

Fire Management

Wildland fires occur in much of the Greater Yellowstone Area and have influenced the evolution of the existing flora and fauna. As a result, these life forms are now dependent on occasional visitations of fire for their continued well being. For these reasons prescribed, fire is frequently used as a management tool.

and weather (e.g., dry, windy periods). An area's topography, accessibility, and its mix of fuel kinds and sizes influence potential for a big fire, as well as the level of difficulty of controlling the fire. Most of the Greater Yellowstone Area is considered to have moderate potential for high intensity fire. In the 1800s, vast areas burned, creating the present vast stands of lodgepole pine.

Areas with large amounts of standing dead and down lodgepole with moderate to heavy understory fuels have high potential for fire. On some National Forests, the acreage with potential for high intensity fires is decreasing because of the salvage and reforestation program in stands of dead lodgepole.

Existing Situation

Potential for high intensity fire is determined by the kind and amount of fuel (e.g., trees, brush, grass), the climate,

Chart 28 shows potential for high intensity fire in the Greater Yellowstone Area.

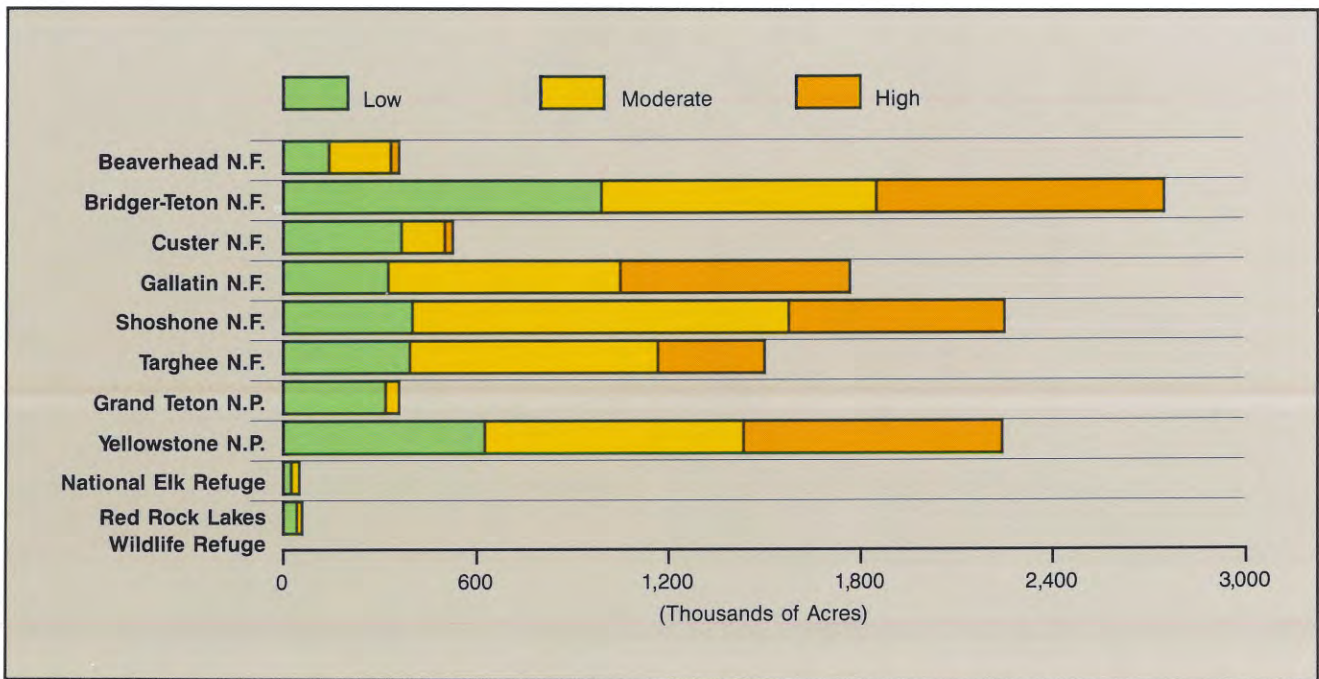


Chart 28. Potential for high intensity fire.

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Planned Management

Wildfires and Prescribed Fires

Fires fall into two broad categories—wildfires and prescribed fires—and the management actions on these fires are quite different. Wildfires are any fires not designated and managed as a prescribed fire within an approved prescription. They can be the result of lightning, human carelessness, or escaped prescribed fires. Prescribed fires, on the other hand, are those that are burning under preplanned conditions and are expected to accomplish land management objectives. They can be the result of lightning or planned ignition.

Fire behavior depends on weather, topography, and the vegetation—especially dead vegetation—that provides fuel. For that reason, timing is all-important in determining fire strategy. Timing helps determine whether to consider a fire a wildfire and take suppression action or a prescribed fire and allow it to accomplish a needed land treatment, weather conditions permitting. Much of the National Parks, National Forest wilderness, and National Forest Fire Management Areas use this technique. In general, this kind of prescribed fire is intended to replicate the natural role of fire. If weather becomes critical and the fire violent and unpredictable, the fire will be suppressed.

Wildfire Suppression Strategy

The same factors that influence intensity of fires—fuel type, amount of fuel, rate of spread, and resistance to control—as well as the economic value of threatened resources, structures, or threat to human life, determine an appropriate suppression strategy.

Three strategies are used to suppress wildfires:

Confinement. Limits the fire spread within a predetermined area, principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.



The large amounts of standing dead and down lodgepole contribute to high intensity fire potential in this area on the Targhee National Forest.



Confinement or containment will often be the suppression strategy at high elevations where fuels are sparse and natural barriers to the spread of the fire exist, Custer National Forest.

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Containment. Surrounds a fire and any spot fires with control line as needed, which can reasonably be expected to check the fire's spread under prevailing and predicted conditions.

Control. Completes the control line around a fire, any spot fires, and any interior islands to be saved; any unburned area adjacent to the fire side of the control line is burned out; all hot spots that are immediate threats to the control line are cooled down, until the line can reasonably be expected to hold under foreseeable conditions.

Prescribed Fire Management

Prescribed fires fall into two general categories: planned ignition and unplanned ignition.

Planned Ignition. These fires are designed to accomplish specific land management needs such as



Fire such as this on the Targhee National Forest will be allowed to play a more natural role in much of the Greater Yellowstone Area.

regeneration of brushfields for wildlife, stimulation of grass growth for livestock, or maintenance of a mosaic or pattern of desirable vegetative communities. When all conditions are appropriate to produce the desired fire spread and intensity, the fire is ignited. If the fire does not behave as intended, it is then considered a wildfire and an appropriate suppression action is taken. In general, the National Parks do not use planned ignition. The National Forests do not utilize planned ignition in wilderness except when a planned fire is needed to maintain or enhance wilderness values.

Unplanned Ignition. Lightning fires may start in predetermined areas and be considered "prescribed" if the burn will accomplish an intended objective, such as aspen regeneration. In some cases, when weather or other factors change, prescribed fires may exceed prescription criteria and behave too violently and require suppression as a wildfire.

Chart 28 shows potential for high intensity fire.

Chart 29 shows fire suppression strategies and types of prescribed fire allowed. Chart 30 illustrates the fire management process. Map 30 shows fire suppression strategies.

Coordination Opportunities

Coordination opportunities as follows:

- Ensure that each unit's fire suppression strategies are compatible with management objectives of adjacent units.
- Ensure that fire suppression strategies on any one unit do not present undue risk of fire to resources of other units.
- Manage prescribed fire and fire suppression so that smoke is at an acceptable level and meets state air quality standards.

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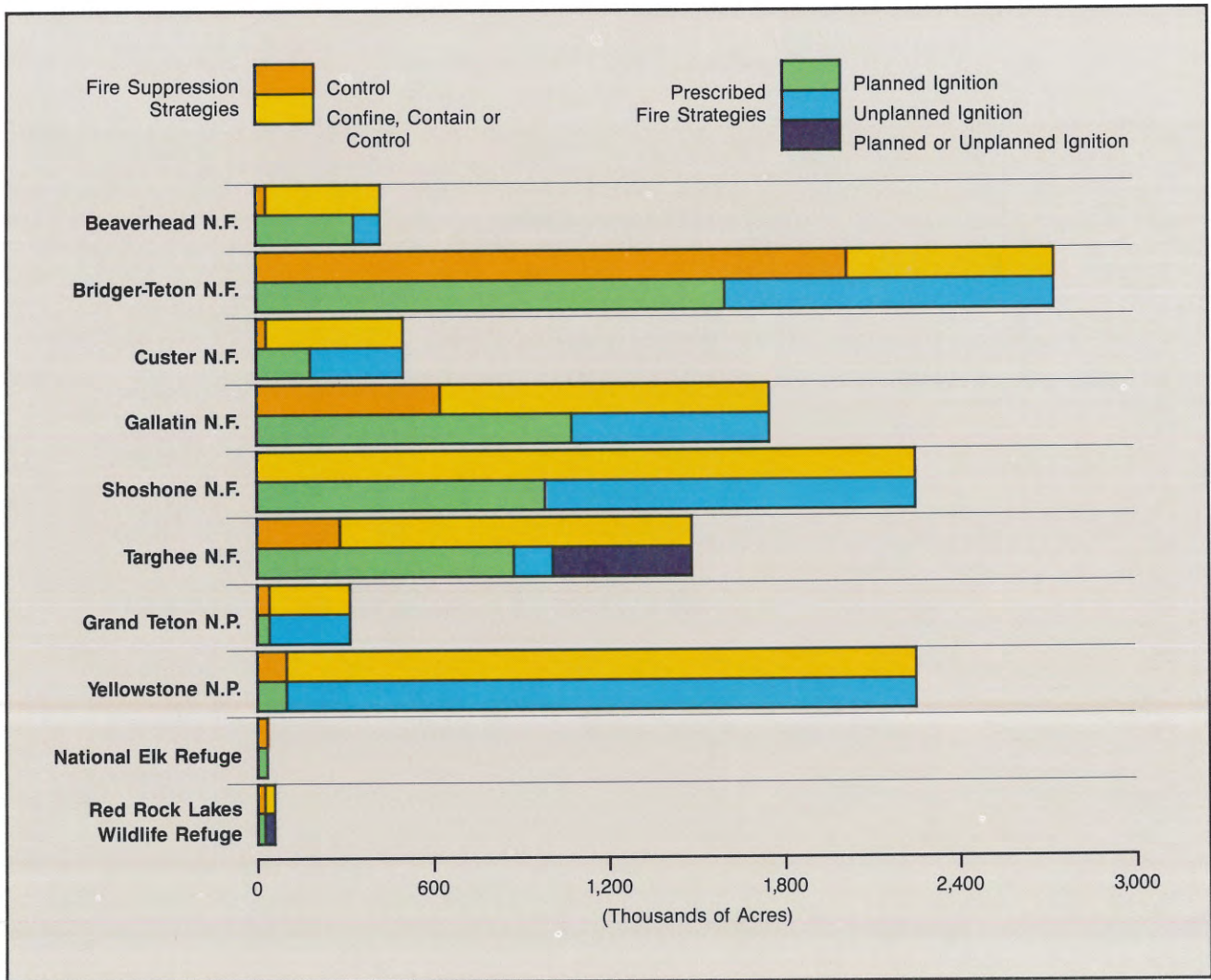


Chart 29. Fire management strategies.

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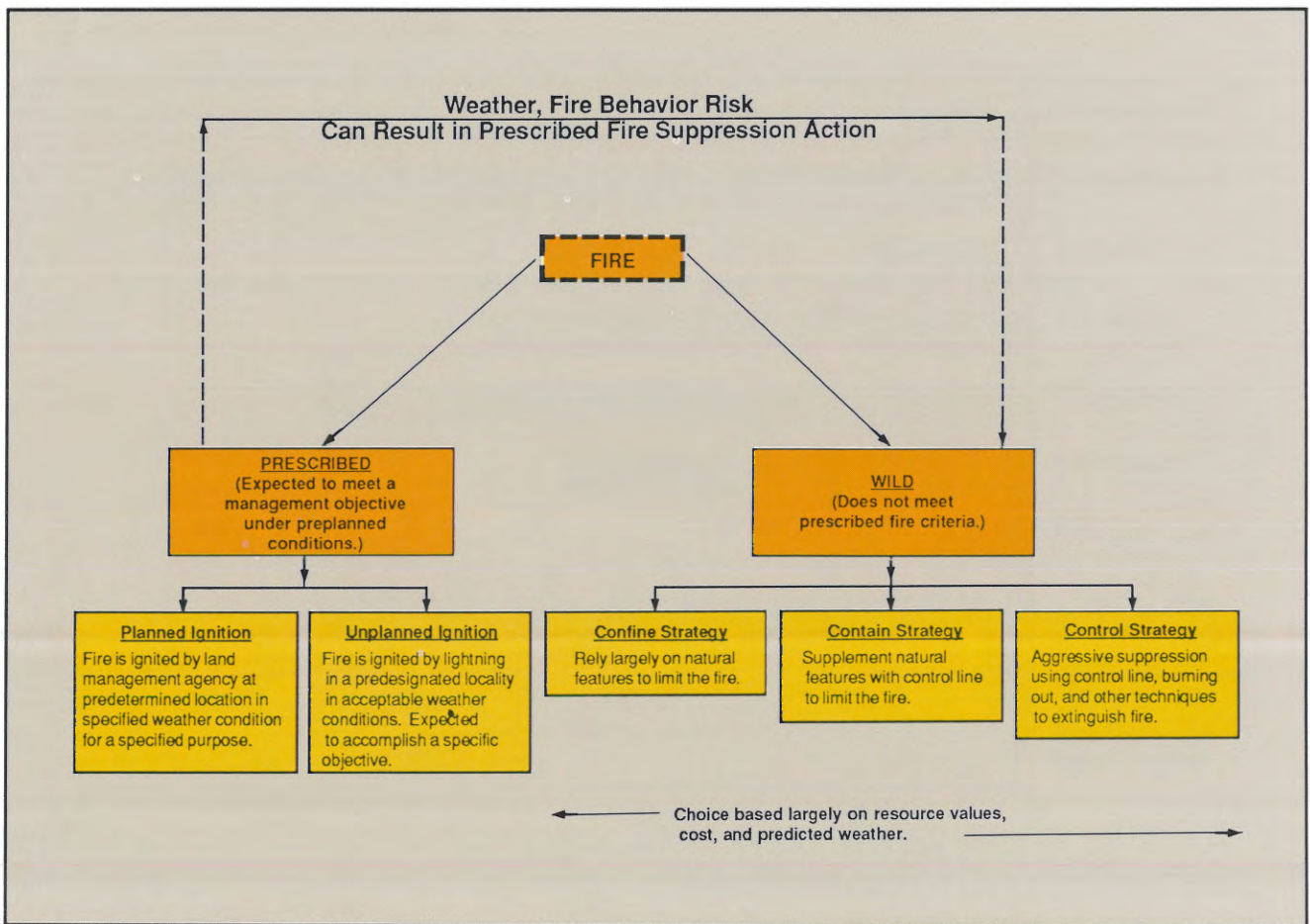


Chart 30. Fire management process.

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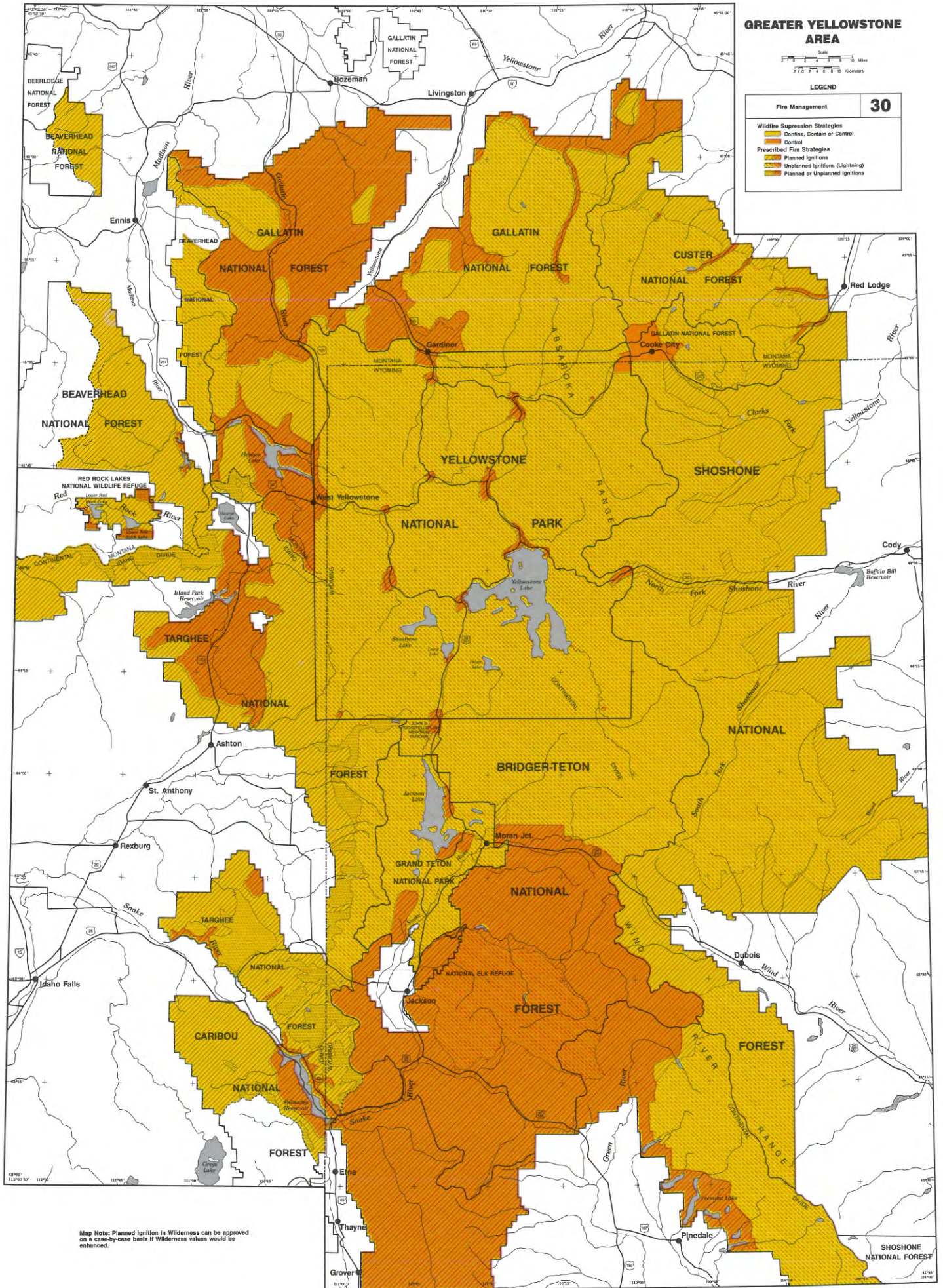
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LEGEND

Fire Management	30
Wildfire Suppression Strategies	
	Control, Contain or Control
	Control
Prescribed Fire Strategies	
	Planned Ignitions
	Unplanned Ignitions (Lightning)
	Planned or Unplanned Ignitions



Map Note: Planned Ignition in Wilderness can be approved on a case-by-case basis if Wilderness values would be enhanced.

Minerals and Energy

Sixty percent of the lands within the Greater Yellowstone Area is withdrawn from mineral leasing or will be recommended for no leasing in the event applications are received; another 17 percent is open to leasing, but with no surface occupancy stipulations. The remaining 23 percent is open to leasing with certain stipulations designed to protect other resources such as wildlife, soil, water, and visual quality. Seventeen percent of the lands within the Greater Yellowstone Area is presently leased for oil and gas or phosphate. Lease applications are pending for another 3 percent.

Existing Situation

Most of the two National Parks are withdrawn from mineral entry and leasing. Parts of National Forests, primarily wilderness areas, are also withdrawn from mineral entry and leasing.

Mineral leasing and development is a valid use of National Forests, but National Forest wilderness areas are withdrawn from leasing and other mineral activity. However, valid claims and leases that existed at the time of wilderness designation may still be operated. Availability of other National Forest lands for mineral leasing and the type of stipulations recommended as a leasing condition depend upon the direction of land management plans.

Currently, profitable extraction is from deposits of gold, nickel, chromium, platinum-group metals, talc, travertine, and dimension stone. In the past, gold, nickel, chromium, silver, tungsten, copper, molybdenum, lead,

zinc, iron, and coal have been recovered from deposits that are either depleted or uneconomic under current conditions. Additional deposits of gold, platinum group metals, oil and gas, and phosphate may be economically developable in the near future.

Some potential exists for the use of geothermal resources for direct heat (nonelectrical) applications if subsurface reservoirs have sufficient permeability.

Geological Potential and Mineral Rights

Three principal geologic provinces occur in the area:

- Yellowstone volcanic plateau
- Overthrust belt
- Northern Rocky Mountain province

The Yellowstone volcanic plateau is centered roughly on the young calderas and volcanic activity in Yellowstone National Park. South, west, and north of the plateau is the overthrust belt. The overthrust belt consists of great overlapping sheets of Paleozoic and Mesozoic strata that were folded and thrust to the east along nearly horizontal faults. To the east and northeast of the volcanic plateau, the northern Rocky Mountains are characterized by broad tertiary sedimentary basins separated by mountainous upthrust blocks of ancient Precambrian basement rocks.

The principal potential commodity, found in the Yellowstone volcanic plateau province, is geothermal. However, since Yellowstone National Park is excluded from mineral entry and the Island Park area is excluded from leasing due to Forest Service administrative decision and legislation, this resource will remain undeveloped. The overthrust belt province is a major source for oil and gas. Several major mineral commodities, including gold, platinum group metals, nickel, and chromium, are found in the northern Rocky Mountain province. All are critical/strategic commodities.

Maps 31 and 32 show geologic potential and ownership of mineral rights.

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Leasable Minerals. Federal law mandates that exploration and development of energy minerals and some nonenergy minerals occur through a leasing system involving the Forest Service and Bureau of Land Management. Thus the term "leasable" minerals implies both energy minerals, such as oil and gas, geothermal, coal, and oil shale, and nonenergy minerals, such as phosphate. Mineral ownership remains with lessor throughout the lease term.

Oil and Gas. The major region of high potential for oil and gas is in the overthrust belt, especially along the Idaho-Wyoming border. Other areas with potential for oil and gas discoveries have been identified throughout much of the Greater Yellowstone Area.

Extensive exploration for oil and gas has occurred throughout these areas, with interest centered on the Bridger-Teton and Shoshone National Forests.

Geothermal Resources. No known electrical-grade geothermal resources exist within the Greater Yellowstone Area, except for those in Yellowstone National Park. These resources will not be developed. The Gallatin and Targhee National Forests have some potential for direct-heat (nonelectrical) utilization of the thermal energy, such as industrial heat for food processing, space heating or cooling, or spas. However, reservoirs are thought to be small, which likely precludes the more extensive of these uses, such as industrial heat.

Geothermal development on National Forests is not likely because direction in the land management plan for the Targhee National Forest prohibits leasing in the area south and west of Yellowstone National Park. However, development is presently occurring on private lands adjacent to Yellowstone National Park. The cumulative effects of this type of development on the groundwater and geothermal systems of Yellowstone National Park are a concern to Park officials.



The Palisades area on the Targhee and Bridger-Teton National Forests is in the overthrust belt and has potential for oil and gas discoveries.



Upper South Willow creek drainage has high potential for both base and precious metals, Beaverhead National Forest.

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Coal. Coal exists throughout much of the area and has been mined to some extent in the past on the Bridger-Teton, Gallatin, Shoshone, and Targhee National Forests.

There is no coal mining now because none of the deposits are mineable under current economic conditions. It is unlikely that any of the coal will be mined in the near future. Much of the coal is relatively deep, necessitating underground mining, which is more expensive than surface mining.

Phosphate. The western phosphate fields of Idaho, Utah, Wyoming, and Montana represent one of the world's larger phosphate reserve areas. Although the Greater Yellowstone Area contains substantial phosphate resources, it does not compare in quantity, and perhaps quality, with other parts of the field, such as in southeastern Idaho—just outside the Greater Yellowstone Area. Southeastern Idaho is the major mining area and has accounted for most of phosphate production from the western United States.

There is no production from the phosphoria formation within the Greater Yellowstone Area. The reason for lack of development includes inconsistent quality, thin beds, steep dips, and inaccessibility. Considering the economic and environmental barriers, the probability of exploration for phosphate in the near future appears slight.

Chart 31 and Map 33 show information on leases and lease applications.

Locatable and Salable Minerals

Locatable minerals include such commodities as gold, silver, and lead, and nonmetallic, such as fluorspar, talc, mica, and uncommon varieties of limestone. Salable mineral materials include common varieties of sand, gravel, stone (limestone), pumice, pumicite, cinders, and clay.

Locatable mineral deposits may be staked and claimed. The miner establishes a right to the mining claim, if all

requirements of Federal and state mining laws are met. This right could result in a patent or title to the lands if a valuable mineral deposit is demonstrated. Salable minerals are not locatable under mining laws but may be purchased or obtained by free-use permit.

There are approximately 11,800 mining claims in the area. Only about 30 percent are considered to be active, where the person holding the claim visits the site and works the claim on a regular basis. The remainder are inactive with only the minimum assessment work being done.

Metallic Minerals. Major production of metals formerly occurred in the Jardine and Cooke City Districts (Gallatin and Shoshone National Forests), the Stillwater-Boulder Creek complex (Gallatin and Custer National Forests), and the Sunlight, Kirwin, and Stinkingwater regions on the Shoshone National Forest.

The Stillwater-Boulder Creek complex has the largest potential platinum and chrome deposits and the second largest nickel deposit within the United States. Chrome deposits were mined extensively during World Wars I and II when high-grade ore was not available from foreign sources.

Near-term production of nickel, chromium, and platinum-group metals is expected in the Stillwater-Boulder Creek complex, where development is currently being conducted by the Stillwater Mining Company.

Gold and tungsten have been mined in the Jardine District and development is also currently underway, which could lead to near-term production.

The Sunlight, Kirwin, Stinkingwater, and Tobacco Root regions are potential sources for gold, copper, silver, lead, zinc, molybdenum, iron, and tungsten. All have been mined in the past to some extent, but current activity is limited primarily to exploration.

Chromium, platinum group metals, nickel, and tungsten are critical/strategic commodities.

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Nonmetallic Minerals. A variety of nonmetallic minerals are also present in the Greater Yellowstone Area. Some of the more prominent are talc and travertine. In addition, there are zeolites, bentonite, gypsum, pumice, clay, and rare earth minerals.

Talc, a critical/strategic mineral, is mined on the Beaverhead National Forest. Travertine, a decorative stone, is quarried on the Gallatin and Targhee National Forests. Marble Shop Incorporated of Knoxville, Tennessee, is the only producer of dimensional travertine

in the United States and obtains its supply from a quarry located on the Targhee. The primary competitive source for this type of decorative stone is Italy.

Finally, sand and gravel deposits are common throughout the area in the form of river terraces and glacial drift.

Chart 33 shows information about the type of minerals associated with mining claims. Map 34 displays the location of claims.

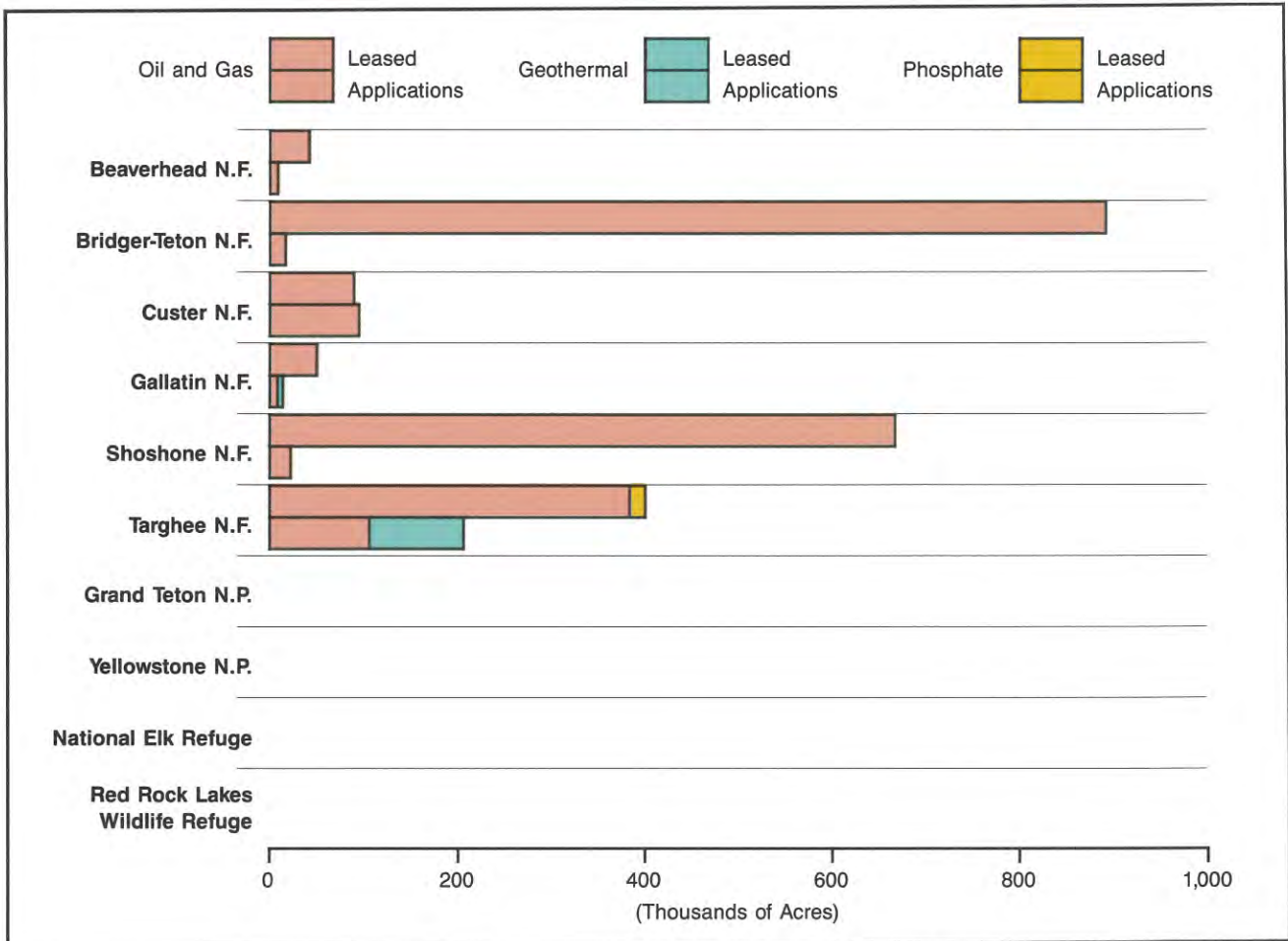


Chart 31. Land area leased or with lease applications.

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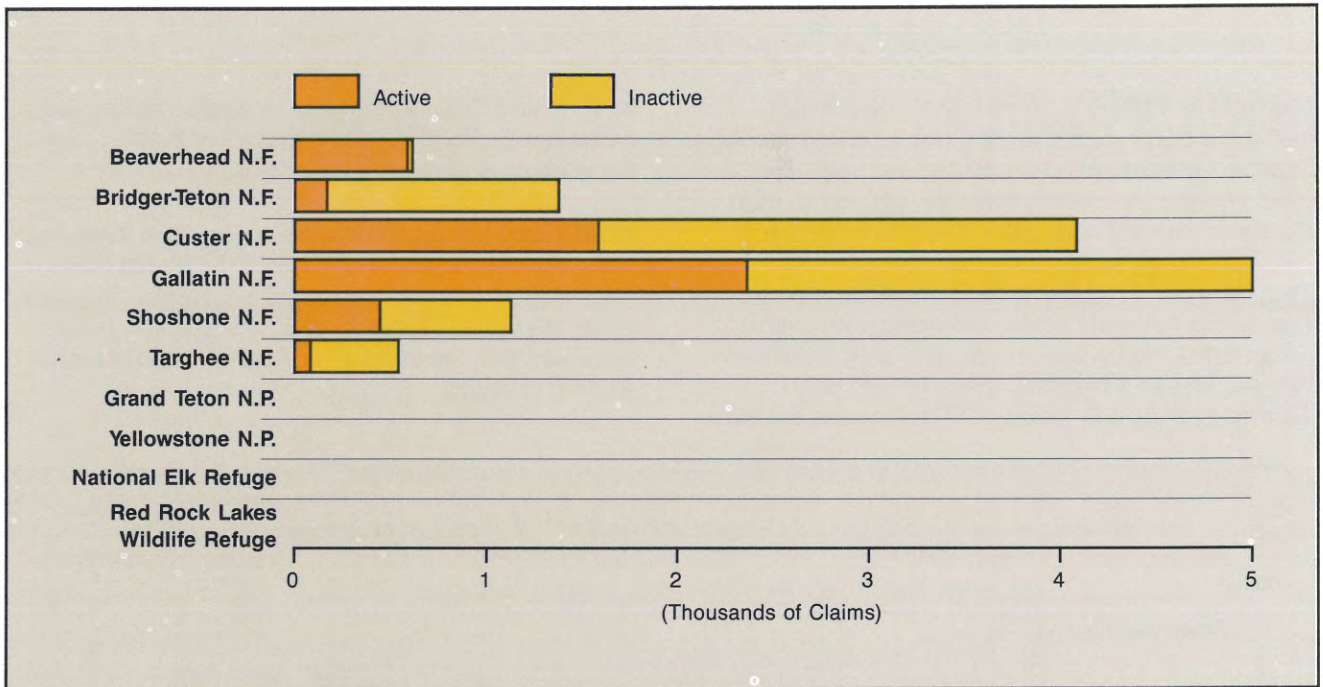


Chart 32. Mining claims—active and inactive.

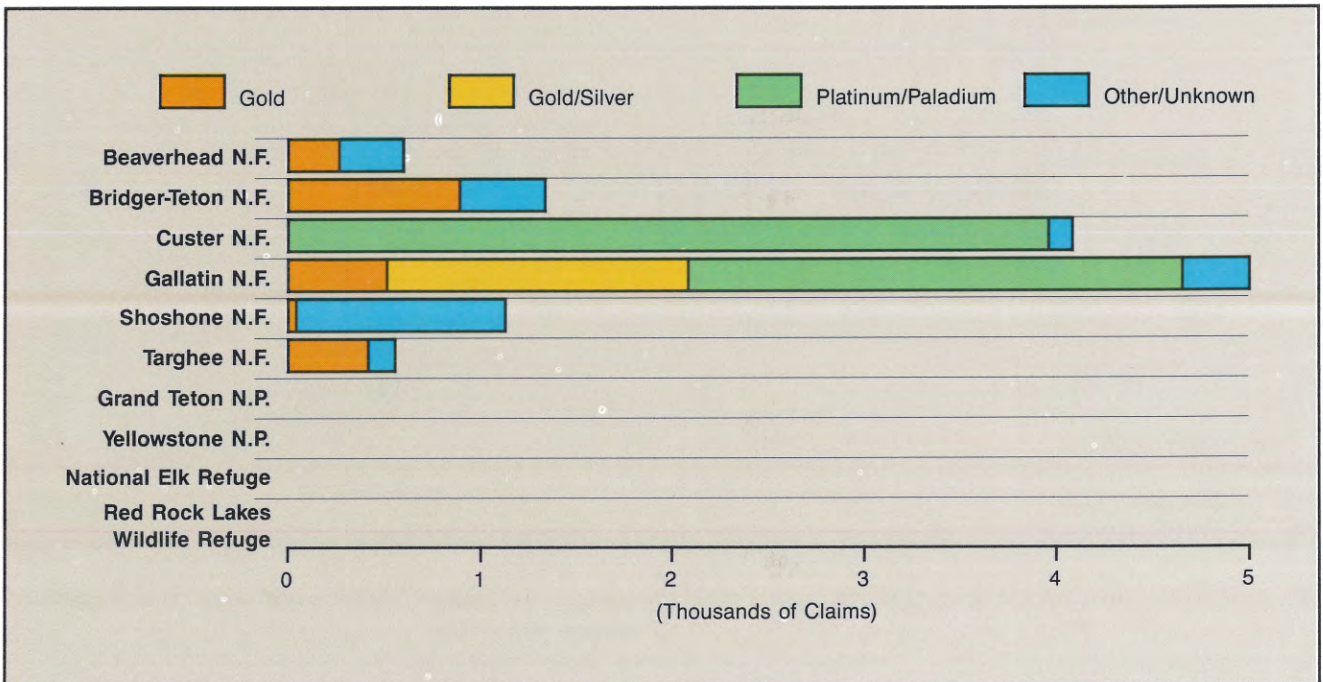


Chart 33. Mining claims and targeted minerals.

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Mineral Leasing Opportunities

In areas open to mineral leasing, stipulations are attached to leases to protect the surface resources from impacts that might result from exploration or development. These stipulations range from the standard requirements in the

regulations, operating orders and lease form—required for all leases—to very restrictive no surface occupancy stipulations.

Lease Stipulations. Standard requirements are attached to all leases. On the Bridger-Teton, Targhee, and Shoshone National Forests, minimum standards must be met regarding use and occupancy of the Forest and existing improvements.



The Stillwater Mine is an important source of platinum group metals, Custer National Forest.

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On the Beaverhead, Custer, and Gallatin National Forests, the standard requirements are supplemented with uniform stipulations applying to aesthetics, erosion control, surface use, cultural resources; endangered or threatened species are also included where applicable.

A no surface occupancy (NSO) stipulation is generally applied to areas of critical concern, such as steep slopes, unstable soils, and important wildlife habitat.

Stipulations falling between the mandatory standard stipulation and the most restrictive NSO stipulation

include stipulations for the protection of threatened and endangered species, controlled or limited surface use stipulations, and various seasonal use stipulations, which are applicable primarily to wildlife habitat protection. These stipulations may also preclude occupancy of the surface under certain conditions.

Chart 34 and Map 34 show the degree of restriction to mineral leasing.

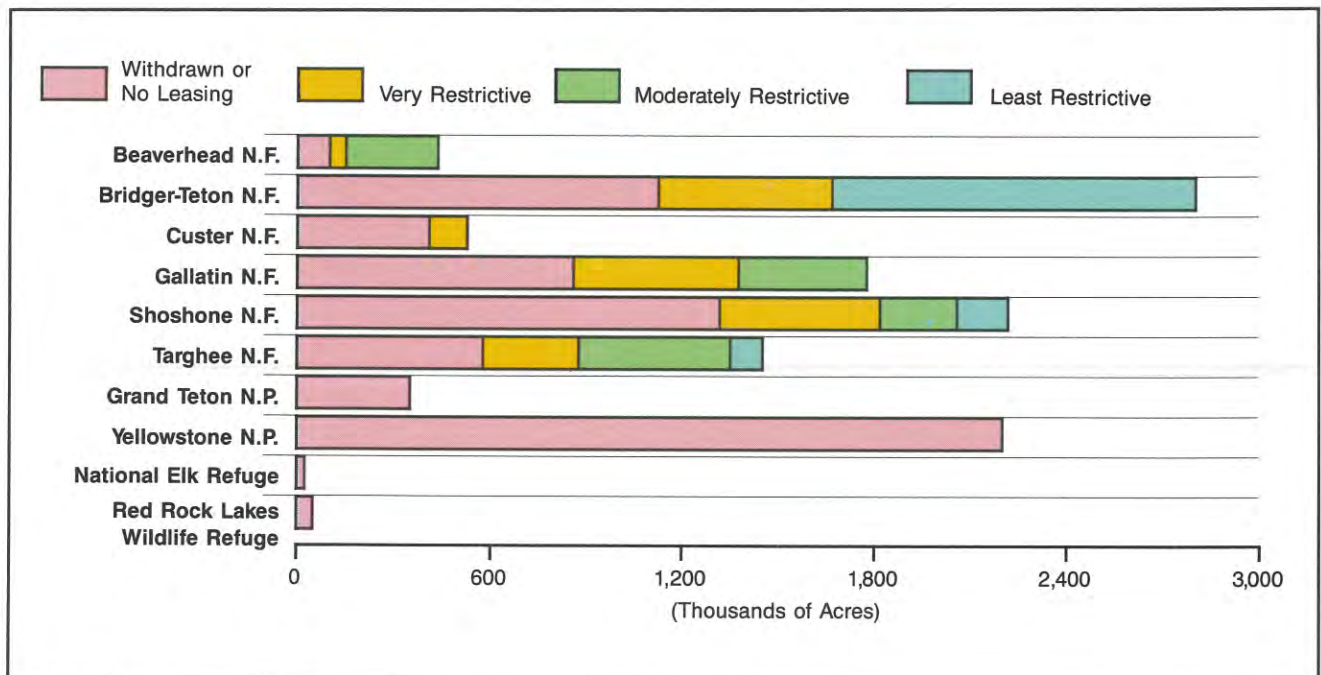


Chart 34. Mineral leasing opportunities.

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Coordination Opportunities

Mineral development, the associated roads, and possible earth disturbing activities have the potential to affect other resources such as wildlife, fish, and water. The coordination opportunities do the following:

- Provide opportunities for leasing, exploration, and development of valuable mineral resources on lands available for mineral exploration
- Ensure that activities associated with mineral exploration and development do not unnecessarily affect other resources



National Parks and National Forest wilderness areas are withdrawn from mineral entry, Grand Teton National Park.

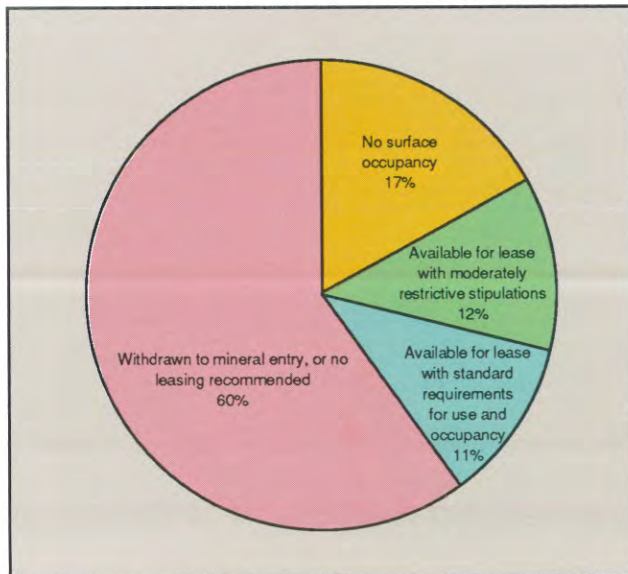


Chart 34.1. Mineral leasing opportunities.



A no surface occupancy stipulation would be a condition to leasing on steep slopes and fragile soils such as this area on the Shoshone National Forest.

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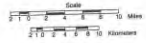


Much of the interest in oil and gas exploration is centered on the Bridger-Teton National Forest.

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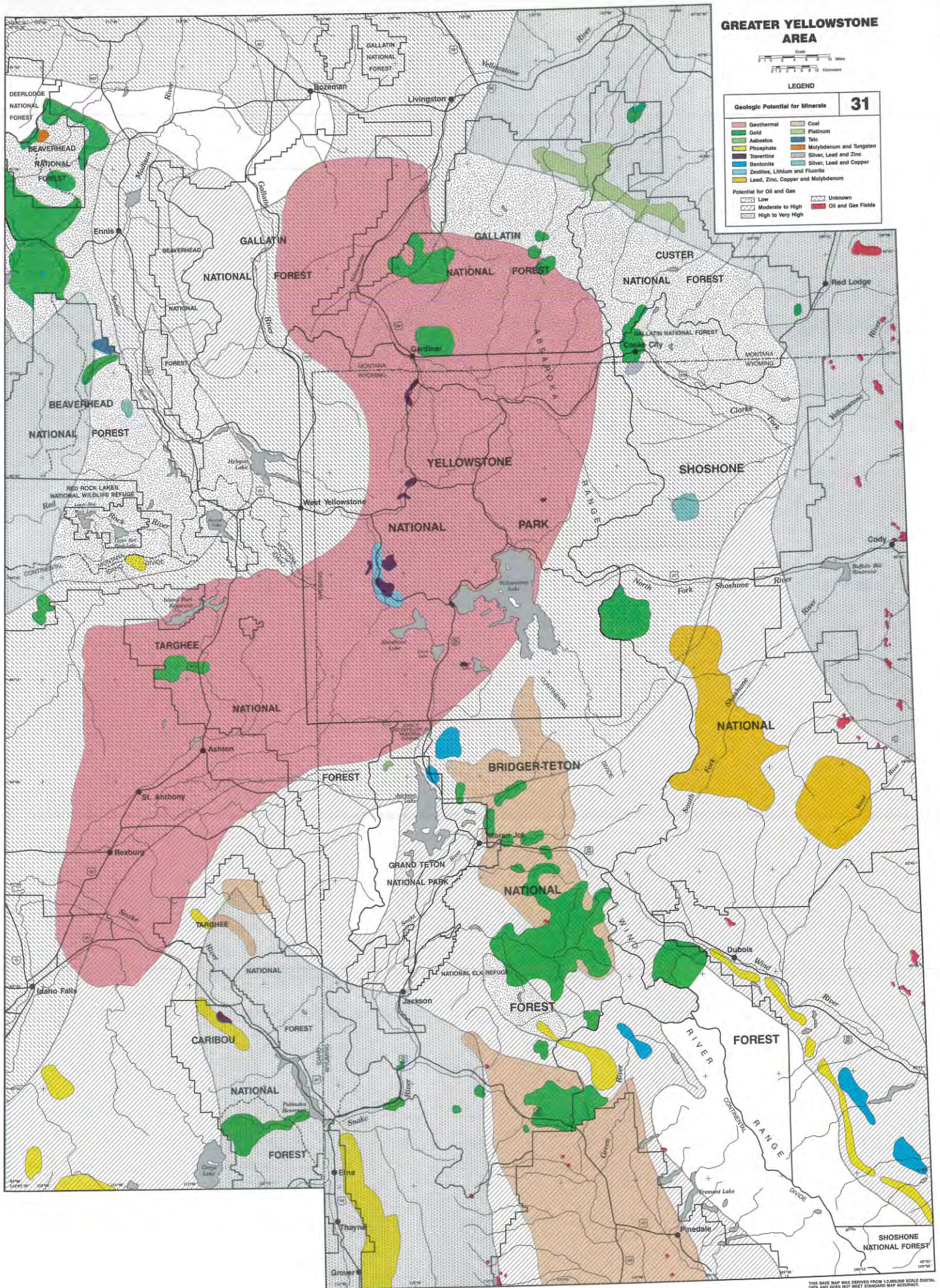
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Geologic Potential for Minerals		31
Geothermal	Coal	
Gold	Platinum	
Asbestos	Talc	
Phosphate	Molybdenum and Tungsten	
Travertine	Silver, Lead and Zinc	
Bentonite	Silver, Lead and Copper	
Zeaolites, Lithium and Fluorite		
Lead, Zinc, Copper and Molybdenum		

Potential for Oil and Gas	
Low	Unknown
Moderate to High	Oil and Gas Fields
High to Very High	



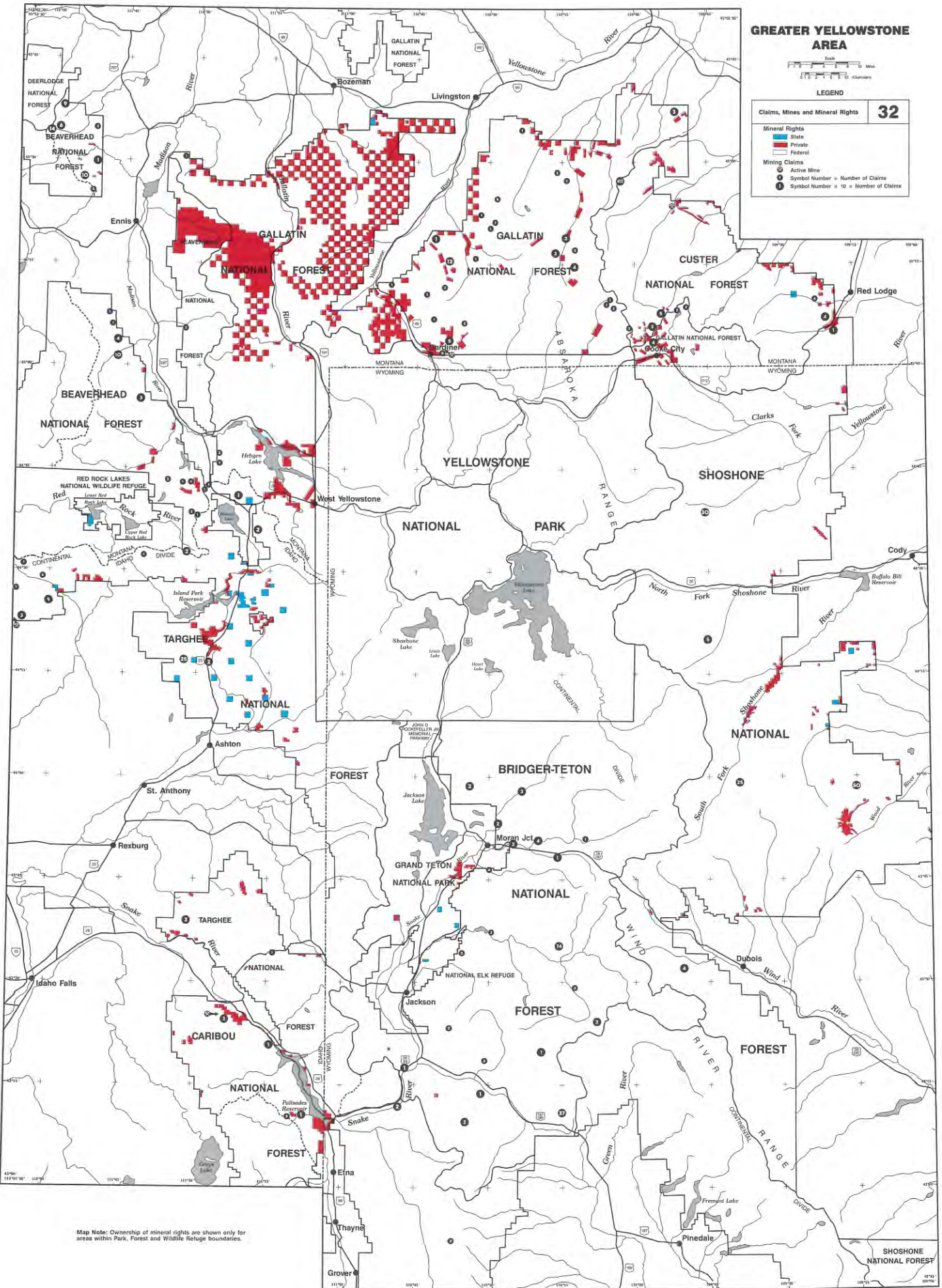
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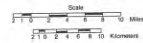
Claims, Mines and Mineral Rights		32
Mineral Rights		
	State	
	Private	
	Federal	
Mining Claims		
	Active Mine	
	Symbol Number = Number of Claims	
	Symbol Number x 10 = Number of Claims	



Map Note: Ownership of mineral rights are shown only for areas within Park, Forest and Wildlife Refuge boundaries.

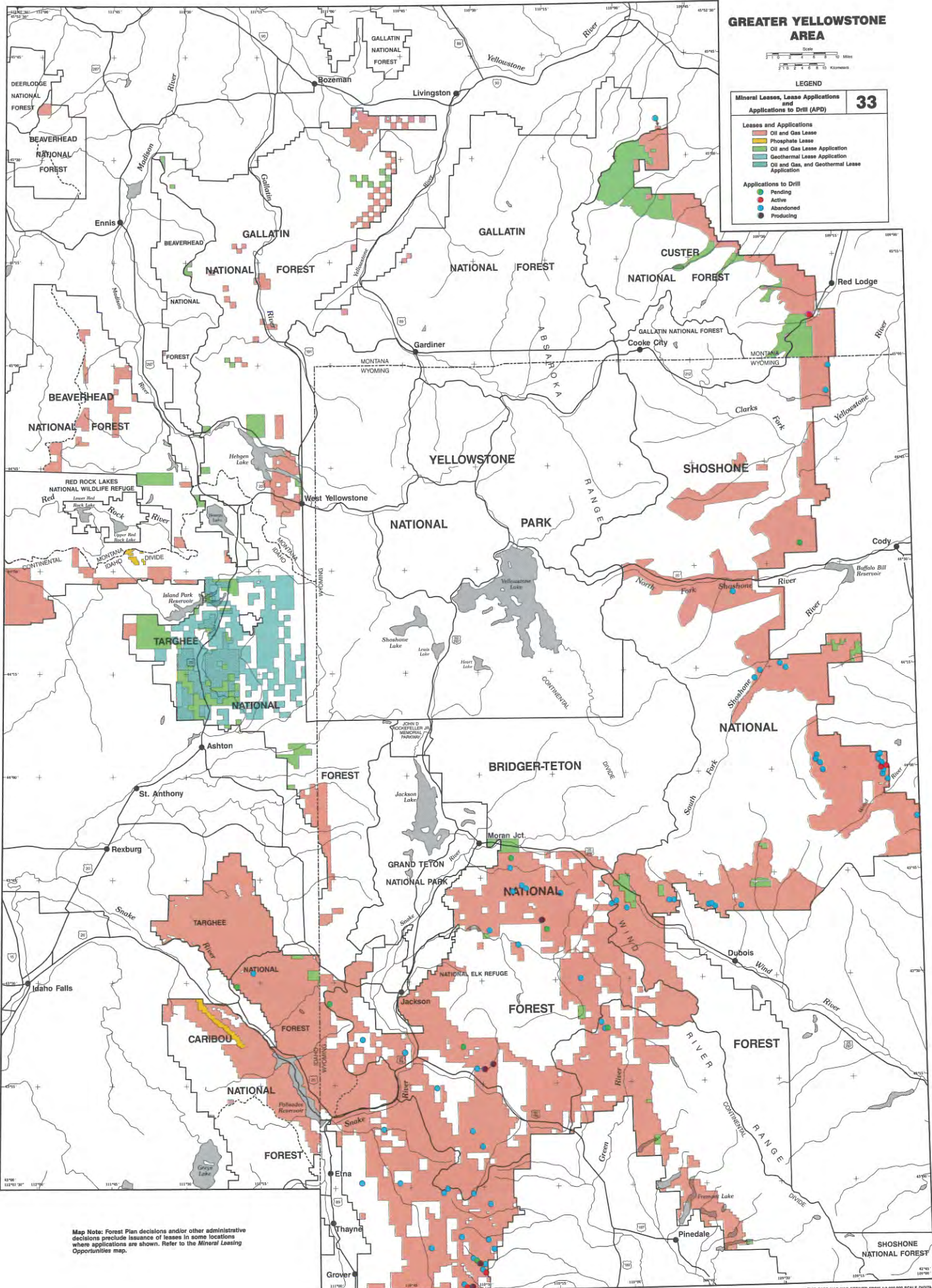
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LEGEND

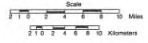
Mineral Leases, Lease Applications and Applications to Drill (APD)		33
Leases and Applications		
■	Oil and Gas Lease	
■	Phosphate Lease	
■	Oil and Gas Lease Application	
■	Geothermal Lease Application	
■	Oil and Gas, and Geothermal Lease Application	
Applications to Drill		
●	Pending	
●	Active	
●	Abandoned	
●	Producing	



Map Note: Forest Plan decisions and/or other administrative decisions preclude issuance of leases in some locations where applications are shown. Refer to the Mineral Leasing Opportunities map.

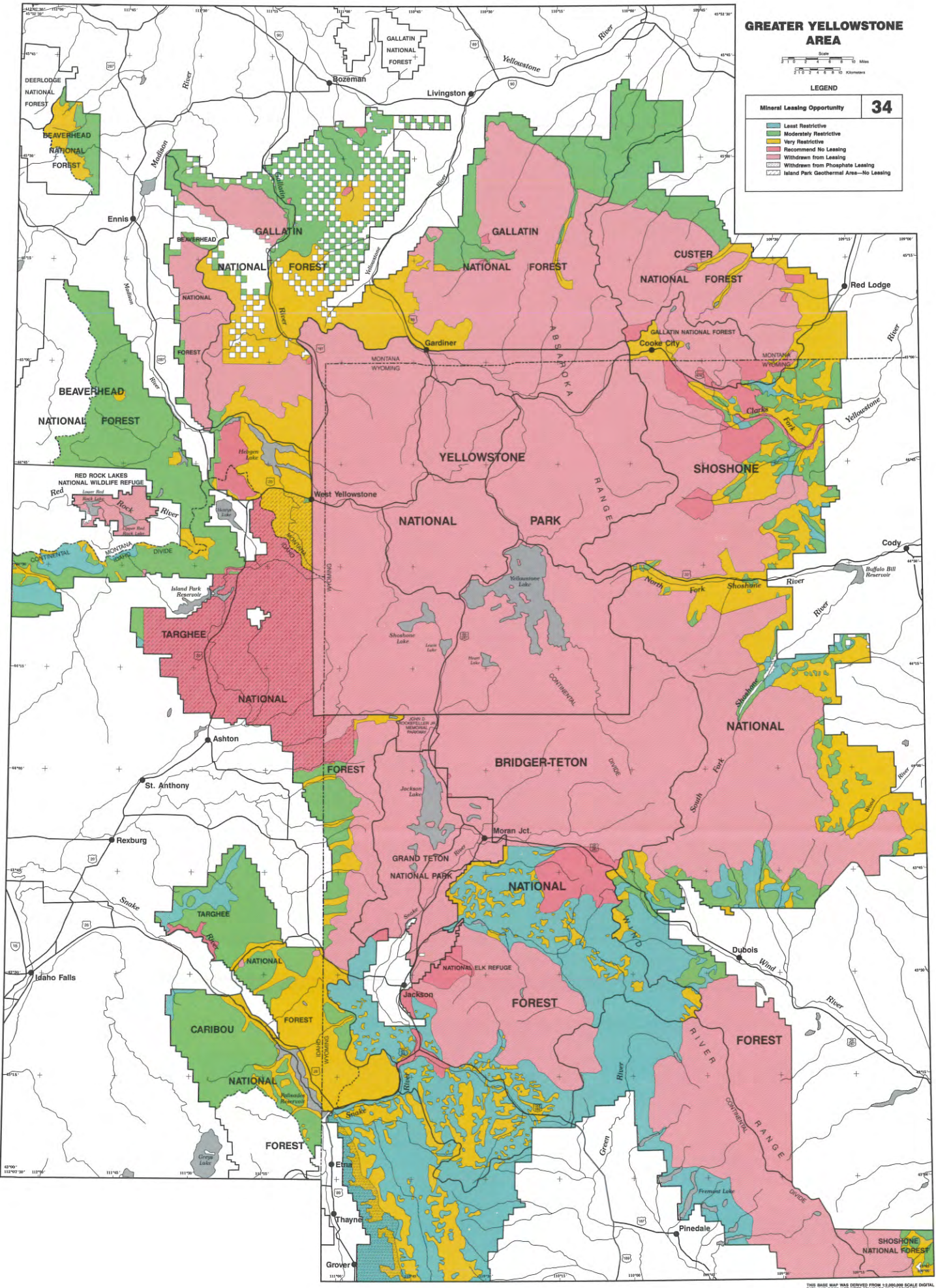
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LEGEND

Mineral Leasing Opportunity	34
	Least Restrictive
	Moderately Restrictive
	Very Restrictive
	Recommend No Leasing
	Withdrawn from Leasing
	Withdrawn from Phosphate Leasing
	Island Park Geothermal Area—No Leasing



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Wildlife and Fish

Abundant wildlife is one of the most important resources within the Greater Yellowstone Area. Wildlife and fish populations may cross Park and Forest boundaries. Management of wildlife and fish habitat presents one of the greatest coordination opportunities because of the different legal mandates for management of National Parks and Forests.

Existing Situation

National Parks generally allow nature to take its course with regard to wildlife. Hunting is not allowed, except for a limited area and season in Grand Teton National Park. Wildlife habitat improvement is generally not practiced.

In National Forests big game animals are hunted. Hunting regulations are set by state fish and game agencies, with the goal of providing a quality experience to the general public and to manage herd numbers in line with available habitat. Improvement of wildlife habitat is a common and continuing practice.

Most management activities have the potential to affect wildlife populations either adversely or beneficially. These activities include timber harvest, livestock grazing, and mineral development in National Forests and the amount and type of recreation use in both Parks and Forests.

Big Game Seasonal Range: Condition and Trend

Elk, mule deer, white-tailed deer, antelope, moose, grizzly bear, black bear, bighorn sheep, bison (also known as

buffalo), mountain goat, and mountain lion are the big game species that inhabit the seasonal ranges within the Greater Yellowstone Area.

Seasonal ranges are areas having suitable habitat qualities (food, cover, and water) so that animals inhabit them either year-round or during a particular season of the year. Areas that have occasional use or that have limited habitat values are not included in the acreage assigned to seasonal ranges.

Elk and Mule Deer. Habitat for elk is distributed across most of the area. During the fall, elk migrate along well established routes to lower elevation wintering areas or to feeding areas, such as the National Elk Refuge near Jackson. A few animals remain at higher elevations and feed on windswept ridges or near thermal features and rivers where some forage is available. In the spring they return to the higher elevations again, following established migration routes. Calving areas usually are located along migration routes. Some units have known calving areas where calves are born each year. Calving areas on other units vary, depending upon weather and animal behavior.

Like elk, mule deer are widely distributed over most of the area. Mule deer use the same winter range as elk, and migration patterns are similar.

Charts 35 and 36 and Maps 35 and 36 show elk and mule deer seasonal ranges.

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The National Elk Refuge near Jackson supplies critical winter feed for elk in the Greater Yellowstone Area.

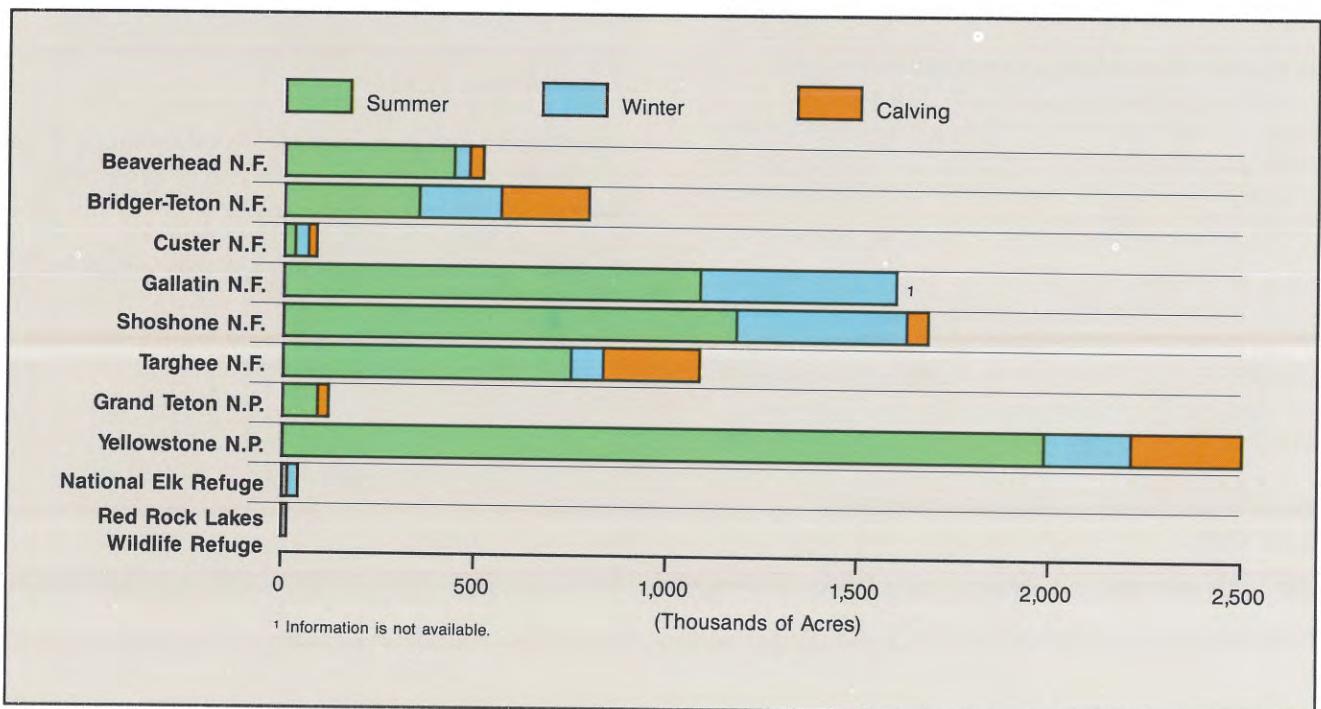


Chart 35. Elk and mule deer seasonal range.

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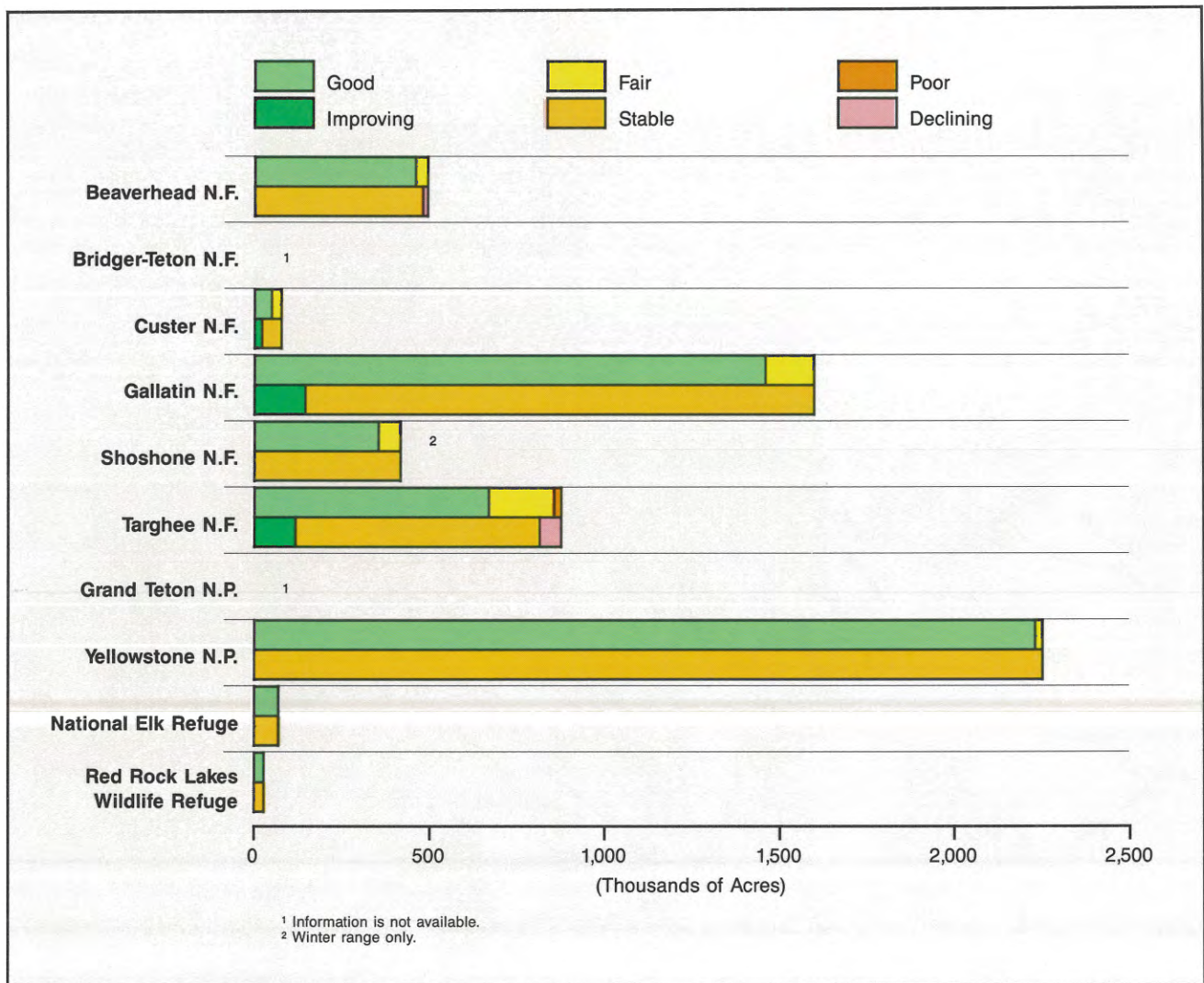
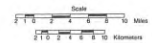


Chart 36. Condition and trend of elk and mule deer range.

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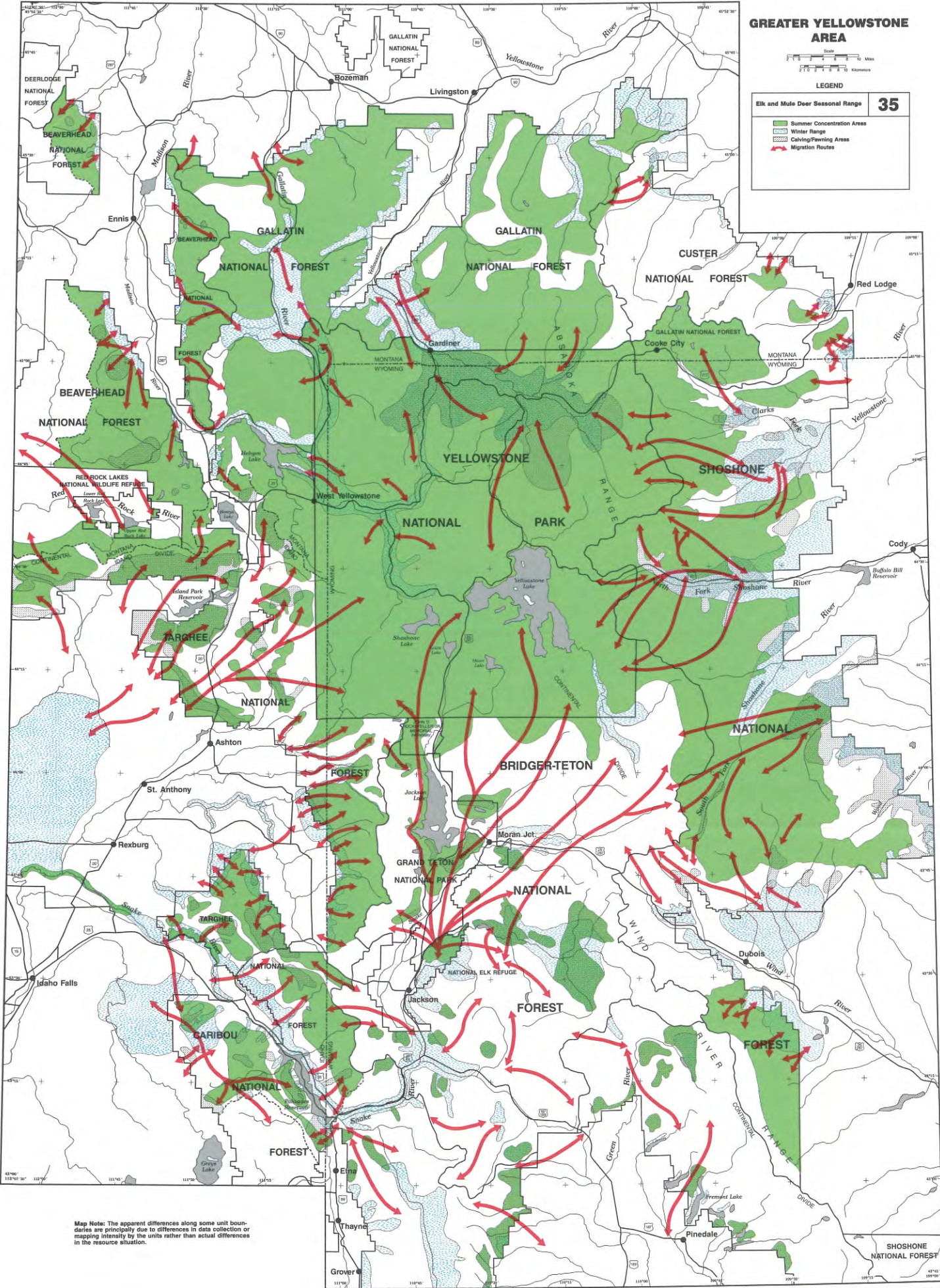
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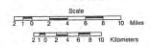
<ul style="list-style-type: none"> Summer Concentration Areas Winter Range Cabin/Packing Areas Migration Routes 	35
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Map Note: The apparent differences along some unit boundaries are principally due to differences in data collection or mapping intensity by the units rather than actual differences in the resource situation.

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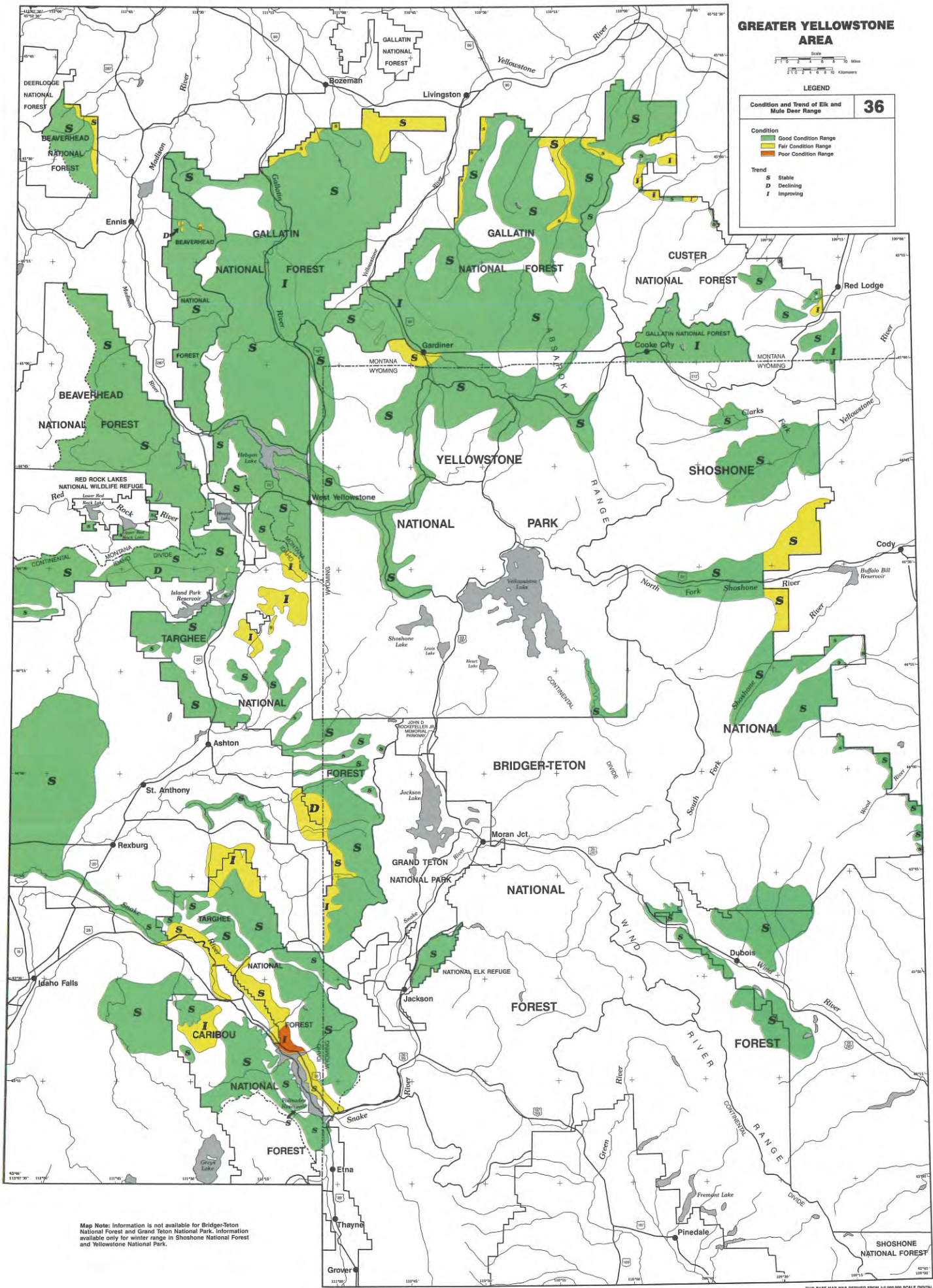
LEGEND

Condition and Trend of Elk and Mule Deer Range

36

Condition
 Good Condition Range
 Fair Condition Range
 Poor Condition Range

Trend
 S Stable
 D Declining
 I Improving



Map Note: Information is not available for Bridger-Teton National Forest and Grand Teton National Park. Information available only for winter range in Shoshone National Forest and Yellowstone National Park.

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White-tailed Deer. Habitat for white-tailed deer is confined to relatively small, widely scattered areas, with most located on the Gallatin National Forest.

Chart 37 and Map 37 show white-tailed deer seasonal range. Chart 38 shows the condition and trend of white-tailed deer range.

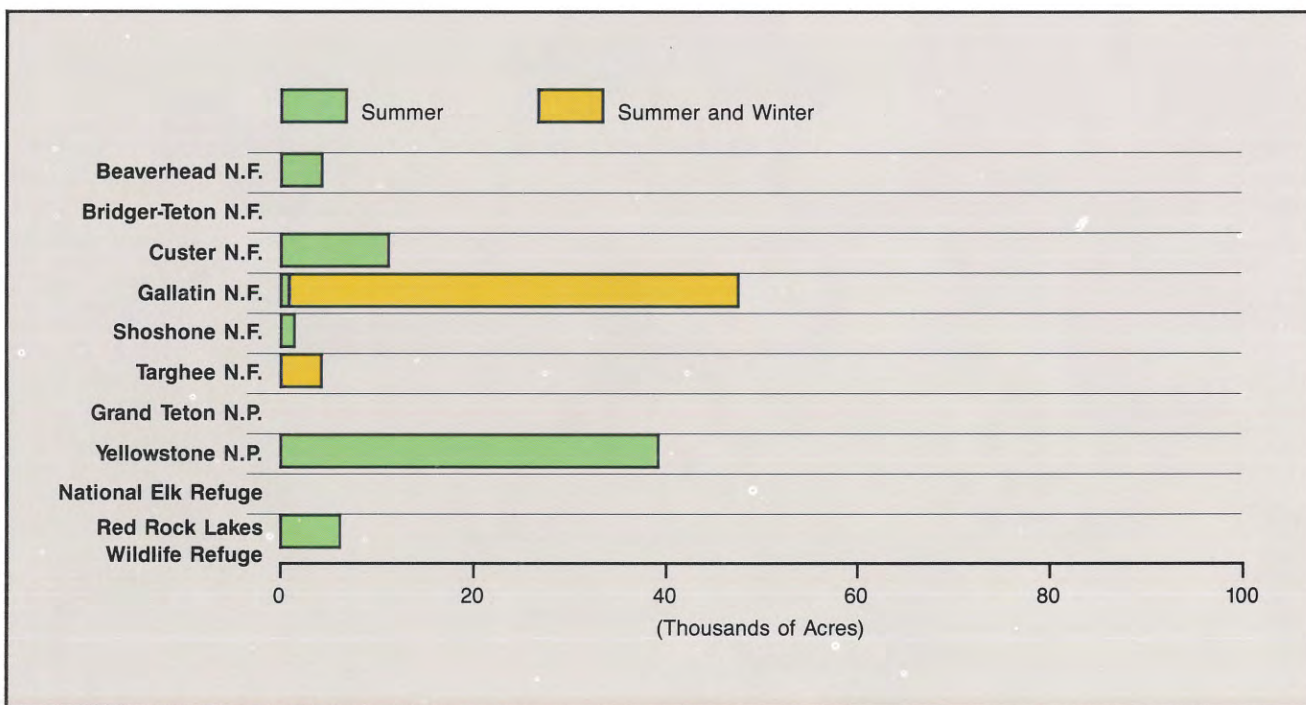


Chart 37. White-tailed deer seasonal range.

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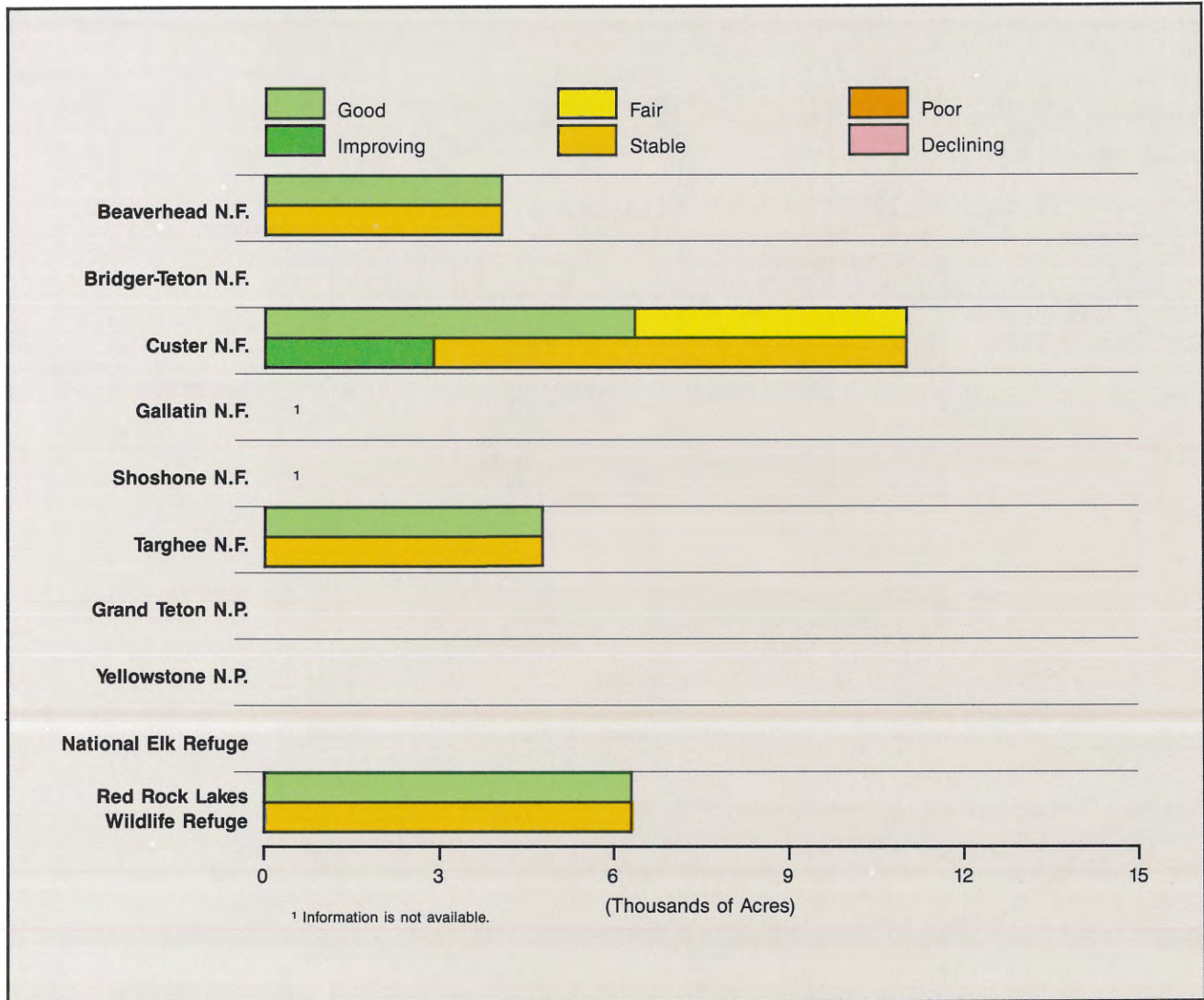


Chart 38. Condition and trend of white-tailed deer range.

The Greater Yellowstone Area

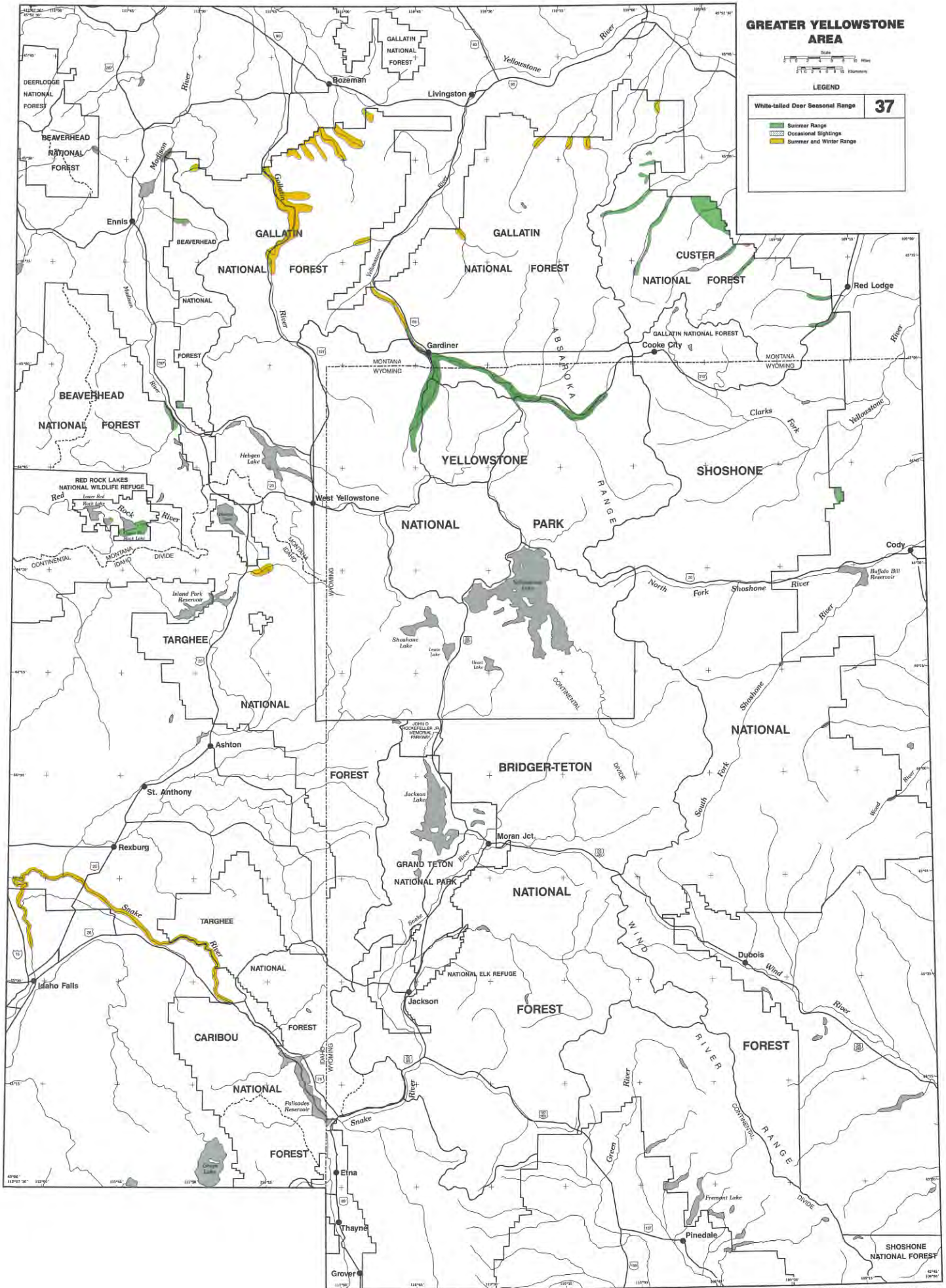
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GREATER YELLOWSTONE AREA



LEGEND

White-tailed Deer Seasonal Range		37
	Summer Range	
	Occasional Sightings	
	Summer and Winter Range	



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Resources and their Management

Mountain Goat. Mountain goat habitat is confined primarily to higher elevation lands in the northern part of the area on the Beaverhead, Custer, Gallatin, and Shoshone National Forests (see Chart 39 and Map 38). Some mountain goats are also present in the southern portion on the Targhee National Forest. Summer range and winter range often overlap, with winter range being more restricted and limited to windswept slopes and ridges and south facing slopes.

Introduction of mountain goats into Idaho and Montana has resulted in periodic sightings in Yellowstone and Grand Teton National Parks. Establishment of permanent mountain goat populations in the Parks is undesirable because they are not a native species and would compete with bighorn sheep.

Chart 40 shows the condition and trend of mountain goat range.

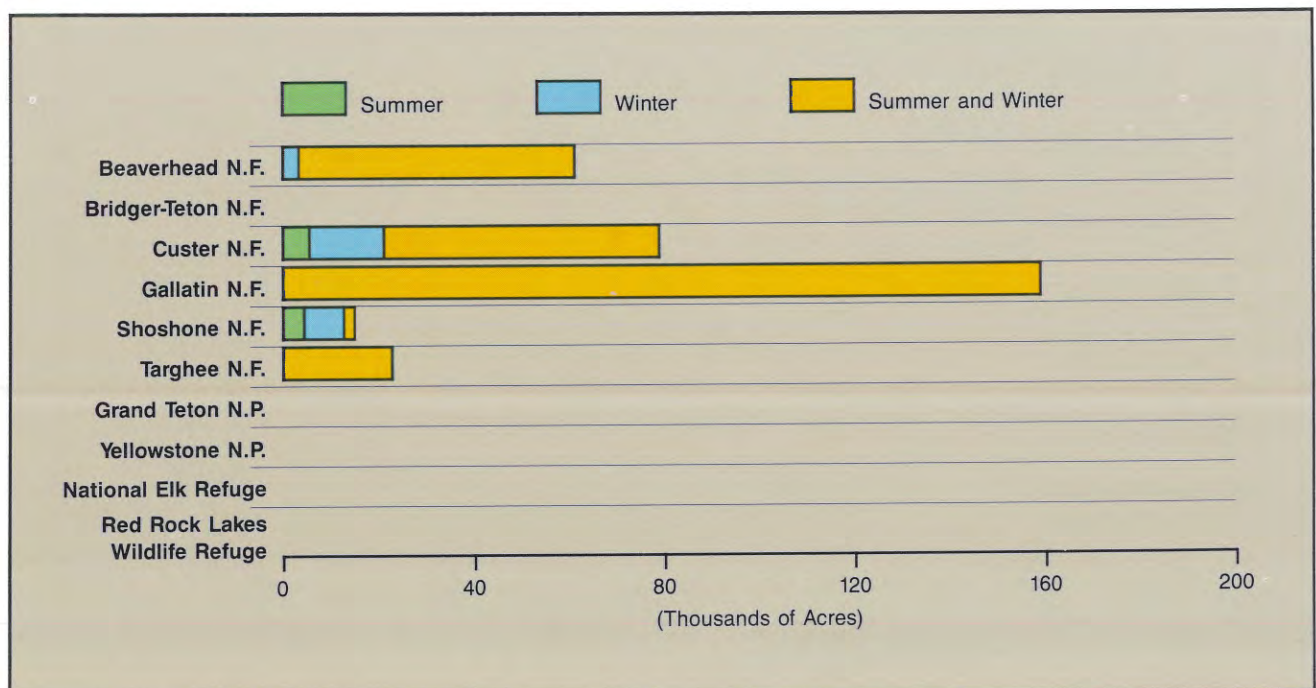


Chart 39. Mountain goat seasonal range.

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Section 3

Resources and their Management

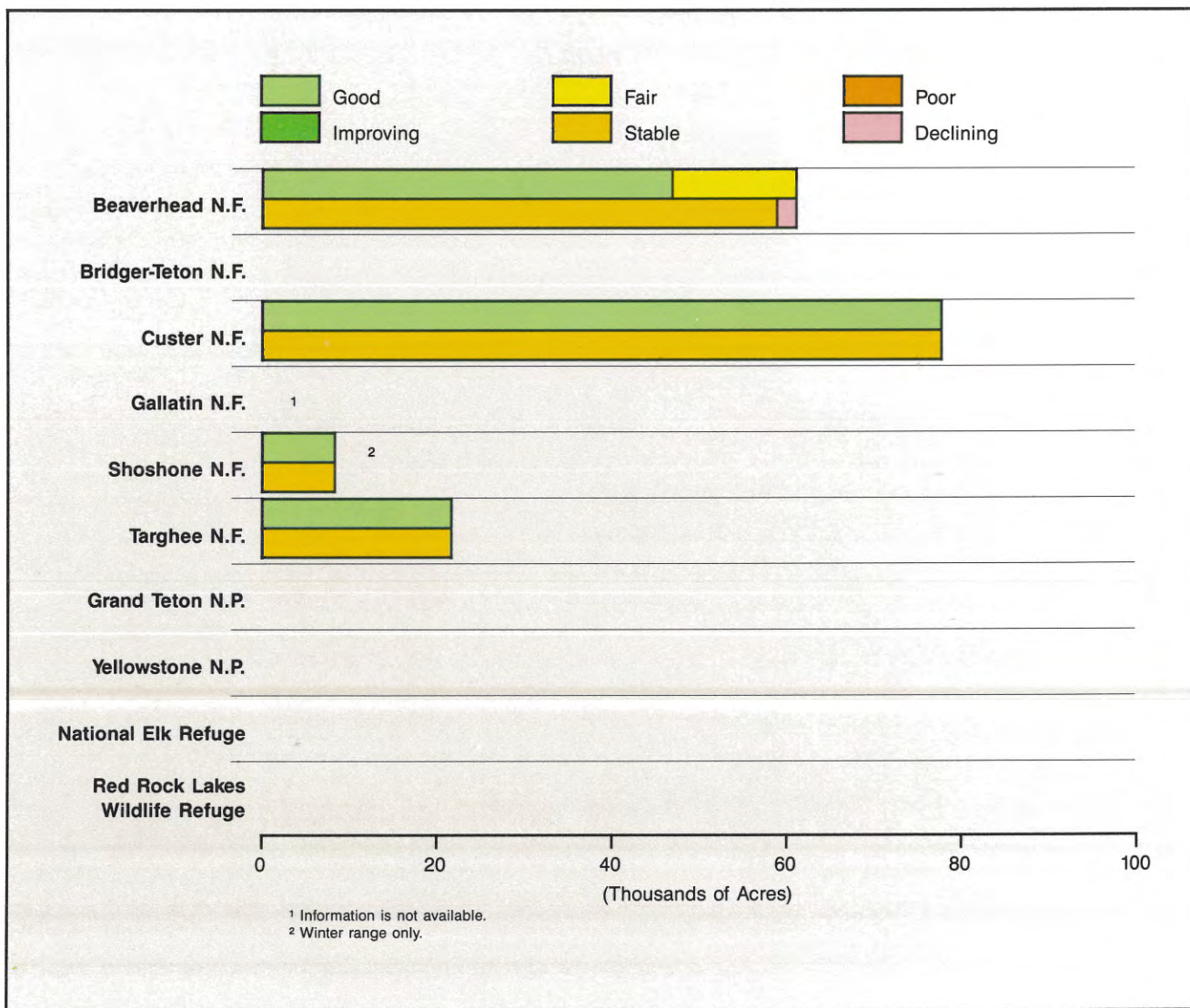


Chart 40. Condition and trend of mountain goat range.

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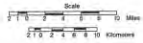


The Gallatin National Forest is home for 650 mountain goats.

The Greater Yellowstone Area

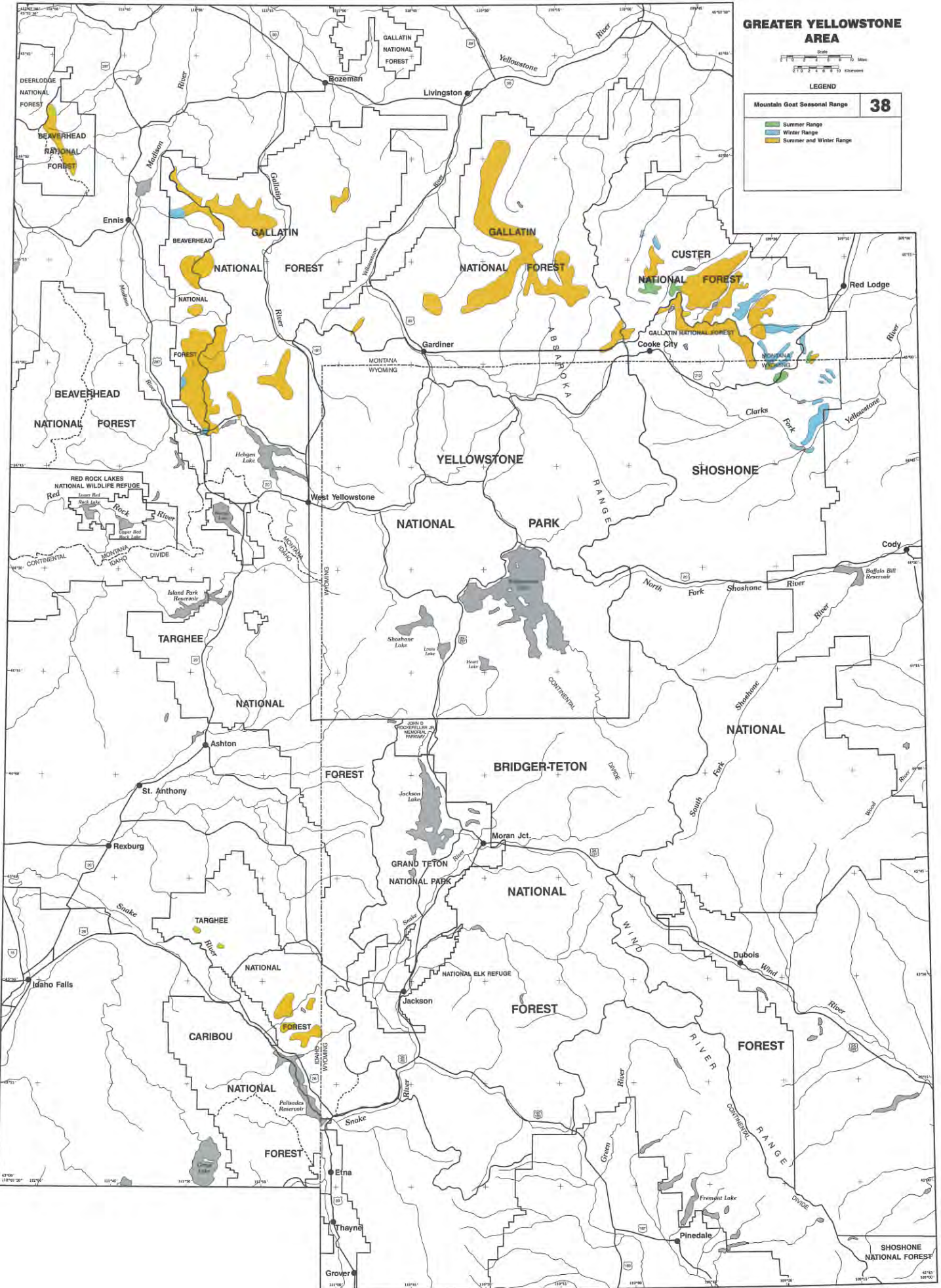
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LEGEND

Mountain Goat Seasonal Range	38
Summer Range	
Winter Range	
Summer and Winter Range	



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Section 3
Resources and their Management

Bighorn Sheep. Habitat for bighorn sheep is located throughout the area with most located on the Bridger-Teton, Shoshone, and Gallatin National Forests (see Chart 41 and Map 39). Winter and summer range overlap, and as with mountain goat, winter range occurs on windswept slopes and southern exposures.

Chart 42 shows the condition and trend of bighorn sheep range.



Bighorn sheep, such as these in the Shoshone National Forest, often use wind-swept slopes at high elevation for winter range.

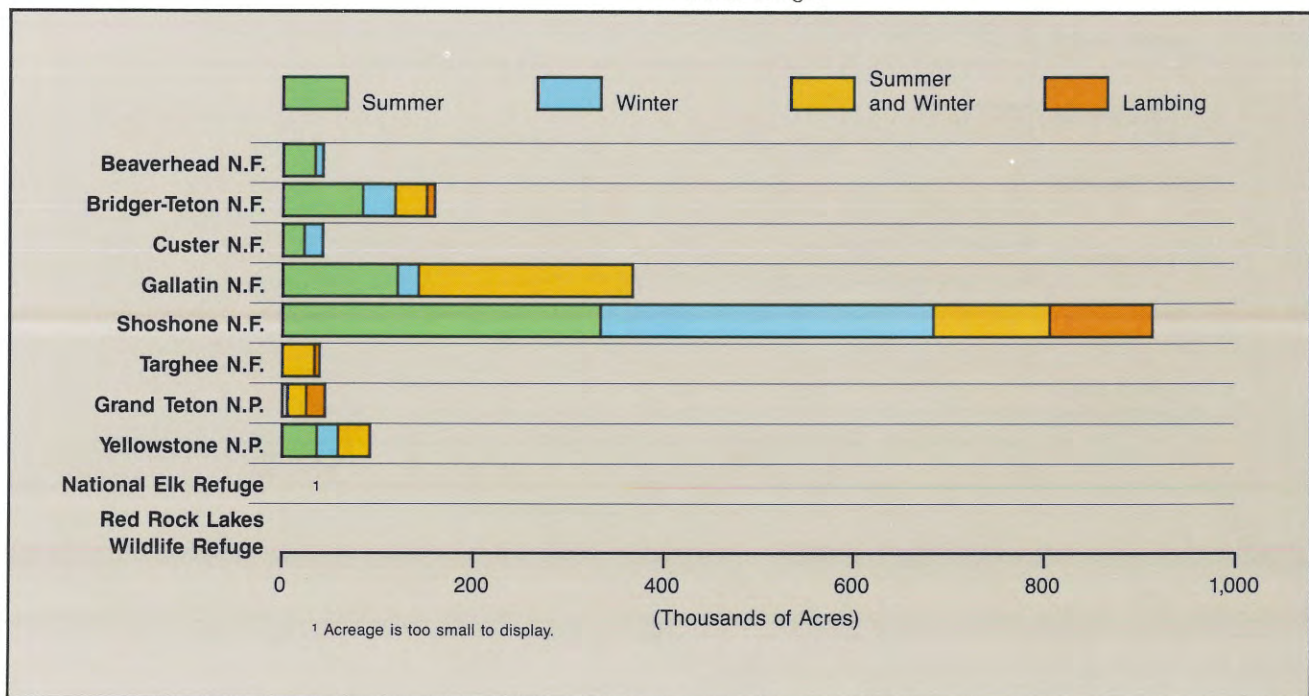


Chart 41. Bighorn sheep seasonal range.

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Resources and their Management

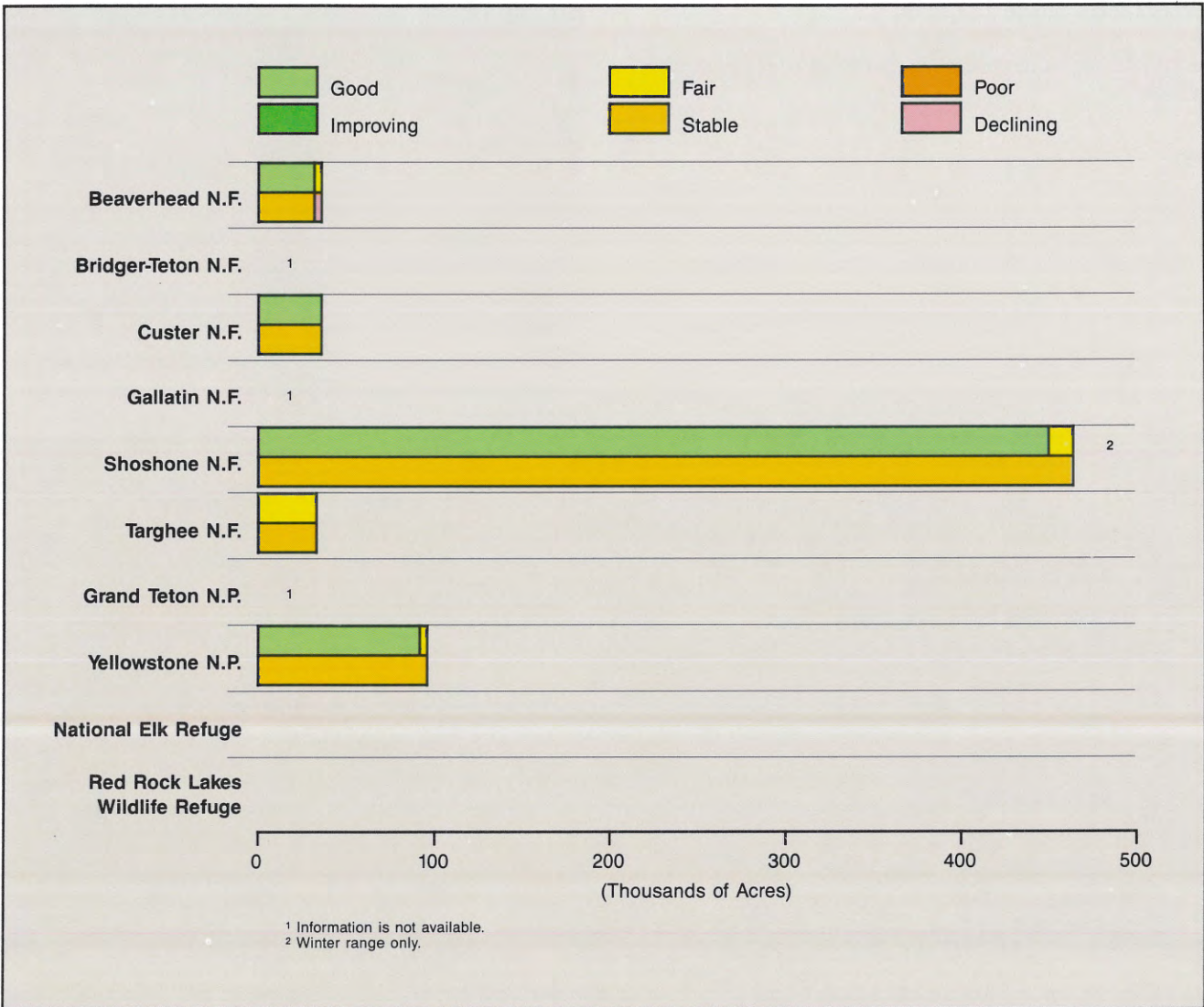


Chart 42. Condition and trend of bighorn sheep range.

The Greater Yellowstone Area

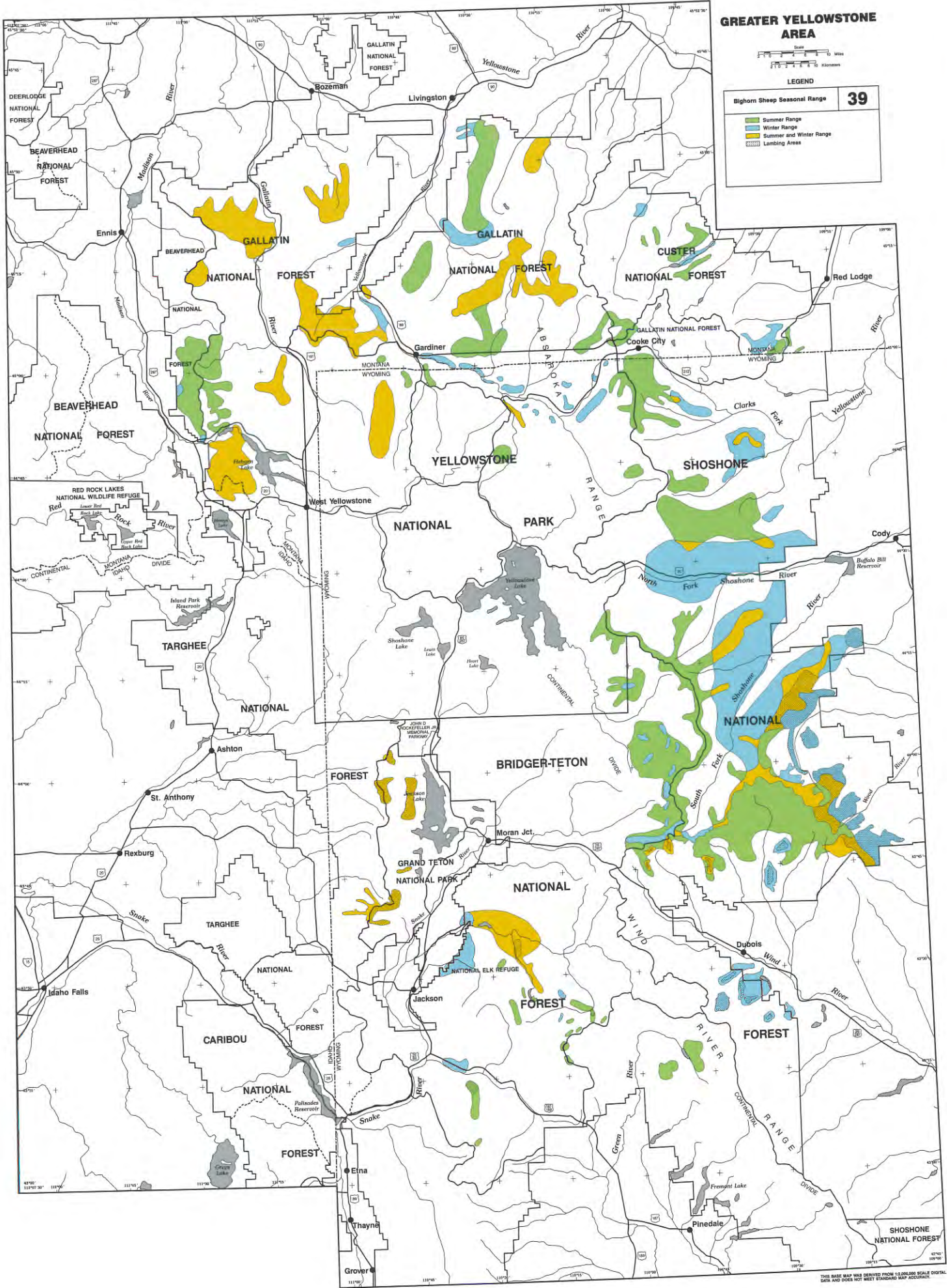
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LEGEND

Bighorn Sheep Seasonal Range	39
 Summer Range	
 Winter Range	
 Summer and Winter Range	
 Lambing Areas	



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Antelope. Much of the area within the Greater Yellowstone Area is high elevation and forested; consequently, the amount of antelope range is limited. Most antelope range is located in non-forested areas on the Bridger-Teton National Forest and in Grand Teton National Park (see Chart 43 and Map 40). Most antelope migrate from Forests and Parks to winter at lower elevations outside Forests and Parks.

Chart 44 shows that most range is in good and stable condition.

Map 41 shows the condition and trend of antelope, bighorn sheep, mountain goat, and white-tailed deer range.

In addition to providing habitat for waterfowl, Red Rock Lakes National Wildlife Refuge also supports summering antelope.

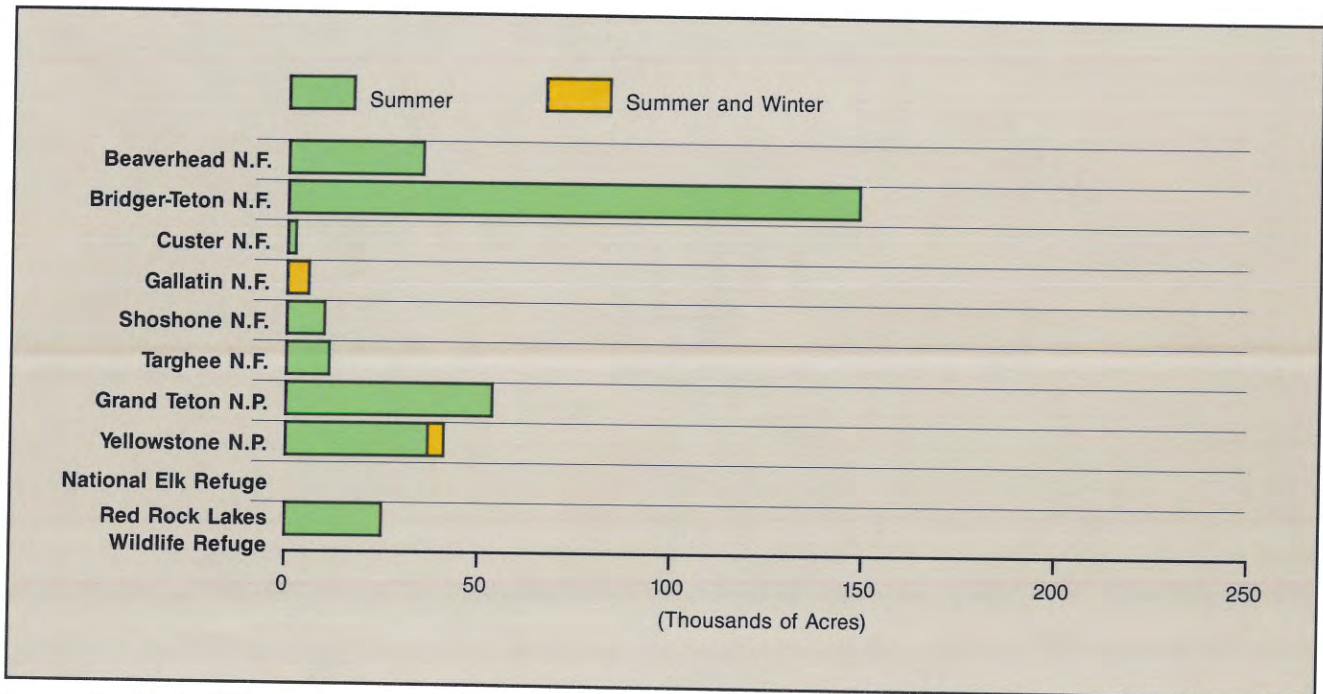


Chart 43. Antelope seasonal range.

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Resources and their Management

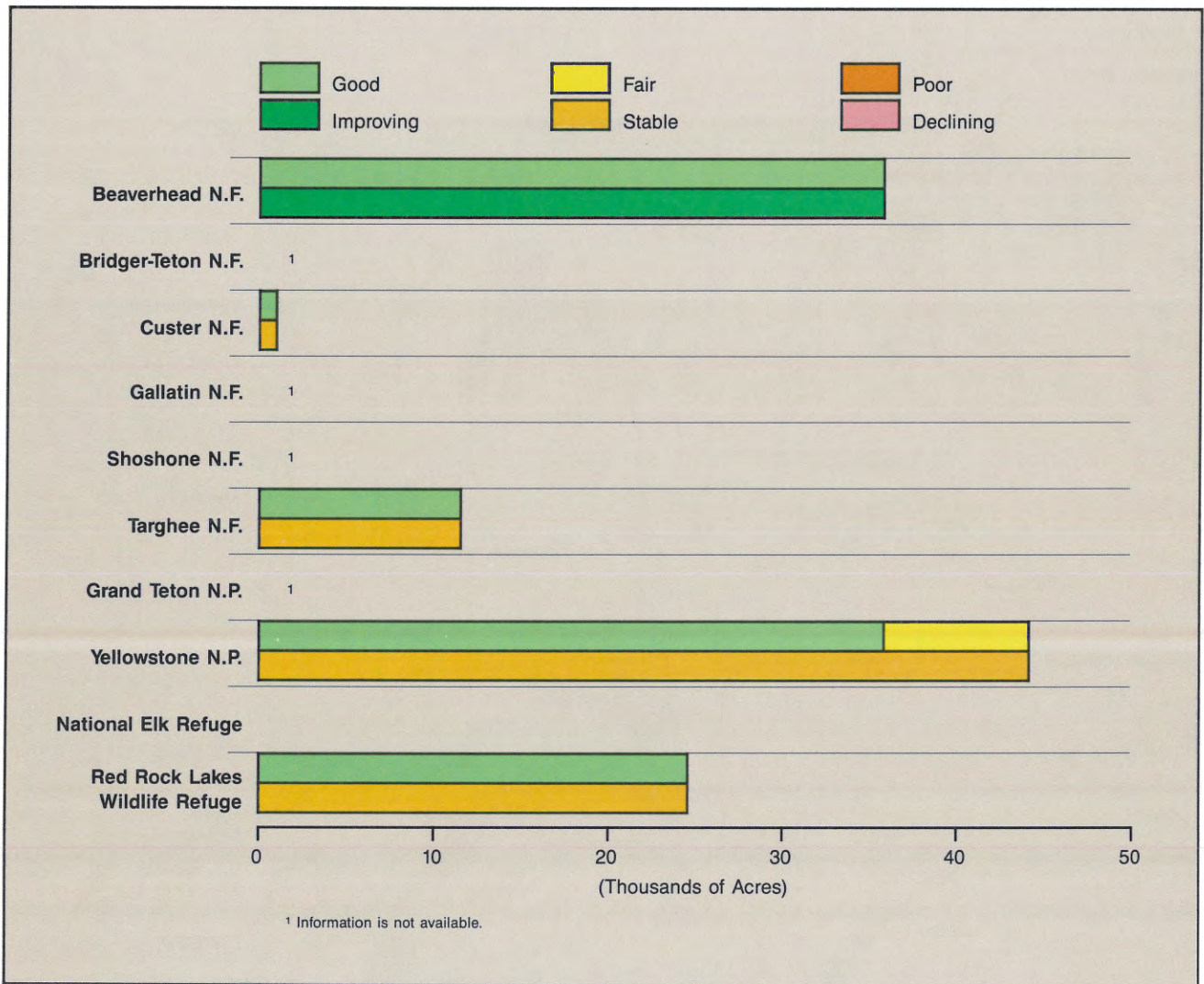
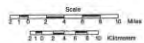
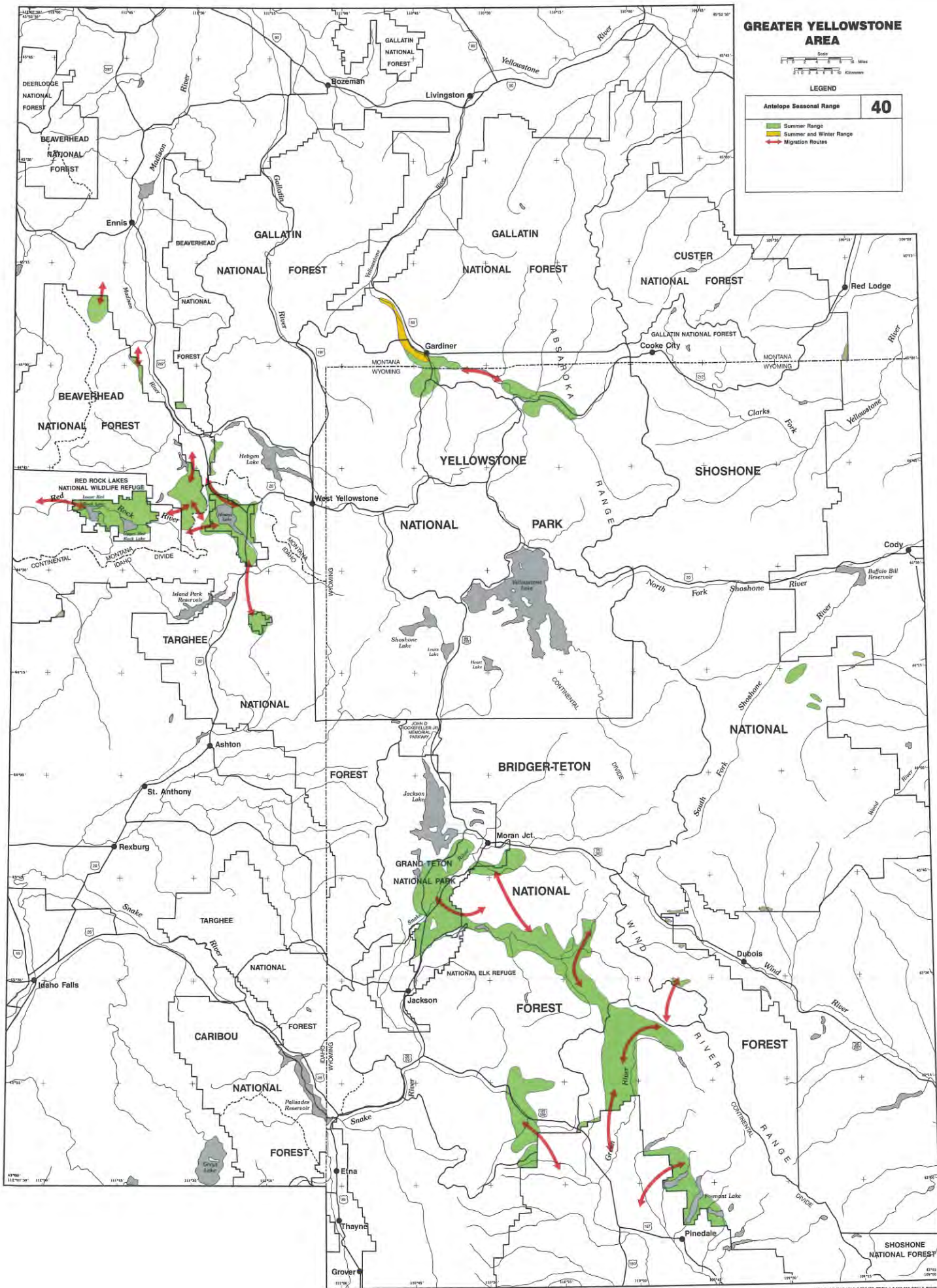


Chart 44. Condition and trend of antelope range.

GREATER YELLOWSTONE AREA

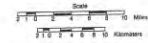


LEGEND	
Antelope Seasonal Range	40
	Summer Range
	Summer and Winter Range
	Migration Routes

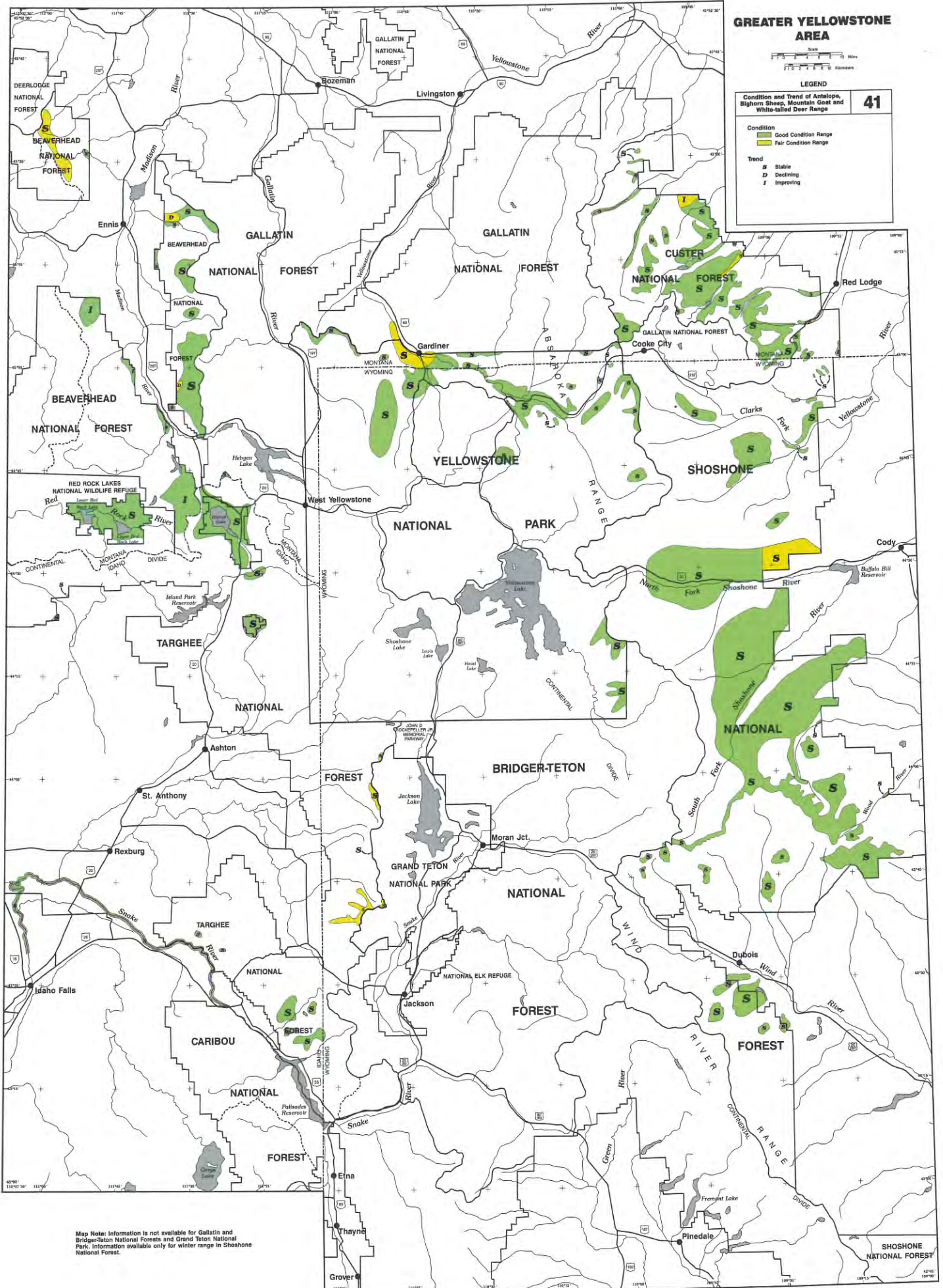


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GREATER YELLOWSTONE AREA



LEGEND		41
Condition and Trend of Antelope, Bighorn Sheep, Mountain Goat and White-tailed Deer Range		
Condition		
	Good Condition Range	
	Fair Condition Range	
Trend		
S	Stable	
D	Declining	
I	Improving	



Map Note: Information is not available for Gallatin and Bridger-Teton National Forests and Grand Teton National Park. Information available only for winter range in Shoshone National Forest.

Section 3

Resources and their Management



Willows are an important source of winter food for moose, Grand Teton National Park.

Moose. Moose are distributed across much of the area (see Chart 45 and Map 42). Range is associated with riparian habitats and adjacent upland coniferous forest areas.

Although the annual range of moose is known, very little can be specified as uniquely winter range or summer range, so information on moose distribution is incomplete.

Some animals move as seasons change, while others remain in the same general area year-round.

Most identified moose range is located on the Targhee, Bridger-Teton, and Gallatin National Forests. Moose range, for the most part, is in good and stable condition. (See Chart 46 and Map 43.)

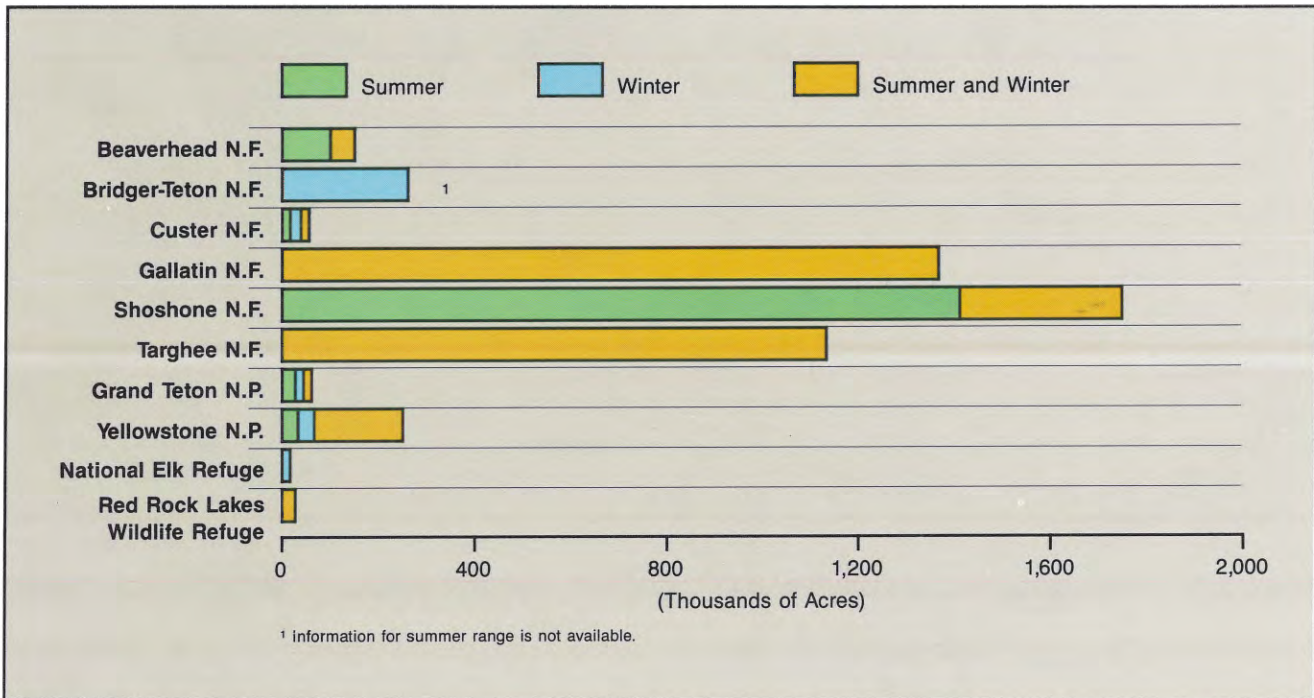


Chart 45. Moose seasonal range.

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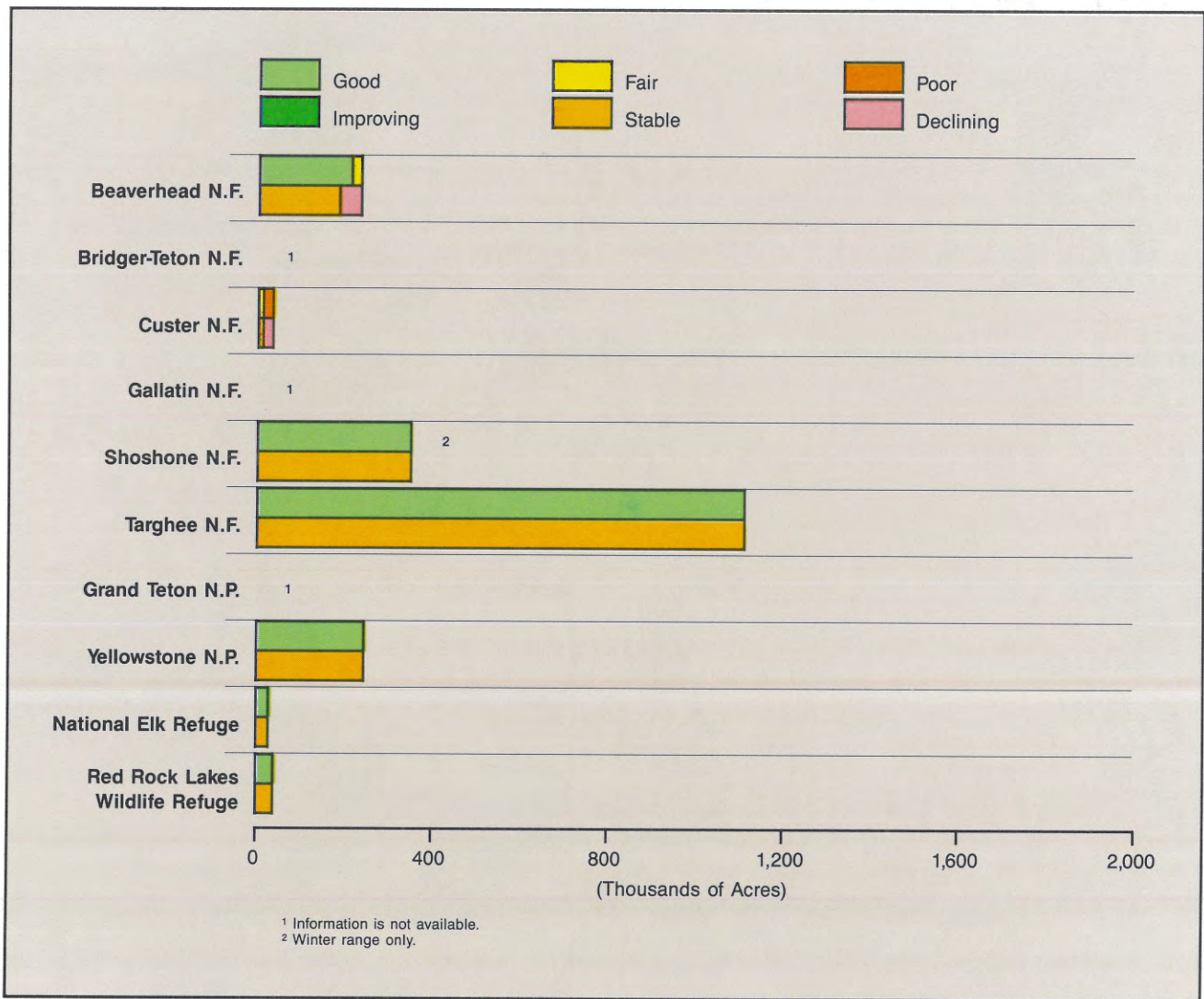
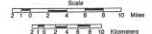


Chart 46. Condition and trend of moose range.

The Greater Yellowstone Area

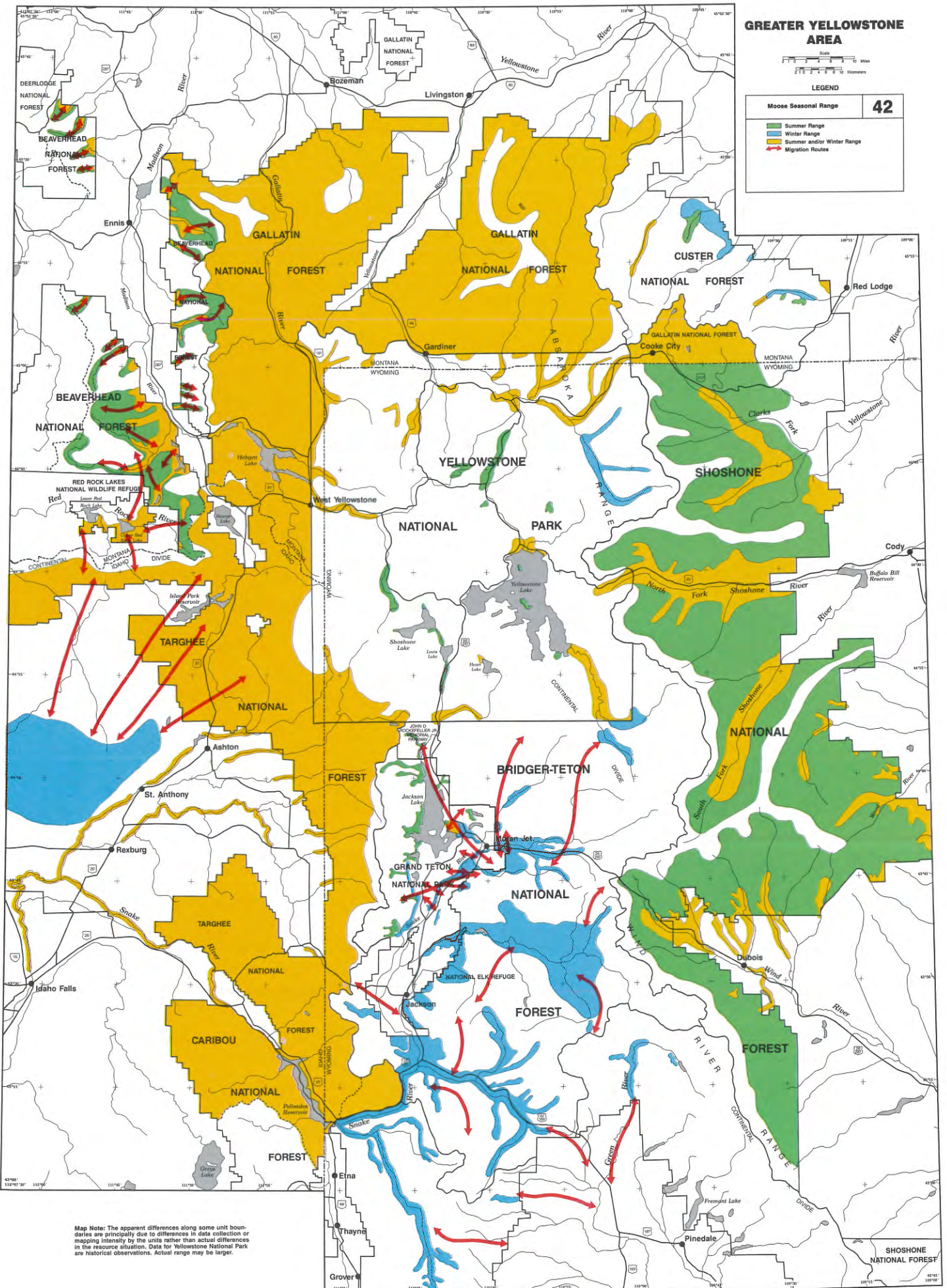
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LEGEND

Moose Seasonal Range	42
■ Summer Range	
■ Winter Range	
■ Summer and/or Winter Range	
→ Migration Routes	



Map Note: The apparent differences along some unit boundaries are principally due to differences in data collection or mapping intensity by the units rather than actual differences in the resource situation. Data for Yellowstone National Park are historical observations. Actual range may be larger.

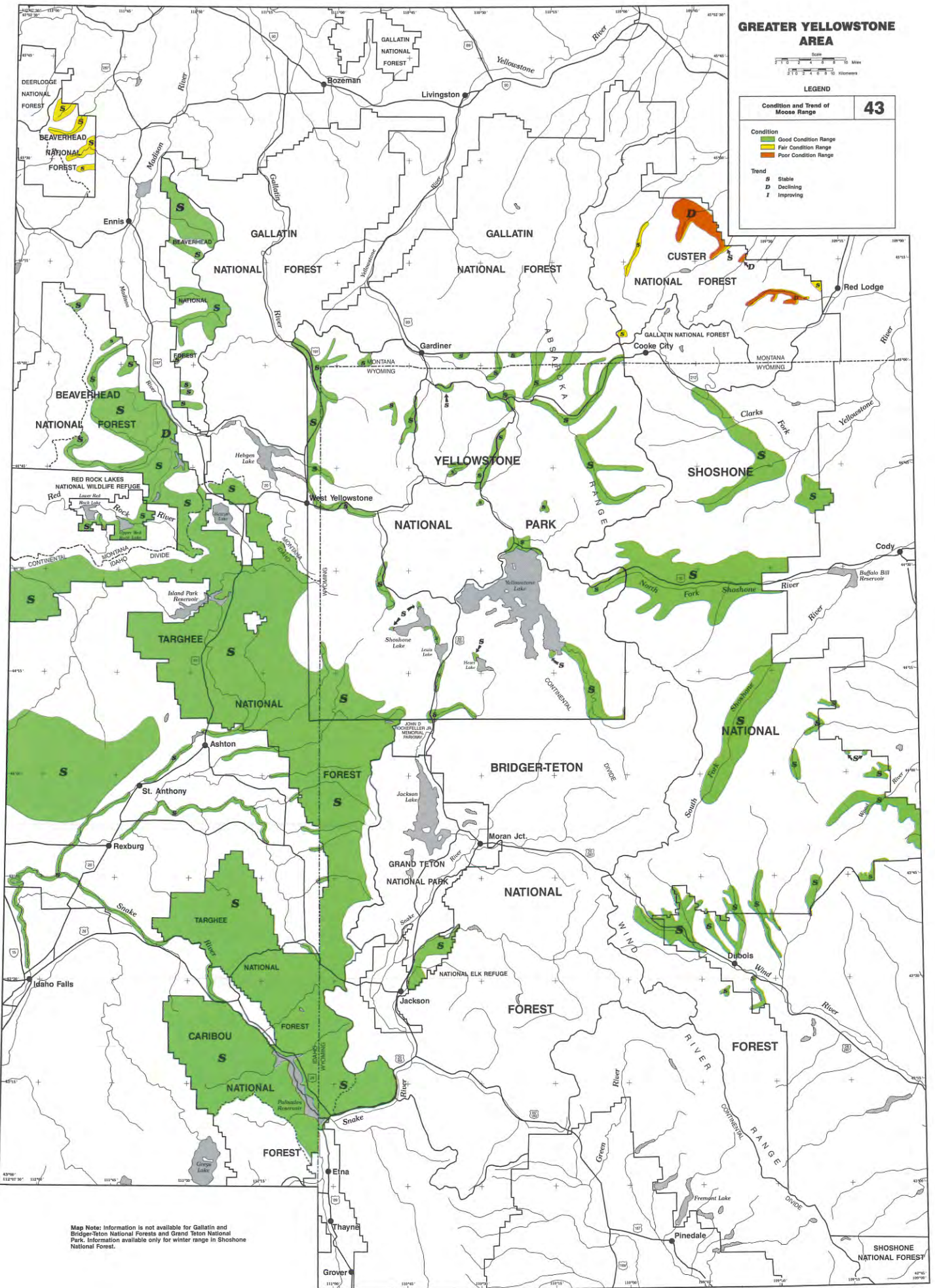
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GREATER YELLOWSTONE AREA



LEGEND

Condition and Trend of Moose Range		43
Condition		
■	Good Condition Range	
■	Fair Condition Range	
■	Poor Condition Range	
Trend		
S	Stable	
D	Declining	
I	Improving	



Map Note: Information is not available for Gallatin and Bridger-Teton National Forests and Grand Teton National Park. Information available only for winter range in Shoshone National Forest.

Section 3

Resources and their Management

Bison. Bison are confined almost entirely to Yellowstone and Grand Teton National Parks. However, some bison from Yellowstone National Park move onto the Gallatin National Forest as well as private lands north

of the Park. Some bison also move onto the National Elk Refuge to spend the winter. Chart 47 and Map 44 show the location and extent of bison range.

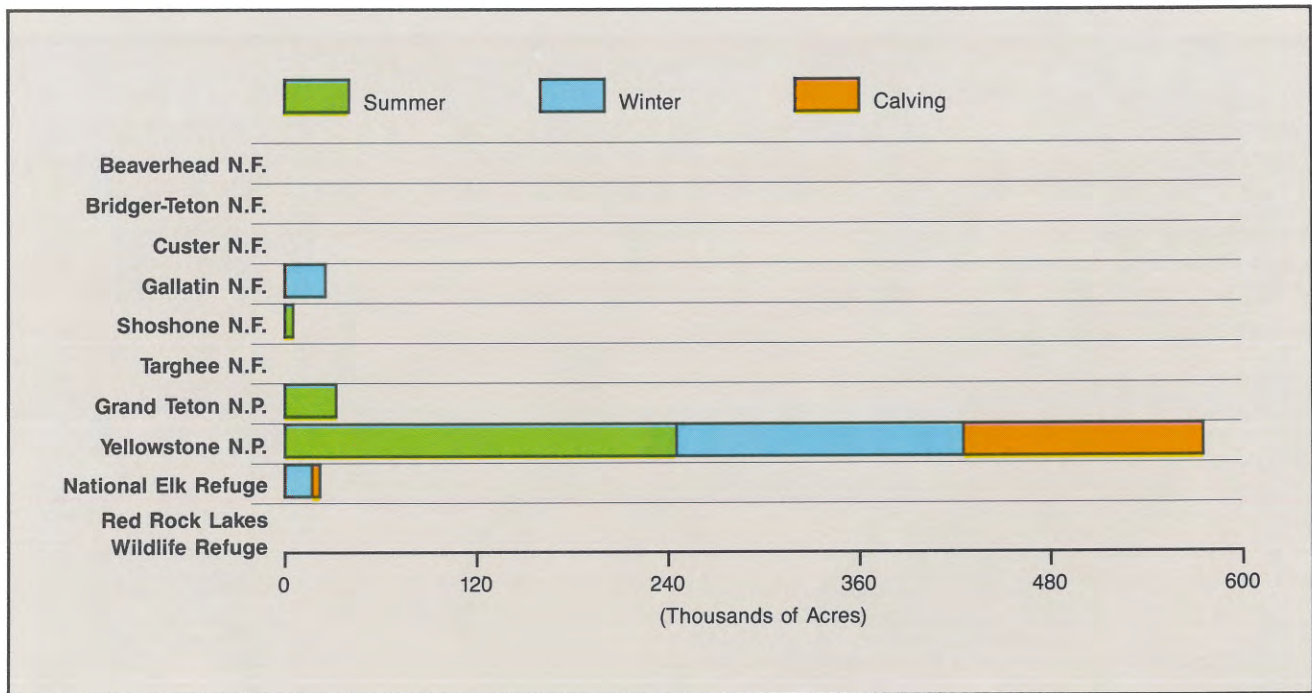


Chart 47. Bison seasonal range.

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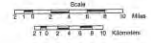


Bison in Yellowstone National Park use much of the same range during both winter and summer.

The Greater Yellowstone Area

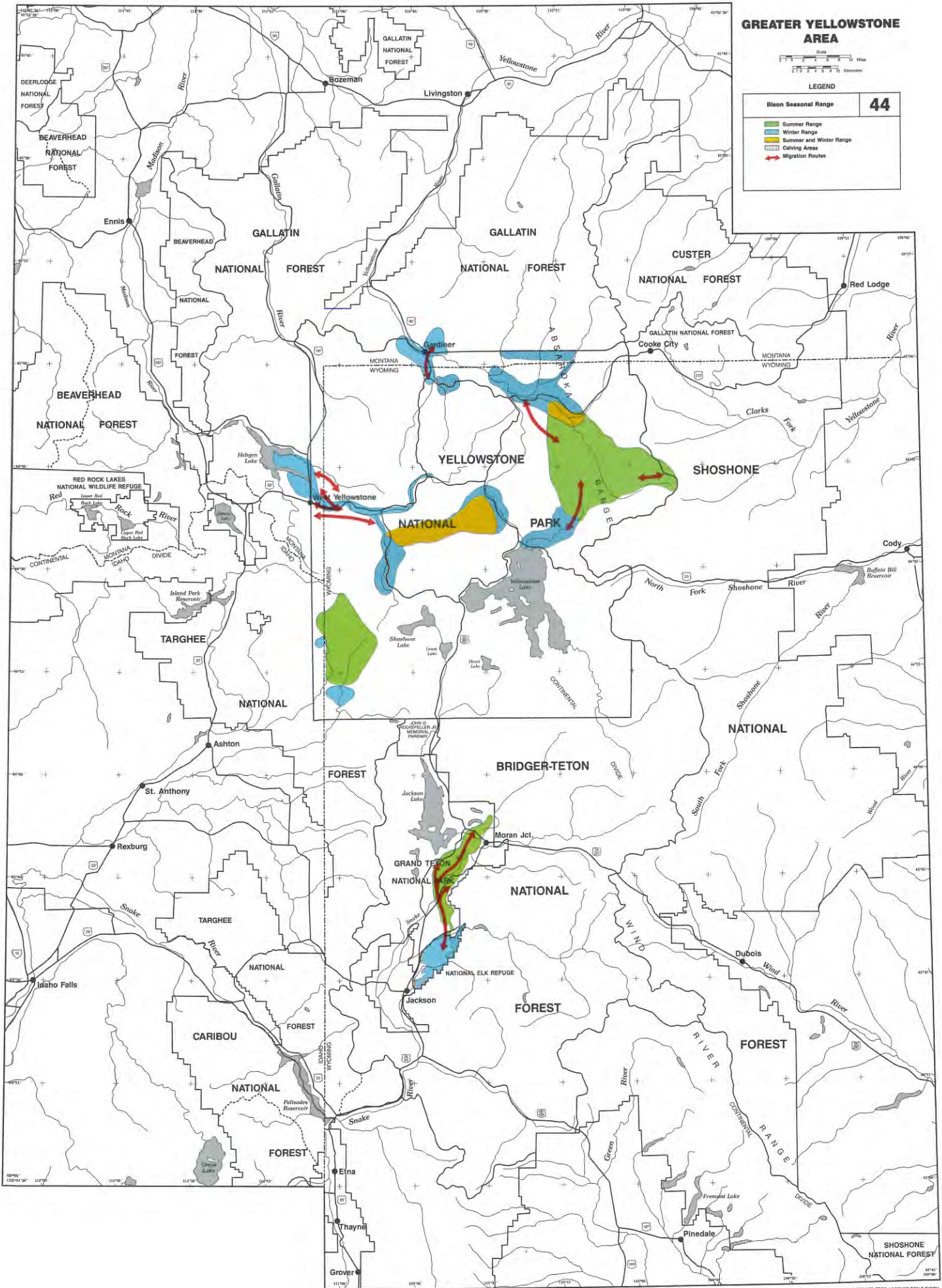
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LEGEND

Bison Seasonal Range	44
 Summer Range	
 Winter Range	
 Summer and Winter Range	
 Calving Areas	
 Migration Routes	



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Section 3

Resources and their Management

Grizzly Bear. The grizzly bear is listed as a threatened species under the Endangered Species Act. Grizzly bear habitat is described by different management situations. Habitat components, bear use, and presence of other uses or activities are the factors that determine the particular management situation for grizzly bear habitat.

Management Situation 1

Areas containing grizzly population centers and habitat components needed for survival and recovery of the species.

Grizzly habitat and its improvement receive the highest management priority. Management decisions favor the needs of grizzly bear when grizzly habitat and other uses compete. Land uses that can affect grizzlies and their habitat will be made compatible with grizzly needs or such uses will be eliminated.

Management Situation 2

Current information indicates that areas lack distinct grizzly population centers and highly suitable habitat does not generally occur. However, some grizzly habitat components exist and grizzlies may occasionally be present. Habitat is either unnecessary for grizzly survival or recovery, or the need has not yet been determined, but habitat may be necessary. The status of such areas is subject to review and change according to demonstrated grizzly populations and their habitat needs.

Management decisions accommodate demonstrated grizzly populations and use if feasible, but not to the exclusion of other uses. When grizzly and other uses are mutually exclusive, the other use needs may prevail. In cases where the need of the habitat for recovery has not yet been determined other land uses may prevail to the extent they do not result in irretrievable/irreversible resource commitments, which would preclude the possibility of eventual reclassification to Management Situation 1. If grizzly populations and/or habitat use represent

demonstrated needs that are so great (necessary to the normal needs or survival of the species or a segment of its population) that they should prevail in management considerations, the area should be reclassified Management Situation 1.

Management Situation 3

Grizzly presence is possible but infrequent. Developments, such as campgrounds, resorts, or other human use result in conditions that make grizzly presence untenable for humans and grizzlies.

Management decisions do not consider grizzly habitat maintenance and improvement. Minimizing grizzly-human conflict is a high priority. Any grizzly frequenting the area or being involved in grizzly-human conflict is controlled. Control actions range from relocation to destroying the bear. A number of factors are considered when determining the appropriate control action, including past history of depredation to livestock or unnatural food and past behavior of the animal toward humans.

A detailed description of each management situation, as well as comprehensive management direction, is contained in *Interagency Grizzly Bear Guidelines, 1986*. These guidelines are applicable to grizzly bear habitat on lands managed by the Forest Service, Park Service, and Bureau of Land Management in Idaho, Montana, Wyoming, and Washington.

Map 45 shows the location of grizzly bear habitat. Chart 48 shows acres of habitat within each administrative unit.

In recent years much of the management emphasis in grizzly bear habitat has been aimed at reducing grizzly mortality as a result of human-bear interaction. Safe camping practices, public and hunter awareness, installation of bear-proof storage and garbage containers, and closure of grizzly bear habitat to bear baiting are some programs that are currently being emphasized.

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Direct habitat improvement (vegetative manipulation) is limited because much of the grizzly bear habitat is in designated National Forest wilderness areas or in National Parks where direct vegetative manipulation is not done.

Acres of planned habitat improvement and numbers of bear-proof structures that are planned are shown on Chart 49.



Management decisions in Situation 1 habitat, such as this in Yellowstone National Park, will favor the needs of grizzly bear. Photo/Jeff Henry

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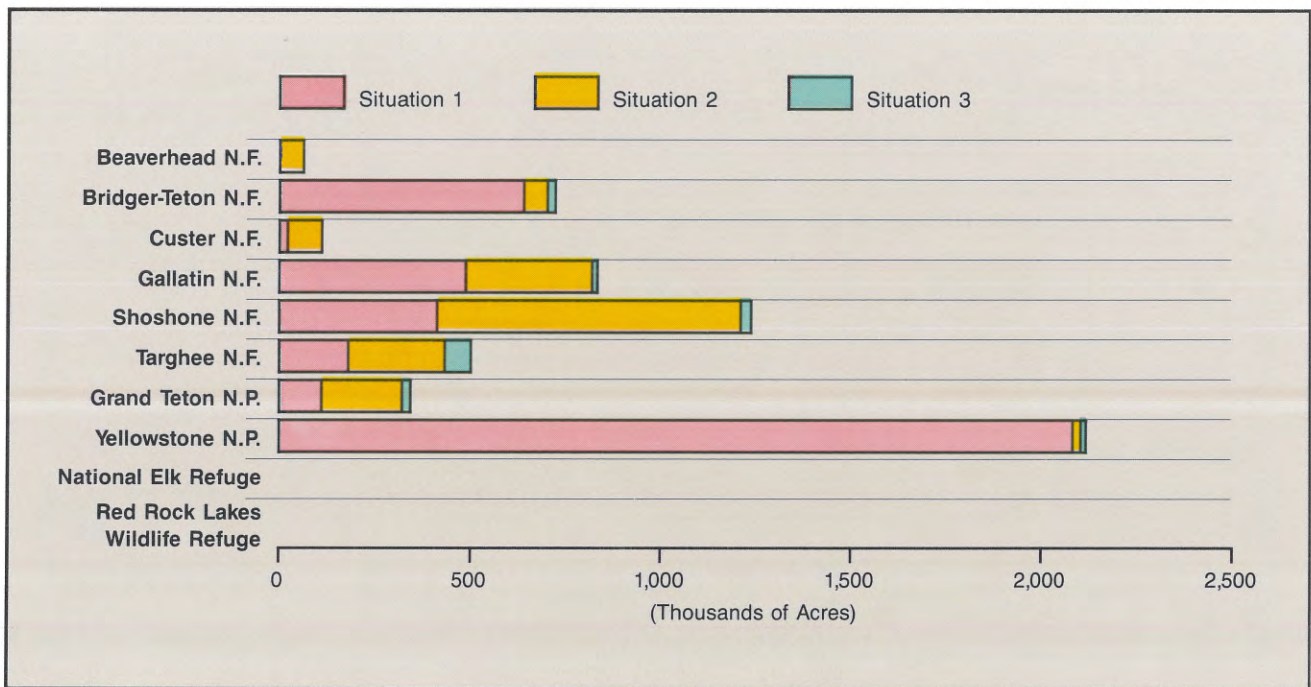


Chart 48. Grizzly bear habitat.

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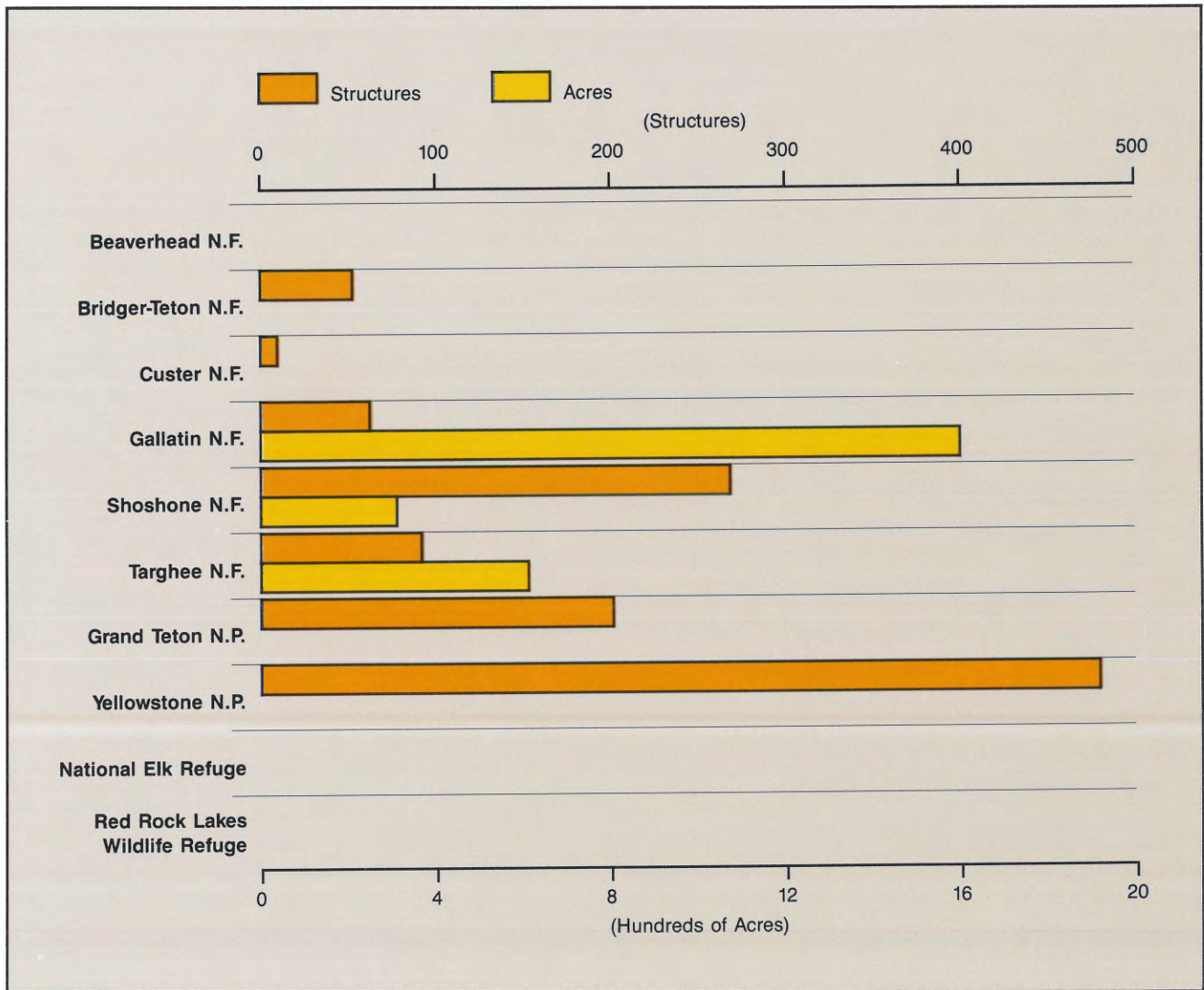
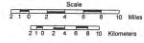


Chart 49. Planned grizzly bear habitat improvement and bear-proof structures.

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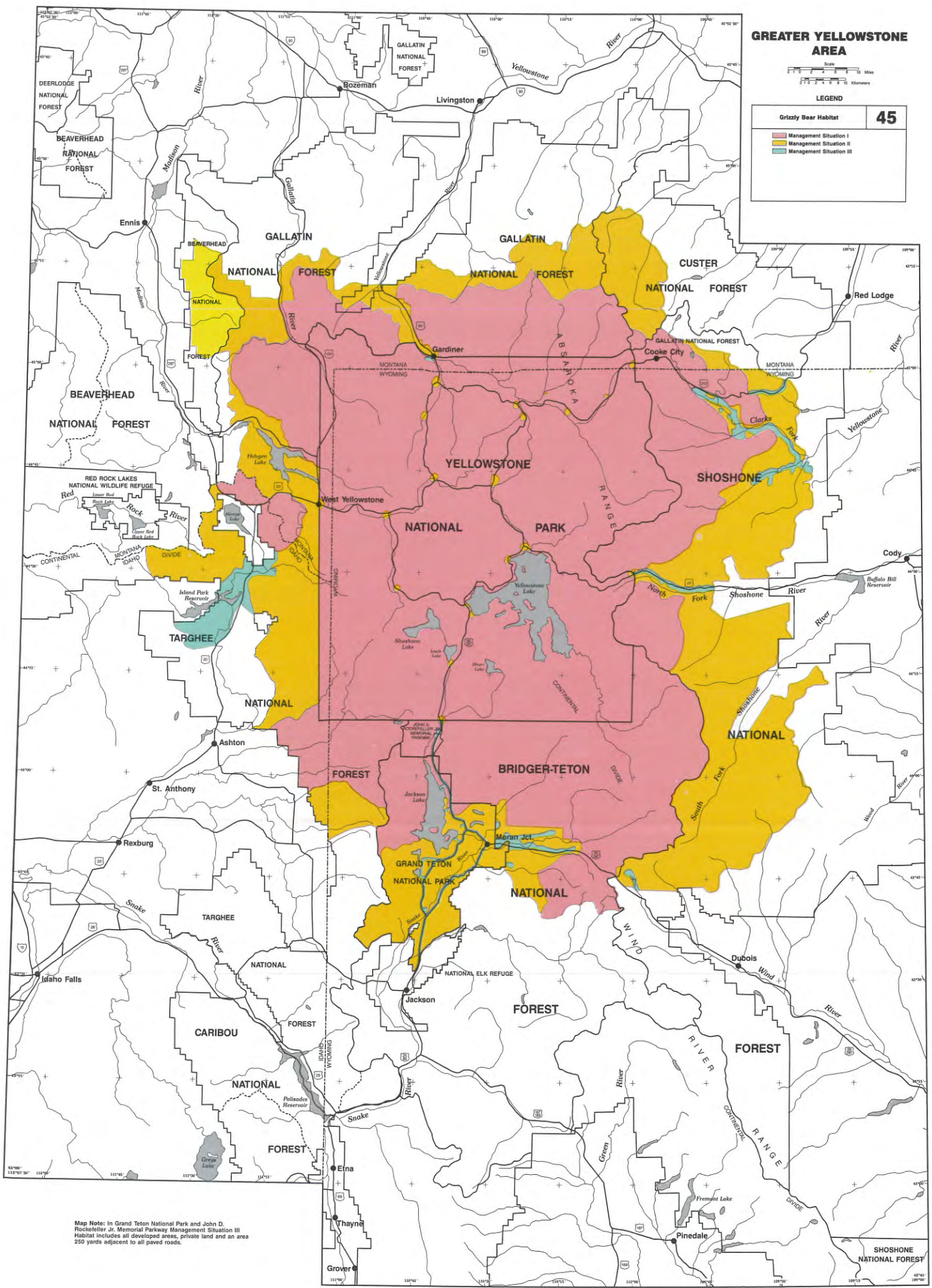
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LEGEND

Grizzly Bear Habitat	45
 Management Situation I	
 Management Situation II	
 Management Situation III	



Map Note: In Grand Teton National Park and John D. Rockefeller Jr. Memorial Parkway Management Situation III Habitat includes all developed areas, private land and an area 250 yards adjacent to all paved roads.

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