

# RANGELANDS

*AN INTRODUCTION TO WILD OPEN SPACES*



**University of Idaho**  
Rangeland Center



**IDAHO RANGELAND  
RESOURCE COMMISSION**

# Rangelands

## An Introduction to Idaho's Wild Open Spaces

2012

**Rangeland Center**  
University of Idaho  
P.O. Box 441135  
Moscow, ID 83844  
(208) 885-6536  
[range@uidaho.edu](mailto:range@uidaho.edu)  
[www.uidaho.edu/range](http://www.uidaho.edu/range)

**Idaho Rangeland Resource Commission**  
P. O. Box 126  
Emmett, ID 83617  
(208) 398-7002  
[ghyde@idahorange.org](mailto:ghyde@idahorange.org)  
[www.idahorange.org](http://www.idahorange.org)

**University of Idaho**  
Rangeland Center



---

The University of Idaho Rangeland Center and the Idaho Rangeland Resource Commission are mutually dedicated to fostering the understanding and sustainable stewardship of Idaho's vast rangeland landscapes by providing scientifically-based educational resources about rangeland ecology and management.

Many people are credited with writing, editing, and developing this chapter including: Lovina Roselle, Karen Launchbaugh, Tess Jones, Ling Babcock, Richard Ambrosek, Andrea Stebleton, Tracy Brewer, Ken Sanders, Jodie Mink, Jenifer Haley and Gretchen Hyde.

# Rangelands Overview

---

What are Rangelands?

How Much Rangeland Is There?

Rangelands of the World

Rangeland Regions of North America

Rangeland Vegetation Types of North America

- Mediterranean Region

- Pacific Northwest

- Great Basin

- Southwest Desert

- Great Plains

Uses and Values of Rangelands

What is Rangeland Management?

History of Rangeland Use and Ownership

- Who Owns and Manages Rangelands?

References and Additional Information

---

## What are Rangelands?

What are rangelands? Rangelands are lands that are not: farmed, dense forest, entirely barren, or covered with solid rock, concrete, or ice. Rangelands are: grasslands, shrublands, woodlands, and deserts. Rangelands are usually characterized by limited precipitation, often sparse vegetation, sharp climatic extremes, highly variable soils, frequent salinity, and diverse topography. From the wide open spaces of western North America to the vast plains of Africa, rangelands are found all over the world, encompassing almost half of the earth's land surface. Because rangeland landscapes are diverse and complex, they are called by various names around the world including prairies, plains, grasslands, swards, steppes, pampas, shrublands, scrublands, woodlands, savannas, deserts, semi-deserts, and arid lands.



J. Peterson



**Grasslands** are ecosystems that are dominated by grasses. Throughout the world, grasslands go by many names including prairies, steppe, pampas, swards, meadows and velds. In North America, grassland biomes include the tallgrass prairie, shortgrass prairie, alpine meadows, California annual grasslands, palouse prairie, southern mixed prairie, marshes, wet meadows, tundra grasslands, and desert grasslands.



**Shrublands** are lands dominated by shrubs that have an understory of grasses and herbaceous plants. Shrublands across the world are called chaparral, cerrados, shrub-steppe, maquis, and scrublands. In North America, shrubland biomes include chaparral, sagebrush-steppe, salt-desert shrublands, tundra shrublands, and mountain browse.

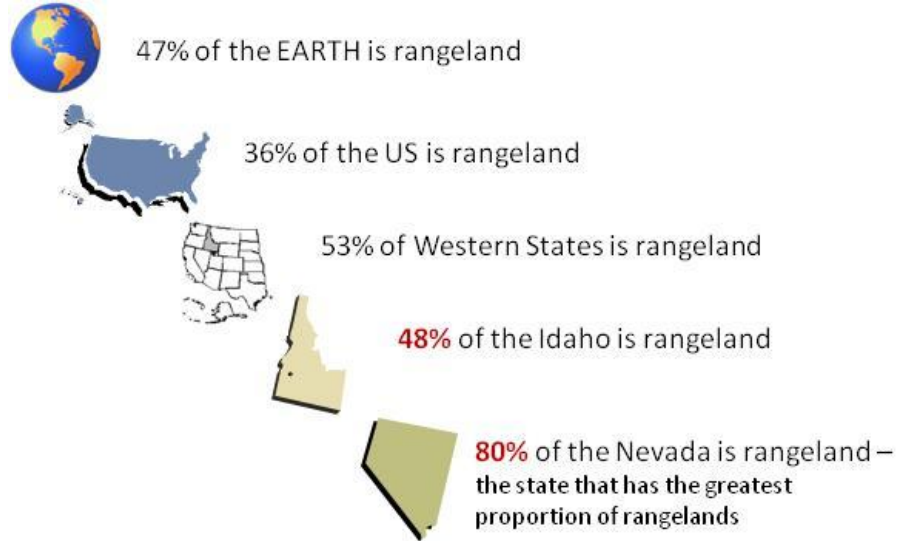
**Woodlands** and **Savannas** are dominated by widely-spaced trees including junipers, oaks, mesquite and pines with an understory of grasses and forbs. Woodland ecosystems across the world take the names of the trees that dominate the landscape. In North America, the largest woodland biome is the pinyon-juniper woodland. Other woodland and savanna ecosystems include oak woodlands, aspen savannas, and mesquite woodlands.



**Deserts** are the driest rangelands and experience extreme water shortages and unpredictable precipitation. These ecosystems are dominated by shrubs and succulent cactus plants. Deserts and arid lands in the world cover massive areas and include the Saharan, Namib, Arabian, Atacama, Australian Outback, and Kalahari deserts. The hot desert biomes in North America are found in the southwest and include the Mojave, Sonoran, and Chihuahuan deserts.

## How Much Rangeland Is There?

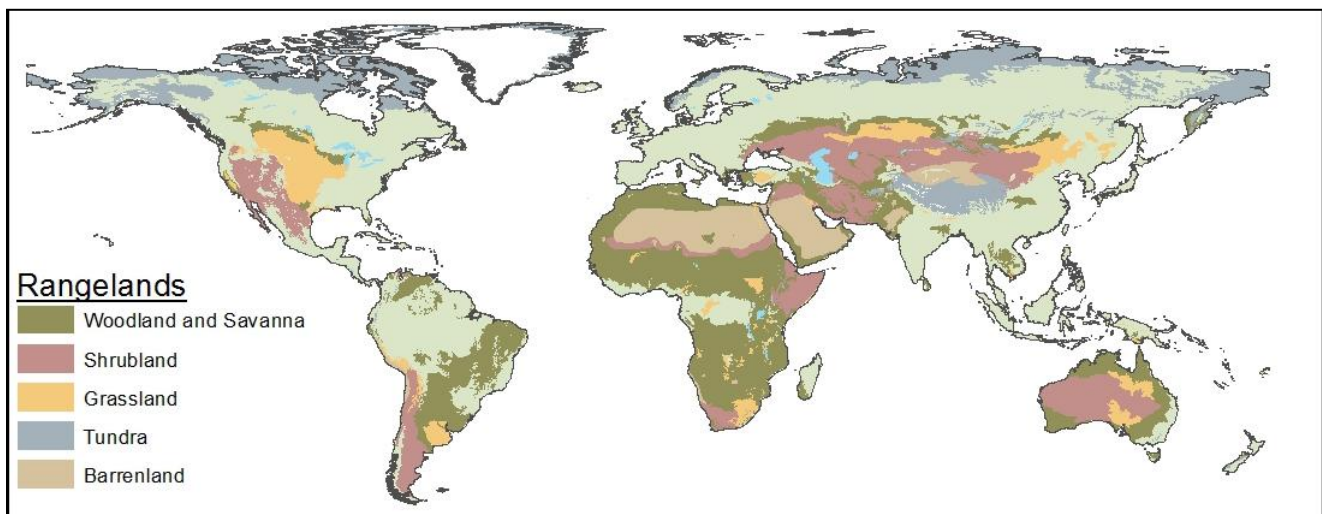
Of the earth's total land surface, 47% is rangeland. In the U.S., 36% of the land area (nearly 1 billion acres) is rangeland. A total of 53% of the 19 states west of the Mississippi are rangeland. Nearly 26 million acres or 48% of Idaho's land area is classified as rangeland. Nevada is the state that is most dominated by rangeland with rangelands covering about 80% of the land in this state. The geographic and climate regimes of Idaho's rangelands are very diverse, which creates many unique plant communities and associations.



## Rangelands of the World

About 71% of the earth's surface is water. Of the 29% of the globe that is land, the most common type of land is rangeland. Though estimates vary, about 47% of the earth's land surface is rangeland, 25% is dense forest, 10% is cropland, and 15% is ice, rock, and barren desert. The footprint of humans in the form of roads, houses, towns and cities is about 3% of the earth's land surface.

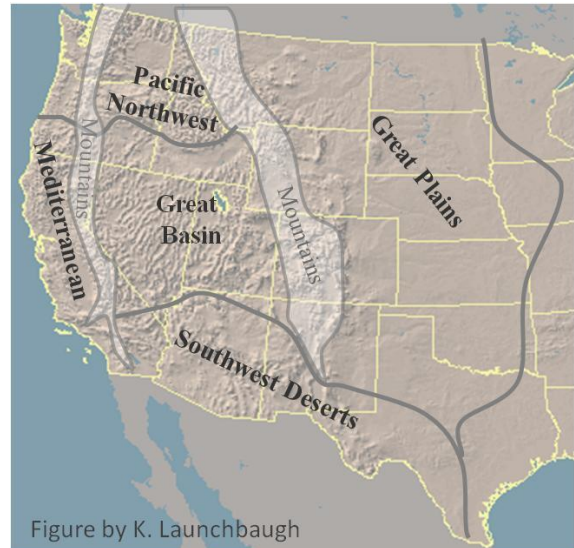
The grassland, shrublands, woodlands, savannas and deserts that are called rangelands occur in a diverse array of forms across the globe. Rangelands occur on every continent with more than 75% of the land surface in Africa and Australia characterized as rangeland.



## Rangeland Regions of North America

The rangelands of the continental United States occur in roughly five geographic zones that vary in topography, climate, and soil types. On the southwest coast, along the Pacific Ocean, is the Mediterranean Region which has a climate similar to the lands that surround the Mediterranean Sea between Southern Europe and Northern Africa. A Mediterranean climate is characterized by hot, dry summers, and mild, wet, cool winters. More than 90% of the annual precipitation in this region occurs during the winter months. In the northwest corner of the United States is a region also heavily influenced by the Pacific Ocean known as the Pacific Northwest which is characterized by cool, dry summers and cool, wet winters. The Pacific climate is very similar to the Mediterranean region but with greater precipitation and slightly wetter summers.

The Great Basin Region just west of the Rocky Mountains is, as its name implies, a large dish or basin. Nearly all the moisture that falls in the region does not flow to an ocean, rather it simply settles in lowlands throughout the basin. As water accumulates in the lower flat valleys, the moisture evaporates away leaving areas with salty (and often alkaline) soils. For example, the Great Salt Lake is a large lake that accumulates water and salts that never flow to the ocean. The climate of this region is strongly influenced by the Pacific Ocean thus it shares the cool, wet winters and dry summers of the Mediterranean and Pacific Climates. However, the Sierra Nevada Mountains intercept moisture heading east from the Pacific Ocean creating a dry area on the east or leeward side of the mountains called a “rain shadow.” Because the Great Basin is set in this rain shadow, it receives much less precipitation with just 8 to 20 inches per year in most areas.



The Southwestern Desert Region includes the Mojave, Sonoran, and Chihuahuan Deserts. These deserts are collectively known as the “hot deserts” because they are characterized by hot, dry summers and warm winters. Most areas of the region receive less than 15 inches of rain per year and some areas receive rain only once every few years. The Southwest Desert Region experiences a monsoon season of rains from July through September. After a dry spring and early summer, the prevailing winds change from western to southerly, bringing moisture in from the Pacific Ocean and Gulf Coast. This leads to almost daily thundershowers which may occur in one location while an area a short distance away is left dry.

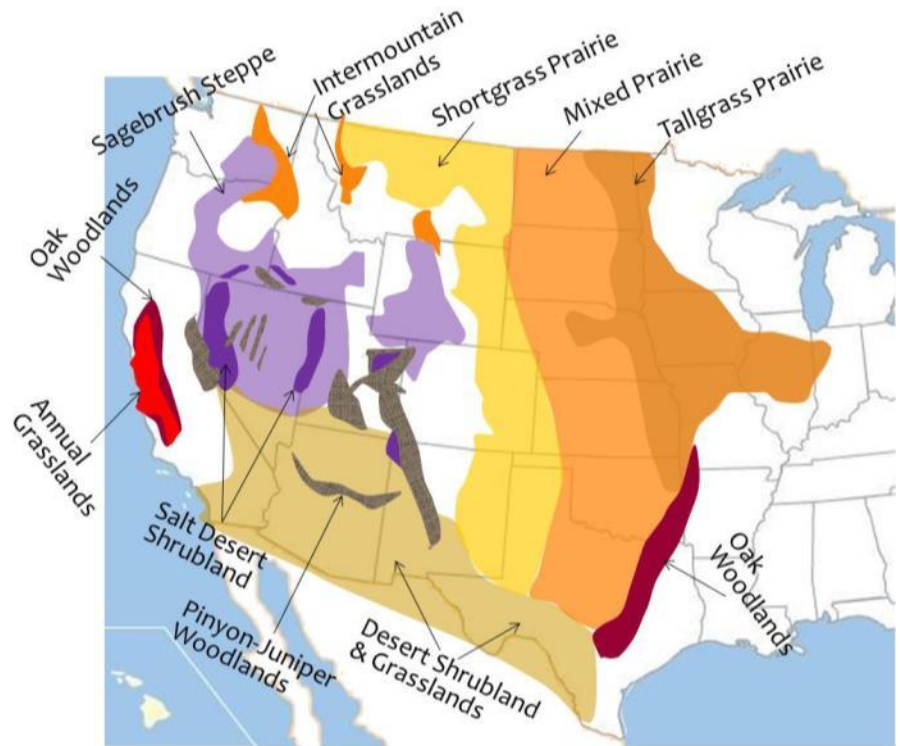
East of the Rocky Mountains is the Great Plains Region which consists of vast flat or rolling landscapes that fall away from the mountains and stretch to the Mississippi River. The Rocky Mountains intercept moisture from the Pacific Ocean and create a strong rain shadow such that the driest part of the Great Plains is directly east of the Rocky Mountains. The amount of annual precipitation increases from west to east across the Great Plains so that areas receiving the most annual precipitation are near the Mississippi. Moisture in the Great Plains occurs largely during the spring and summer.



## Rangeland Vegetation Types of North America

The grasslands, shrublands, woodlands, and deserts that dominate North American landscapes take many different forms. Each of the rangeland regions in North America has characteristic vegetation adapted to its unique combination of soils and climate.

A. W. Kuchler, an American geographer and naturalist, is recognized for creating one of the first reliable maps of vegetation of the continental United States. Kuchler created his map by looking at existing maps and photos and by visiting many sites across the country. The Kuchler vegetation map is still widely used today. However, most modern vegetation maps are created by remote sensing technology that takes pictures and collects light waves using cameras mounted on satellites orbiting the earth.



Simplified map of major rangeland vegetation types based on A.W. Kuchler's Potential Natural Vegetation (K. Launchbaugh).

### Mediterranean Region

**Annual Grasslands** - Before European settlement, the annual grassland region in California was a bunchgrass prairie dominated by needlegrasses. Exotic annual plants such as cheatgrass and medusahead were well adapted to the Mediterranean climate. These plants were accidentally introduced at a time when heavy grazing was occurring in an effort to produce meat to feed miners of the gold rush and homestead era. The region was quickly converted from perennial bunchgrasses to annual plants. Nearly all of the range plants in unfarmed areas of this region today are annual and exotic.



The precipitation varies greatly from 30 or more inches near the ocean to as little as 8 inches in the foothills of the Sierra Nevada Mountains. The region is characterized by mild wet winters and long dry summers. Soils range from prairies soils (called mollisols) to desert soils (called aridisols). Many of these

soils are excellent for farming. More than half of the region today is now farmed and is important for truck crops such as tomatoes, almonds, grapes, strawberries, apricots, and asparagus.



### **Oak Woodlands and Savannas -**

Several plant communities across western North America are dominated by oak trees or shrubs. These include the oak savannas in California and Texas, oak woodlands in southern California and central Texas, and oak shrublands in northern Texas and New Mexico and

the lower elevations of the Rocky Mountains in New Mexico and Colorado. These oak-dominated vegetation types vary

significantly depending on the species of oak present. All oak communities share mesic or mild, climates with 20 to 31 inches of precipitation each year.

The oak savanna type is a true savanna with an overstory of oak trees and an understory of grasses and low growing shrubs. In mid-elevations surrounding the California central valley are savannas composed of Blue Oak. In southern California the major oak species is interior live oak and the plant communities take more of a woodland form with more shrubs in the understory. Texas also has several important oak types including the post oak savanna of east central Texas and the live oak woodlands of central Texas.

## **Pacific Northwest**

**Intermountain Grassland** - This region includes a diversity of grasslands dominated by bunchgrasses including the Palouse Prairie and Canyon Grasslands of Idaho, Washington, Oregon and Montana. Major grasses include bunchgrasses such as bluebunch wheatgrass and Idaho fescue. These grasslands receive from 12 to 25 inches of precipitation mostly as rain in the spring. Late summer rains are uncommon in this region and therefore lightning-ignited wildfires were historically uncommon. Long, dry summers limited invasion of trees and shrubs into the grasslands.



The Palouse is a unique grassland type within the Intermountain Grasslands. The soils of the Palouse are mostly windblown soils, called loess, that are excellent for farming. Therefore, only about 1% of the original Palouse prairie exists today. Nearly all of the land was plowed to create the most productive un-irrigated cropland in the world for growing dry land wheat, lentils, and dry peas.



## Great Basin

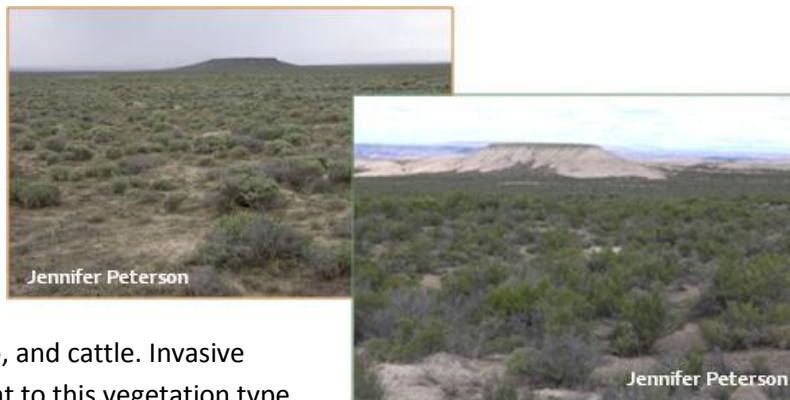
**Sagebrush Steppe** – The sagebrush steppe is one of the most extensive range types in western North America. The term “steppe” refers to dry grassland and treeless regions. Therefore the sagebrush steppe is a region with an overstory of shrubs, mostly sagebrush and rabbit brush, and abundant stands of bunchgrasses, mostly bluebunch wheatgrass, Idaho fescue, and Sandberg bluegrass between the shrubs. There are about 20 different species of sagebrush that occur in the sagebrush steppe, though big sagebrush is by far the most common.



The sagebrush steppe has a semiarid climate with 8 to 20 inches of precipitation per year characterized by wet springs and long dry summers. Fires were historically patchy where small areas of shrubs would burn and perennial grasses would grow for several years in the burned areas until shrubs became reestablished. At lower elevations in the sagebrush steppe regions, invasion of annual grasses has created a fine fuel leading to more frequent fire. Fires that occurred once in several decades in the past may now occur every few years in areas where annual grasses have taken over. A fire regime with such frequent fires has created a situation where native grasses and shrubs have difficulty becoming reestablished between fires and the annual grasses now dominate some areas. Sagebrush steppe areas at higher elevation have a different relationship with fire. Annual grasses do not grow as well and are less invasive on colder, higher elevation sites. However, juniper and other evergreen plants can invade sagebrush communities. In these regions, prescribed fire is very important to reduce evergreen trees and allow sagebrush and grasses to grow and dominate the sites.

**Salt Desert Shrublands** – In the Great Basin there are level areas in the lower elevations of the landscape that accumulate salt and create a plant shrub community that is well adapted to dry salty soils called the salt desert shrublands. This region has a very dry climate with only 3 to 10 inches of precipitation each year.

Dominant shrubs, such as shadscale saltbrush and winterfat, are mostly shrubs of the Chenopodiaceae family. These shrubs, like most shrubs, are nutritious in the winter and this vegetation type is important for winter grazing by wildlife, sheep, and cattle. Invasive annual plants are the greatest threat to this vegetation type.





**Pinyon-Juniper Woodlands** – Woodland communities made up of pine and juniper are widely spread across the mid-elevation lands west of the Rocky Mountains and are collectively called the Pinyon-Juniper woodlands or P-J woodlands. This

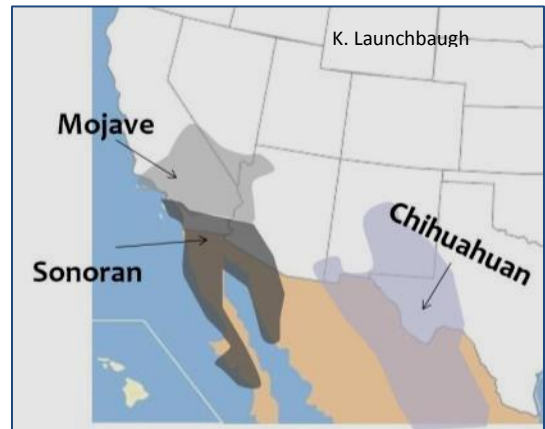


woodland type takes many forms from nearly solid stands of Pinyon Pine to stands of Western, Utah, or Rocky Mountain juniper. This vegetation type is important because it provides good cover and forage for wildlife and livestock.

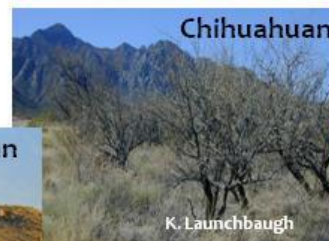
Expansion of P-J woodlands in recent decades has caused concern because sagebrush steppe regions are being invaded by juniper trees. Humans generally suppress wildfires to protect human lives and property, inadvertently allowing junipers to spread. A greater fire frequency, such as what occurred historically, could reduce juniper invasion.

## Southwest Desert

**Desert Shrublands and Grasslands** –The Desert Southwest includes three major desert types: Mojave, Sonoran, and Chihuahuan. The three deserts are collectively called the “hot desert” or, as discussed here, desert shrublands and grasslands. The temperatures of the region are indeed hot with several weeks or months with daily high temperatures exceeding 100° F. The amount of precipitation varies from 5 to 20 inches per year. Precipitation amounts vary immensely from year to year and place to place.



The plant communities in the Mojave are dominated by creosote bush and a mix of other shrubs and warm season grasses. Large succulent plants such as the saguaro and other upright cactus plants are the iconic species of the Sonoran desert. The Chihuahuan desert is a mix of shrubs, such as mesquite and creosote bush, with stretches of grasslands common on deeper soils. A few centuries ago, more of this area was dominated by warm season grasses such as black grama. Heavy grazing and severe drought converted much of the area from grasslands to shrublands.



## Great Plains

**Tallgrass Prairie** – This productive prairie is dominated by tall grasses including big bluestem and Indian grass. The growth of these large grasses during the early formation of this region created very productive soil, in the mollisol soil order, that were easily plowed and converted to croplands. Therefore, most of the original tallgrass prairie region is now cropland and only about 5% of the tallgrass prairie remains today. The Konza Prairie in Kansas is one of the largest remnants of the tallgrass prairie.



This region receives 20 to 30 inches of precipitation each year occurring mostly as spring and summer rains. The tallgrass prairie region is one of the most mesic, or moist, grassland types. Without fire and drought periods these grasslands are quickly taken over by shrubs and trees. Grasses are well adapted to fire while woody plants in this region are generally killed by fire. Therefore, occasional fires reduce invasion by woody plants, leading to the use of prescribed fires as an important management tool for tallgrass prairies. Drought or unusually dry summers reduce survival of shrub and tree seedlings and slow invasion by woody plants. Grazing by large ungulates, such as bison, was also an important ecological force during the development of this prairie and its major grasses are adapted to grazing.

**Mixed Prairie** – As the name suggests, the mixed prairie is a mix of grasses: tallgrasses and mid-grasses and cool-season and warm-season grasses. The landscapes in the mixed prairie can also appear quite patchy as a mix of plant communities are laid out across the rolling plains. Plants evolved with grazing from bison, therefore most are well adapted to grazing. Wildland fires were also common on the mixed prairie and prescribed fire is often used as a management tool to reduce shrub invasion and improve the forage value of grasses.



Precipitation ranges from 14 to 20 inches per year occurring as spring and summer rains. The soils are mostly mollisols but not as fertile or productive as the tallgrass prairie, therefore much of this region was not plowed into farmlands and exists as native prairie today. This region also includes many shallow wetlands that are important for migratory waterfowl including ducks and geese. For example, the Prairie Pothole region is found within the mixed prairie.



**Shortgrass Prairie** – The shortgrass prairie is dominated by low-growing wide-spreading grasses that are adapted to low precipitation. The region receives only 12 to 20 inches of



precipitation each year because it is in the rain shadow of the in Rocky Mountains. The shortgrass prairie also received heavy grazing by bison as it formed on the plains. Native grasses in this region, such as blue grama and buffalograss, are well adapted to drought and heavy grazing. Fire is not common in the shortgrass prairie because plant biomass is not sufficient for extensive fires.

## Uses and Values of Rangelands

Historically, the primary use of rangeland has been to provide forage for livestock and wildlife. However, the importance of rangeland for recreation and water production is growing. Rangelands provide natural beauty, a diversity of wildlife, recreational opportunities like hunting, hiking, and camping, and economic values, including ranching, mining, and electrical power. Rangelands also serve as important watersheds for production of clean, abundant water. The soils, vegetation, and water of rangelands are important to the ecological and economic health of all regions dominated by rangelands. Therefore, most rangelands are managed under principles of multiple-use which means that several uses or values of rangeland are managed simultaneously with care to avoid overuse or destruction of natural resources.

Though rangelands appear to be dry, unyielding landscapes, they provide important contributions of water to the streams, lakes, and aquifers that they contain. Because rangelands are located mostly in arid climates with low precipitation, water is doubly precious. The many miles of streams, lakes, and reservoirs scattered throughout rangelands become a water source for irrigation and urban areas. As human populations grow, and water consumption and use increases, healthy rangeland ecosystems are becoming increasingly important to provide high quality water.

**Riparian areas** are the lush ecosystem that consists of vegetation along bodies of water. Riparian areas may surround lakes, ponds, wetlands, fast or slow-moving rivers, creeks, and streams. There are riparian areas on Idaho rangelands surrounding rivers and creeks that run through grazing lands, open meadows, and uplands. These areas provide nutritious vegetation for wildlife and livestock, and important habitat for fish and other aquatic species. Without proper management, these areas can be damaged by uncontrolled livestock and wildlife grazing.



Rangelands also provide important **habitat** for **domestic livestock**, including cattle, sheep, goats, and horses. Most of the world's livestock live on rangelands and serve as a highly significant and necessary source of food and livelihood for people all over the globe. Ranching is an important endeavor that uses livestock to convert the nutritious and renewable grasses and other plants on rangelands into food, fiber, and other animal-based products for humans. Livestock have been grazing on North American rangelands since the mid-1800s, and they still exist today in familiar scenes over range landscapes. Livestock production on rangeland is very important to supply meat for American and world populations. Rangelands are the primary source of our meat supply:

- Most calves and lambs fattened in feedlots are born and raised on range and pastureland.
- Nationwide, range and pasture provide 83% of nutrients consumed by beef cattle, 91% of nutrients for sheep and goats, and 72% of nutrients for horses and mules.
- Rangeland and pastureland in the 19 western states are home to 58% of all beef cattle in the U.S.

- Western rangelands harbor 79% of sheep and 88% of goats in the U.S.
- Range livestock production is economically vital to western states in terms of land used and cash receipts.

A diversity of **wildlife** thrive on rangeland habitats. Mammals, birds, amphibians, reptiles, fishes, and even insects make their home in these complex ecosystems. Plants, water, and soils on rangelands provide unique environments for wild animals and plants, including threatened and endangered species. Some rangelands are designated as special protection areas for wildlife.

The varied topography, scenic landscapes, and vast openness of rangelands are valuable to lots of people for recreation and tourism activities. Common recreational activities include hunting, camping, mountain biking, backpacking, hiking, horseback riding, and off-road vehicle touring. From mountains to plains, from lakes and rivers to deserts, rangeland areas are excellent places to have fun and enjoy life in these wild vistas and open spaces.

Rangelands can also provide a significant source of energy and other **natural resources**. Rangelands are used for hard rock mining, such as gold, copper, silver, or zinc, which benefits the economy of surrounding communities. Water coming from rangelands generates hydroelectric power. Mining and extraction of coal, oil, and natural gas are important energy resources gained from rangelands. Woody plants are also used for fuel, while grasses and other plants on rangelands can be harvested for ethanol and biodiesel production. Rangelands can also serve as suitable sites for attaining solar power, as well as wind power from turbines. These uses of rangelands will become more valuable and common as the demand for more energy increases, especially clean renewable energy.

Federal public land is to be managed for “**multiple use**” and for the greatest good of all Americans. Individual states manage grazing lands to protect and enhance their value so they can achieve financial returns that benefit education and various state institutions. A century ago, most citizens considered rangelands “wasteland” and thought that meat production was the best use for rangelands. Recently, more and more people are enjoying rangelands for recreation and aesthetics. What will the next generations want from rangelands? Open space? Wind power? Carbon sequestration?

*“...Rangelands may be far better at producing the stuff of myth and national identity than ...beef and mutton products. Yet, in the long run, the production and perpetuation of national myth may be one of the most valuable resources harvested from public rangeland.” As reported by Hart (1994) from a National Academy of Sciences Report.*

## What is Rangeland Management?

Rangeland management is the careful use and stewardship of rangelands to meet the needs and desires of those who live on and care about these lands. Rangeland management involves managing unforested lands with natural plant communities dominated by grasses, shrubs, and forbs. This endeavor is different from agriculture because plants and animals are not managed in isolation or solely for production purposes. Management decisions on rangelands are made with ecological properties in mind such as: soil health, vegetation, wildlife, invasive plants, and water quality. Range managers also need to consider the land owner’s objectives that might include livestock production, open space, recreation opportunities, or energy production.

Rangeland management is a challenging endeavor because many land resources and ecological forces that affect rangelands do not respect fences or property boundaries such as fire, invasive plants, wildlife, and water resources. Furthermore, even a single pasture used to manage livestock can include land owned by a rancher, the U.S. Forest Service, Bureau of Land Management and the State Department of Lands. This can often be the case when land parcels are not productive or sizeable enough to be managed on their own so they are managed in conjunction with adjoining ownerships. Many people do not realize that one pasture may include public and privately owned land. This creates a challenge in rangeland management because different agencies and individuals have different goals and opportunities for what they can or want to achieve on the land.

Because manipulating these intricate ecosystems requires a mix of science-based knowledge and practical experiences, rangeland management is described as both a science and an art. Although management decisions stand on scientific principles, there is no “silver bullet” nor are there pre-determined “correct” solutions that can apply to all rangeland management situations. This is why rangeland management is an art—it includes becoming familiar with every land element and having the knack for administering land management decisions based on what one knows or understands about that rangeland. A successful range manager embraces learning through experience built upon a foundation of scientific knowledge.

### **History of Rangeland Use and Ownership**

Western rangelands, and the Native Americans living there, were first documented by explorers Meriwether Lewis and William Clark in 1805-1806. Lewis and Clark were among the first Europeans who made the journey from St. Louis to the Pacific Ocean and they reported on many different grasses, forbs, and woody plants on the range. In fact, Lewis also described prairie dogs, sagegrouse and other animals still common today on rangelands.

Lewis and Clark’s discoveries from their journey westward were followed by increased interest in these uncharted lands. The idea of making dreams come true in the green and boundless west seemed appealing to many easterners. As a result, the first wagon traveled road was called the Oregon Trail and it crossed the country in the 1840’s. In 1862, the Homestead Act helped to motivate major settlement on rangelands, followed by additional laws to allocate land for settlement and human use. Most of these settlements surrounded rivers, creeks and streams where water was available to irrigate crops and water for livestock. Between 1870 and 1900, rangelands were seen as land primarily well suited for livestock production. The wide open spaces of western rangelands provided forage and habitat for sheep, cattle, and wildlife. By the late 1880’s, the western livestock production industry peaked. During this era, large ranches running thousands of cattle and sheep dominated the business sector of Western North America.

The Forest Reserve Act of 1891 set aside about 47 million acres of National Forest to preserve forests and grazing lands. This act helped to set the foundation for the U.S. Forest Service, created in 1905, to provide for management of rangelands and grazing practices. In 1934, the Taylor Grazing Act recognized the importance of controlling use on public grazing lands and providing for their improvement. This led to the formation of the Grazing Service, which eventually was combined with the General Land Office to form the Bureau of Land Management in 1946.



The 1990's brought more and more people to western landscapes. Since the late 1800's, livestock grazing has been the predominant economic use of public rangelands, while hunting and fishing remained the main recreational uses until the mid-1900's. However, an increasing western population, greater individual wealth and a high degree of mobility has created demands for other forms of recreation on public lands. Since 1960, considerable conflict has occurred over the use of public lands.

### Who Owns and Manages Rangelands?

The question of who owns land can be examined in three categories: Federal, State and Private. Public lands include both federal and state lands.

Federal lands are those owned and managed by federal agencies such as the Bureau of Land Management (BLM), U.S. Forest Service (USFS), National Park Service (NPS), National Wildlife Refuge System, Army Corp of Engineers, and U.S. Military bases. Federal lands are 26.0% of U.S. lands. However, it is clear from this figure entitled "Federal Land as a Percentage of Total State Land Area" that the about half (48.6%) of the thirteen western states are federal lands.

These federal lands are owned by all U.S. citizens and they are managed and cared for us on our behalf by a handful of federal agencies. The BLM manages the greatest area overseeing 31.4% of all federal land (10.9% of all U.S. land). The

	% <u>Federal</u>	% <u>State</u>	% <u>Private</u>
----- 13 Western States-----			
Alaska	60.2	29.0	10.8
Arizona	41.1	12.5	46.4
California	40.1	2.3	57.6
Colorado	35.5	4.4	60.1
Hawaii	12.8	0.6	86.6
Idaho	61.4	5.2	33.5
Montana	29.3	5.6	65.1
New Mexico	29.4	11.2	59.4
Nevada	80.9	0.2	18.9
Oregon	26.7	4.9	68.4
Utah	63.1	7.3	29.6
Washington	27.3	9.1	63.6
Wyoming	48.4	6.2	45.4
<b>Western States Combined</b>	<b>48.6</b>	<b>13.5</b>	<b>37.9</b>
----- 6 Plains States-----			
Kansas	0.3	0.6	99.1
Nebraska	1.1	0.5	98.4
North Dakota	3.1	1.8	95.1
Oklahoma	1.3	1.0	97.7
South Dakota	7.4	0.2	92.5
Texas	1.4	0.5	98.1
<b>Plains States Combined</b>	<b>2.1</b>	<b>0.7</b>	<b>97.2</b>
----- 31 Eastern States-----			
<b>31 Eastern States Combined</b>	<b>4.7</b>	<b>5.9</b>	<b>89.4</b>
----- All 50 States-----			
<b>All 50 States</b>	<b>26.0</b>	<b>8.7</b>	<b>65.3</b>

Source: [www.nrcm.org/documents/publiclandownership.pdf](http://www.nrcm.org/documents/publiclandownership.pdf)



USFS manages 24.5% of federal land (8.5% of U.S. land). The NPS oversees 22.2% of federal lands (7.7% of U.S. land) and National Wildlife Refuges account for 11.3% of federal land (3.9% of all U.S. Land).

State owned lands include state wildlife refuges, state parks, state school lands, and other land parcels owned and managed by states. Lands owned by states account for 8.7% of all land in the U.S. These lands are managed by land care professionals in agencies such as Fish and Game

agencies, State Departments of Land, and State Parks and Recreation.

Private lands are owned and managed by individuals, corporations, and Native American tribes. An individual land owner may simply be a person or family who owns a house with a yard or small pasture. Large land owners include ranchers that cover thousands of acres and are owned by a family or a family corporation. All land owners manage their land for different personal goals. Many rangeland owners are ranchers who garner income from grazing livestock or offering recreational opportunities including hunting and guest ranches. Private lands are often called “**deeded land**” because an individual or corporation holds the deed to the land.

Irrelevant Land Ownership Distinctions. It is easy to categorized lands as private or public. But, this distinction can hide the important reality that private and public lands are inextricably tied. For example, many ranchers in western states graze their herds and flocks on their private land and hold permits for grazing on state, BLM or USFS land. Thus, an individual ranch often includes both state and public lands. In addition, wild animals use both public and private lands for habitat. Weeds, wild fires, and streams don’t stop at the border between private and public land. In fact, there is often not even a fence or boundary marker between public and private lands. Thus, it is important to be aware of land

<b>Federal Agencies Owning and Managing Rangelands</b>	
<u>Agency and Website</u>	<u>Major Purposes</u>
Bureau of Land Management <a href="http://www.blm.gov">www.blm.gov</a>	Administers and manages land, and develops management and conservation programs.
United States Forest Service <a href="http://www.fs.fed.us">www.fs.fed.us</a>	Manages national forests and grasslands, and provides technical and financial assistance to state and private forestry agencies.
Natural Resources Conservation Service <a href="http://www.nrcs.usda.gov">www.nrcs.usda.gov</a>	Provides technical assistance to private land owners, serving through Soil Conservation Districts and the Farm Services Agency.
National Park Service <a href="http://www.nps.gov">www.nps.gov</a>	Preserves national parks and reserves for resource conservation and recreation.
Fish and Wildlife Service <a href="http://www.fws.gov/refuges/">www.fws.gov/refuges/</a>	Manages lands and waters set aside in the National Wildlife Refuge system to conserve America's fish, wildlife and plants.

ownership boundaries when recreating or working on rangelands. It is also important to realize that many aspects of rangeland management will require that public and private land owners work together for the good of the land, water, and animals that inhabit these lands.

## References and Additional Information

- Fazio, J.R. 1999. Lewis and Clark in Idaho—A lesson in science under stress. *Rangelands* 21:3-5. Available at:  
[http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume21/Number5/azu\\_rangelands\\_v21\\_n5\\_3\\_7\\_m.pdf](http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume21/Number5/azu_rangelands_v21_n5_3_7_m.pdf)
- Heady, H.F. and R.D. Child. 1994. *Rangeland Ecology and Management*. Westview Press, Inc. Boulder, CO.
- Holecheck, J. 2000. *Range Management: Principles and Practices*. 4<sup>th</sup> edition. Prentice-Hall, Inc. Upper Saddle River, NJ.
- Marlow, C.B. 2000. Perspectives: Science in rangeland management. *Rangelands* 22:57-59. Available at:  
[http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume22/Number4/azu\\_rangelands\\_v22\\_n4\\_57\\_59\\_m.pdf](http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume22/Number4/azu_rangelands_v22_n4_57_59_m.pdf)
- Miller, R.K. 1981. Improved Stewardship Through Innovation and Cooperation. *Rangelands* 3:126. Available at:  
[http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume3/Number3/azu\\_rangelands\\_v3\\_n3\\_126\\_m.pdf](http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume3/Number3/azu_rangelands_v3_n3_126_m.pdf)
- Mosley, J.C. 1985. Let's not forget the art in range management. *Rangelands* 7:154-155. Available at:  
[http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume7/Number4/azu\\_rangelands\\_v7\\_n4\\_154\\_155\\_m.pdf](http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume7/Number4/azu_rangelands_v7_n4_154_155_m.pdf)
- NLCD Land Cover Statistics. USGS Land Cover Institute. Available at: <http://landcover.usgs.gov/nlcd.php>
- O'Laughlin, J., W.R. Hundrup, and P.S. Cook. 1998. History and analysis of federally administered lands in Idaho. Policy Analysis Group Report #16. College of Natural Resources, University of Idaho. Available at: <http://www.cnrhome.uidaho.edu/default.aspx?pid=90761>
- Thomas, H.S. 1994. History of public land grazing. *Rangelands* 16:250-255. Available at:  
[http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume16/Number6/azu\\_rangelands\\_v16\\_n6\\_250\\_255\\_m.pdf](http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume16/Number6/azu_rangelands_v16_n6_250_255_m.pdf)
- Tisdale, E.W. 1986. Native vegetation of Idaho. *Rangelands* 8:202-206. Available at:  
[http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume8/Number5/azu\\_rangelands\\_v8\\_n5\\_202\\_207\\_m.pdf](http://digitalcommons.library.arizona.edu/objectviewer?o=http://rangelands.library.arizona.edu/Volume8/Number5/azu_rangelands_v8_n5_202_207_m.pdf)