

369a

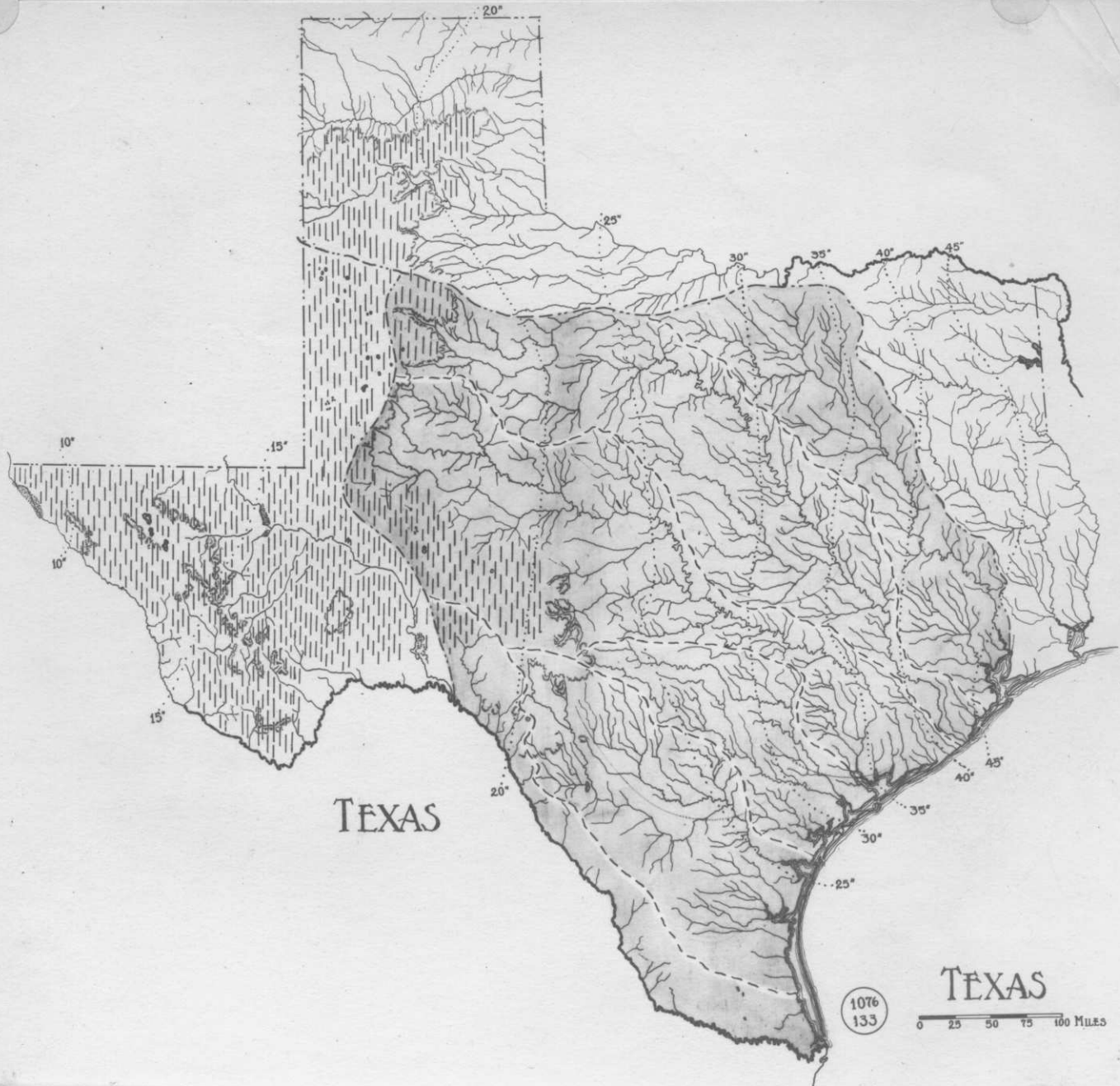


Photo Reduction none
original ~120" x 25 1/2" TV
No Blue Print

great inclined plane that rises to 4000 feet at the northwesterly corner. In its forests the present rate of cutting will exhaust its yellow pine in thirty years. Of the 2,950,488 acres of irrigable lands only 536,234 acres were irrigated in 1914. Practically none of the swamp land has been reclaimed. This state controls all its vacant land as it entered the Union as an independent republic. Its greatest industry is the growth of cattle and horses.

The state has few if any important public reservations. The Great South Way passes through the southerly part of the state with the Plains Way starting from it at the Sabine River and leading below the Big Mountain Triangle of Colorado to the California and Puget Sound regions.

UTAH

Crop regions	Character	Chief crops
I. Strawberry Valley	irrigated	orchard fruits, potatoes
II. Bear River Valley	irrigated	orchard fruits
III. Sevier Valley	irrigated	alfalfa
IV. Wasatch Mts.	rugged	forests
V. Great Basin	arid	sage brush
VI. Colorado Plateau	high irrigated	sub-tropical fruits

Average yield per acre

Wheat	25-28 bu.	Oats	46-50 bu.	Rye	18-24 bu.
Corn	31-38 "	Barley	41-45 "	Potatoes	152-185 "

Chief products of state--cereals, live stock, fruit, minerals
 Chief field crops--wheat, oats, potatoes, alfalfa, sugar beet
 Chief farm crops--small fruits
 Special crops of note--sugar beet
 Special advantages of state--mineral deposits
 Special problems of state--irrigation

This state is reduced from 84,000 square miles to 76,000 square miles. The new state should include the Salt Lake Basin and the region south, being the eastern part of the Great Basin. The drainage to the Green and Colorado Rivers should belong to the state of Colorado.

The soil is very fertile but very dry; in the west part ✓ of the state mostly alkali barrens. Most of the farms are near the streams. Irrigation is necessary. Area irrigated in 1910 999,410 acres.

The Great Salt Lake contains over 5,000 million tons of common salt, and over 900 million tons of sodium sulphate, and much other mineral matter. The state is third in the production of silver and lead and fourth in copper.

Here the great Salt Lake is the intersecting point for several of the Re-creation ways passing from east to west and from the Puget Sound region to the Gulf.

This great body of water with its mountains setting is a point of great scenic interest.

Photo Reduction 1" No Blue Print
original of 14 x 16"

Photo Reduction 1" No Blue Print
original of 12 x 16"

371a

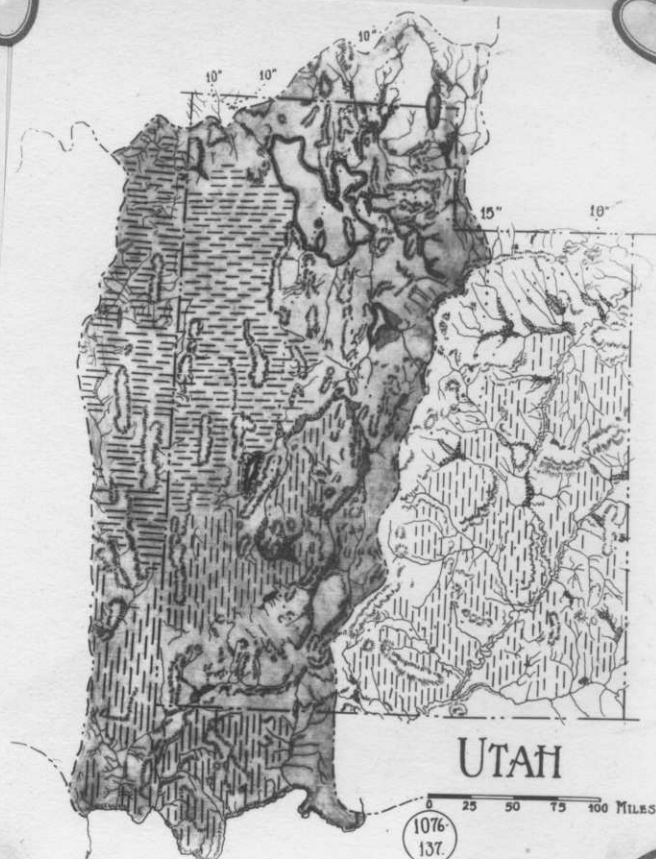
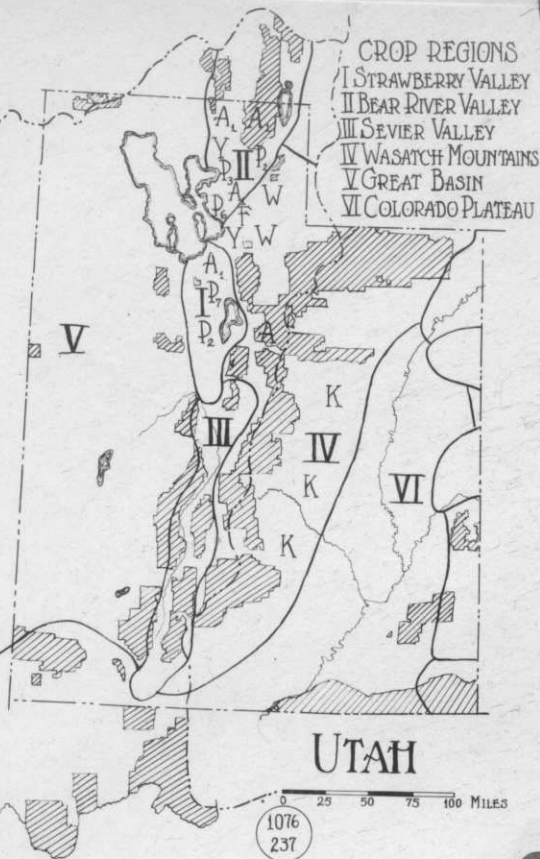


Photo Reduction 1" No Blue Print
original of 17 x 11"

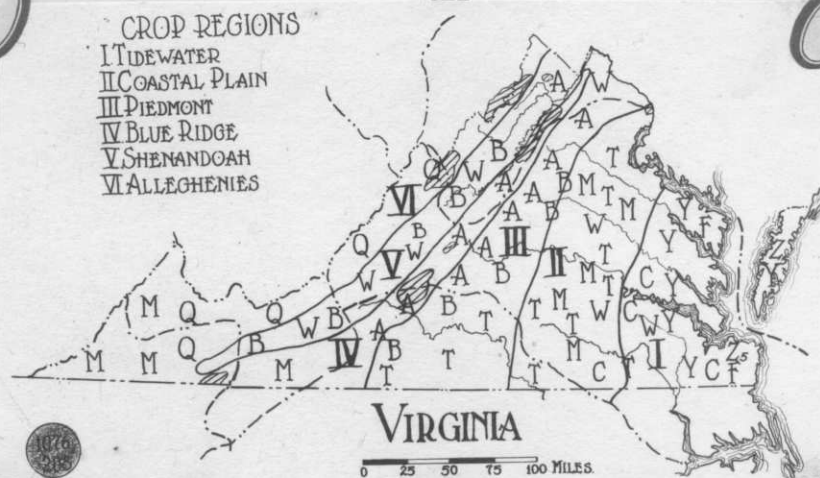
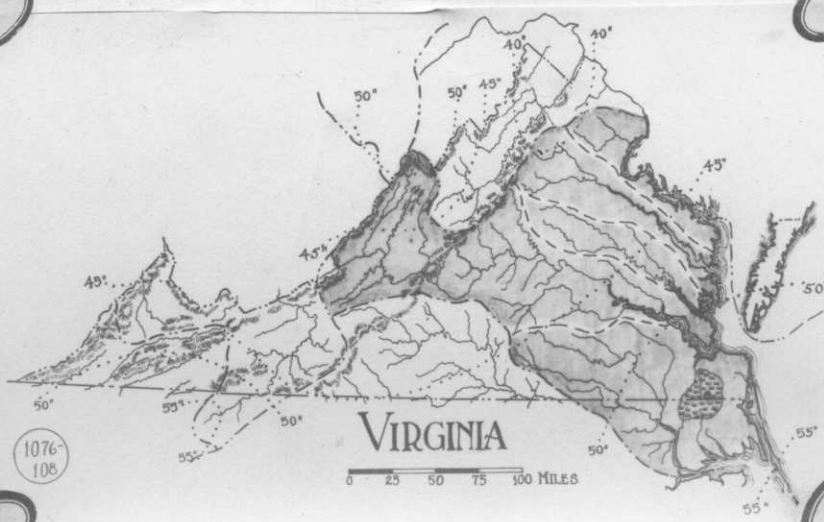


Photo Reduction 1" No Blue Print
original of 20 x 14"



VIRGINIA

Crop regions	Character	Chief crops
I. Tidewater	light loam	truck crops, cotton
II. Coastal Plain	level sandy loam	early veg., small fruits, tobacco
III. Piedmont	hilly fertile	orchard fruits
IV. Blue Ridge	ragged	forests
V. Shenandoah Valley	level, fertile	cereals
VI. Alleghenies	ragged fertile	forests, orchard fruit

Average yield per acre

Corn 24-28 bu.	Oats 20-25 bu.	Rye 12-14 bu.
Wheat 12-14 "	Barley 27-29 "	Potatoes 85-125 "
	Sweet potatoes 95-110 "	Cotton 220-265 lb

Chief products of state--grains, cotton, tobacco, coal
 Chief field crops--corn, wheat, oats, tobacco, potatoes, cotton
 Chief farm crops--truck crops, fruits, vegetables
 Special crops of note--sweet potatoes, peanuts
 Special advantages of state--water power, truck soil
 Special problems of state--use of water power, drainage of swamps

The new state as indicated is reduced in area from 42,000 to 25,000 square miles, and includes the left bank of the Potomac Basin below the head of navigation, the basins of the Rappahannock, Pamunkey, James and Chowan. The Roanoke River Basin goes to North Carolina, the headwaters of the Tennessee River to Tennessee, the Kanawha River to West Virginia and the Cape Charles point to Delaware.

Few states have so much of historic interest as this state and its broadly rolling clay soils carry tobacco and corn and sweet potatoes as the principal crops, while the lighter soils near the coast produce peanuts and garden truck. There are

540,000 H.P. available in its streams.

The western part of the state is mountainous and a region of apples.

It is through the mountain valleys of this state that the Appalachian Way of the Recreation Plan passes and the Erie Way is carried across the mountains from Richmond through central Ohio to Lake Erie.

WASHINGTON

Crop regions	Character	Chief crops
I. Yakima Valley	fertile	apples
II. Spokane Valley	fertile	apples
III. Wenatchee Valley	fertile	apples
IV. Okanogan Valley		
V. Columbia Valley		
VI. Snake Valley	irrigated	fruits & veg.
VII. Puget Sound Valley		
VIII. Pacific Slope	fertile valleys	veg. & fruits
IX. Cascade Range	rugged	forests
X. Lava Plain	weathered lava	wheat by dry farming
XI. Colville Valley		

Average yield per acre

Corn	27-28 bu.	Oats	48-55 bu.	Rye	20-22 bu.
Wheat	22-25 "	Barley	37-41 "	Potatoes	141-170 "

Chief products of state--lumber, cereals, fruit, livestock, coal, hay

Chief field crops--wheat, barley, corn, oats

Chief farm crops--fruit, vegetables

Special crops of note--hops

Special advantages of state--enormous potential waterpower; forests, harbors

Special problems of state--use of water power

The area of the old and the new states is substantially the same.

To Montana is given the outlet of the Pend Oreille Lakes, and from Montana is taken the stream heads that supply the water powers at Spokane. To Oregon is given the southerly branches of the Snake River and an easterly branch of the Columbia.

This river is thus continued eastward as the southerly state boundary.

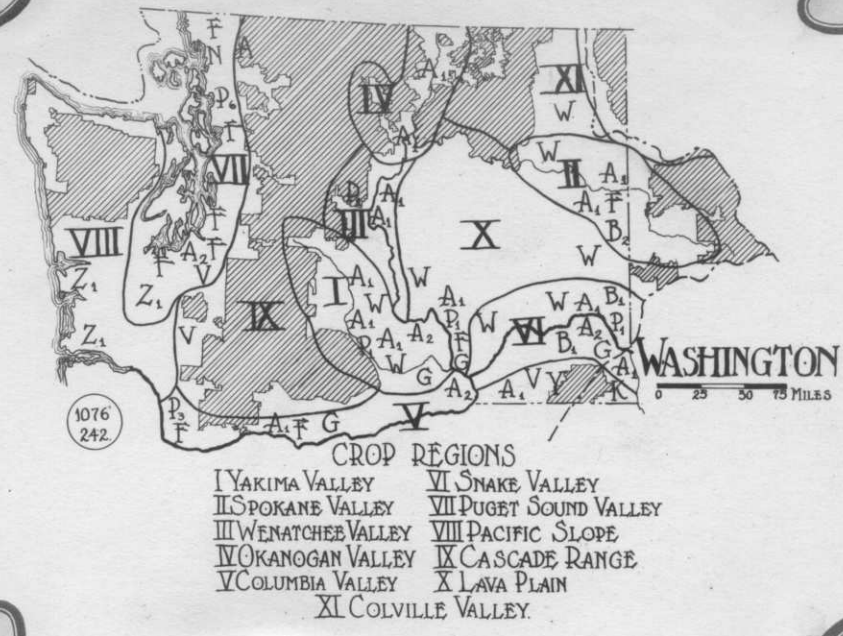
The soils of the state are volcanic and glacial. West of the Cascade Mts. is heavily timbered rolling land with a great rainfall. East of the Cascades is elevated land with so little rain in summer that irrigation is necessary. In 1910 334,578 acres were irrigated. It is the first state in lumber production, and National Forests cover one-fourth of its area.

While only 35% of the state is called arable, conditions are favorable for varied crops and intensive cultivation. The state is first in its undeveloped water powers with Puget Sound one of the greatest harbors in the world at the north and the Columbia River Continental Gateway is at the south, both ice-free for all the year. This state is likely to be one of the greatest distributing points and future manufacturing centers on the continent to supply the trade of the Orient.

Its scenic attractions are varied and its great scenic distinction lies in the big isolated perpetually ^{snow} covered peaks like Mount Rainier and the mountain ridges so distributed through the state that all its people can easily reach the cool uplands.

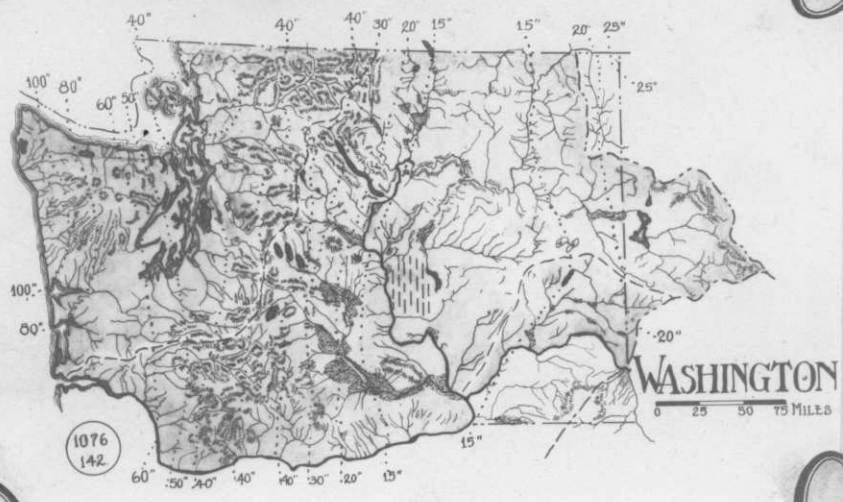
All the scenic ways of the National Recreation plan lead to this unique Puget Sound State.

Photo Reduction /
Original 19" x 11 1/2"
No Blue Print



W✓

Photo Reduction /
Original 19 1/2" x 9 1/2"
No Blue Print



W✓

W✓



W✓

Photo Reduction /
Original 15" x 14 1/2"
Blue Print none

Photo Reduction /
Original 15" x 13"
Blue Print 1

WEST VIRGINIA

Crop regions	Character	Chief crops
I. Monongahela Valley	deep loam	orchard fruits
II. Kanawha Valley	deep loam	small fruits, cereals
III. Alleghenies	rugged	forests
IV. Potomac Valley	level, deep rich loam	cereals, tobacco
V. Shenandoah Valley	level, fertile	cereals
Average yield per acre		
Corn 30-33 bu.	Oats 25-29 bu.	Potatoes 86-117 bu
Wheat 13-15 "	Rye 13-14 " Sweet	potatoes 97-110 "

Chief products of state--coal, oil, gas, cereals, tobacco
 Chief field crops--wheat, corn, oats, hay, potatoes, tobacco
 Chief farm crops--fruits
 Special crops of note--tobacco
 Special advantages of state--fertile river valleys, water power
 Special problems of state--flood control.

The size of the new and the old state are about the same.

The new state should include the Little Kanawha, Kanawha, and Big Sandy River Basins and the right bank of the Ohio between them. Drainage to the Monongahela goes to Pennsylvania and of the Potomac to Maryland.

Two-fifths of the state is mountainous and the remainder is very hilly. The river bottoms are exceedingly fertile.

WISCONSIN

Crop regions	Character	Chief crops
I. Driftless Area	hilly rich clay	cereals
II. Southern Lakes	deep fertile	tobacco
III. Michigan Shore	sandy loam	fruits
IV. Hill Lands	clay loams	forest, small fru
V. Northern Lakes	swampy, hilly	forest

Average yield per acre

Corn 34-41 bu.	Oats 33-46 bu.	Rye 17-19 bu.
Wheat 18-22 "	Barley 25-35 "	Potatoes 102-120 "

Chief products of state--cereals, hay, vegetables, mine
 Chief field crops--wheat, corn, etc. potatoes, sugar beet, tobacco
 Chief farm crops--fruits and vegetables
 Special crops of note--tobacco
 Special advantages of state--port on Lake Superior
 Special problems of state--drainage of lake regions

The present state area is 56,066 square miles, the new 66,060. The new lines include the upper Peninsula of Michigan, the St. Croix, Chippewa and Wisconsin River Basins and the westerly bank of the Mississippi for reasons stated in the study of Minnesota. Superior at the head of the lake is included with Duluth because of like interests. The headwaters of the Illinois River are indicated in the new Illinois. This includes Madison, the capital city, of Wisconsin, and Racine and Kenosha. Here I must state that these studies are intended to represent an ideal study based on topography. If the reasons offered for the recommended changes in state lines ultimately come to be accepted as logical and sound as based on economic reasons then the recommendations will to some degree be accepted with modifications made to reconcile

Photo
Production!
original of 16" x 14" 1/2"
No Blue Print



Photo Reduction
Originals 17" x 14"
No Blue Print



political, social, financial and industrial conditions. The two studies of Pennsylvania will indicate how such adjustments can be made to balance lands included and excluded. The tributary with its lakes that goes to Madison and is partly included in the city park system might be held in Wisconsin down to its junction with the main stream, or the inclusion might go further down the stream to Freeport in Illinois where several branches join.

There are few states in which soil conditions and consequently crops are so diversified as an examination of the crop maps and key will indicate. It is the region of the Northern Lakes where I have indicated two Recreation reservations for here are already great numbers of summer shore homes. The glacial area is undulating with mixed soil and poor drainage. The driftless area is hilly, well drained, and largely cultivated and grazed. One reservation area is indicated at the heads of the Chippewa and St. Croix Rivers, the other at the head of the Wisconsin River. Already great numbers of people go to these lake regions to their summer homes or to public resorts of which nearly one hundred are operated in the lake regions of the state. Another value of these reserves would be to protect game and conserve and equalize the waters for the development of the 1,000,000 H.P. that are needed as there is no coal or oil. Another reservation region is indicated in the southern Lake region where the state and local authorities should join to unite the lake regions where many summer homes now are with Green Bay and with the large cities adjacent to them. The Great North Recreation Bay passes through the northern lake regions with a Green Bay way to connect with

the proposed Lower Lake region. Though the south of the state would pass the very direct Minnesota way from Eismark to Chicago along the Minnesota River.

In the state plan as I pointed out in 1904 in a study for the city of Grand Rapids, the Wisconsin River valley would be an exceedingly important scenic thoroughfare and I find that this project is already under way.

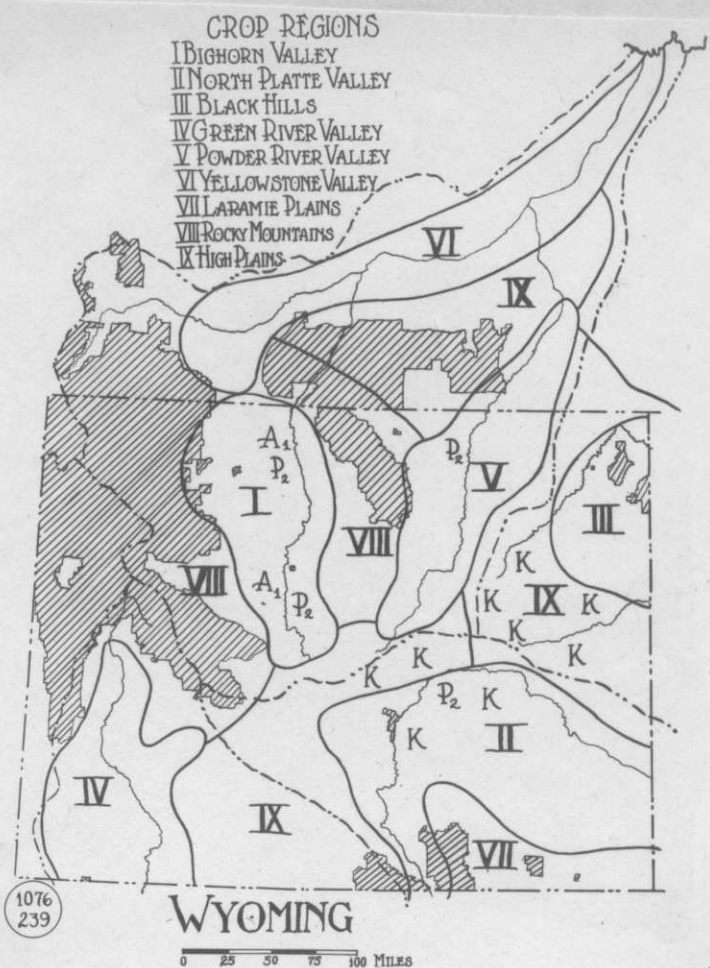
There are 13,000,000 acres of undeveloped land. The original swamp area included 2,560,000 acres of which 200,000 acres have been reclaimed to date.

Wisconsin is one of the very progressive states of the Union and it has already had an examination made of the state for the selection of isolated state parks although few of the recommendations have been acted upon.

WYOMING

Crop regions	Character	Chief crops
I. Bighorn Valley	irrigated	
II. North Platte Valley		cereals, grazing
III. Black Hills	ragged	forests
IV. Green River Valley	fertile when irrigated	
V. Powder River Valley		
VI. Yellowstone Valley	irrigated	
VII. Laramie Plains	high plateau	grazing
VIII. Rocky Mts.	mountains	forests
IX. High Plains	arid	sage brush
Average yield per acre		
Corn 23-29 bu.	Oats 37-42 bu.	Rye 20-22 bu.
Wheat 26-36 "	Barley 32-36 "	Potatoes 131-230 "

Photo Reduction
Original of 14 1/2" x 17"
No Blue Print



W✓

Photo Reduction
Original of 16" x 18 1/2"
No Blue Print



W✓

Chief products of state--sheep & cattle, vegetables, cereals, fruit,
lumber, coal, minerals

Chief field crops--cereals, forage

Chief farm crops--small fruits and vegetables

Special crops of note

Special advantages of state--enormous oil fields, coal & mineral
deposits, scenery

Special problems of state--dry farming, development of enormous phosphate
deposits

The state has 97,914 square miles, the new state 71,324 square miles. The new state lines are made to include the Yellowstone River basin in Wyoming and through Montana up to the Missouri thus including sugar beet and vegetable land. The easterly sheep lands are added to the Cheyenne River basin of South Dakota. The southerly bad lands are placed in the Platte River basin of Nebraska and the Green River Basin of Colorado. A part of the Yellowstone Park is added to the Snake River drainage basin of Idaho.

The new state would be well balanced including, as it would, grazing, agricultural ^{and} orchard lands with a very considerable irrigated area for diversified crops at its center and its forest area, mineral resources, an available water power of 927,000 H.P. the ninth among the states. Add to this the scenic values on its brilliantly colored river canyons, its great hot and mineral springs and it is a much favored state with a prosperous future assured.

Over 20,000,000 acres of the state is in mountains, a half of this in timber. One-half of this state is suited for sheep and cattle grazing or dry farming, and it is now the first state in the sheep industry. There is a water supply to irrigate

10,000,000 acres, of which only 1/4 is yet used.

Coal covers 42% of the state area, about 670,725,100,000 tons of which only 1/40 of one percent has been dug. There are great deposits of oil. More phosphate rock is found than in any other state, on about 1,250,000 acres.

Most of the high mountain lands of the state are already included in National Forest reserves that are open to the public. The great north and south Recreation way is indicated from the Great North Way on the Missouri River near Glasgow, thence on the divide between the Musselshell and the Yellowstone Rivers ^{to} ~~and~~ Billings, thence along the wonderful Big Horn River Canyon to the Platte Way near Lander with a branch east of the Big Horn Mountains across the mountain tributaries of the Tongue and Powder Rivers to a point near Douglas on the Great Central Way; a branch is also indicated to ~~and~~ through the Yellowstone from the Big Horn. Another branch passes west from the Musselshell to the great Missouri River power center at Great Falls, Montana.

F. APPENDIX.

PRINCIPAL RIVER BASINS.
(See map on page 1.)

Name of Basin	Drainage area in square miles.	(Total area of U.S. in sq. mi.)	"Flow per year in billion cu. ft.	Maximum horse- power 45%	Minimum horse power 45%	Tons of solids per sq. mile per year dis- solved and suspended.
---------------	-----------------------------------	---------------------------------------	--	-----------------------------------	----------------------------------	---

1. Great Lakes Basin	361,870	8,197	8,362,600	1,476,280	117	
----------------------	---------	-------	-----------	-----------	-----	--

2. Atlantic Coast Basin	159,879	6,942	8,166,600	1,712,050	169	
Maine to Cape Henry	159,879	6,942	1,927,600	1,882,000	270	
Cape Henry to Cape Sable						

3. West Gulf Basin	142,220	6,697	962,000	559,000	261	
4. West Gulf Basin)	422,700	8,222	622,600	422,760	108	

5. Mississippi Basin	322,600	12,260	6,166,600	2,960,890	244	
East tributaries	905,200	8,580	4,066,000	2,942,970		
West	322,600					

7. Colorado Basin	222,000	221	8,846,000	2,918,500	426	
8. Great Basin	222,000	---	801,000	218,000	120 (does not reach ocean)	

9. Columbia River Basin	290,400	15,220	24,701,000	12,979,700	270	
(Northern Pacific)						
10. Pacific Coast Basin	70,700	2,122	7,308,200	2,212,400	222	
(Southern Pacific)						

added horsepower, corrected by Bureau of
Corrections

2,269,489

72,672

61,678,000

22,082,000

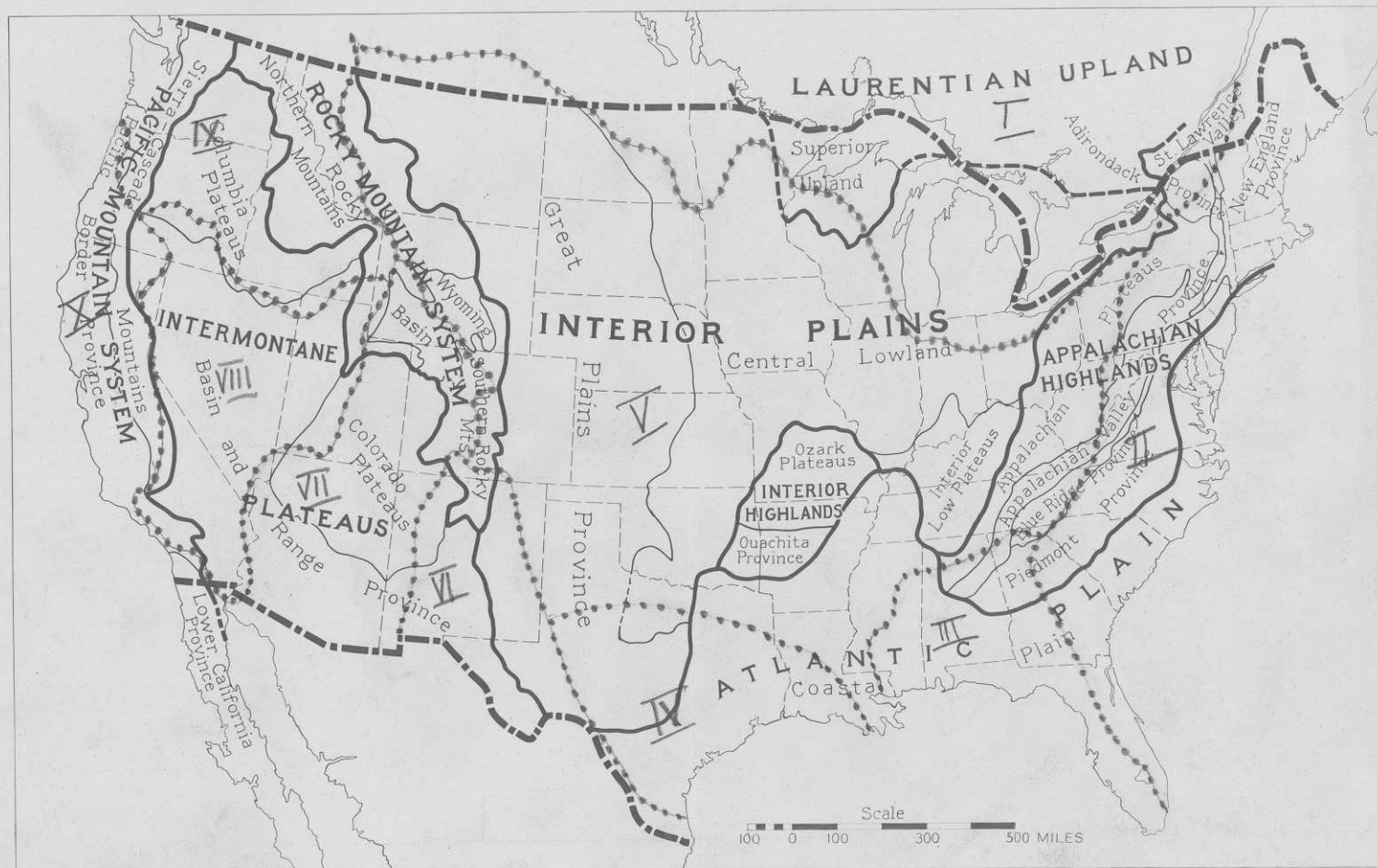
222 (average).

* From water-supply report 224, U. S. Geol. Survey, 1908; modified by Bureau of corporations in report of Commissioner of corporations on the water-power development of the U. S., March 14, 1912.

** Allows for the 5/14 of available power of Niagara Falls allowed at present to U. S.; total estimated maximum for Niagara Falls, 6,600,000 h.p., minimum 5,600,000 h.p. of which but 25% can by treaty be developed.

† Includes also the drainage to Hudson Bay, and drainage in Canada into Great Lakes.

-381a-



Principal River Basins Shown Thus: -----

I - Great Lakes
II - Atlantic Coast
III - East Gulf
IV - West Gulf

V - Mississippi
VI - Rio Grande
VII - Colorado
VIII - Great Basin

IX - Columbia
X - Pacific Coast

1076-338

WATER POWER DEVELOPMENTS
of 1,000 Horse-power or over.

State	Horse power in use 1890	Horse power in use 1908	Total minimum horse-power available.
	*	o	x
Alabama	11,797	151,624	509,000
Arizona	160	10,855	893,000
Arkansas	2,024	5,868	32,000
California	4,850	466,774	3,424,000
Colorado	1,849	78,878	842,000
Connecticut	61,205	116,145	72,000
Delaware	4,785	7,976	5,000
Florida	939	4,339	8,000
Georgia	30,067	166,587	374,000
Idaho	1,156	78,743	1,162,000
Illinois	17,445	50,116	192,000
Indiana	21,810	39,153	42,000
Iowa	20,363	17,304	160,000
Kansas	7,611	18,606	111,000
Kentucky	9,012	14,156	83,000
Louisiana	90	1,184	1,000
Maine	79,717	543,096	443,000
Maryland	19,043	21,715	43,000
Massachusetts	138,362	260,182	118,000
Michigan	34,395	205,019	180,000
Minnesota	26,682	152,380	232,000
Mississippi	3,449	7,222	32,000
Missouri	8,162	10,107	72,000
Montana	954	148,062	2,749,000
Nebraska	5,495	12,703	196,000
Nevada	108	20,577	172,000
New Hampshire	68,291	182,167	135,000
New Jersey	25,832	38,011	44,000
New Mexico	922	2,310	160,000
New York	219,348	885,862	1,057,000
North Carolina	30,063	162,284	370,000
North Dakota	803	613	86,000
Ohio	38,641	54,840	59,000
Oklahoma	none	2,994	75,000
Oregon	9,255	231,379	3,148,000
Pennsylvania	110,276	290,990	276,000
Rhode Island	22,240	37,165	6,000
South Carolina	13,573	207,242	460,000
South Dakota	See N. Dakota	11,112	43,000
Tennessee	18,564	95,060	463,000
Texas	2,508	9,966	255,000
Utah	3,535	64,265	743,000
Vermont	52,226	170,276	94,000
Virginia	37,464	100,123	492,000
Washington	1,185	147,041	4,932,000

State	Horse power in use 1880	Horse power in use 1908	Total Minimum horse-power available.
		0	x
West Virginia	9,454	20,500	381,000
Wisconsin	45,356	220,916	358,000
Wyoming	38	3,595	773,000
	<u>1,225,379 -</u>	<u>5,356,680</u>	<u>26,756,000</u>

- The total in use in 1870 was 1,130,471 horse power.

* From Tenth Census

c From water supply paper 234, United States Geological Survey and Bureau of Census

x Estimated minimum (exclusive of potential storage) at 75% efficiency of minimum flow; from Report of Bureau of Corporations, 1912

CITY RESERVOIRS IN 1909.

New York, Croton Reservoir, etc.	108,638,000,000	gallons
Denver, Colorado	110,000,000,000	"
Boston, Mass. Metropolitan Waterworks	82,966,530,000	"
San Francisco, California	29,000,000,000	"
Taunton, Mass.	10,300,000,000	"
Newark, New Jersey	9,000,000,000	"
Oakland, California	6,300,000,000	"
Brockton, Mass.	5,700,000,000	"
New Bedford, Mass.	5,550,000,000	"
Charleston, South Carolina	3,127,820,000	"
New Haven, Connecticut	2,837,000,000	"
Worcester, Mass.	2,550,000,000	"
Baltimore, Maryland	2,310,000,000	"
Cambridge, Mass.	2,270,000,000	"
Hartford, Conn.	2,035,000,000	"
Scranton, Pa.	2,000,000,000	"
Holyoke, Mass.	1,600,000,000	"
Springfield, Mass.	1,500,000,000	"
Pawtucket, Rhode Island	1,475,000,000	"
Waterbury, Connecticut	920,000,000	"
Los Angeles, California	898,000,000	"

GOVERNMENT RESERVOIRS.
(See Map on Page

1.	Keechelus Reservoir	Wash.
2.	Kachess	"
3.	Clelun	"
4.	Bumping Lake	"
5.	Cold Spring	Ore.
6.	Clear Lake	Cal.
7.	Lake Tahoe	" & Nev.
8.	Strawberry Valley Reservoir	Utah
9.	Salt River Reservoir	Ariz.
10.	St. Mary's Lake	Mont.
11.	Warm Springs	Mont.
12.	Willow Creek	"
13.	Shoshone	Wyo.
14.	Jackson Lake	"
15.	Fathfinder	"
16.	Engle (Elephant Butte) Reservoir	N. Mexico
17.	Hondo Reservoir	"
18.	Lake McMillan Reservoir	"
19.	Avalon	"
20.	Belle Fourche	S. Dakota
21.	Concepcionally	Wash.
22.	East Park	Cal.
23.	Lake Valcot	Idaho
24.	Boise	"
25.	Shertburne	Mont.
26.	Two Medicine	"
27.	Sun River	"

ESTIMATED IRRIGABLE LANDS BY STATE.

		x 1898		* estimated 1908	
Mont.	about	1,000,000	Acres	6,000,000	Acres
Nev.	"	6,000,000	"	1,500,000	"
N. M.	"	4,000,000	"	2,000,000	"
Ariz.	"	6,000,000	"	1,000,000	"
Utah	"	4,000,000	"	2,000,000	"
Idaho	"	7,000,000	"	5,446,000	"
Wyo.	"	9,000,000	"	6,200,000	"
Cal.	"	17,000,000	"	10,000,000	"
Colo.	"	8,000,000	"	2,893,900	"
Ore.	"	3,000,000	"	3,000,000	"
Wash.	"	8,000,000	"	1,000,000	"
N. D.	"	500,000	"	1,840,000	"
S. D.	"	1,000,000	"	121,900	"
Nebr.	"	1,500,000	"	1,000,000	"
Okla.	"	1,000,000	"	-----	"
Kans.	"	-----	"	168,500	"
Texas	"	-----	"	500,000	"

Total 72,000,000 Acres 44,375,000 Acres

x From Yearbook Department of Agriculture, 1898

* From Report of National Conservation Commission, Vol. II

GOVERNMENT RECLAMATION PROJECTS.
(See Map on page)

(See report of Reclamation Service ending June 30th, 1916)

No.	Name	State	Approximate area irrigable	
1.	Belle Fourche,	S. D.	76,591	Acres
2.	Boise,	Ida.	230,000	"
3.	Carleton,	N. M.	24,796	"
4.	Hondo,	N. M.	3,330	"
5.	Huntley,	Mont.	32,813	"
6.	Klamath,	Ore. - Cal.	38,000	"
7.	Lower Yellowstone,	Mont. - W. D.	42,328	"
8.	Milk River,	Mont.	22,200	"
9.	Minidoka,	Ida.	120,000	"
10.	North Platte,	Wyo. - Neb.	137,754	"
11.	Okanagan	Wash.	10,099	"
12.	Orland	Calif.	20,328	"
13.	Strawberry Valley	Utah	60,000	"
14.	Sio Grande	N. M.	45,000	"
15.	Salt River	Ariz.	219,691	"
16.	Shoshone	Wyo.	42,816	"
17.	Sun River	Mont.	16,326	"
18.	Truckee-Carson	Nev.	65,000	"
19.	Umatilla	Ore.	17,000	"
20.	Uncompahgre Valley	Colo.	69,500	"
21.	Yakima (Sunny side & Pion- ton)	Wash.	117,197	"
22.	Yuma	Ariz.	72,440	"
23.	North Dakota Pumping	N. D.	12,239	"
24.	Silver Lake,	Ore.	48,000	"
25.	Bogue River Valley	Ore.	50,000	"
26.	Ochoco,	Ore.	15,500	"
27.	Deschutes	Ore.	125,000	"
28.	Harney and Silver Creek,	Ore.	100,000	"
29.	Warner Valley and White River	Ore.	60,000	"
30.	Malheur-Cwyhee	Ore.	61,600	"
31.	Blackfoot	Mont.	122,500	"
32.	Flathead	Mont.	152,000	"
33.	Fort Peck	Mont.	152,000	"
34.	Zuni	N. M.	4,000	"
35.	Grand Valley	Colo.	50,000	"
36.	Buford-Fronton	N. D.	12,500	"
37.	Garden City	Kans.	10,886	"
38.	Henson	N. D.	16,500	"
39.	Williston	N. D.	12,000	"
40.	John Day	Ore.	122,000	"
41.	Wapato	Wash.	120,000	"

Total

1,330,222

"

PRIVATE RECLAMATION PROJECTS.

(List Incomplete)

(See Map on Page)

No.	Name	State	Approximate area irrigable
50.	Kittitas.	Wash.	60,000
51.	Atwater.	Cal.	220,000
52.	San Joaquin Valley	Cal.	150,000
53.	Fresno Canal	Cal.	400,000
54.	Big Bend	Wash.	
55.	Sulphur Springs Valley.	Ariz.	800,000
56.	South Gila.	Ariz.	200,000
57.	Sacramento.	Cal.	
58.	Owen's River.	Cal.	
59.	Imperial Valley.	Cal.	400,000
60.	Dubois.	Ida.	
61.	Two Buttes.	Calo.	20,000
62.	San Carlos.	Ariz.	
63.	Saint Mary.	Mont.	
64.	Valier.	Mont.	170,000
65.	Big Timber.	Mont.	10,000
66.	Billings.	Mont.	27,000
67.	Huntley.	Mont.	
68.	Clark Fork.	Mont.	
69.	Madison River.	Mont.	
70.	White River.	Calo.	
71.	Grande Valley.	Calo.	
72.	La Plata Valley.	N. M.	
73.	Las Vegas.	N. M.	
74.	Urton Lake.	N. M.	
75.	Leesburg.	N. M.	
76.	Bismarck.	N. D.	
77.	Turlock.	Cal.	176,210
78.	Fort Shaw.	Mont.	
79.	Ten Lakes Land.	N. M.	55,000
80.	Miami.	N. M.	10,000
81.	Bloomfield.	N. M.	7,000
82.	James Reservoir.	N. M.	1,500
83.	Antelope Valley.	N. M.	19,500
84.	Maxwell Irrigation.	N. M.	12,000
85.	Yellowstone Irrigation.	Mont.	8,200
86.	Cartersville Irrigation.	Mont.	12,000
87.	Tongue River and Yellowstone.	Mont.	9,700
88.	Hysham.	Mont.	7,200
89.	Little Missouri.	Mont.	58,000
90.	Lockwood.	Mont.	3,000
91.	Teton Co-operative Reservoir.	Mont.	55,000
92.	Musselshell Development.	Mont.	20,334
93.	Flat Willow Creek.	Mont.	25,000

No.	Name	State	Approximate area irrigable
94.	Bitter Root Valley.	Mont.	40,000
95.	Sanset Orchard.	Mont.	3,200
96.	Canyon Creek.	Mont.	2,460
97.	Mill Creek.	Mont.	2,220
98.	Blodgett Creek.	Mont.	1,920
100.	Callatin.	Mont.	18,000
101.	Glen Lake.	Mont.	4,400
102.	Glass-Lindsay Land.	Mont.	10,934
103.	Fergus County.	Mont.	7,769
104.	Butte County.	Cal.	150,000
105.	Central Canal.	Cal.	250,000
106.	Surprise Valley.	Cal.	50,000
107.	Laramie.	Colo.	100,000
108.	Standley Lake.	Colo.	150,000
109.	Henrylyn.	Colo.	115,000
110.	Arkansas-Eagle.	Colo.	200,000
111.	Twin Falls.	Ida.	1,341,000
112.	American Falls.	Ida.	57,000
113.	Idaho Irrigation.	Ida.	110,000
114.	Big Lost River-	Ida.	81,000
115.	Owyhee Land.	Ida.	30,000
116.	Tri-State.	Nebr.	120,000
117.	Wheatland.	Wyo.	
118.	North Platte Encampment.	Wyo.	50,000
119.	Blain Irrigation.	Wyo.	92,606
120.	Point Rock.	Wyo.	54,000
121.	Rock Creek Ditch.	Wyo.	50,000

Area irrigated in the United States:

Arid region	Semi-arid	Rice region	Total
1889.- 3,564,416 A	66,965 A		3,631,381 A
1899.- 7,963,273 A	266,417 A	251,214 A	7,778,904 A
1902.- 8,471,641 A	406,449 A	600,199 A	9,661,289 A
1907.- 9,700,000 A	425,000 A (estimated)	876,000 A	11,000,000 A

AREA IRRIGATED BY STATE 1910

Wyoming	1,135,302	Acres
Colorado	2,792,032	"
Arizona	320,051	"
New Mexico	461,718	"
Idaho	1,430,848	"
Montana	1,679,084	"
Utah	999,410	"
Nevada	701,833	"
Washington	334,379	"
Oregon	686,129	"
California	2,664,104	"
North Dakota	10,248	"
South Dakota	201,625	"
Nebraska	255,950	"
Kansas	37,479	"
	13,708,191	acres.

AREA OF STAMPS.

Fla.	20,000,000 acres.	Miss.	4,000,000 acres.	Tex.	2,500,000 acres
La.	9,500,000 "	Wis.	3,000,000 "	Mo.	3,500,000 "
Miss.	6,000,000 "	Ill.	2,500,000 "	S.C.	2,000,000 "
Nich.	5,000,000 "	Ne.	2,500,000 "	Total	
Ark.	6,000,000 "	N.C.	2,500,000 "	about	75,000,000 "

CROPS IN THE UNITED STATES (1915)

	Acresage	Total Crop	Average per Acre.
Corn	108,321,000 A.	3,054,535,000 bu.	28.2 bu.
Wheat	59,898,000 A.	1,611,505,000 bu.	16.9 bu.
Oats	40,780,000 A.	1,540,362,000 bu.	37.8 bu.
Rye	2,856,000 A.	49,190,000 bu.	17.2 bu.
Barley	7,395,000 A.	237,009,000 bu.	32.0 bu.
Buckwheat	806,000 A.	15,769,000 bu.	19.6 bu.
Rice	803,000 A.	28,947,000 bu.	36.1 bu.
Potatoes	3,761,000 A.	359,103,000 bu.	95.5 bu.
Hay	50,872,000 A.	85,225,000 Tons.	1.69 tons.
Tobacco	1,368,000 A.	1,060,537,000 lbs.	775 lbs.

COMPARATIVE YIELD OF CROPS PER ACRE.

Wheat	Oats	Barley	Rye
U.S. -----14 bu.	30 bu.	25 bu.	15 bu.
Ger. -----28 bu.	47 bu.	33 bu.	24 bu.
Eng. -----32 bu.	45 bu.	44 bu.	26 bu.
France-----19 bu.	27 bu.	22 bu.	17 bu.
Austria---17 bu.	27 bu.	23 bu.	18 bu.
Hungary---17 bu.	30 bu.	22 bu.	17 bu.

CROPS - AVERAGE YIELDS.

Corn, average per past ten years	26.6 bu.	Yield 1915	28.2 bu.
Wheat, " " " " "	15. bu.	" 1915	16.9 "
Oats, " " " " "	30. bu.	" 1915	37.8 "
Barley, " " " " "	25.6 bu.	" 1915	32. "
Rye, " " " " "	16.4 bu.	" 1915	17.2 bu.
Potatoes, " " " " "	97.5 bu.	" 1915	110.5 "
Sweet Potatoes, " " " " "	93.1 bu.	" 1915	103.3 "
Hay, " " " " "	1.41 ton	" 1915	1.68 ton
Cotton, " " " " "	186.3 lbs.	" 1914	209.2 lbs.
Rice, " " " " "	36.1 bu.	" 1915	36.1 bu.

YIELD OF COTTON-1914

Texas	3,946,000 bales	Average weight of bale,	500 lbs.
Georgia	2,460,000 "	Net weight	489.43 lbs.
Alabama	1,538,000 "	Raw value,	\$.10 to \$.15 per lb.

CONSUMPTION OF COTTON -1914

Continental Europe	6,000,000 bales	United States	5,649,000 bales
Great Britain	4,300,000 "	India	1,730,000 "
Japan and others	2,226,000 "		

VALUE OF CROPS-1916

Value of American Farm Products	\$13,449,000,000
Crops	9,111,000,000
Corn	2,296,000,000
Cotton	1,406,000,000
Hay	1,162,000,000
Wheat	1,026,000,000
Oats	656,000,000
Potatoes	417,000,000
Wood-lot products	221,000,000
Apples	186,000,000
Tobacco	169,000,000
Barley	160,000,000

PRODUCTION PRINCIPAL CEREALS, 1916

(From Bureau Crop Estimates, Department of Agriculture.)

Crop	Total Bushels	Total Acres	Total farm value	Yield per Acre	Farm price per bu.
Oats	1,229,182,000	40,529,000	\$ 546,986,000	30.3	\$.445
Corn	2,717,932,000	108,620,000	2,236,858,000	25.	.823
Wheat	607,557,000	50,871,000	828,100,000	11.9	1.363

PRODUCTION OF FRUITS.

The total production of apples in 1915 in the United States was about 76,000,000 barrels or 220,000,000 bushels, of which the average farm value was about .75¢, a total value of \$165,000,000. The varieties most planted the country over are Baldwin, Ben Davis and Northern Spy.

The 1915 production of peaches was about 65,000,000 bushels, the average farm value .81¢ per bushel --- total \$52,650,000.

Area in Apples (1910) bearing-----	2,993,507	acres
" " " not bearing-----	1,234,119	"
Peaches and Nectarines bearing-----	667,034	"
" " " not "-----	387,846	"
Plums and Prunes-----	278,593	"
Grapes-----	418,837	"
Citrus Fruits-----	203,086	"
Nuts-----	227,985	"
Strawberries-----	143,045	"
Bush Fruits-----	110,984	"

PRESENT FORESTS.

Cut of Lumber in 1909

(from "Forest Products of the United States, 1909", by
Bureau of the Census and Forest Service.)

Alabama-----	1,691,001,000	M. Board Feet.
Arizona-----	62,731,000	
Arkansas-----	2,111,300,000	
California-----	1,143,507,000	
Colorado-----	141,710,000	
Connecticut-----	168,371,000	
Delaware-----	55,440,000	
Florida-----	1,201,734,000	
Georgia-----	1,542,249,000	
Iaho-----	645,800,000	
Illinois-----	170,181,000	
Indiana-----	555,418,000	
Iowa-----	132,081,000	
Kansas-----	4,716,000	
Kentucky-----	860,712,000	
Louisiana-----	3,551,918,000	
Maine-----	1,111,565,000	
Maryland-----	267,939,000	
Massachusetts-----	361,200,000	
Michigan-----	1,859,724,000	
Minnesota-----	1,561,508,000	
Mississippi-----	2,572,662,000	
Missouri-----	660,159,000	
Nebraska & Nevada-----	11,230,000	
Montana-----	308,582,000	
New Hampshire-----	649,605,000	
New Jersey-----	61,620,000	
New Mexico-----	91,987,000	
New York-----	681,440,000	
North Carolina-----	2,177,715,000	
North Dakota-----		
Ohio-----	542,904,000	
Oklahoma-----	225,730,000	
Oregon-----	1,898,995,000	
Pennsylvania-----	1,462,771,000	

Rhode Island-----	25,489,000
South Carolina-----	897,660,000
South Dakota-----	31,057,000
Tennessee-----	1,223,849,000
Texas-----	2,099,130,000
Utah-----	12,638,000
Vermont-----	351,571,000
Virginia-----	2,101,716,000
Washington-----	3,852,316,000
West Virginia-----	1,472,942,000
Wisconsin-----	2,035,038,000
Wyoming-----	28,602,000
	<u>44,509,751,000</u>

ESTIMATED STAND OF LUMBER IN M. BOARD FEET

State	Publicly owned *	Privately owned	total
Ala.		56,300,000,000	56,300,000,000
Ariz.	27,550,000,000		27,550,000,000
Ark.	2,900,000,000	78,700,000,000	81,600,000,000
Cal.	133,300,000,000	248,100,000,000	381,400,000,000
Calif.	27,000,000,000		
Conn.			
Del.			
Fla.	800,000,000	73,900,000,000	74,700,000,000
Ga. (part)		46,000,000,000	
Ide.	78,700,000,000	50,400,000,000	129,100,000,000
Ill.			
Ind.			
Iowa.			
Kan.			
Ky.			22,955,000,000
La.		119,800,000,000	119,800,000,000
Me.			
Md.			
Mass.			
Mich.	500,000,000	47,600,000,000	48,100,000,000
Minn.	6,500,000,000	23,200,000,000	29,700,000,000
Miss.	200,000,000	95,300,000,000	95,500,000,000
Mo. (part)		9,900,000,000	
Mont.	43,812,000,000	21,800,000,000	65,612,000,000
Nebr.			
Nev.	1,700,000,000		
N. H.			
N. J.			
N. M.	18,740,000,000		
N. Y.	8,600,000,000		25,000,000,000
N. C. (part)	200,000,000	42,900,000,000	
N. D.			
Ohio.			
Okla.	4,000,000,000		
Ore.	147,700,000,000	398,100,000,000	545,800,000,000
Pa.			

State	Publicly owned	Privately owned	Total
R. I.			
S.C. (part)		30,700,000,000	
S. D.	5,500,000,000		25,000,000,000
Tenn.			25,000,000,000
Tex.		66,000,000,000	66,000,000,000
Utah	8,700,000,000		
Vt.			
Va. (part)		14,500,000,000	
Wash.	96,475,900,000	294,600,000,000	391,075,900,000
W. Va.			
Wis.	2,000,000,000	29,200,000,000	31,200,000,000
Wyo.	14,300,000,000		
All other states	420,095,000	450,000,000,000	566,600,000,000
	<u>629,000,000,000</u>	<u>2,197,000,000,000</u>	<u>2,826,000,000,000</u>

* This includes National Parks, National Forests, Military Reservations, Indian Reservations, Vacant Public lands, and State lands. Adapted from report of Bureau of Corporations "The Lumber Industry, 1909"

NATURAL FOREST REGIONS.

Typical trees of each Region.

1. Northern Forest

White Spruce
Red Spruce
Black Spruce
Balsam Fir
Hemlock
White Pine
Red Pine
Jack Pine
Arbor Vitae
Tamarack
Sugar Maple
Silver Maple
Red Maple
American Beech
Basswood
Cane Birch
Black Ash
White Ash
Chestnut
Cottonwood
Balsam Poplar
Aspen Poplar
Pin Cherry
Canada Plum

2. Central Forest

White Pine
Pitch Pine
Red Cedar
White Oak
Bur Oak
Black Oak
Red Oak
Pin Oak
Scarlet Oak
Shag-bark Hickory
Pecan
American Beech
Chestnut
Black Walnut
Butternut
Cucumber Tree
Tulip Poplar
Choke Cherry
Black Cherry
Sweet Gum
Sour Gum
White Ash
Blue Ash
Green Ash

Central Forest (Cont.)

Red Ash
American Elm
Slippery Elm
Hackberry
Basswood
Sycamore
Coffee Tree
Sugar Maple
Silver Maple
Red Maple
Box Elder
Sassafras
Hardy Catalpa
Black Locust
River Birch
Sweet Birch
Buckeye
Persimmon
Cottonwood

3. Southern Forest

Short-leaved Pine
Loblolly Pine
Jersey Pine
Long-leaved Pine
White Cedar
Evergreen Magnolia
Bald Cypress
White Oak
Red Oak
Black Oak
Post Oak
Live Oak
Sugar Maple
Red Maple
Silver Maple
Mocker-nut Hickory
Sycamore
Tupelo Gum
Red Gum
Red Bay
Cork Elm
Water Locust
Southern Catalpa
Persimmon
Water Ash
White Ash
Cottonwood
Osage Orange
Red Mulberry

4. Subtropical Forest.

Royal Palm
Palmetto
Cork Wood
Wild Fig

5. Rocky Mountain Forest.

Rocky Mountain Yellow Pine
Rocky Mountain White Pine
Douglas Spruce
White Fir
Blue Spruce
Utah Juniper
Western Red Cedar
Arizona White Oak
Quaking Aspen
Narrow-leaved Cottonwood

6. Pacific Coast Forest.

Douglas Spruce
Noble Fir
Red Fir
Sitka Spruce
Engelmann Spruce
Weeping Spruce
Western Arbor Vitae
Western Hemlock
Mountain Hemlock
Red-wood
Big Tree
Lodge-pole Pine
Yellow Pine
Western White Pine
Nut Pine
Incense Cedar
Port Orford Cedar
Yellow Cedar
California Live Oak
Pacific Yew
Western Larch
Vine Maple
Oregon Maple
Red Alder
Oregon Ash
Western Birch
Black Cottonwood

NATIONAL FORESTS.

Set aside by President Harrison-----	13,416,710	acres, none eliminated
" " " " Cleveland-----	26,686,320	" " "
" " " " McKinley-----	7,080,089	" " "
" " " " Roosevelt-----	148,546,924	" " "
" " " " Taft-----	4,333,847	" 11,680,578
" " " " Wilson-----	445,363	" 3,081,063
to June 30th, 1915		

USE OF LUMBER.

The 20,000,000,000 cubic feet of wood taken from our forests annually includes 100,000,000 cords of fire wood valued at \$250,000,000; 40,000,000,000 feet of lumber, \$750,000,000; 1,000,000,000 posts, poles and fence rails, \$100,000,000; 118,000⁰⁰⁰ railroad ties \$60,000,000; 1,500,000,000 staves, 133,000,000 sets of heading, and 50,000,000 barrel hoops valued at \$35,000,000; 3,000,000 cords of native pulp wood \$20,000,000; 165,000,000 cubic feet of mine timber \$10,000,000; and 1,250,000 cords of wood for distillation that would be included under the miscellaneous products valued at \$40,000,000. This makes a total of \$1,280,000,000. Of this value three-fifths is in lumber, one-fifth in firewood, and one to eight percent in other items.

COAL REGIONS. (See Map on Page).

Regions	State	Kind of Coal	Area sq. miles
1. Eastern	Pa.	Anthracite	70,022
	Appalachians	Bituminous	
2. Interior	Mich.	"	144,664
	Ill.		
	Ind.		
	W. Ky.		
	Iowa		
	Kansas		
	Missouri		
	Oklahoma		
	Arkansas		
	Texas		
3. Gulf	Ala.	Lignite	84,300
	Miss.		
	La.		
	Ark.		
	Tex.		

Regions	State	Kind of Coal	Area sq. miles
4. Northern Great Plains	The Dakotas N. Mont. N. Wyo.	Lignite and subbituminous	103,564
5. Rocky Mountains	N. Mont. N. Wyo. Colo. Utah N. Mexico	bituminous and subbituminous	92,396
6. Pacific Coast	Wash. Ore. Cal.		1,830
Total			496,776 sq. miles

ORIGINAL COAL SUPPLY.

Regions	Easily Available tons	Non-Available tons	Total tons
1. Eastern	555,634,000,000	8,000,000,000	563,634,000,000
2. Interior	406,667,000,000	91,000,000,000	497,667,000,000
3. Gulf	13,045,000,000	10,045,000,000	23,090,000,000
4. Northern Great Plains	521,793,000,000	459,000,000,000	980,793,000,000
5. Rocky Mountains	414,740,000,000	374,280,000,000	789,020,000,000
6. Pacific Coast	11,100,000,000	10,900,000,000	22,000,000,000
	1,922,979,000,000	1,155,225,000,000	3,078,204,000,000

ESTIMATED COAL SUPPLY BY STATE.

(From United States Geological Survey Bulletin #394, Conservation of Mineral Resources.)

State	Estimated Supply tons	Exhaustion to 1908
Alabama	68,903,000,000	.3%
Arizona	60,000,000	.00%
Arkansas	1,687,000,000	2.4%
California	1,000,000,000	.7%
Colorado	371,770,000,000	.05%
Georgia	953,000,000	1.3%
Idaho	600,000,000	.004%
Illinois	240,000,000,000	.4%
Indiana	44,169,000,000	.54%
Iowa	29,160,000,000	.6%
Kansas	7,022,000,000	1.9%
Kentucky	104,027,000,000	.18%
Maryland	8,044,000,000	3.4%
Michigan	12,000,000,000	.175%
Missouri	40,000,000,000	.36%
Montana	303,060,000,000	.012%
New Mexico	163,780,000,000	.02%
North Carolina	200,000,000	almost none
North Dakota	500,000,000,000	.0008%

State	Estimated Supply, tons	Exhaustion to 1908.
Ohio.	86,028,000,000	.9%
Oklahoma	79,278,000,000	.075%
Oregon	1,000,000,000	.27%
Pennsylvania		
(bituminous)	112,574,000,000	2.5%
(anthracite)	8,622,500,000	10.2%
South Dakota	10,000,000,000	none
Tennessee	25,665,000,000	.5%
Texas	8,000,000,000	.07%
Utah	197,458,000,000	.015%
Virginia	22,500,000,000	.4%
Washington	27,000,000,000	.33%
W. Virginia	231,039,000,000	.3%
Wyoming	424,085,000,000	.027%
Total -----	3,076,254,000,000	Less than 1%

Railroads take 140,000,000 tons per year; industries and households nearly three times this amount. In 1913 only 20,700,000 tons were exported. In 1915, 22,600,000 tons were exported of which 180,000 tons went to France as against 16,000 tons in 1913. In 1916, 2,800,000 tons went to Italy as against 322,000 tons in 1913.

In 1913 the world produced less than 1,500,000,000 short tons, of which the United States produced 570,048,125 tons, 38% of this total; Great Britain 321,922,120 tons, 22% of the total; and Germany in 1913, 281,979,467 or 20% of the total. These three centers exported coal. The remainder of the industrial world imported it. France in 1913 imported coal and coke to the value of \$111,000, Italy \$75,000, and Russia \$45,000.

FROM OUR REGIONS
(See Map on Page)

Districts	States	Available Long tons	Non-available Long tons	Production 1907 Long tons
1. Northeastern	Vermont, New York Massachusetts Connecticut New Jersey Pennsylvania Maryland, Ohio, Virginia	228,000,000	1,098,000,000	2,822,822
2. Southeastern	Alabama Georgia Florida South Carolina North Carolina Kentucky Tennessee	528,440,000	1,246,800,000	6,197,360
3. Lake Superior	Michigan Minnesota Wisconsin Illinois Indiana Ohio Pennsylvania Maryland, Ohio, Virginia	2,870,000,000	72,030,000,000	41,628,744
4. Mississippi Valley	Mississippi Alabama Georgia Florida South Carolina North Carolina Kentucky Tennessee	318,000,000	870,000,000	820,428
5. Rocky Mountain	Montana, Idaho Wyoming Colorado Utah, Nevada, New Mexico West Texas, Arizona Washington Oregon California	87,460,000	120,668,000	
6. Pacific Slope	Washington Oregon California	68,850,000	22,998,000	821,288
	Total	4,722,180,000	48,116,040,000	51,420,818

Ore Types	States	Available long tons	Non-available long tons.
Lake Superior.	Mich., Wis., Minn.	3,500,000,000	72,000,000,000
Adirondack	New York	20,200,000	127,000,000
Clinton	N.Y., Ky., Pa.	508,640,000	1,620,500,000
	Wis. Va. Tenn. Ala.		
Appalachian	N.Y., N.J., Va., N.C.	55,500,000	127,500,000
Metamorphic	S.C., Ala.		
Appalachian	N.H., N.Y., Pa., Md.,	65,400,000	181,500,000
Brown	N.J., N.C., Va., W.Va.		
	Tenn., Ala., Georgia.		
Appalachian	Pa., O., Ky., Tenn., Ala.		
carbonate			308,000,000
West Tennessee	Ala., Miss., Tenn., Ky.,	10,000,000	15,000,000
brown			
East Texas	Tex., La., Ark.,	260,000,000	?
brown			
Ozark	Mo., Ark.	45,000,000	55,000,000
Rocky Mountain	Wyo., Tex., Colo., N.M. Ariz.	1 ?	?
Metamorphic			
Total		4,786,155,000	75,116,070,000

OIL AND GAS

(See Map on page).

REGIONS	STATE	KIND OF PETROLEUM	MINIMUM BARRELS	MAXIMUM BARRELS.
1. Appalachian	N.Y. to Tenn.	Lamp Oil	2,000,000,000	5,000,000,000
2. Lima, Indiana	Ohio and Ind.	2% sulphur	1,000,000,000	3,000,000,000
3. Illinois	E. Illinois	Light Oils	350,000,000	1,000,000,000
4. Mid-Continent,	Kansas, Okla.	Light Oils in asphalt	400,000,000	1,000,000,000
5. Gulf	Texas, S. La.	Asphalt, little lamp oil or gasoline	250,000,000	1,000,000,000
6. California	California	Asphaltic	5,000,000,000	8,500,000,000
Other fields	Colo., Wyo., N. Mex. Utah, Ida., Mont., Ore., Wash.		1,000,000,000	5,000,000,000
Total ---			10,000,000,000	24,500,000,000

APPENDIX.

\$1076-57.

RAILROAD MAP.

MAIN TRUNK LINES.

Connections.

1. Northern Pacific	Chicago, St. Paul, Bismarck-Billings, Spokane to Portland and Seattle.
2. Union Pacific	Chicago, Omaha, Cheyenne, Granger to Portland and San Francisco
3. Southern Pacific	New Orleans, El Paso, Los Angeles to San Francisco and Seattle.
4. Santa Fe	Chicago-Kansas City, Albuquerque, Bakersfield to San Francisco.
5. Pennsylvania Lines	Philadelphia-Pittsburgh, to Chicago and St. Louis
6. New York Central	Boston / Albany, Buffalo, Cleveland to Chicago. New York)
7. Canadian Pacific	Crosses Maine; also Chicago to Winnipeg and to Vancouver in Canada.
8. Seaboard Air Line	New York, Philadelphia, Washington, Richmond, Raleigh and to Birmingham and Tampa.
9. Louisville and Nashville	New Orleans-Birmingham-Nashville to St. Louis and Cincinnati.
10. Illinois Central	New Orleans, Memphis, Cairo, to Chicago.
11. Chicago, Milwaukee, & St. Paul.	Chicago, Milwaukee, St. Paul, Spokane to Seattle
12. Southern Railway.	Washington, Charlotte, Atlanta to New Orleans.

FREIGHT RATES.

United States	.729	Denmark	2.133¢	Japan	.774¢
Brazil	.703¢	France	1.155¢	Russia	.938¢
Canada	.758¢	Germany	1.244¢	Spain	2.226¢
Austria	1.509¢	Hungary	1.215¢	Sweden	1.273¢

(From Report Interstate Commerce Commission to June 30, 1916.)

Total mileage of main lines, June 30, 1915.	257,569 miles
" " " tracks of all kinds	391,141 "
Number of tons of freight carried for revenue 1914	1,976,138,155 tons
" " " " " " " " 1915	1,802,018,177 tons
Number of Passengers carried 1914	1,053,136,718
" " " " " " " " 1915	976,305,602

Freight Rates (continued)

Total revenue:

Freight, June 30, 1914-1915	\$2,037,925,560
Passenger " " " "	646,475,045
Mail " " " "	58,359,095

Operating expenses-----	\$2,088,682,956
Total revenue from operation-----	751,978,207
Net income-----	306,378,567

Total capacity of freight cars-----	92,228,541 tons
Total capital invested-----	\$19,719,893,944

The investment in equipment in 1917 was estimated to be \$21,127,959,078

PROPOSED NATIONAL HIGHWAYS.

(See Map on page).

Main Highways. (Shown as solid heavy line on map.)

No.	Name	Route	Miles
1.	Northern	Boston-Albany-Buffalo-Cleveland-Chicago-Milwaukee-St. Paul-Fargo-Bismarck-Billings-Helena-Spokane-Seattle.	3,657
2.	Central	Washington-Wheeling-Columbus-Indianapolis-St. Louis-Kansas City-Topeka-Colorado Springs-Denver-Cheyenne-Salt Lake City-Carson-Sacramento	3,519
3.	Southern	Jacksonville-Mobile-New Orleans-Houston-El Paso-Tucson-Yuma-San Diego.	3,046
4.	Atlantic	Galais-Portsmouth-Boston-Providence-New Haven-New York-Philadelphia-Baltimore-Washington-Richmond-Raleigh-Columbia-Augusta-Savannah-Miami	2,309
5.	Mississippi	Buluth-St. Paul-Dubuque--Springfield-St. Louis-Cairo-Memphis-Jackson-Baton Rouge-New Orleans	1,779
6.	Pacific	Bellingham-Tacoma-Portland-Sacramento-San Francisco-Los Angeles-San Diego	1,620

Main Highways total 16,160

Trunk Highways. (Shown as dotted line on map.)

No.	Name	Route	Miles
7.	Appalachian	Albany-Seranton-Harrisburg-Hagerstown-Roanoke-Knoxville-Chattanooga-Birmingham-Mobile	2,191
8.	Canada-Gulf	St. Paul-Sioux City-Kansas City-Joplin-Texas-Kana-Baton Rouge-New Orleans	1,802
9.	Great Lakes-Atlantic	Chicago-Indianapolis-Cincinnati-Lexington-Asheville-Columbia-Charleston	1,218
10.	Great Lakes-Gulf	Chicago-Terre Haute-Nashville-Chattanooga-Atlanta-Macon-Tallahassee-Aspalachicola	1,681
11.	Lake-Mountain-Pacific	Chicago-Savoyport-Council Bluffs-Lincoln-Denver-Salt Lake City-Mareka-Los Angeles	3,040
12.	Missouri-Arizona	Chicago-St. Louis-Joplin-Guthrie-Albuquerque-Phoenix	1,900
13.	Northwest	Chicago-Dubuque-Sioux Falls-Deadwood-Billings	1,903
14.	Oklahoma-Carolinas	Wagoner-Little Rock-Helena--Memphis-Nashville-Knoxville	650
15.	Puget-Gulf	Seattle-Walla Walla-Boise-Pocatello-Granger-Trinidad-Fort Worth-Galveston	2,503
16.	Rocky Mountain	Havre-Helena-Livingston-Gardiner-Yellowstone Park-Cheyenne--Colorado Springs-Santa Fe-El Paso	1,854
17.	Santa Fe	Stockton-Mojave-Flagstaff-Albuquerque-Trinidad-Kansas City	2,398
18.	Southwest	Philadelphia-Harrisburg-Pittsburg-Charleston-Louisville-Cairo-Little Rock-Texas-Kana-Dallas-Laredo	2,531
19.	Texas-Atlantic	Wilmington-Charlotte-Atlanta-Birmingham-Jackson-Shreveport-Dallas-Fort Stockton	2,263
20.	Meridian	Pembina-Fargo-Yankton-Melpherson-Fort Worth-Maco-Galveston	1,872
Trunk Highways- total			27,806
To this add many Link Highways (Shown in light lines)			6,539
Grand total of National Highway System			50,485 miles

TRANSCONTINENTAL MOTOR ROUTES.
(See Map on Page)

No.	Name	Route	Mileage	Condition
1.	Lincoln Highway	New York-Philadelphia-Pittsburg-Dallas-Oklahoma-Salt Lake City-Reno-San Francisco	2,300	Organized 1913 usable and marked 1916.
2.	Southern Highway	Washington-Richmond-Durham- (Knoxville-Birmingham-Gulf route- Little Rock-Dallas) or (Charlottesville- Atlanta-Montgomery-Mobile-New Orleans)-St. Louis-Phoenix-Tucson-San Diego	3,202	Many stretches impossible 1916.
3.	National Old Trails Road	Washington-Wheeling-Columbus- Indianapolis-St. Louis-Kansas City-Elmwood-Albuquerque-Flag- staff-Los Angeles	2,930	Proposed 1911. More than 1/3 usable 1916.
4.	Midland Trail	(Pikes Peak Ocean to Ocean) By National Old Trails Road from Washington to Kansas City-Denver- Salt Lake City-and by Lincoln Highway to San Francisco.	2,500	Proposed March 1916 in use June 1916.
5.	Yellowstone Trail	(National Parks Transcontinental) Boston-Albany-Buffalo-Cleveland- Chicago-Minneapolis-St. Paul-Lincoln- Missoula-Spokane-Seattle-		
6.	Northwest Trail	Minneapolis-San Diego-St. Paul- Butte-Bismarck-Denver-and via Yellow- stone trail to Seattle		
7.	Wonderland Trail	Duluth-Grand Forks-Minnesota- Glacier National Park-Spokane and via Yellowstone trail to Seattle		

No.	Route	Mileage	Condition
8.	Dixie Highway Jackson-Chicago-Indianapolis-Louisville-Kentucky-Tennessee-Georgia-Florida-Alabama-Louisiana-Mississippi-Alaska	2,700	Over 80% complete, to be finished 1918.
9.	World in Road Portland-Memphis-Columbia-Richmond-Cathart-1,666	1,666	Much work done 1916.
10.	Oregon Trail (Planned by) By National Old Trails Road to Kansas City-Kentucky-Tennessee-Indiana-Illinois-Missouri-Nebraska-Kansas	2,000 from 644	Worked with stone markers. No work done yet. 1916.
11.	Oregon Trail Ogden-Reno-A detour for Lincoln Highway through northern Nevada	---	---
12.	Yellowstone Yellowstone Park-Douglas-Chicago	---	In use 1916.
13.	Black and Yellow Trail Yellowstone Park-Denver-Pike's Peak and Chicago	---	---
14.	English Highway Vancouver-Battle-Portland-Sacramento-San Francisco-Los Angeles-San Diego	1,015	In use 1916
15.	El Camino Real San Francisco-Los Angeles-San Diego	612	In use 1916
16.	Jackson Highway Chicago-Via Dixie Highway to Louisville	(Buffalo to Louisville 623)	Organized July 1916 Used 95% surfaced 1916.

No.	Route	Mileage	Condition
17.	Old Spanish Trail (Jefferson Davis Highway) Miami-Tampa-Live Oak-Kadison- Tulchasee-Mobile-via southern Highway to San Diego	2,760	Work begun. Mostly unimproved 1916.
18.	International Highway Glacier National Park-Missoula- Polio-Lewistown-via Oregon Trail to Boise. From Boise to Pocatello-Ogden- Kamoh-Missoula-via Phoenix-via Southern Highway to Douglas	2,066	415 miles yet to be improved 1916
19.	Atlantic Highway Dallas-Buffalo-Renton-Providence- New York-via Southern Highway to Durham-Washington-Columbia-via State- Savannah-Jacksonville-Miami	2,240	Unable 1916
20.	Park to Park Highway Yellowstone National Park-Big Horn-via Yellowstone Highway to Cheyenne-Indian-Rates Park-Pikes Peak Park-Nova Verde National Park- Bottled Forest-Grand Canyon National Monument-Sagwala National Park-Township National Park-Croft National Park-Mc. Kainer National Park-Glacier National Park-Yellow- stone National Park.	(about 4,000)	Proposed July 1916.
21.	Jefferson Highway St. Paul-des Moines-Kansas City- Joplin-Pittion-Shreveport-New Or- leans.	-----	-----
22.	Route 20 and Sunset Trails Washington via Old Trails Road to Albuquerque-Phoenix-via Southern Highway to Yuma	-----	-----

No.	Name	Route	Mileage	Condition
23.	Old Indian Trail	Charleston-Columbia-Augusta-Atlanta-Birmingham-Columbus-Hot Springs-Lawton-Santa Fe-Via National Old Trails to Los Angeles	2,960	Proposed 1915 No work done
24.	Appalachian Highway	Port Kent-(Maine)-Augusta-Fairland-Schenectady-Saratoga-Hartford-Hagerstown-Knoxville-Chatanooga-Birmingham-Memphis-New Orleans	-----	Proposed 1915 Much impassable
25.	Sunshine Highway	British Columbia-Spokane-Boise-Twin Falls-Idaho-Bojave City-Preseott-Phoenix-Korales	2,248	Proposed 1916 Desert region wholly impassable
26.	Great Lakes-Atlantic Highway	Oleveland-Kentler-Honolulu-Charlotte-Columbia-and via Atlantic Highway to Miami	1,525	Mostly usable
27.	Mississippi Highway	Superior-Ren Ojire-Dubuque-Keokuk-St. Louis-Cairo-Memphis-Jackson-New Orleans	1,660	Proposed 1916
28.	International Paved-way	Detroit-South Bend-Springfield-St. Louis-Little Rock-Texas-Kansas-Dallas-Austin-Laredo	2,000	Proposed 1916

WATER TRANSPORTATION.

Advantages of Water Transportation:

1. Less power is required to move a ton horizontally on water than in any other way. To move one ton requires:

218 lbs.	by horses on good dirt road.
100 lbs.	" " " dustless level road. (minimum)
33 lbs.	" " " paved level street.
4 lbs.	" railroad by best level straight track @ 10 miles per hour
10 lbs.	" " " best level curved track
1 lb.	on water to keep load moving on water.
5 lbs.	by water at speed of 5 miles per hour. (best speed)

2. There is an advantage of grade of waterways over all other ways. Highways vary with topography, grades often rising to over 10%. Railways are built to low grades, sometimes rising to 4%. Waterways are practically level, grades being taken up by locks. On land transportation each 1% added to a slope requires an extra tractive force of 20 lbs.

3. The proportion of weight of vehicle to load is less on waterways. A horse pulls over 80% of the paying load in the weight of the wagon. Motor trucks at present pull a much greater percent in the vehicle. A freight car weighs at least 37% of its carrying capacity. Ocean and lake freighters have a much lower per cent of vehicle to load than wagons. River and canal barges weigh about 15% of the carried load.

4. The first cost of vehicle per ton carried is lowest on river barges.

Wagons cost \$15. to \$30. per ton carried, Motor trucks cost \$500. to \$1,000 per ton carried. Freight cars cost \$25. to \$30. per ton carried. Ocean freighters \$70. to \$100. per ton carried. River barges cost from \$4. to \$9. per ton carried.

4a. The average speed of vehicles, the chief factor in the cost of

vehicle per ton per year, is mostly in favor of water vehicles.

Wagons average	2 miles per hour (including delays)	20 mi. per dy.
Motor trucks	6 " " " " " "	144 " " "
Freight Cars	2 " " " " " "	50 " " "
Ocean carriers	10 " " " " (no delays)	240 " " "
Lake freighters	6 " " " " (deduct 10% for each month of ice)	144 " " "
River barges	4 " " " " (including lock delays but deduct also for ice.)	100 " " "

The factor of delay makes comparison difficult.

5. The life of the vehicle is greatly in favor of water vehicles.

Wheel wear and shock on road bed are wholly avoided by water carriers.

6. The cost for motive power is greatly in favor of railroads for the initial costs.

H	
Horse for wagons about	\$150. per horse power
Motor trucks	30 " " "
Lake freighters	25 " " "
Ocean carriers over	25 " " "
Locomotives about	15 " " "
Tow boats	60 to \$90 per horse power.

Operating costs and cost of maintenance are much higher on locomotives than other vehicles. A locomotive burns at least twice the fuel per horse power that a marine engine does, and many times more than a gas engine. At least 5% of the operating costs of locomotives goes for repairs due to racking from travel, from which water borne vehicles are entirely free.

7. The first cost of roadway must vary with circumstances.

Macadam roads for heavy tonnage \$150,000 per mile, the Ohio river canal will cost \$77,600 per mile. New York Barge canal will cost \$300,000 per mile. A double track railway with sidings, \$100,000 per mile. Lake and Ocean are of course free of cost as traffic ways, and the tonnage capacity per hour is by far the greatest for canals.

8. Maintenance of way is lower for river routes, even canals with locks, than railways or highways.

Cost of maintaining Ohio River Canal estimated	\$1,035.	per mi. per yr.
" " " railways for heavy traffic	\$1,200. to \$1,600	per mi. per yr.
" " " highways of very limited capacity	\$1,000.	per mi. per yr.

A regulated stream, moreover, reduces maintenance cost for bridges used by highway and roadway.

9. The cost for crew per ton mile is in favor of water transportation.

10. Terminal charges are usually heaviest for water transportation, but the terminals of water routes are used also by land vehicles.

Disadvantages of water transportation:

1. Waterways cannot reach interior points. Trans-shipping to land vehicles is often necessary.
2. River and canal routes are often longer than railways and highways.
3. Usually only low-grade and non-perishable goods are water borne. Perishable and high grade goods are usually carried on land. This need not be true in the future.
4. In northern latitudes ice closes water routes for several weeks or months each year.
5. There are dangers peculiar to water borne vehicles--shifting channels, sandbars, hidden snags and logs, storms and fogs, drifting ice, collisions, etc. Wheel borne vehicles on land have their dangers---derailments, collisions, fog and storms, washouts, and many obstructions of the right-of-way.

(Adapted from "Ohio Water Problem" by C. A. Sherman, Ohio State Bulletin, 1915)

POPULATION OF CITIES.

New York,---N. Y.	5,333,539
Chicago,--- Ill.	2,397,600
Philadelphia,---Pa.	1,657,910
St. Louis,--- Mo.	737,597
Boston---Mass.	734,747
Cleveland,---Ohio.	639,431
Baltimore,---Md.	579,590
Pittsburgh,---Pa.	564,878
Detroit,--- Mich.	546,183
Buffalo,--- N. Y.	457,723
San Francisco---Cal.	452,855
Los Angeles---Cal.	452,140
Milwaukee,--- Wis.	419,589
Cincinnati,--- Ohio.	402,175
Newark,--- N. J.	389,106
New Orleans--- La.	351,321
Washington -- D.C.	356,028
Minneapolis,--- Minn.	343,455
Seattle,--- Wash.	313,029
Jersey City--- N. J.	293,403
Kansas City---Mo.	284,567
Indianapolis,---Ind.	259,820
Portland,--- Ore.	259,582
Denver,--- Colo.	245,523
Rochester,--- N. Y.	245,077
Providence,--- R.I.	243,856
St. Paul,--- Minn.	236,766
Louisville,--- Ky.	234,482
Columbus,--- Ohio.	204,567
Oakland,--- Cal.	186,902
Toledo,--- Ohio.	184,126
Atlanta,--- Ga.	179,292
Birmingham,--- Ala.	164,165
Worcester,--- Mass.	157,499
Syracuse,--- N. Y.	149,353
New Haven,--- Conn.	144,505
Memphis,--- Tenn.	142,231
Scranton,--- Pa.	141,351
Spokane,--- Wash.	135,657
Paterson,--- N. J.	135,339
Richmond,--- Va.	135,061
Omaha,--- Neb.	133,274
Fall River,--- Mass.	125,443
Grand Rapids--- Mich.	123,860
Dayton,--- Ohio.	123,794
San Antonio,--- Texas	116,890
Bridgeport,--- Conn.	116,075

Nashville,---Tenn.	114,899
Dallas,--- Texas.	113,525
Lowell,--- Mass.	111,004
New Bedford,---Mass.	110,941
Cambridge,--- Mass.	110,565
Salt Lake -- Utah.	109,736
City	
Hartford,--- Conn.	107,521
Trenton,--- N.J.	107,228
Houston,--- Tex.	104,736
Tacoma,--- Wash.	103,416
Reading,--- Pa.	103,361
Albany,--- N. Y.	102,961
Camden,--- N.J.	102,455
Youngstown,---Ohio.	100,593
Springfield,---Mass.	100,146
Lynn,--- Mass.	98,307

From "Statistics of Cities"

U.S. Census Bureau 1915.

Population of States
Estimated July 1, 1916 or State Census 1915.

	Population.
Alabama-----	2,332,608
Arizona-----	225,544
Arkansas-----	1,739,723
California-----	2,938,654
Colorado-----	962,060
Connecticut-----	1,244,479
Delaware-----	213,880
District of Columbia-----	868,980
Florida-----	898,493
Georgia-----	2,856,065
Idaho-----	428,586
Illinois-----	6,162,257
Indiana-----	2,616,817
Iowa-----	2,220,321
Kansas-----	1,829,545
Kentucky-----	2,379,629
Louisiana-----	1,829,150
Maine-----	772,489
Maryland-----	1,362,837
Massachusetts-----	3,693,310
Michigan-----	3,054,854
Minnesota-----	2,279,603
Mississippi-----	1,951,674
Missouri-----	3,410,692
Montana-----	459,494
Nebraska-----	1,271,375
Nevada-----	106,734
New Hampshire-----	442,506
New Jersey-----	2,644,342
New Mexico-----	410,262
New York-----	10,275,375
North Carolina-----	2,402,938
North Dakota-----	739,201
Ohio-----	5,088,627
Oklahoma-----	2,232,081
Oregon-----	835,741
Pennsylvania-----	6,522,017
Rhode Island-----	595,986
South Carolina-----	1,625,475
South Dakota-----	698,609
Tennessee-----	2,286,094
Texas-----	4,428,566
Utah-----	454,023
Vermont-----	262,699
Virginia-----	2,192,019
Washington-----	1,534,221
West Virginia-----	1,586,036
Wisconsin-----	2,500,353
Wyoming-----	141,705
From Statesman's Yearbook 1916.	102,107,212

Total Population of the United States

1800	5,308,482
1850	23,191,876
1880	52,155,765
1900	75,994,575
1916	101,882,479

Per Sq. Mile.

6.47
7.86
16.66
25.55
24.26

INDIAN RESERVATIONS.

(See Map on page).

No.	Key	Name	State	Area
66.	(1200-14)	Allegheny, N.Y.		30,489
46.	(4600-1)	Blackfeet, Mont.		1,498,207
36.	(2700-2)	Bois Fort (Bett Lake), Minn.		56,782
1.	(4400-22)	Camp McDowell (Salt River), Ariz.		24,971
67.	(1200-18)	Cattaraugus, N.Y.		81,680
121.	(5600-5)	Chabalia (Cushman), Wash.		3,799
79.	(2800-28)	Cherokee, Okla.		4,346,243
82.	(2800-28)	Cherokee Outlet, Okla.		4,949
84.	(3000-27)	Cheyenne and Arapaho, Okla.		526,789
151.	(3400-8)	Cheyenne River, S. D.		1,210,808
80.	(3100-30)	Chickasaw, Okla.		3,803,635
28.	(2900-22)	Chippewa and Menominee, Kan.		4,195
81.	(2900-31)	Choctaw, Okla.		4,291,036
24.	(5000-6)	Coeur d'Alene, Ida.		104,077
2.	(4600-32)	Colorado River, Ariz.		240,699
122.	(5300-5)	Columbia (Colville), Wash.		22,619
123.	(5100-2)	Colville, Wash.		1,347,989
82.	(3000-26)	Creek, Okla.		2,999,608
47.	(4200-7)	Crow, Mont.		2,313,213
109.	(3300-10)	Crow Creek and Old Minnabago, S.D.		288,905
37.	(3700-3)	Deer Creek (Bett Lake), Minn.		296
75.	(3200-3)	Devil's Lake (Fort Totten), N.D.		137,381
15.	(5400-22)	Digger, Cal.		270
57.	(5000-14)	Duck Valley (Western Shoshone), Nev. & Ida.		381,920
38.	(2600-5)	Fond du Lac, Minn.		33,286
3.	(4300-30)	Fort Apache, Ariz.		1,681,920
48.	(4100-2)	Fort Belknap, Mont.		497,600
76.	(3600-2)	Fort Berthold, N.D.		329,554
25.	(4600-12)	Fort Hall, Ida.		366,472
4.	(4800-22)	Fort Mojave, Ariz.		31,328
49.	(3900-2)	Fort Peck, Mont.		722,453
5.	(4600-35)	Gila Bend, (Pima), Ariz.		10,231
6.	(4800-34)	Gila River (Pima), Ariz.		266,309
115.	(4800-20)	Goshute and Deep Creek, Utah.		34,500
39.	(2400-3)	Grand Portage, Minn.		24,191
105.	(5700-8)	Grande Ronde, Ore.		32,783
7.	(4600-27)	Havasupai (Suppai), Ariz.		616
124.	(5600-3)	Hoh River (Neah Bay), Wash.		640
3.	(4700-26)	Hualapai (Walapai), Ariz.		780,880
13.	(5700-15)	Hoopa Valley, Cal.		128,142
33.	(1700-12)	Isabella, Mich.		98,586
29.	(2900-19)	Iowa (Kickapoo), Kan.		11,769
85.	(3000-26)	Iowa (Saw and Fox), Okla.		8,605
62.	(4100-25)	Jicarilla Apache, N.M.		761,112
50.	(4800-3)	Jocho (Flathead), Mont.		228,408

No.	Key	Name	State	Area
9.	(4600-25)	Kaibab, Ariz.		128,240
125.	(5500-5)	Kalispel, Wash.		4,629
86.	(3000-25)	Kansa (Kaw), Okla.		99,644
30.	(3000-19)	Kickapoo, Kan.		27,531
88.	(5200-29)	Kiowa, Comanche and Apache, Okla.		547,236
87.	(2800-25)	Kickapoo (Shawnee), Okla.		22,650
106.	(5600-13)	Klamath, Ore.		1,019,176
142.	(2400-7)	Lac Courte Oreille (Hayward), Wis.		68,914
143.	(2300-7)	Lac du Flambeau, Wis.		41,030
110.	(3000-7)	Lake Traverse (Siasseton), S.D.		508,838
34.	(2100-5)	L'Anse, Mich.		52,773
144.	(2400-5)	La Pointe (Mad River), Wis.		123,751
26.	(5000-6)	Lapwai (Hot Porco), Ida.		212,390
40.	(2800-4)	Leech Lake, Minn.		47,772
111.	(3400-11)	Lower Brule, S. D.		239,511
153.	(5600-1)	Lummi (Tulalip), Wash.		12,561
127.	(5800-1)	Makah (Nash Bay), Wash.		23,040
41.	(2700-4)	Mankakanton, Minn.		12,582
145.	(2200-9)	Menominee, Wis.		231,680
63.	(4000-34)	Mescalero Apache, N.M.		474,240
17.	(5000-31)	Mission, Cal.		178,397
58.	(4500-25)	Mojave River, Nev.		1,128
89.	(2800-26)	Modoc (Seneca), Okla.		3,966
10.	(4400-26)	Mohave (Hopi), Ariz.		2,472,320
128.	(5600-3)	Muckleshoot (Cushman), Wash.		3,491
11.	(4300-26)	Navajo, Ariz., N.M., Utah.		11,589,997
129.	(5700-3)	Nisqually, (Cushman), Wash.		4,717
51.	(4000-6)	North Cheyenne (Tongue River), Mont.		489,500
90.	(3000-25)	Oakland (Ponca), Okla.		11,456
68.	(1100-14)	Oil Spring, N.Y.		640
52.	(3000-15)	Omaha, Neb.		125,022
69.	(900-13)	Onida, N.Y.		350
146.	(2200-19)	Onida, Wis.		65,440
70.	(900-13)	Orondaga, N.Y.		6,100
35.	(2100-5)	Ontonagon, Mich.		2,551
91.	(3,000-25)	Osage, Okla.		1,465,350
92.	(3000-26)	Otoe, Okla.		128,351
93.	(3000-26)	Ottawa (Seneca), Okla.		12,995
130.	(5700-2)	Ozette (Nash Bay), Wash.		640
18.	(5200-24)	Payute, Cal.		75,746
116.	(4400-24)	Payute (Navajo), Utah.		600,000
69.	(5200-16)	Payute (Fallon), Nev.		4,640
12.	(4500-35)	Papago, Ariz.		155,954
94.	(3000-25)	Pawnee, Okla.		112,701
95.	(3000-25)	Peoria (Seneca), Okla.		43,234
112.	(3600-11)	Pine Ridge, S. D.		2,367,148
96.	(3000-25)	Ponca, Okla.		101,138
53.	(2200-13)	Ponca (Santee), Neb.		27,236
131.	(5600-2)	Port Madison (Tulalip), Wash.		7,264
31.	(3000-21)	Potawotomie, Kan.		220,788
97.	(2100-26)	Potawotomie, (Shawnee), Okla.		291,616
64.	(4000-28)	Pueblo, N.M.		773,300
132.	(5300-3)	Puyallup (Cushman), Wash.		17,463
60.	(5800-19)	Pyramid Lake, Nev.		322,000

No.	Key	Name	State	Area
74.	(1700-27).	Qualla, N.C.		63,211
98.	(2800-24).	Quapaw (Seneca), Okla.		56,245
133.	(5800-2).	Quilts (Kash Bay), Wash.		827
134.	(5800-6).	Quinalt (Taholah), Wash.		223,543
147.	(2400-5).	Red Cliff, Wis.		14,166
42.	(2300-3).	Red Lake, Minn.		543,328
113.	(3300-12).	Rosebud, S.D.		1,716,321
19.	(5700-19).	Round Valley, Cal.		42,106
27.	(2600-14).	Sac and Fox, Iowa.		3,251
99.	(3000-26).	Sac and Fox, Okla.		87,684
32.	(3000-19).	Sac and Fox (Kickapoo), Kan.		8,079
13.	(4500-32).	Salt River, Ariz.		46,780
14.	(4300-33).	San Carlos (White Mountain), Ariz.		1,834,240
54.	(2100-14).	Santee (Siobrara), Neb.		72,611
23.	(1500-45).	Seminole, Fla.		23,542
100.	(3000-27).	Seminole, Okla.		259,697
101.	(2800-26).	Seneca, Okla.		41,813
102.	(3000-27).	Shawnee, Okla.		12,745
117.	(4700-24).	Shivwite, Utah.		23,040
135.	(5700-5).	Shoalwater, Wash.		225
154.	(5800-9).	Silata, Ore.		44,459
55.	(2100-14).	Sioux, Neb.		640
136.	(5400-6).	Skokomish (Cushman), Wash.		7,802
118.	(4700-22).	Skull Valley, Utah.		60
137.	(5600-4).	Snokomish (Tulalip), Wash.		22,490
138.	(5100-4).	Spokane, Wash.		1,494
139.	(5600-4).	Squaxton Island (Cushman), Wash.		7,259
77.	(3400-6).	Standing Rock, N.D., S.D.		1,397,926
148.	(2300-10).	Stockbridge and Munsee, Wis.		8,920
71.	(700-9).	St. Regis, N.Y.		14,640
140.	(5800-1).	Swinomish (Tulalip), Wash.		7,259
72.	(1200-13).	Tanawanda, N.Y.		7,549
20.	(5200-27).	Tule River, Cal.		48,551
78.	(3300-1).	Turtle Mountain, N.D.		43,820
73.	(1200-13).	Tascorora, N.Y.		6,269
119.	(4500-10).	Utah Valley, Utah.		288,950
152.	(5200-7).	Umatilla, Ore.		156,774
120.	(4300-19).	Uncompahgre, Utah.		75,327
22.	(4200-24).	Ute, Colo.		466,794
43.	(2500-5).	Vermillion Lake, Minn.		1,060
61.	(5200-21).	Walker River, Nev.		50,503
150.	(5500-2).	Wam Springs, Ore.		462,804
44.	(2900-5).	White Earth, Minn.		712,790
45.	(2800-4).	White Oak Point and Chippewa (Leach Lake) Minn.		64,733
103.	(2300-28).	Wichita (Kiota), Okla.		162,714
149.	(4200-12).	Wind River (Shoshone), Wyo.		650,469
56.	(3000-15).	Winnabago, Neb.		123,393
104.	(2800-25).	Wyandot (Seneca), Okla.		20,942
141.	(5300-6).	Yakima, Wash.		1,056,462
114.	(2100-12).	Yankton, S.D.		268,263
21.	(5000-33).	Yuma, Cal.		39,366
65.	(4200-29).	Zuni, N.M.		215,040
Total				67,025,434 acres.

Administered by Dept, of Interior,

MILITARY RESERVATIONS
of 100 Acres or more,
Administered by the Department of War.
(See Map on Page).

No.	Key	Name	State	Area in Acres
1.	(1900-39)	Anniston Field Artillery Range,	Ala.	760
2.	(2100-38)	Fort Gaines,	Ala.	267
3.	(2100-38)	Fort Morgan,	Ala.	493.9
4.	(2100-38)	Perdido Bay, (2 reservations)	Ala.	298.8 1,097.4
5.	(4300-30)	Fort Apache,	Ariz.	7,579.75
6.	(4400-35)	Fort Huachuca,	Ariz.	44,800.
7.	(4600-32)	Backeye Military Target Range,	Ariz.	640.
8.	(4800-35)	Douglas " " "	"	640.
9.	(4500-38)	Flagstaff " " "	"	640.
10.	(4500-32)	Florence " " "	"	6,141.1
11.	(4500-32)	Hess " " "	"	1,278.6
12.	(4500-32)	Phoenix " " "	"	320.
13.	(4500-34)	Wilmet " " "	"	3,200.
14.	(4800-33)	Yuma " " "	"	240.
15.	(4600-29)	Whipple-Parracks, and Target Range	"	1,731.5
16.	(2600-29)	Fort Logan H. Roots,	Ark.	1,049.25
17.	(5600-23)	Forta Baker and Barry	Cal.	1,905.16
18.	(5500-22)	Benicia Post and Arsenal	Cal.	251.86
19.	(5100-51)	Fort MacArthur	Cal.	102.41
20.	(5600-23)	Fort McDowell,	Cal.	640.
21.	(5500-25)	Presidio of Monterey,	Cal.	392.13
22.	(5100-23)	Fort Rosecrans,	Cal.	940.3
23.	(5600-24)	Presidio of San Francisco	Cal.	1,479.94
24.	(5600-23)	Yerba Buena Island,	Cal.	141.
25.	(2800-18)	Fort Logan	Colo.	973.08
26.	(2800-18)	Fort Logan Target Range	Colo.	960.
27.	(900-19)	Fort Delaware,	Del.	178.
28.	(800-21)	Delaware Breakwater	Del.	140.
29.	(900-19)	Fort Du Pont,	Del.	269.32
30.	(1300-38)	Militia Target Range,	Del.	227.
		Anastasia Island Military	Fla.	700.
		Reservations,		
31.	(2100-37)	Fort Barrancas,	Fla.	2,590.
32.	(1600-45)	Cayo Costa, or Boca Grande	Fla.	1,176.24
		Island,		
33.	(1700-40)	Cedar Keys,	Fla.	202.8
34.	(1500-37)	Fort Clinch	Fla.	694.5
35.	(1600-43)	Fort Dade and De Soto	Fla.	378.) 613.)
36.	(1600-45)	Gasparilla Island,	Fla.	Unknown
37.	(2100-37)	Fort McRee,	Fla.	400
38.	(1500-38)	Militia Target Range,	Fla.	682.
39.	(2000-28)	Moranc Point Reservation,	Fla.	5,958.2
40.	(2000-38)	Panacea Military Reservation	Fla.	269.39
1.	(2000-38)	Perdido Bay	Fla.	109.9
2.	(2000-38)	Fort Pickens	Fla.	Unknown
3.	(1900-38)	St. Andrew's Sound Reservation	Fla.	1,603.8
4.	(1500-37)	St. John's Bluff	Fla.	117.7

45.	(1900-38)	St. Joseph's Bay Reservation,	Fla.	4,000.
46.	(1800-31)	Fort McPherson	Ga.	236.64
47.	(1900-31)	Fort McPherson Rifle Range	Ga.	1,271.
48.	(1500-34)	Savannah Military Target Range,	Ga.	112.
49.	(1700-32)	Holton " " "	Ga.	177.5
50.	(1700-31)	Atlanta " " "	Ga.	134.2
51.	(1500-31)	Augusta " " "	Ga.	112.15
52.	(1900-29)	Fort Oglethorpe Target Range	Ga.	1,926.
53.	(1500-37)	Point Peter,	Ga.	720.
54.	(1400-34)	Fort Pulaski	Ga.	150.
55.	(1400-34)	Fort Screven,	Ga.	297.
56.	(5000-11)	Boise Barracks	Ida.	7,036.35
57.	(5000-11)	Militia Rifle Range	Ida.	160.
58.	(2400-16)	Rock Island Arsenal	Ill.	896.62
59.	(2100-14)	Fort Sheridan	Ill.	720.87
60.	(1900-19)	Fort Benjamin Harrison,	Ind.	2,417.81
61.	(2700-15)	Fort Des Moines	Iowa	640.
62.	(2700-15)	Fort Des Moines, Target Range,	Iowa	896.96
63.	(2700-16)	Polk County Rifle Range	Iowa	272.77
64.	(2500-15)	Cedar Rapids Target Range	Iowa	117.27
65.	(2800-20)	Fort Leavenworth	Kan. and Mo.	6,781.78
66.	(3000-20)	Fort Riley,	Kan.	19,446.73
67.	(1800-20)	Fort Thomas	Ky.	285.62
68.	(2300-39)	Battery Bienvenue	La.	934.7
69.	(2300-39)	Fort Jackson	La.	557.6
70.	(2300-40)	Fort Livingston	La.	126.16
71.	(2300-38)	Fort Pike,	La.	Unknown
72.	(2300-38)	Proctor's Landing Military Reservation	La.	100.
73.	(2300-40)	Fort St. Philip	La.	1,105.85
74.	(200-9)	Fort Knox	Mo.	124.5
75.	(400-11)	Fort Levett	Mo.	125.68
76.	(400-12)	Fort McKinley	Mo.	111.
77.	(100-20)	Fort Howard,	Mo.	245.
78.	(100-21)	Fort Smallwood,	Mo.	100.
79.	(100- 21)	Fort Washington	Mo.	341.43
81.	(400-14)	Fort Andrews	Mass.	90.2
82.	(400-14)	Deer Island	Mass.	100.
83.	(300-15)	Long Point	Mass.	150.
84.	(600- 14)	Springfield Armory	Mass.	306.
85.	(1800-6)	Target Range, Fort Brady	Mich.	2,960.
87.	(1700-14)	Detroit Target Range	Mich.	101.64
88.	(1900-12)	Grand Rapids Target Range	Mich.	193.6
89.	(2700-9)	Fort Snelling.	Minn.	2,381.75
90.	(2200-38)	Ship Island	Miss.	1,350.
91.	(2400-24)	Arsadia Target Range	Mo.	1,375.
92.	(2400-22)	Jefferson Barracks	Mo.	1,260.91
93.	(2400-22)	St. Louis Militia Target Range	Mo.	307.
94.	(2800-23)	Nevada " " "	Mo.	123.4
95.	(3900-5)	Fort Keogh Remount Depot	Mont.	57,600.
96.	(4600-5)	Fort Missoula	Mont.	3,417.41
97.	(4600-5)	Fort William Henry Harrison	Mont.	1,799.
98.	(3000-16)	Fort Crook	Neb.	545.67
99.	(3000-17)	Plattsmouth Rifle Range	Neb.	696.
100.	(3700-14)	Fort Robinson	Neb.	23,040.

101.	(300-13)	Militia Target Range.	N. H.	138.62
102.	(700-18)	Fort Hancock,	N. J.	1,566.
103.	(900-19)	Fort Mott,	N. J.	146.1
104.	(600-17)	Picatinny Arsenal,	N. J.	1,551.12
105.	(4200-33)	Fort Bayard,	N. H.	14,100.
106.	(4000-34)	Fort Bliss Target Range.	N. H.	Unknown
107.	(3900-32)	Militia Target Range.	N. H.	6,928.
108.	(4200-27)	Fort Wingate,	N. H.	73,500.
109.	(700-17)	Fort Hamilton,	N. Y.	115.6
110.	(700-17)	Fort H. G. Wright,	N. Y.	306.
111.	(700-17)	Fort Jay (Governor's Island)	N. Y.	204.5
112.	(900-10)	Madison Barracks Post,	N. Y.	107.6
113.	(900-10)	Madison Barracks, Stony Point Target Range.	N. Y.	868.
114.	(700-9)	Fort Montgomery,	N. Y.	800.
115.	(1200-12)	Fort Niagara,	N. Y.	288.5
116.	(900-10)	Pine Plains Maneuver Reservation,	N. Y.	10,307.67
117.	(700-9)	Plattsburg Barracks,	N. Y.	703.
118.	(300-16)	Fort Terry,	N. Y.	340.
119.	(700-16)	Fort Totten,	N. Y.	136.35
120.	(700-17)	Fort Wadsworth,	N. Y.	226.
121.	(700-14)	Watervliet Arsenal,	N. Y.	106.
122.	(700-15)	West Point,	N. Y.	3,575.5
123.	(1200-30)	Fort Caswell,	N. C.	2,750.
124.	(1000-29)	Fort Mason,	N. C.	405.
125.	(3400-5)	Fort Lincoln,	N. D.	144.27
126.	(3100-4)	Militia Target Range,	N. D.	500.
127.	(3000-26)	" " "	Okla.	154.48
128.	(3200-27)	Fort Reno.	Okla.	9,493.
129.	(3200-29)	Fort Sill,	Okla.	51,292.82
130.	(5500-8)	Clackamas County Military Target Range	Ore.	197.21
131.	(5700-7)	Sand Island,	Ore.	192.07
132.	(5700-7)	Fort Stevens (Point Adams)	Ore.	3,515.37
133.	(1300-14)	Presque Isle,	Pa.	2,024.
134.	(900-16)	Tobyhanna Artillery Target Range,	Pa.	18,410.
135.	(300-15)	Fort Adams,	R. I.	135.
136.	(300-15)	Fort Greble,	R. I.	104.35
137.	(300-15)	Fort Mansfield,	R. I.	98.1
138.	(1400-34)	Bay Point,	S. C.	126.
139.	(1400-34)	Fort Fremont,	S. C.	170.
140.	(1400-34)	Hilton Head,	S. C.	803.
141.	(1400-33)	Fort Moultrie,	S. C.	238.
142.	(3700-9)	Fort Meade,	S. D.	27,305.5
143.	(3100-9)	Militia Target Range,	S. D.	110.
144.	(1700-27)	" " "	Tenn.	120.9
145.	(4000-35)	Fort Bliss,	Texas,	1,277.78
146.	(3400-40)	Fort Clark,	Texas,	3,963.2
147.	(2800-40)	Fort Crockett,	Texas,	125.57
148.	(3300-41)	Eagle Pass,	Texas,	155.29
149.	(5800-6)	Fort Canby (Cape Disappointment)	Wash.	340.2
150.	(3200-39)	Leon Springs Target and Maneuver, Range,	Texas,	17,275.87
151.	(3300-43)	Fort McIntosh,	Texas	209.
152.	(2200-38)	Militia Rifle Range, Pelican Spit,	Texas, Texas,	978.63

154.	(3200-40)	Fort Sam Houston,	Texas,	1,245.11
155.	(2800-40)	Fort San Jacinto,	Texas,	658.
156.	(2800-40)	Fort Travis,	Texas,	93.2
157.	(4500-17)	Fort Douglas,	Utah,	9,995.
158.	(4400-18)	Fort Duchesne,	Utah,	150.
159.	(4500-18)	Militia Target Range,	Utah,	18,500.
160.	(600-9)	Fort Ethan Allen,	Vt.	790.
161.	(1100-22)	Arlington Estate, and Fort Myer,	Va.	1,046.
162.	(1100-22)	Belvoir, or White House Tract,	Va.	1,500.
163.	(900-24)	Cape Henry,	Va.	543.1
164.	(1200-21)	Front Royal Remount Depot,	Va.	5,062.13
165.	(1100-22)	Fort Hunt (Sheridan's Point)	Va.	197.4
166.	(900-24)	Middle Grounds, Chesapeake Bay,	Va.	459.1
167.	(1000-24)	Fort Monroe,	Va.	475.96
168.	(5600-2)	Fort Casey,	Wash.	547.83
				547.71
169.	(5600-3)	Challen Point, (2 reservations)	Wash.	206.25
170.	(5700-6)	Fort Columbia,	Wash.	729.35
171.	(5600-1)	Deception Pass, (2 reservations)	Wash.	550.
				630.
172.	(5600-2)	Double Bluff,	Wash.	625.25
173.	(5700-2)	Fort Flagler,	Wash.	910.
174.	(5600-3)	Foalweather Point,	Wash.	485.3
175.	(5100-3)	Fort George Wright,	Wash.	1,022.6
176.	(5600-1)	Hope Island and Skagit Island,	Wash.	200.
177.	(5600-2)	Lagoon Point,	Wash.	206.
178.	(5600-1)	Fort Lawton,	Wash.	640.
				634.5
179.	(5700-2)	Lopez Island, (2 reservations)	Wash.	677.28
180.	(5600-3)	Middle Point and Orchard Point,	Wash.	385.25
				398.5
181.	(5800-2)	Mee-ah Harbor, (2 reservations)	Wash.	381.25
				258.63
182.	(5700-2)	New Dungeness Harbor, (2 reservations)	Wash.	22.75
183.	(5700-2)	Nodale Point,	Wash.	182.58
184.	(5700-5)	Point Defiance,	Wash.	637.9
185.	(5700-2)	Protection Island,	Wash.	354.25
186.	(5700-1)	San Juan Island, (2 reservations)	Wash.	494.31
				640.
187.	(5700-1)	Shaw Island, (2 reservations)	Wash.	594.9
				471.5
188.	(5100-4)	Fort Spokane,	Wash.	640.
189.	(5600-1)	Socio Islands,	Wash.	377.4
190.	(5600-3)	Tala Point,	Wash.	162.25
191.	(5700-6)	Three Tree Point,	Wash.	640.
192.	(5700-2)	Fort Townsend,	Wash.	614.
193.	(5600-7)	Vancouver Barracks,	Wash.	640.47
194.	(5700-2)	Vancouver Point,	Wash.	603.
195.	(5700-5)	Vashon Island,	Wash.	480.
196.	(5200-6)	Fort Walla Walla,	Wash.	611.75
197.	(5600-3)	Fort Ward,	Wash.	320.33
				424.
198.	(5700-2)	Washington Harbor, (2 reservations)	Wash.	473.
199.	(5600-2)	Whidbey Island,	Wash.	606.
200.	(5600-2)	Fort Whitman,	Wash.	129.4

No.	Key	Name	State	Acres
201.	(5700-3)	Fort Norden	Wash.	501.5
202.	(2400-11)	Sparta Target Range	Wis.	14,111.
203.	(3800-16)	Fort D. A. Russell	Kyo.	5,385.
204.	(3800-16)	Fort D. A. Russell Target and Maneuver Reservation	Kyo.	56,320.
205.	(4000-9)	Fort Mackenzie	Kyo.	6,480.
Total				650,000.00 +

(From "U.S. Military Reservations, National Cemeteries, and Military Parks, Title, Jurisdiction, etc." Edition 1916.)

NATIONAL ARMY CANTONMENTS.

A on plan.
(See Plan on page).

Number	Name	State	Area
1.	Camp Custer, Battle Creek,	Mich.	
2.	Camp Devens, Ayer	Mass.	
3.	" Dodge, Des Moines (Fort Dodge State Rifle Grounds and Iowa Nat. Guard)	Iowa	3,500 acres
4.	" Dix, Wrichtstown,	N.J.	
5.	" Funston, Fort Riley, (part of Fort Riley)	Kans.	
6.	" Gordon, Atlanta	Ga.	
7.	" Grant, Rockford	Ill.	
8.	" Jackson, Columbia	S. C.	
9.	" Lee, Petersburg,	Va.	
10.	" Lewis, American Lake,	Wash.	
11.	" Monro, Annapolis Junction,	Md.	
12.	" Pike, Little Rock	Ark.	
13.	" Sherman, Chillicothe,	Ohio.	1,900 acres
14.	" Taylor, Louisville,	Ky.	
15.	" Travis, Fort Sam Houston, (part of Fort Sam Houston)	Texas	
16.	" Upton, Yaphank,	N. Y.	
17.	" Beauregard, Alexandria	La.	
18.	" Bowie, Fort Worth	Texas	
19.	" Cody, Deming,	N. M.	
20.	" Doniphan, Fort Sill, (part of Fort Sill Reservation)	Okla.	
21.	" Fremont, Palo Alto,	Cal.	
22.	" Green, Charlotte,	N. C.	
23.	" Hancock, Augusta	Ga.	2,000 acres
24.	" Kearny, Linda Vista	Cal.	
25.	" Logan, Houston,	Texas	
26.	" McArthur, Waco,	Texas	
27.	" McClellan, Anniston,	Ala.	
28.	" Sevier, Greenville,	S. C.	2,000 acres
29.	" Shelby, Hattiesburg,	Miss.	
30.	" Sheridan, Montgomery,	Ala.	
31.	" Wadsworth, Spartanburg,	S. C.	
32.	" Wheeler, Macon	Ga.	

National Guard Camps
on plan

STATE RESERVATIONS.
(See Map on Page)

(Exclusive of lands about Institutions, and School Grants and other unappropriated State Lands. Leased reservations also omitted. City and County Reserves not included.)

No.	Name.	Area.
<u>Alabama.</u>		
	NONE.	
<u>Arizona.</u>		
	NONE.	
<u>Arkansas.</u>		
	NONE.	
<u>California.</u>		
a.	Pinnacles Game Preserve (All of Pinnacles National Monument.)	2,080 Acres
1.	California Redwood Park,	15,410
2.	Midwell Park	35
3.	Sutter's Fort	8.56
4.	State Fair Grounds	69.45
5.	Cleveland Game Preserve (in Cleveland National Forest)	116,000.
1.	Trinity Game Preserve (in Trinity National Forest)	64,000.
1.	Angeles Game Preserve, (in Angeles National Forest)	600,740.
<u>Colorado.</u> (No State Reservations)		
<u>Connecticut.</u>		
1.	Israel Putnam Memorial Camp Grounds	102.
2.	Fort Griswold Park	14.
3.	State Game Farm	
4.	Westport Beach	17.
5.	Mt. Tom State Park	190.
6.	Hard Park	400.
7.	Portland Forest Reserve	1,140.
8.	Union Forest Reserve	287.
9.	Simsbury Forest Reserve	130.
10.	Cornwall Forest Reserve	1,100.
<u>Delaware.</u>		
	NONE.	
<u>Florida.</u>		
	NONE.	
<u>Georgia.</u>		
	NONE.	
<u>Idaho.</u>		
a.	Payette River Game Preserve (All of Boise National Forest)	230,000.
1.	State Fish Hatchery Hayburn Park on Lake Coeur d'Alene (No State Forests.)	1,280. -----

<u>Illinois.</u>	No.	Name.	Area.
	1.	Deer Grove Forest Preserve.	1,000 Acres
	2.	Fort Massac Park.	20
	3.	Camp Logan Rifle Range.	260
	4.	Camp Lincoln Rifle Range.	160
	5.	Starved Rock State Park.	1,155.56
	6.	Spring Grove Fish Hatchery.	10.
		Ogle County Forest Tract.	500.
		Fort Chertres Tract.	----
(Many rivers are State Fish Preserves; no State Game Preserves)			
<u>Indiana.</u>			
	1.	Henryville Reservation State Forest	2,000.
	2.	McCormick's Creek Canyon State Park	350.
	3.	Turkey Run State Park	2,000.
<u>Iowa.</u>		NONE.	
<u>Kansas.</u>		NONE.	
<u>Kentucky.</u>		NONE.	
<u>Louisiana.</u>			
	1.	State Wild Fowl Refuge (State forests, leased, 36,000 Acres)	132,000.
<u>Maine.</u>			
	1.	Maine Forestry District	9,467,772.
<u>Maryland.</u>			
	1.	Shiprock Forest Reserve	888.
	2.	Swallow Falls Forest Reserve	825.
	3.	Kindness Forest Reserve	206.
	4.	Petapaco Forest Reserve	629.
<u>Massachusetts.</u>			
	1.	Metropolitan Park System	9,462.
	2.	Mt. Tom State Reservation	
	3.	Mt. Sugar Loaf State Reservation	
	4.	Greylock State Reservation	8,458.
	5.	Wachusett Mountain State Reservation	1,500.
	6.	Deer Hill State Reservation	
	7.	Mt. Everett State Reservation	
	8.	Wachusett Reservoir	
	9.	Province Lands	
	10.	Reservation for protection of Heath Hen	
	11.	Otter River State Forest	1,300.
	12.	Carver Forest and Game Preserve	7,000.
	13.	State Master Grounds	
	14.	Monument Mountain State Reservation	250.
		Mt. Grace State Reservation	
		Winchendon State Forest	
		Reading State Forest	

No.	Name	Area
<u>Michigan.</u>		
1.	Higgins Lake State Forest	13,560.98 Acres
2.	Houghton Lake State Forest	38,578.49
3.	Rife Lake State Forest	7,102.35
4.	Lake Superior State Forest	38,007.6
5.	Ogemaw State Forest	4,199.42
6.	Hansen State Military Reservation	14,000.
7.	Mackinac Island State Park	1,015.
8.	Michilimackinac State Park	20.
	St. Clair Flats	
	(Forest Reserves in many counties -- total 276,869. A.)	

<u>Minnesota.</u>		
4.	Superior Game Preserve	
	in Superior National Forest	910,000
	outside of Forest	<u>510,000</u>
		1,420,000
1.	Burntside Forest	20,000
2.	Itasca State Park	23,000
3.	Pillsbury Forest	1,000
4.	Interstate Park at the Dalles of the	
	St. Croix (with Wisconsin) in	
	Minnesota	150
5.	Minneopa State Park	60
6.	Alexander Ramsey State Park	
7.	Horace Austin State Park	50

Mississippi. NONE

Missouri NONE

Montana.

7.	Yellowstone Game Preserve	
	(Part of Absaroka National Forest)	
8.	Pryor Mountain Game Preserve	
	(Part of Beartooth National Forest)	
1.	Lincoln Timber Lands	23,420
2.	Sanders " "	11,400
3.	Flathead " "	18,540
4.	Whitefish " "	65,000
5.	Swan River " "	40,000
6.	Mineral " "	9,360
7.	Missoula " "	17,390
8.	Granite " "	4,870
9.	Havalli " "	9,200
10.	Powell " "	2,240
11.	Deerlodge " "	1,920
12.	Silverbow " "	640
13.	Jefferson " "	4,480
14.	Madison " "	3,390
15.	Beaverhead " "	3,200
16.	Gallatin " "	7,760
17.	Park " "	1,960
18.	Lewis & Clark " "	1,640
19.	Meagher " "	5,440

No.	Name	Area
20.	Cascade Timber Lands	2,240 acres
21.	Sweetgrass " "	640
22.	Carbon " "	1,920
23.	Fergus " "	1,280
24.	Blaine " "	640
25.	Guster " "	4,480
26.	Fallon " "	1,280
30.	Snow Creek Game Preserve	61,440

Nebraska. NONE

Nevada. NONE.

New Hampshire.

1.	Crawford Notch State Forest	5,925
2.	Alton Bay State Forest	292
	Blue Job State Forest	99
3.	Harrison State Forest	210
	Davisville " "	32
4.	Haven Reservation State Forest	95
5.	Huckins " "	100
	Cathedral & White Horse Lodge State Forest	40
6.	Livermore Falls State Forest	134
7.	Mascoma State Forest	174
8.	West Yard State Forest	204
	Dunbarton " "	56
9.	Merriman " "	400
10.	Monadnock " "	492
	Miller Park " "	3
11.	Nursery and Experiment Forest	142
12.	Sentinel Mountain State Forest	143
	Joseph B. Walker " "	45
	Litchfield " "	122
	Salmon Falls " "	20
	Bear Brook " "	413
	Sugar Hill " "	56
		9,115

New Jersey.

1.	Key's Landing Forest Reserve	375
2.	Bass River " "	1,632
3.	E. C. Stokes " "	5,548
4.	Lebanon " "	3,498
5.	Mt. Laurel " "	20
6.	Penn " "	2,754
7.	Swartswood Lake " "	560
	Palisades Interstate Park---see New York	
	Washington Crossing Park	100
	Fort Monmouth Park	
	Wharton Tract	100,000
	State Camp Ground and Rifle Range	

No.	Name	Area
<u>New York.</u>		
1.	Niagara Falls State Reservation	112 acres
2.	Palisades Interstate Park (Including Harriman Park)	30,000
3.	Adirondack Forest Preserve	1,701,894
4.	Catskill Forest Preserve	110,970
5.	Bronx River Parkway	
6.	Watkins Glen Reservation	103.5
7.	Fire Island State Park	119
8.	Saratoga Springs State Reservation	100
9.	Stony Point Battlefield	33
10.	John Brown Farm	243
11.	St. Lawrence Reservation	181
12.	Lake George Battlefield	35
13.	Letchworth Park	1,000
14.	Crown Point State Reservation	25
15.	Bennington Battlefield	171
16.	John Boyd Thatcher Park	350
17.	Clark Reservation	75
18.	Battle Island Park	200
19.	Sewtown Battlefield Reservation	16
	State Game Farm, Middle Island	
	Washington Headquarters	6
	Saratoga Battle Monument	2
	Spy Island	1
	Fort Brewerton	1
	Lester Park	3
	Stark's Knob	4
	Other small parks, total	4
<u>North Carolina.</u> NONE.		
<u>North Dakota.</u> NONE.		
<u>Ohio.</u>		
1.	Lawrence County Forest Tract	1,500
2.	Athens County " "	230
3.	Fort Asanda Memorial	2.5
	Serpent Mound	1
	Fort Ancient	
<u>Oklahoma.</u> NONE		
<u>Oregon.</u>		
1.	State Rifle Range	
	(No State Reservations except along Columbia River Highway.)	

No.	Name	Area
<u>Pennsylvania.</u>		
1.	Bald Eagle Forest	1,000
2.	Bedford County Forest	10,055
3.	Black Forest, Brown Township Division	30,000
	Blackwells Division	29,000
	Slate Run Division	-----
	Waterville Division	-----
4.	Buchanan Forest	11,079
5.	Clearfield Forest, Clearfield Division	-----
	Karlsruhe "	32,000
	Penfield "	9,631
6.	Gray's Run Forest	6,915
7.	Hopkins Forest, Renova and Keating Division	-----
	Snowshoe Division	22,900
	McElhattan "	12,000
8.	Kettle Creek Forest, Crossfork Division	59,595
	Leidy "	18,600
9.	Logansport Forest	14,063
10.	Minisink Forest, Hetch Division	30,000
	Pocono "	22,224
	Promised "	10,520
11.	McClure Forest	6,093
12.	Nittany Forest	4,145
13.	Pennypacker Forest	24,700
14.	Rothrock Forest	19,527
15.	Seven Mountain Forest, Barres Division	18,922
	Bear Meadows "	21,000
	Pea "	14,000
	Coburn "	15,000
	Greenwood "	23,000
	Jacks Mountain "	19,429
	Kishacoquillas "	33,800
16.	Sinnewahoning Forest, Austin "	25,000
	Kull "	23,290
	Medix "	24,500
	Sinnewahoning Div.	60,000
	Siserville Division	20,000
17.	South Mountain Forest, Caledonia "	25,780
	Mont Alto "	20,000
18.	Stuart Forest	8,500
19.	Stone Forest, Joseph Division	50,000
	Chatham "	11,329
20.	Trough Creek Forest	6,100
21.	Whotham Forest	13,000
22.	White Deer Forest, Buffalo Division	20,200
	McCall Division	22,500
	Tea Spring Division	26,000
23.	Young Woman's Creek Forest	-----
Total forests		1,004,536

Valley Forge Park
Game Preserves (14 in 1915) are on State Forests or
leased lands.

No.	Name	Area
<u>Rhode Island.</u>		
	Mt. Hope State Reservation	400 acres
	Metropolitan Park System	
	Darfee Hill Forest	1,619
<u>South Carolina.</u>		
	NONE	
<u>South Dakota.</u>		
	1. Custer State Forest	61,400
	(also a Game Preserve)	
	2. Short Pine Hills Forest	14,360
	3. Five Timber Tracts of each 640 acres	32,000
<u>Tennessee.</u>		
	NONE.	
<u>Texas.</u>		
	Washington State Park.	
<u>Utah.</u>		
	NONE	
<u>Vermont.</u>		
	1. Battell Forest (Camel's Hump Park)	3,500
	2. Geo. Aitken Forest	550
	3. Arlington Forest	225
	4. E. J. Haggood Forest	100
	5. West River Forest	700
	6. L. E. Jones Forest	500
	7. Mansfield Forest	5,000
	8. Lyndon Land Forest	75
	9. West Rutland Forest	350
	10. Putnam Forest	1,100
	11. Proctor-Piper Forest	400
	Charles Downer Forest	800
	Total Forest	14,000
	12. State Fish Hatchery	
<u>Virginia.</u>		
	NONE	
	State Forests are on Private property.	
<u>Washington.</u>		
	State Park at Bellingham	
	State Park at Chelalis	
<u>West Virginia.</u>		
	NONE	
<u>Wisconsin.</u>		
	1. Wisconsin State Reserve	400,000
	2. Devil's Lake State Park	1,040
	3. Fish Creek State Park	-----
	4. Brule Park (Douglas Co.)	-----
	5. Marquette State Park	1,651
	6. Interstate Park of the Dalles of the	
	St. Croix (with Minnesota)	580
	Peninsula Park (Door Co.)	3,240
	Cushing Memorial Park	8

No.	Name	Area
<u>Wyoming.</u>		
3.	Teton Game Preserve (Part of Teton National Forest)	576,000
4.	Big Horn Game Preserve (Part of Big Horn National Forest)	-----

THE OF THE LARGEST DEER PARKS IN THE UNITED STATES:

Blue Mountain Forest Park,	N. H.	25,000 acres
Grand Island Preserve,	Mich.	13,800
Litchfield Game Preserve,	N. Y.	10,000
Buckland Park,	N. J.	4,000
Otzinachson Club,	Pa.	4,000
Dietrich Preserve,	N.Y.	3,000
Glen Boulah Park,	Calo.	2,000
Mount Pocono,	Pa.	1,200
Ha-Ha Tonka,	Mo.	1,000
Blooming Grove Park,	Pa.	1,000

(From Biological Survey Circular 72)

VACANT PUBLIC LANDS IN THE UNITED STATES.
July 1st, 1916

Lands unappropriated and unreserved.

Alabama	42,680 acres
Arizona	25,597,219
Arkansas	402,219
California	20,025,999
Colorado	14,908,127
Florida	135,237
Idaho	15,510,561
Kansas	56,018
Louisiana	44,804
Michigan	90,540
Minnesota	798,804
Mississippi	20,274
Missouri	952
Montana	16,649,725
Nebraska	146,256
Nevada	55,375,077
New Mexico	26,338,379
North Dakota	381,199
Oklahoma	55,250
Oregon	15,237,809
South Dakota	2,382,588
Utah	32,968,827
Washington	1,132,571
Wisconsin	5,005,872
Wyoming	23,528,492
	254,945,589 acres.

Alaska, about 15,500,000 acres reserved.

(From Department of Interior, Circular 484, July 1, 1916)