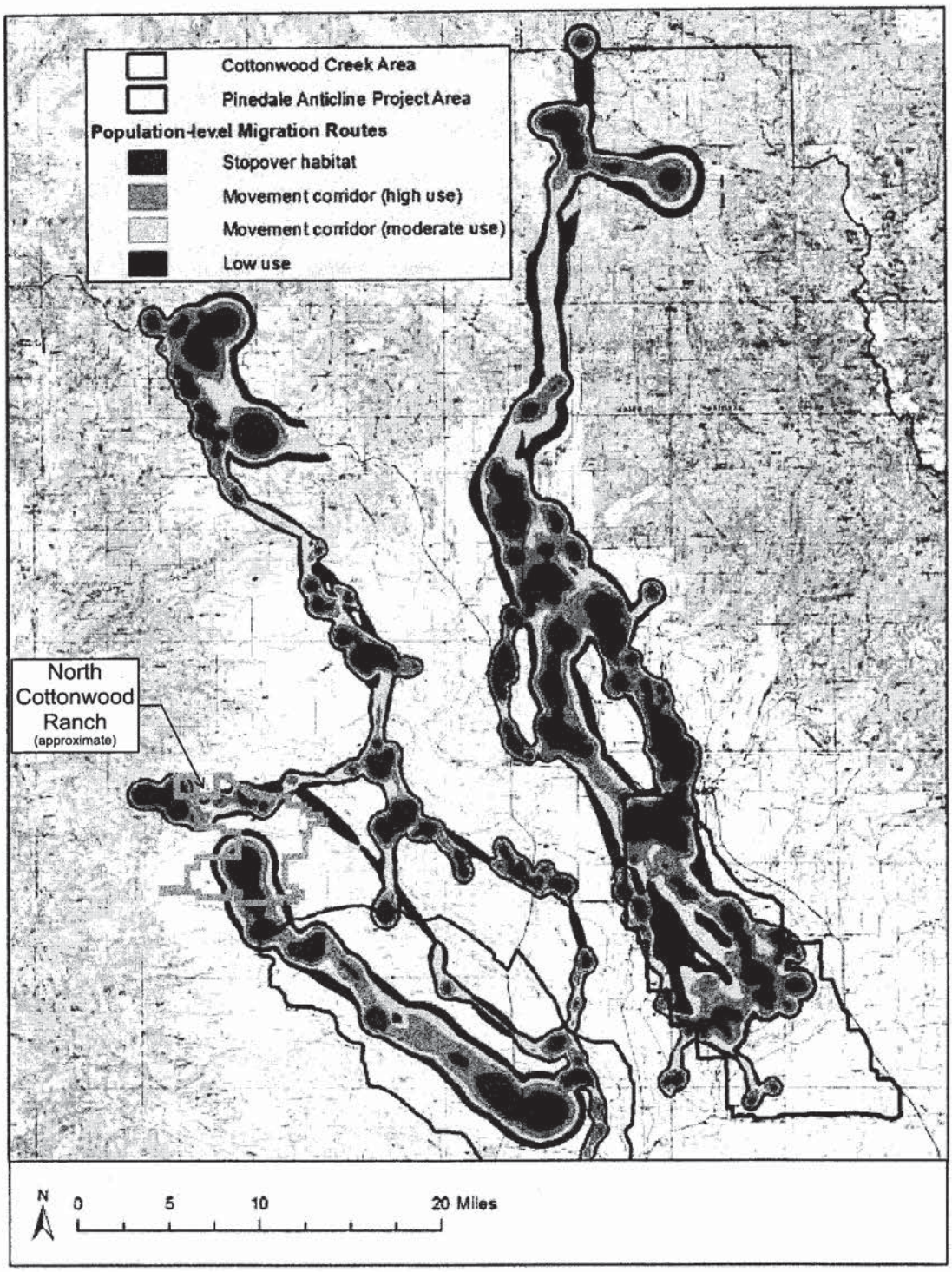
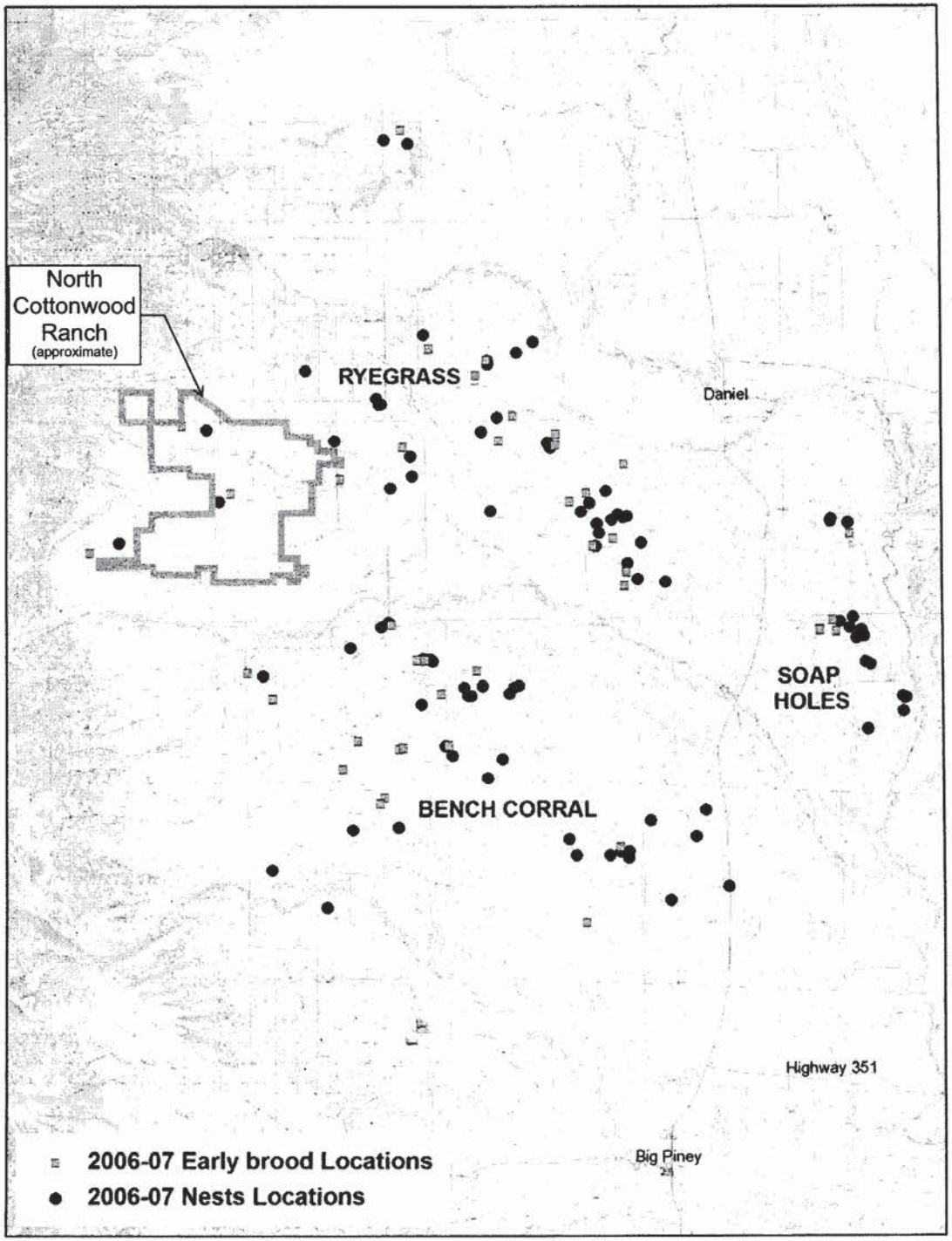


Figure 8. Population-level migration routes of pronghorn from the Pinedale Anticline Project Area and Cottonwood Creek area during spring and fall migrations of 2010.

SOURCE: Pronghorn Monitoring in the Pinedale Anticline Project Area: 2010 Annual Report. WEST, Inc. Laramie, WY.

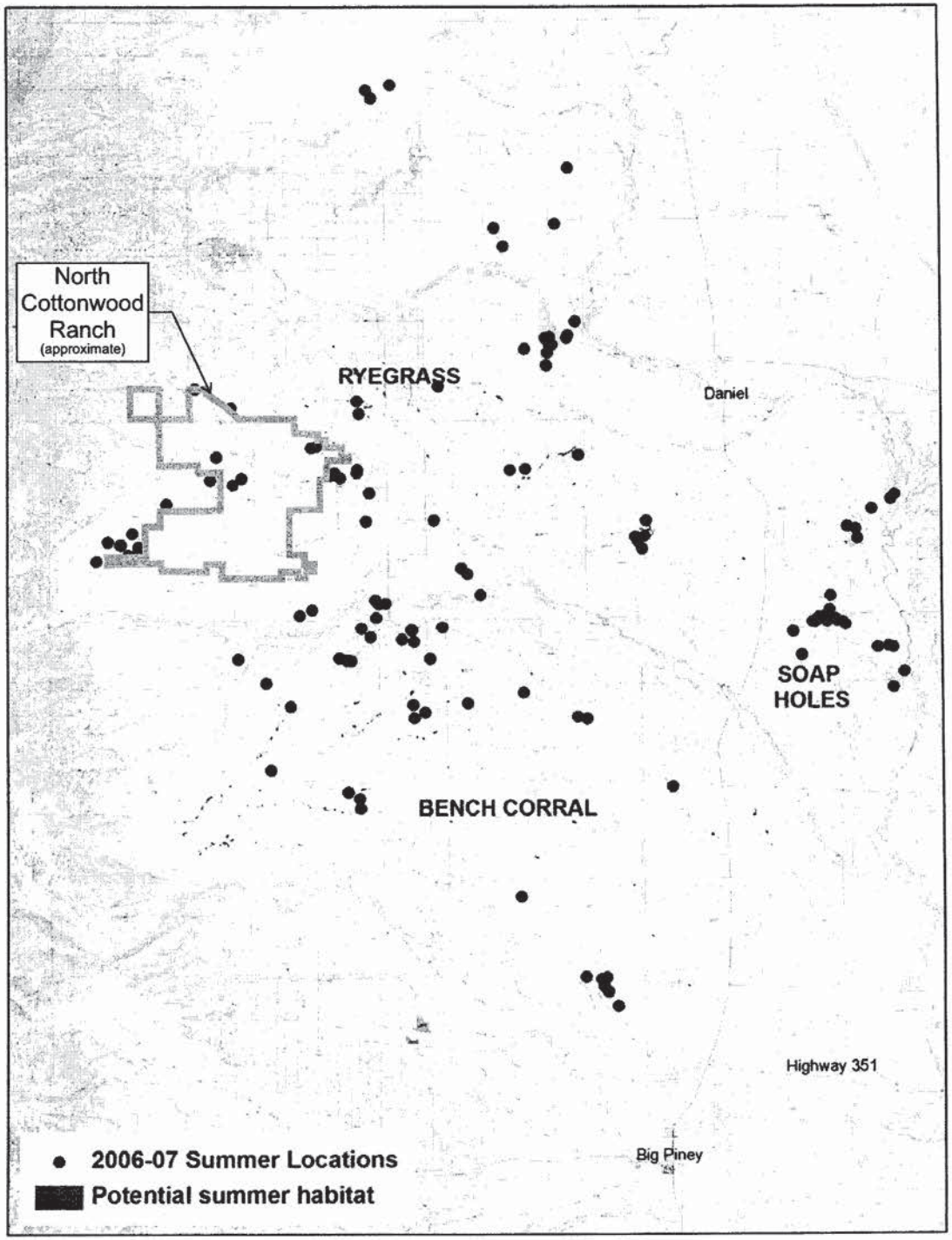
Nesting and Early Brood-rearing locations of greater sage-grouse inhabiting areas west of the Green River in the UGRB

SOURCE: Ryegrass Sage-grouse Seasonal Habitat Selection and Demographics. Matt Holoran, 2008.



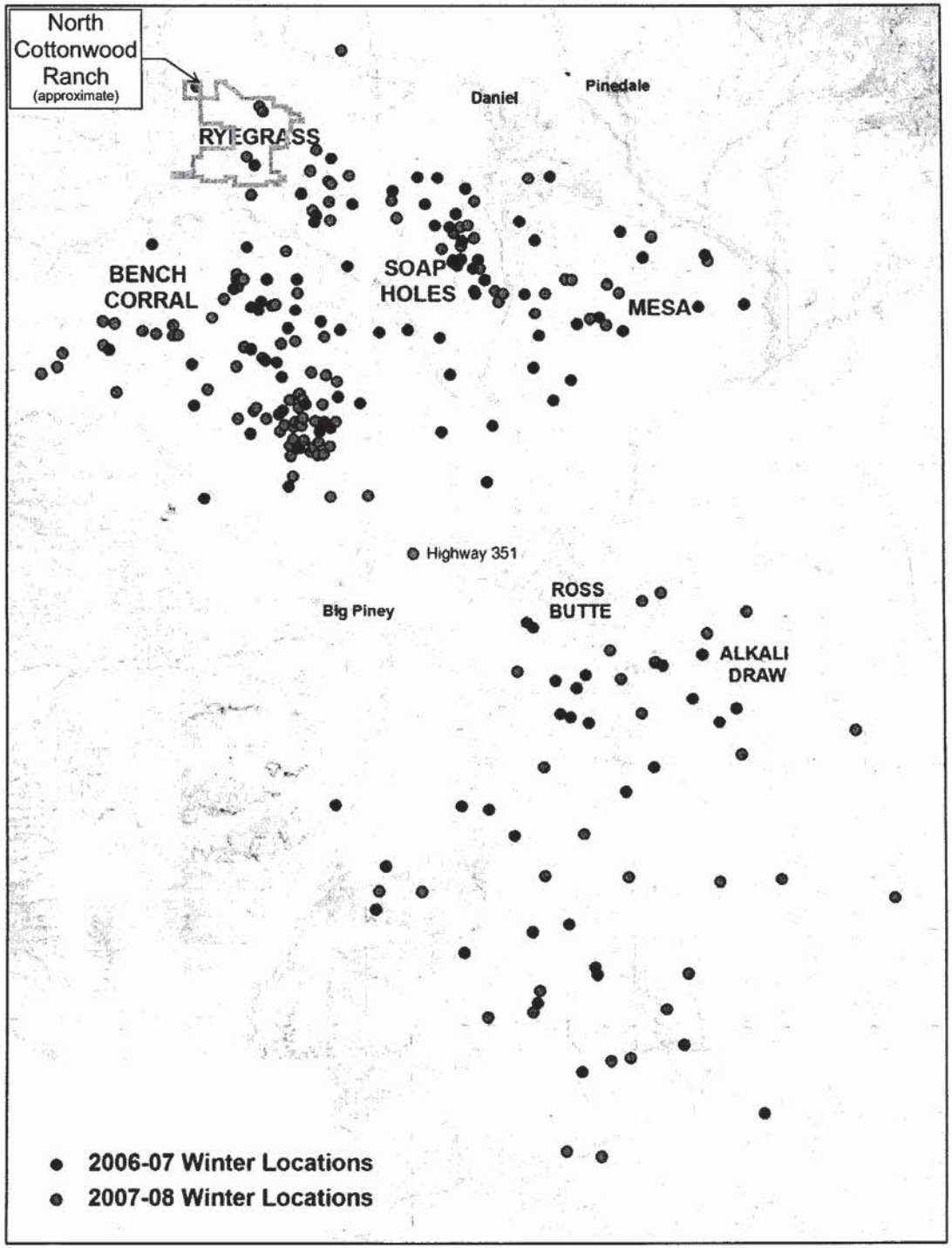
Late brood-rearing and summering locations of greater sage-grouse inhabiting areas west of the Green River in the UGRB

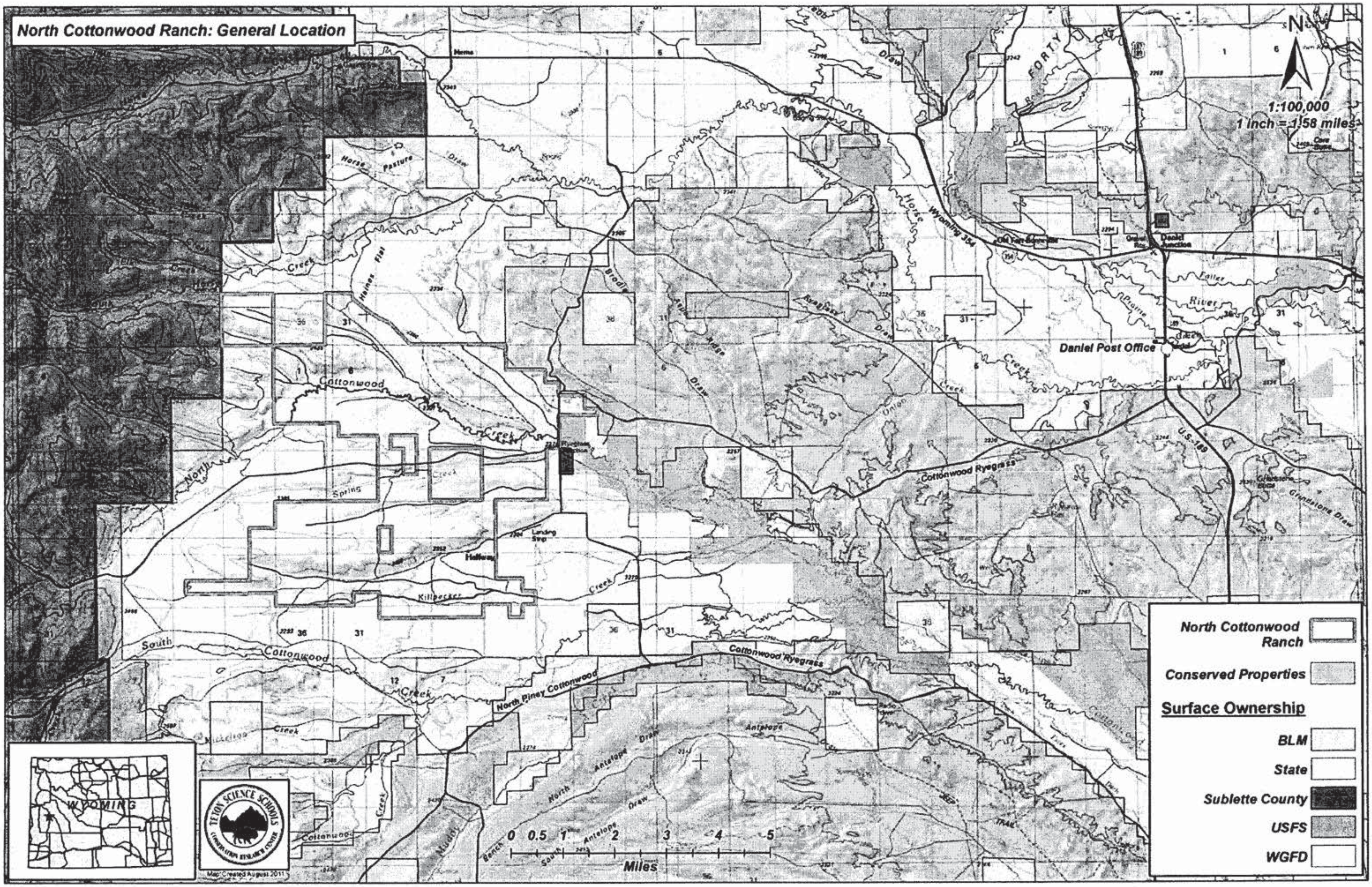
SOURCE: Ryegrass Sage-grouse Seasonal Habitat Selection and Demographics. Matt Holoran, 2008.



Wintering locations of greater sage-grouse inhabiting areas west of the Green River in the UGRB

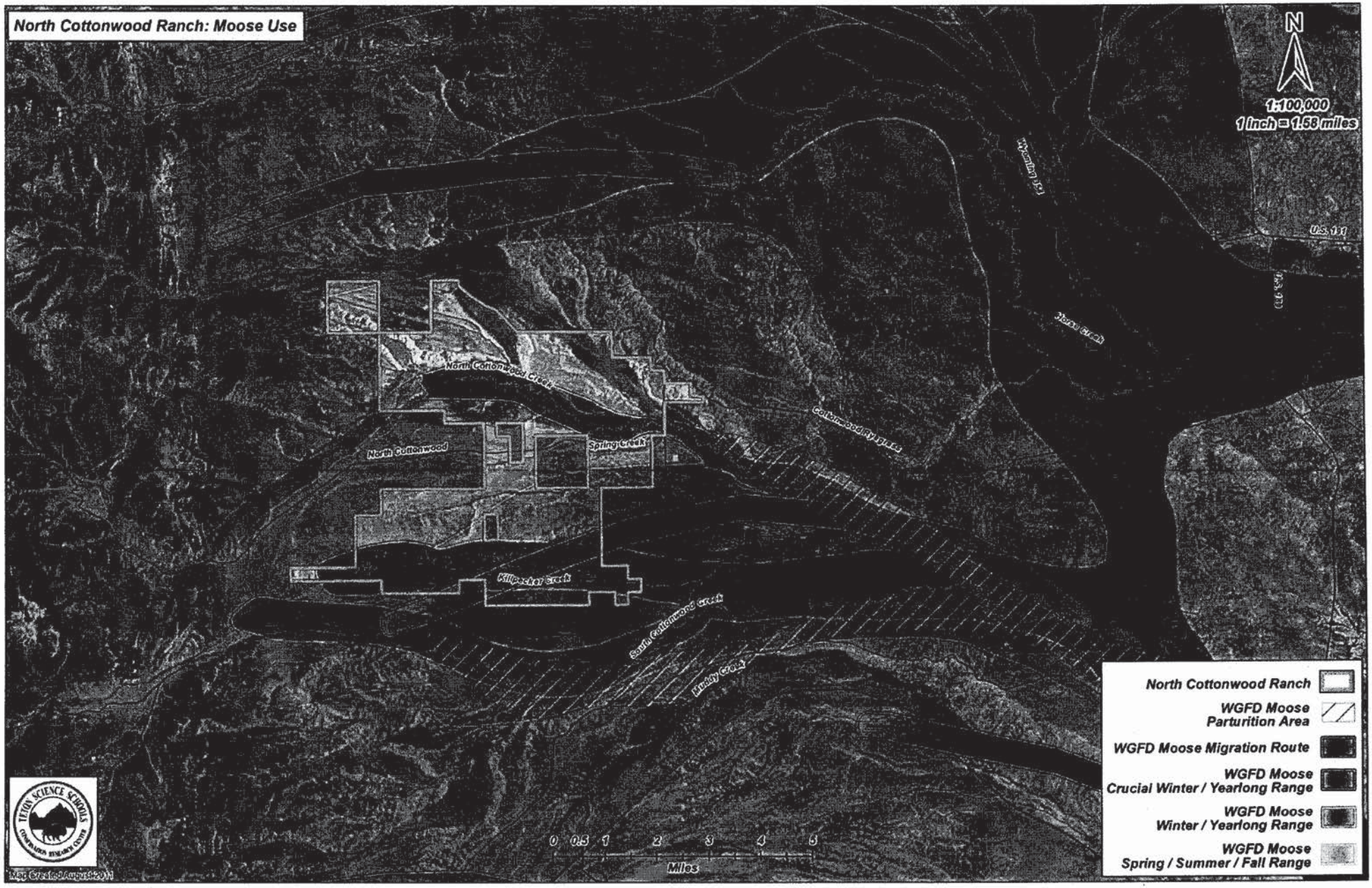
SOURCE: Ryegrass Sage-grouse Seasonal Habitat Selection and Demographics. Matt Holoran, 2008.




North Cottonwood Ranch: General Location
N
1:100,000
1 inch = 1.58 miles
Daniel Post Office
Daniel Junction
Wyoming 354
U.S.-189
FORTY
Horse
Draw
Fall River
Prairie
Creek
Union
Brodie
Aspen Ridge Draw
Ryegrass Draw
Cottonwood Ryegrass
Grindstone Draw
Horse Pasture Draw
Haines Flat
Cottonwood Creek
North
Spring Creek
Halfway
Killpecker
South Cottonwood Creek
Mickelson Creek
North Piney Cottonwood
Antelope Draw
North Antelope Draw
South Antelope Bench
Muddy
Cottonwood
Landing Strip
0 0.5 1 2 3 4 5
Miles
North Cottonwood Ranch
Conserved Properties
Surface Ownership
BLM
State
Sublette County
USFS
WGFD
WYOMING
TETON SCIENCE SCHOOLS
CONSERVATION RESEARCH CENTER
Map Created August 2011


North Cottonwood Ranch: Mule Deer Use
N
1:100,000
1 inch = 1.58 miles
Wyoming 191
U.S. 191
Horse Creek
Calpet Road
North Cottonwood Creek
North Cottonwood
Spring Creek
Killpecker Creek
South Cottonwood Creek
Muddy Creek
0 0.6 1 2 3 4 6
Miles
North Cottonwood Ranch
WGFD Mule Deer Parturition Area
WGFD Mule Deer Migration Route
WGFD Mule Deer Crucial Winter / Yearlong Range
WGFD Mule Deer Winter / Yearlong Range
WGFD Mule Deer Spring / Summer / Fall Range
Map Created August 2011


North Cottonwood Ranch: Elk Use
N
1:100,000
1 inch = 1.58 miles
Jewett
Elk Feedground
North Cottonwood Creek
North Cottonwood
Spring Creek
Millpecker Creek
South Cottonwood Creek
Muddy Creek
Horse Creek
U.S. 191
Ranch Corral
Elk Feedground
0 0.5 1 2 3 4 5
Miles
Map Created August 2014
North Cottonwood Ranch
WGFD Elk
Parturition Area
WGFD Elk Migration Route
WGFD Elk
Crucial Winter Range
WGFD Elk
Winter / Yearlong Range
WGFD Elk
Spring / Summer / Fall Range


North Cottonwood Ranch: Moose Use
N
1:100,000
1 inch = 1.58 miles
Wyoming 191
U.S. 191
Horse Creek
North Cottonwood Creek
Cottonwood Creek Road
North Cottonwood
Spring Creek
Hillpocker Creek
South Cottonwood Creek
Buckly Creek
0 0.5 1 2 3 4 5
Miles
Teton Science Schools
Conservation History Center
Map Created August 2011
North Cottonwood Ranch
WGFD Moose Parturition Area
WGFD Moose Migration Route
WGFD Moose Crucial Winter / Yearlong Range
WGFD Moose Winter / Yearlong Range
WGFD Moose Spring / Summer / Fall Range


North Cottonwood Ranch: Pronghorn Use
N
1:100,000
1 inch = 1.58 miles
Wyoming 22
U.S. 191
Hoback River
Colorado Gulch
North Cottonwood Creek
North Cottonwood
Spring Creek
Hillpocker Creek
South Cottonwood Creek
Muddy Creek
North Cottonwood Ranch
WGFD Pronghorn Parturition Area
WGFD Pronghorn Migration Route
WGFD Pronghorn Winter / Yearlong Range
WGFD Pronghorn Spring / Summer / Fall Range
0 0.5 1 2 3 4 5
Miles
TETON SCIENCE SCHOOLS

N. Cottonwood Ranch sage brush and aspen community.

Numerous wet meadows and willow communities on the N. Cottonwood Ranch.

Upper reaches of North Cottonwood Creek on the North Cottonwood Ranch.

One of many springs at the headwaters of Kilpecker Creek on the ranch.