Range Area

TABLE 1.—*Area of range types and forage depletion*

Types	Areas	Depletion
	1,000 acres	*Percent*
Tall grass	18,513	21
Short grass	198,092	49
Pacific bunchgrass	42,534	51
Semidesert grass	89,274	55
Sagebrush grass	96,528	67
Southern desert shrub	26,896	62
Salt-desert shrub	40,858	71
Piñon-juniper	75,728	60
Woodland-chaparral	13,406	50
Open forest	126,367	33
Total	[1] 728,196	52

[1] Does not include 1,217,000 acres in national parks.

The salt-desert shrub type, reduced by 71 percent, and the tall grass, by 21 percent, constitute the extremes. Furthermore, nearly three-fourths of the tall-grass type is in the moderate depletion class, and nine-tenths of the area of the salt-desert shrub is in the

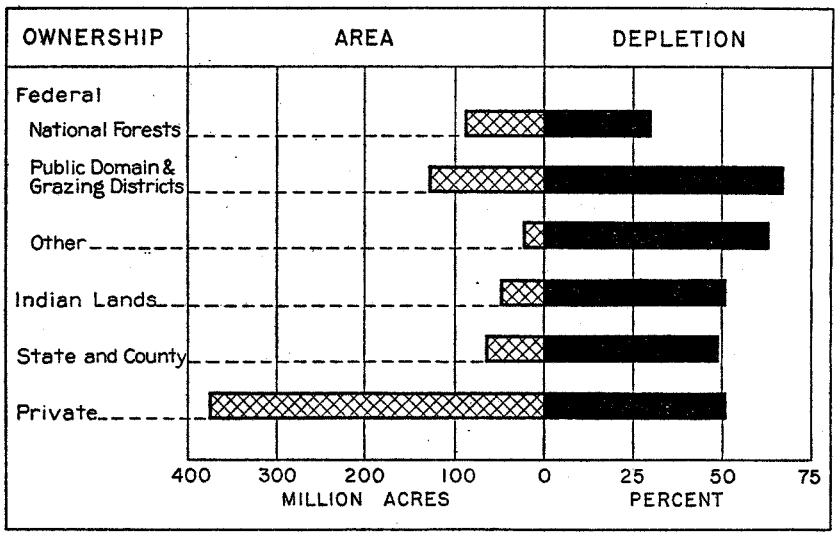


FIGURE 4.—AREA AND DEPLETION BY OWNERSHIPS.

Ranges of all ownerships and forms of control except the national forests have been depleted by half or more. The national forests 30 years ago were probably in even worse condition than the public domain then was because of the comparative abundance of water on the national forests and of the general shortage of summer range.

severe- and extreme-depletion classes. The salt-desert shrub, sagebrush grass, southern-desert shrub, and piñon-juniper ranges now rate about a third of the virgin range.

The reductions in productivity are all the more staggering because of the magnitude of the areas involved.

Ownership, first nearly all Federal, has become more than half private (table 2 and fig. 4).

The ownership pattern of the virgin range has changed from virtually complete Federal ownership to a bewildering mosaic of intermingled State, county, municipal, private, Federal, and other ownerships. Even the land in Federal ownership or control is under various jurisdictions, such as the national parks and monuments, national forests, Indian lands, grazing districts, and unreserved public domain. Table 5 indicates for the present range area of 728,000,000 acres the approximate acreage in each of the several classes of ownership. The proportional area in each ownership is illustrated in figure 23.

TABLE 5.—*Distribution of virgin and present range areas by ownership or control and plant types*

Type	Approximate area of virgin range [1]		Present area, all ownerships		Federal ownership or control					
					National forests		Indian lands		Public domain [2]	
	1,000 acres	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*
Tall grass	42,000	5.0	18,513	2.5	202	1.1	106	0.6	10	0.1
Short grass	280,000	33.0	198,092	27.2	993	.5	11,627	5.9	9,759	4.9
Pacific bunchgrass	61,000	7.2	42,534	5.8	1,714	4.0	461	1.1	1,689	4.0
Semidesert grass	93,000	11.0	89,274	12.3	1,636	1.8	12,353	13.8	7,686	8.6
Sagebrush-grass	90,000	10.6	96,528	13.3	3,637	3.8	2,158	2.2	43,237	44.8
Southern desert shrub	25,000	2.9	26,896	3.7	98	.4	2,409	8.9	6,424	23.9
Salt-desert shrub	42,000	5.0	40,858	5.6	366	.9	1,657	4.1	30,657	75.0
Pinon-juniper	74,000	8.7	75,728	10.4	13,811	18.2	10,352	13.7	22,302	29.5
Woodland-chaparral	10,000	1.2	13,406	1.8	712	5.3	78	.6	1,693	12.6
Open forests	130,550	15.4	126,367	17.4	64,785	51.3	7,190	5.7	4,335	3.4
All types	847,550	100.0	728,196	100.0	87,954	12.1	48,391	6.6	127,792	17.5

Type	Federal ownership or control				State and county		Private	
	Other Federal [3]		All Federal					
	1,000 acres	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*	*1,000 acres*	*Percent*
Tall grass	137	0.7	455	2.5	787	4.2	17,271	93.3
Short grass	3,166	1.6	25,545	12.9	24,403	12.3	148,144	74.8
Pacific bunchgrass	863	2.0	4,727	11.1	1,894	4.5	35,913	84.4
Semidesert grass	2,734	3.1	24,409	27.3	16,440	18.4	48,425	54.3
Sagebrush-grass	6,147	6.4	55,179	57.2	6,558	6.8	34,791	36.0
Southern desert shrub	1,530	5.7	10,461	38.9	5,792	21.5	10,643	39.6
Salt-desert shrub	2,000	4.9	34,680	84.9	927	2.3	5,251	12.8
Pinon-juniper	4,561	6.0	51,026	67.4	3,802	5.0	20,900	27.6
Woodland-chaparral	120	.9	2,603	19.4	163	1.2	10,640	79.4
Open forests	1,739	1.4	78,049	61.8	4,750	3.7	43,568	34.5
All types	22,997	3.2	287,134	39.4	65,516	9.0	375,546	51.6

[1] Exclusive of area east of boundary line shown in fig. 1. In addition to area shown here, the tall grass type is estimated to have covered 210,000,000 acres east of the boundary line shown in fig. 1.
[2] Including grazing districts.
[3] Exclusive of 1,217,000 acres of grazable land in national parks and monuments, only 40,000 acres of which are actually grazed.

Changes in area have occurred in nearly every major plant type. Some have become larger. The sagebrush-grass range, for instance, has expanded at the expense of adjacent types from about 90 million to more than 96 million acres, and in California the woodland-chaparral vegetation covers 3.4 million acres more than at the time of white settlement. Some of the range types are considerably smaller, as, for example, the tall-grass prairie, much of which is now devoted to agricultural crops. The Pacific bunchgrass range also

has become considerably smaller, because a large part has been used for wheat production, orchards, and other agricultural crops, and because of the inroads made by encroaching sagebrush. The proportional distribution of the present range area in the different plant types is shown in figure 24.

In every part of the western range, lands have been taken for cities, roads, and for other needs of settlement. All told, as detailed in table 5, the total area of open range land is about 119 million acres less today than a century ago.[6]

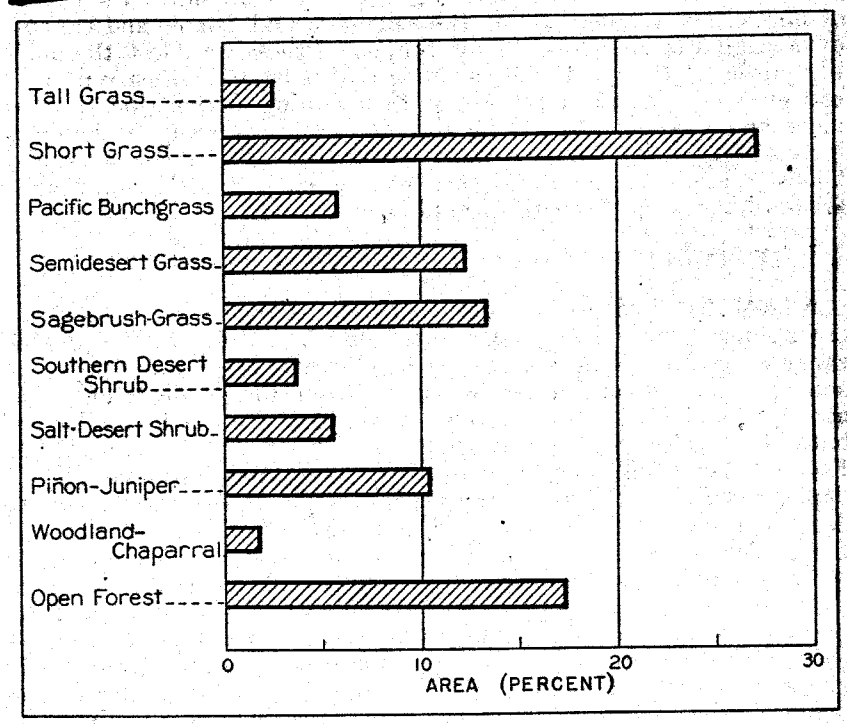


FIGURE 24.—TYPES OF RANGE FORAGE.

One-fourth and more of the present range area is in the very valuable short-grass type. The first four principal grass types (shown in fig. 25) account for nearly a half of the total area.

By far the most significant departure from virgin range conditions is the change in the plant cover. Although varying in density under different forms of management, the plant cover in every range type is depleted to an alarming degree. Many valuable forage species have disappeared entirely. Palatable plants are being replaced by unpalatable ones. Worthless and obnoxious weeds from foreign countries are invading every type. And throughout the entire western range the vegetation has been thinned out until even

[6] About 2 million acres of former range have been used for cities, highways, and other needs of settlement; about 116 million acres for farm crops; and 1 million acres of grazable lands are included in national parks and monuments. Also not included are about 68 million acres of dense forests and 59 million acres of deserts and inaccessible areas which never have been usable as range.

Southern Forest Ranges

APPENDIX

SOUTHERN FOREST RANGES

By W. G. Wahlenberg, Forester, and E. W. Gemmer, Associate Silviculturist, Southern Forest Experiment Station

Conditions on ranges in the Southern States differ markedly from those found in the West. The South is not usually thought of as an important factor in the livestock industry of the country. However, southern forest-range lands cover an immense territory. Within this wide region there are, roughly, 300 million acres of land, two-thirds of which is in forest of one form or another. Most of this 200 million acres of forest land provides some grazing for livestock. Nearly all of the livestock owned by farmers is handled in small herds and for the most part is allowed to range at large. The industry contributes an important share of the income and subsistence of southern farmers.

The South, as covered in this report, includes the nine States from Virginia to Louisiana and Arkansas and the pine-forested sections of eastern Texas and eastern Oklahoma, as shown in figure 86. It can be divided roughly into four physiographic divisions: (1) The extensive Coastal Plain; (2) the Piedmont; (3) the Mississippi River bottomlands; and (4) the remaining area, including the Appalachian-Ozark highlands, sand hills, silt-loam uplands, prairies, marshes, etc. The Coastal Plain and Piedmont form the major part of the southern forest-range land. On these the predominating soils are sands and sandy loams, overlying more or less impervious clay subsoils.

The climate provides mild winters, hot summers, rainfall usually abundant throughout the year, and long growing seasons. Such a climate is conducive to rapid growth of vegetation.

According to the 1934 agricultural census, the area of crop land on southern farms totaled approximately 64 million acres; pasture land amounted to 44 million acres, divided into plowable, 12 million acres; woodland, 24 million acres; and other, 8 million acres. The forest land under fence and devoted to permanent improved pastures is relatively small—probably not over 20 million acres; the remaining 180 million acres of other forest land is also open forest range.

The early settlers in the South appreciated its possibility as a stock-raising country and the forest ranges have been used to some degree for livestock since the early colonial days. While only a small proportion of the total livestock values in the United States are in the South, the number of packing plants, creameries, and cheese factories there is gradually increasing, and the region may some day become self-sufficient in the production of livestock and livestock products.

Southern Forest Ranges

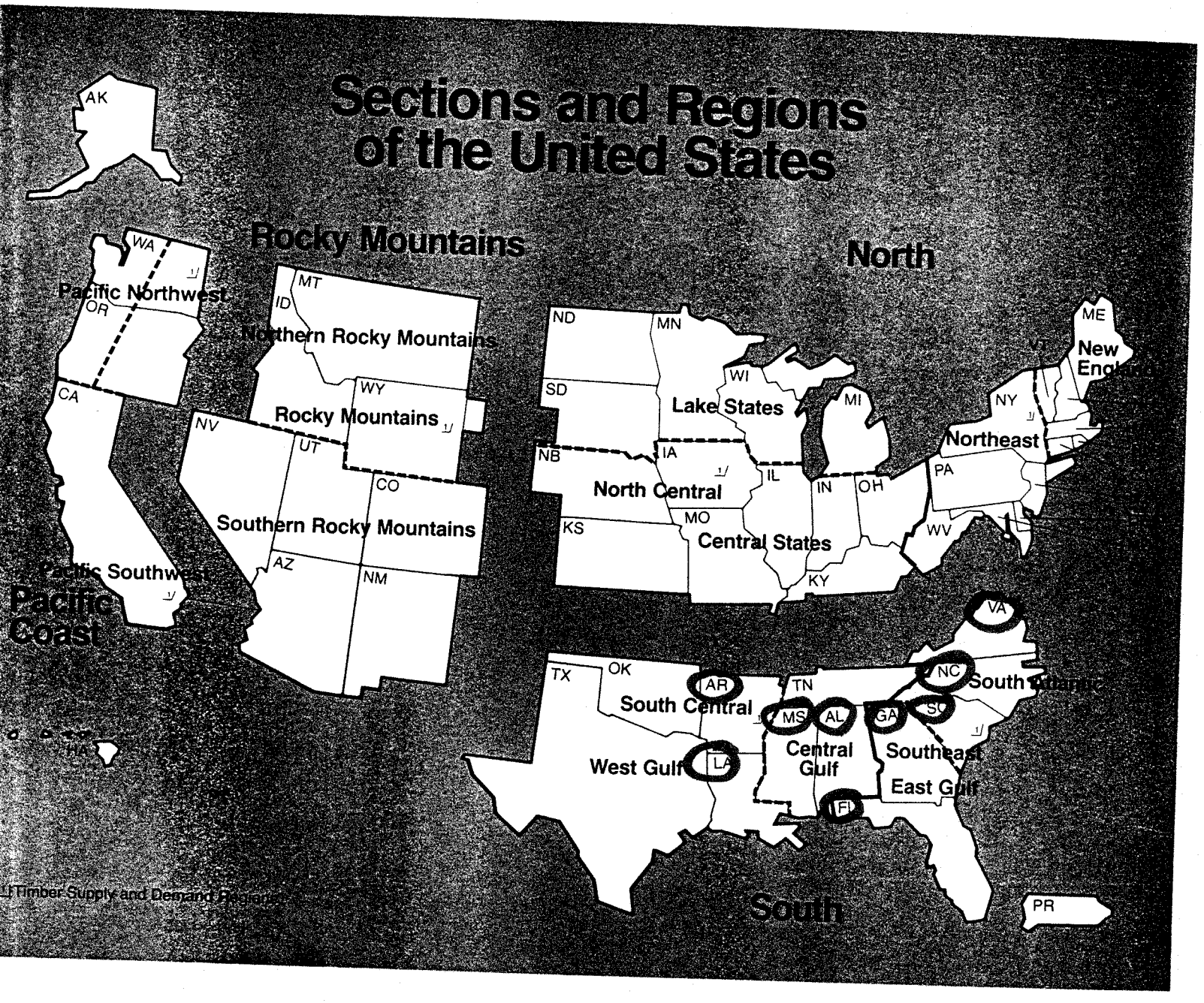
Encompassed in nine southeastern state

1 Arkansas
2 Louisiana
3 Mississippi
4 Alabama
5 Florida
6 Georgia
7 South Carolina
8 North Carolina
9 Virginia

Plus pine forested sections of eastern Texas and eastern Oklahoma

About 180 million acres of open forest land is also open range

Sections and Regions of the United States



from a general thinning of the herbaceous cover rather than from extensive changes in its composition. For example, on piñon-juniper ranges of the upper Rio Grande watershed in New Mexico, grasses which originally made up about 80 percent of the herbaceous cover still hold this position, except on the most severely depleted areas.

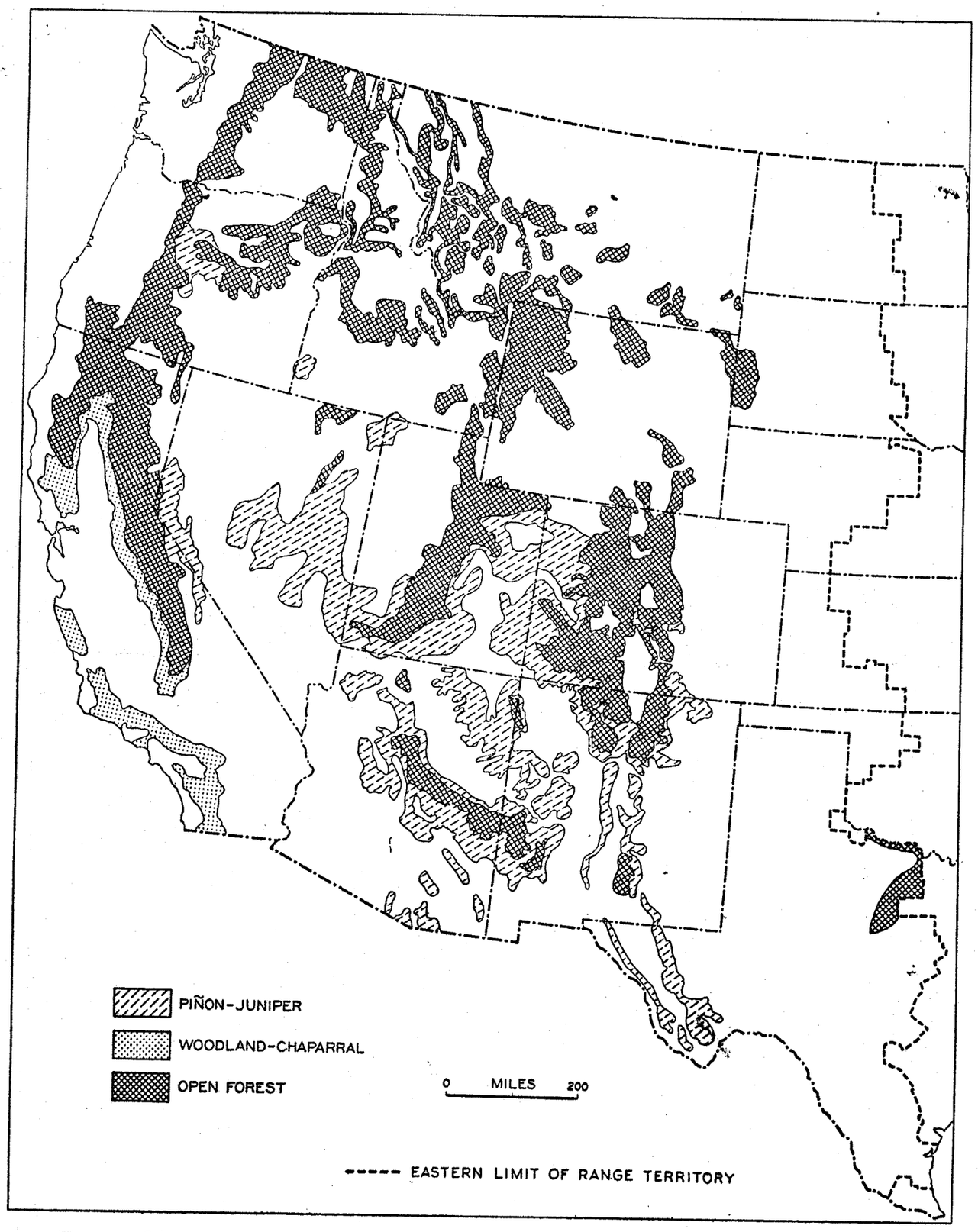


FIGURE 34.—THE PRINCIPAL FOREST TYPES OF THE PRESENT RANGE.

Much of the open-forest type is on the national forests. Woodland-chaparral is wholly a California type.

The average density of this herbaceous vegetation, however, is in that region less than half what it was in the virgin condition. The more northerly piñon-juniper ranges probably had a thin cover of herbaceous vegetation even before the white man began to use those ranges and, with long-continued and excessive use, the forage plants

Rangeland areas U.S.
(thousand acres)

1. Total area

		%
Total rangeland area	820 023	
Total land area	2 254 791 8	36.4

2. Sections of U.S.

48 contiguous states	897 562.7	71.7
Alaska	231 471.6	28.2
Hawaii	968.0	.1
Total	820 023	100.0

Table 2.1—*Land and water areas of the United States, by class of land, water, and section, region, and State*[1]

(Thousand acres)

Section, region, and State	Total land and water area	Land					Water				
		Total land area	Total forest and range land	Forest and range land		Other land[4]	Total water area	Inland water			Other water[7]
				Forest[2]	Range-land[3]			Total inland water	Large area[5]	Small area[6]	
1	2	3	4	5	6	7	8	9	10	11	12
North:											
Northeast:											
Connecticut	3,572.7	3,081.7	1,860.8	1,860.8	0.0	1,220.9	491.0	124.0	93.0	31.0	367.0
Delaware	1,540.5	1,232.5	391.8	391.8	.0	840.7	308.0	84.0	72.0	12.0	224.0
Maine	21,963.2	19,729.2	17,718.	17,718.3	.4	2,010.5	2,234.0	1,529.0	1,415.0	114.0	705.0
Maryland	7,874.2	6,289.2	2,736.9	2,653.2	83.7	3,552.3	1,585.0	480.0	439.0	41.0	1,105.0
Massachusetts	5,898.6	5,006.6	2,952.4	2,952.3	.1	2,054.2	892.0	278.0	233.0	45.0	614.0
New Hampshire	5,954.3	5,731.3	5,013.5	5,013.5	.0	717.8	223.0	223.0	177.0	46.0	.0
New Jersey	5,261.4	4,775.4	1,988.9	1,928.4	60.5	2,786.5	486.0	240.0	205.0	35.0	246.0
New York	34,531.6	30,356.6	17,220.2	17,218.4	1.8	13,136.4	4,175.0	1,374.0	1,136.0	238.0	2,801.0
Pennsylvania	29,483.2	28,592.2	16,826.0	16,825.9	.1	11,766.2	891.0	421.0	268.0	153.0	470.0
Rhode Island	786.4	664.4	404.2	404.2	.0	260.2	122.0	113.0	105.0	8.0	9.0
Vermont	6,149.9	5,906.9	4,511.9	4,511.7	.2	1,395.0	243.0	243.0	219.0	24.0	.0
West Virginia	15,475.8	15,334.8	11,668.6	11,668.6	.0	3,666.2	141.0	141.0	71.0	70.0	.0
Total	138,491.8	126,700.8	83,293.9	83,147.1	146.8	43,406.9	11,791.0	5,250.0	4,433.0	817.0	6,541.0
North Central:											
Illinois	37,072.7	35,441.7	3,810.7	3,810.4	.3	31,631.0	1,631.0	654.0	435.0	219.0	977.0
Indiana	23,370.1	22,951.1	3,946.0	3,942.9	3.1	19,005.1	419.0	273.0	135.0	138.0	146.0
Iowa	36,025.2	35,634.2	1,599.7	1,561.3	38.4	34,034.5	391.0	391.0	198.0	193.0	.0
Michigan	61,946.5	36,172.5	19,270.8	19,270.4	.4	16,901.7	25,774.0	1,086.0	894.0	192.0	24,688.0
Minnesota	55,288.0	50,382.0	16,865.0	16,709.2	155.8	33,517.0	4,906.0	3,490.0	3,106.0	384.0	1,416.0
Missouri	44,598.8	43,867.8	14,323.6	12,876.0	1,447.6	29,544.2	731.0	731.0	473.0	258.0	.0
Ohio	28,683.0	26,121.0	6,146.6	6,146.6	.0	19,974.4	2,562.0	350.0	173.0	177.0	2,212.0
Wisconsin	42,379.0	34,616.0	14,914.7	14,907.7	7.0	19,701.3	7,763.0	1,323.0	1,095.0	228.0	6,440.0
Total	329,363.3	285,186.3	80,877.1	79,224.5	1,652.6	204,209.2	44,177.0	8,298.0	6,509.0	1,789.0	35,879.0
Total, North	467,855.1	411,887.1	164,171.0	162,371.6	1,799.4	247,716.1	55,968.0	13,548.0	10,942.0	2,606.0	42,420.0
South:											
Southeast:											
Florida	38,588.6	33,993.6	19,228.8	17,039.7	2,189.1	14,764.8	4,595.0	3,485.0	3,006.0	479.0	1,110.0
Georgia	37,711.7	36,795.7	25,256.0	25,256.0	.0	11,539.7	916.0	885.0	521.0	364.0	31.0
North Carolina	33,654.7	30,955.7	20,043.3	20,043.3	.0	10,912.4	2,699.0	2,699.0	2,449.0	250.0	.0
South Carolina	19,963.0	19,143.0	12,269.4	12,249.4	20.0	6,873.6	820.0	732.0	569.0	163.0	88.0
Virginia	27,090.2	25,286.2	16,444.9	16,417.4	27.5	8,841.3	1,804.0	837.0	657.0	180.0	967.0
Total	157,008.2	146,174.2	93,242.4	91,005.8	2,236.6	52,931.8	10,834.0	8,638.0	7,202.0	1,436.0	2,196.0
South Central:											
Alabama	33,388.1	32,231.1	21,415.1	21,361.1	54.0	10,816.0	1,157.0	799.0	597.0	202.0	358.0
Arkansas	33,986.6	33,090.8	18,281.7	18,281.5	.2	14,809.1	896.0	896.0	686.0	210.0	.0
Kentucky	25,853.0	25,282.0	12,160.8	12,160.8	.0	13,121.2	571.0	571.0	454.0	117.0	.0
Louisiana	31,705.2	28,409.2	15,074.7	14,558.1	516.6	13,334.5	3,296.0	2,646.0	2,309.0	337.0	650.0
Mississippi	30,953.7	29,929.7	16,735.3	16,715.6	19.7	13,194.4	1,024.0	668.0	313.0	355.0	356.0
Oklahoma	44,748.8	43,727.8	17,814.2	8,513.3	9,300.9	25,913.6	1,021.0	1,021.0	828.0	193.0	.0
Tennessee	27,035.9	26,289.9	13,560.9	13,160.5	400.4	12,729.0	746.0	746.0	633.0	113.0	.0
Texas	171,149.8	167,282.8	114,878.1	23,279.3	91,598.8	52,404.7	3,867.0	3,814.0	3,315.0	499.0	53.0
Total	398,821.3	386,243.3	229,920.8	128,030.2	101,890.6	156,322.5	12,578.0	11,161.0	9,135.0	2,026.0	1,417.0
Total, South	555,829.5	532,417.5	323,163.2	219,036.0	104,127.2	209,254.3	23,412.0	19,799.0	16,337.0	3,462.0	3,613.0
Rocky Mountain and Great Plains:											
Rocky Mountain:											
Arizona	72,902.3	72,580.3	63,662.2	18,493.9	45,168.3	8,918.1	322.0	322.0	314.0	8.0	.0
Colorado	66,720.1	66,283.1	50,092.7	22,271.0	27,821.7	16,190.4	437.0	437.0	311.0	126.0	.0
Idaho	53,476.1	52,676.1	45,324.7	21,726.6	23,598.1	7,351.4	800.0	800.0	737.0	63.0	.0
Montana	94,168.2	92,896.2	75,893.3	22,559.3	53,334.0	17,002.9	1,272.0	1,272.0	1,040.0	232.0	.0
Nevada	70,739.8	70,294.8	64,571.0	7,683.3	56,887.7	5,723.8	445.0	445.0	428.0	17.0	.0
New Mexico	77,864.0	77,669.0	66,785.3	18,059.8	48,725.5	10,883.7	195.0	195.0	149.0	46.0	.0
Utah	54,343.7	52,504.7	45,258.4	15,557.4	29,701.0	7,246.3	1,841.0	1,841.0	1,809.0	32.0	.0
Wyoming	62,666.3	62,055.3	56,924.5	10,028.3	46,896.2	5,130.8	611.0	611.0	525.0	86.0	.0
Total, Rocky Mountain	552,882.5	546,959.5	468,512.1	136,379.6	332,132.5	78,447.4	5,923.0	5,923.0	5,313.0	610.0	.0

Table 2.1—*Land and water areas of the United States, by class of land, water, and section, region, and State*[1]—continued

(Thousand acres)

Section, region, and State	Total land and water area	Land					Water				
		Total land area	Total forest and range land	Forest and range land		Other land[4]	Total water area	Inland water			Other water[7]
				Forest[2]	Rangeland[3]			Total inland water	Large area[5]	Small area[6]	
Great Plains:											
Kansas	52,648.7	52,126.7	17,622.6	1,344.4	16,278.2	34,504.1	522.0	522.0	295.0	227.0	.0
Nebraska	49,425.1	48,828.1	25,303.5	1,029.1	24,274.4	23,524.6	597.0	597.0	451.0	146.0	.0
North Dakota	45,225.7	43,938.7	12,717.7	421.8	12,295.9	31,221.0	1,287.0	1,287.0	923.0	364.0	.0
South Dakota	49,310.2	48,381.2	25,099.7	1,702.0	23,397.7	23,281.5	929.0	929.0	743.0	186.0	.0
Total, Great Plains	196,609.7	193,274.7	80,743.5	4,497.3	76,246.2	112,531.2	3,335.0	3,335.0	2,412.0	923.0	.0
Total, Rocky Mountain and Great Plains	749,492.2	740,234.2	549,255.6	140,876.9	408,378.7	190,978.6	9,258.0	9,258.0	7,725.0	1,533.0	.0
Pacific Coast:											
Pacific Northwest:											
Alaska	375,303.0	362,485.0	350,616.5	119,144.9	231,471.6	11,868.5	12,818.0	12,818.0	12,787.0	31.0	.0
Oregon	62,099.0	61,356.0	52,132.7	29,810.0	22,322.7	9,223.3	743.0	712.0	606.0	106.0	31.0
Washington	45,177.0	42,456.0	31,076.0	23,181.0	7,895.0	11,380.0	2,721.0	1,187.0	1,039.0	148.0	1,534.0
Total	482,579.0	466,297.0	433,825.2	172,135.9	261,689.3	32,471.8	16,282.0	14,717.0	14,432.0	285.0	1,565.0
Pacific Southwest:											
California	101,607.0	99,847.0	83,191.7	40,152.0	43,039.7	16,655.3	1,760.0	1,716.0	1,489.0	227.0	44.0
Hawaii	4,128.0	4,109.0	2,954.0	1,986.0	968.0	1,155.0	19.0	19.0	16.0	3.0	.0
Total	105,735.0	103,956.0	86,145.7	42,138.0	44,007.7	17,810.3	1,779.0	1,735.0	1,505.0	230.0	44.0
Total, Pacific Coast	588,314.0	570,253.0	519,970.9	214,273.9	305,697.0	50,282.1	18,061.0	16,452.0	15,937.0	515.0	1,609.0
Total, United States	2,361,490.8	2,254,791.8	1,556,560.7	736,558.4	820,002.3	698,231.1	106,699.0	59,057.0	50,941.0	8,116.0	47,642.0

[1]Data for forest land as of January 1, 1977; data for rangeland and other land as of 1976; data on inland water as of 1977; data on other water as of 1970.

[2]Land at least 10 percent stocked by forest trees of any size, or formerly having such cover, and not currently developed for nontimber use. Included in these lands are transition zones, such as areas between heavily forested and nonforested lands and forest areas adjacent to urban built-up lands, which may have timber production as a primary use.

[3]Land on which the natural vegetation is predominately grasses, grasslike plants, forbs, or shrubs; and which is not currently developed for nonrange use.

[4]Residual obtained by subtracting forest land and rangeland from total land area. This category includes cropland, improved pasture, and industrial and urban areas.

[5]Lakes and ponds at least 40 acres in size; waterways ⅛ mile or more in width.

[6]Lakes and ponds between 2 and 40 acres in size; waterways less than ⅛ mile in width.

[7]Includes Atlantic, Pacific, and Gulf Coastal waters: Chesapeake and Delaware Bays; Long Island and Puget Sounds: New York Harbor; Straits of Juan de Fuca and Georgia; and the Great Lakes. Excludes Alaska and Hawaii.

Sources: Forest land — U.S. Department of Agriculture, Forest Service. *Forest Statistics of the U.S. 1977.*

Rangeland — U.S. Department of Agriculture, Forest Service estimates based on data supplied by U.S. Department of Agriculture, Soil Conservation Service U.S. Department of the Interior, Bureau of Land Management, Bureau of Indian Affairs, and National Park Service; and U.S. Department of Defense.

Inland water — U.S. Department of Agriculture, Soil Conservation Service (preliminary data)

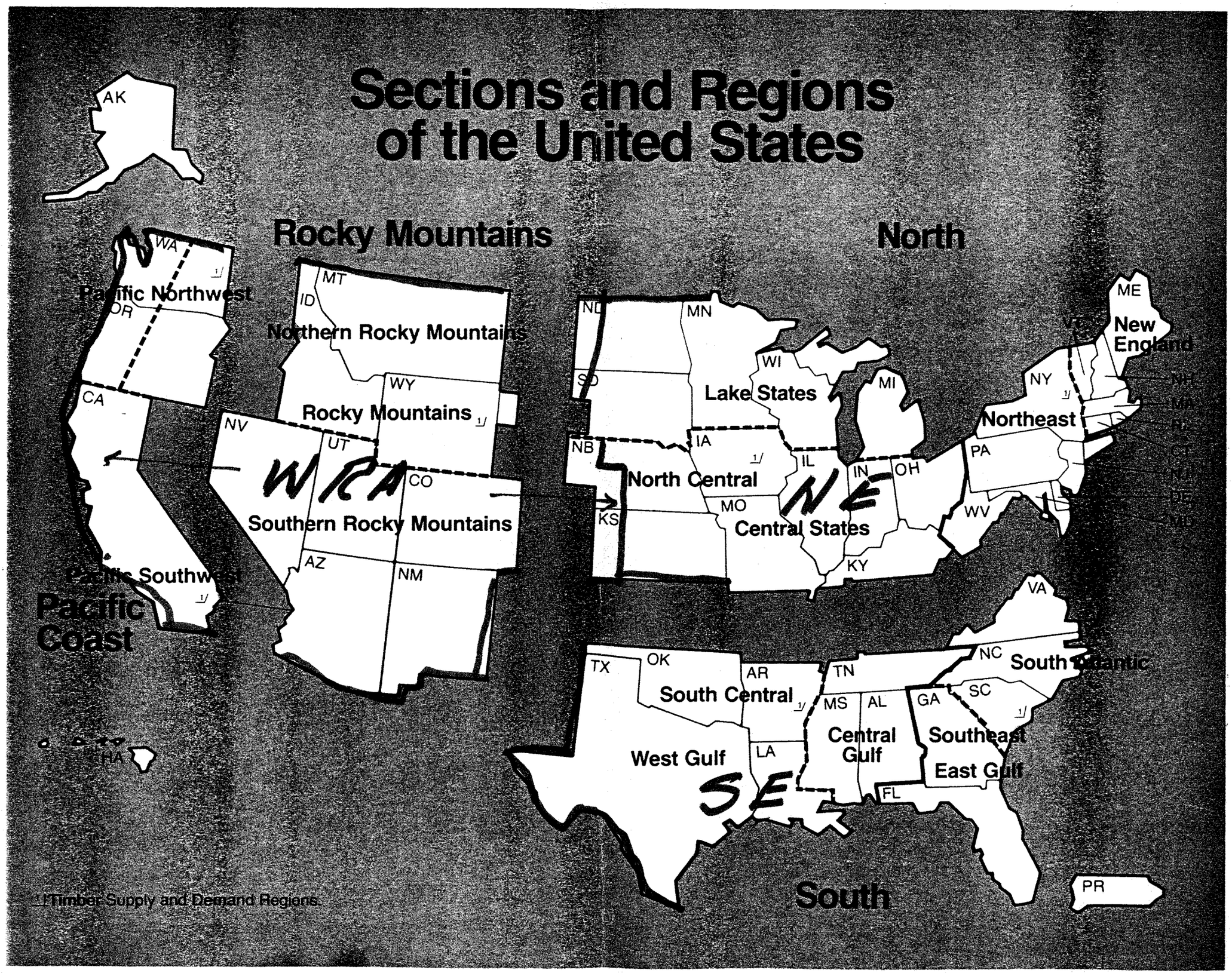
All other land and water. U.S. Department of Commerce, Bureau of Census. Area Measurement Reports. GE-20 No. 1, 22 p. 1970.

Area of Total Land and Rangelands of the United States

June 3 1998

Location	State	Total Land Area (1000 acres)	Rangeland (1000 acres)	%
48 states				
WRA				
11 Prime states				
	1 California	99,8470	43 039.7	
	2 Oregon	61, 3560	22 327	
	3 Washington	42, 4560	7 895.0	
	4-11 Rig-Mtn.	546 9595	332 152.5	
Total 11 Prime states		750, 6185	405 389.9	
4 Plains states	Total	193 274.7	24446.8	
Total WRA		943 8932	479 836.7	
East of WRA	North	411, 8871	1 799.4	
	South	532 4175	105 926.6	
Total E of WRA		944 3046	107, 726.0	
Total 48 states		1, 888, 197.8	587, 562.7	71.7
Total Alaska		362 4850	231 471.6	28.2
Total Hawaii		4 109.0	968.0	0.1
Total U.S. 50 states		2 254 791.8 ✓	820 002.3	100

Sections and Regions of the United States



1/ Timber Supply and Demand Regions

Allotments on which photos taken and those to see and repeat photos in 1998

To see	State	Allotment
	Arizona	
✓		Clay Hole
✓		Clay Spring
✓		McFyen
✓		Murchison
✓		Crowder Walsh (KOFA)
	California	
		Bare Fox Mt
		Buttermilk
✓		Cima Dome
✓		Home Camp
✓		Massacre
✓		O X
		Ivanpah
✓		Rand Mt
✓		Southcott
✓		Tambler
		Tule
✓		Tuledad
✓		Walls Meadow

Allotments

	Total No	Number to see
Arizona	5	5
California	13	9
Total	18	14

Allotments on which photos taken and those to see and repeat photos in 1998

To see ✓	State	Allotment
	California	**(Cont'd)**
✓		Bridge Creek
✓		Grass Valley
✓		Gray Valley
✓		Blacks Mt Exp. Str
✓		Patterson Flat
✓		Harvey Valley
(6) 6		
	Colorado	
✓		Badger Wash
		Corcoran Wash
		Grounds
		Sloss
		Trail Gulch
(5) 0		
	Idaho (1)	
✓		Blacks Mt
✓		Goose Creek
		Indian Jake (Little)
		Jerusalem
✓		Macon Flat
		Marsh Valley
(7) 4 ✓		Morgan Creek

	0 Total	✓ To see
California	6	6
Colorado	5	0
Idaho	7	4
Total	18	10

Allotments on which photos taken and those to see and repeat photos in 1998

To see ✓	State	Allotment
	Idaho (2)	
✓		Petan
✓		Pierce
✓		Pleasant View
✓		Valley
✓		West Bellview
✓		Hard Creek
✓		E W French
		Bennet Hills
		Marsing
		Crater Moon
		Firth
(11) 6	Montana	
		Crago
		Hibsdale

Allotments on which photos taken and those to see and repeat photos in 1998

To see ✓	State	Allotment
	Nevada	
		Baker
		Eureka
		Mustang
✓		Sand Spring
	FS	Saval
(6) 1	FS	Sunflower Flat
	New Mexico	
		Carlsbad
✓		Circle F
✓		Colhern
✓		Inmon
(4) 2		
	Oregon	
		Juniper Mt
(1) 0		
	Utah	
		Big Flat – 10 Mile
		50 Mile Mt
	FS	Hobble Creek
(3) 0		
	Wyoming	
		Cumberland
		Hall Creek
(2) 0		