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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

GRAPHIC NOTES ON  
THE PUBLIC DOMAIN



The following charts and maps have been selected to illustrate important phases of Federal land-management activities. They also supplement the Bureau of Land Management publication "Brief Notes on the Public Domain."

Marion Clawson, Director  
Bureau of Land Management

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GRAPHIC NOTES ON THE PUBLIC DOMAIN  
By Irving Senzel  
Chief, Branch of Research

1. ACQUISITION OF THE TERRITORY OF THE UNITED STATES AND ORIGIN OF THE PUBLIC DOMAIN

In a short span of about 70 years, a new nation, the United States of America, acquired sovereignty over a vast empire of 2 billion acres, spanning the North American continent from the Atlantic to the Pacific. In the course of this process, and by the subsequent acquisition of Alaska, the United States Government became the owner of a huge estate, known as the "public domain" and covering an area of 1 billion 400 million acres in the United States proper and 365 million acres in Alaska.

2. NET AREA AND COST PER ACRE OF MAJOR LAND ACQUISITIONS BY THE UNITED STATES

The acquisitions of the public domain cannot be considered as "purchases" in the market-place sense of the term. Many considerations were involved including high affairs of state. The United States, however, did make nominal payments to former owners of parts of the public domain. The payments ranged from 2¢ per acre (for Alaska) to 53¢ per acre (for the Gadsden Purchase).

3. CESSIONS OF INDIAN LANDS

Under the law of nations, the United States acquired title to the public domain subject to the occupancy rights of the native Indians. The United States has secured cession of native rights to most of the public domain by various means, including conquest, purchase, and treaty.

4. APPROXIMATE AREA OF THE PUBLIC DOMAIN DISPOSED OF UNDER THE PUBLIC-LAND LAWS

The Federal Government had no intention of being a permanent landlord of the public domain. The Congress passed thousands of laws providing for disposal of public lands to private owners and State and local governments. In all, the Government has disposed of 1 billion acres of public domain. About 2/3 of this area was given away free of charge to homesteaders, veterans, States, railroads, and others to encourage settlement and development of the country and about 1/3 sold for cash. Many of the sales were made at fairly nominal prices. About one-fourth of the original public domain in the States is still in federal ownership, and Congress has provided for its administration under various laws.

5. RELATION OF FEDERAL LAND REVENUES TO TOTAL FEDERAL REVENUES

A stated objective of early policy with respect to the disposal of the public domain was to secure revenues for general governmental purposes. In actual practice, the public domain never yielded a substantial proportion of Federal revenues with the exception of a relatively few years. As might be expected, the proportion tended to increase during periods of "booms" and intense speculation in lands. Prior to the homestead act of 1862, revenues from public lands fluctuated roughly around 5 and 10 per cent of total revenues. After 1862, they have been generally well below 5 per cent.

11

6. FEDERAL LAND GRANTS FOR RAILROADS

An exciting era in Federal land disposal activities was the period of grants of land to States and corporations to assist in the construction of railroads. A total of 130 million acres was granted for this purpose. Among the routes benefited were the great transcontinental lines, the Northern Pacific, Central Pacific and Union Pacific, and the Atchison, Topeka, and Santa Fe, as well as others. The grants were, in effect, a "quid pro quo" proposition. The railroads received lands and other aids to help defray costs of construction. The Government received reduced freight and passenger rates over the land-grant lines and the Nation, of course, benefited from the important additions to the transportation system serving it.

7. MAJOR LAND PURCHASES BY FEDERAL CIVILIAN AGENCIES

In addition to the public domain, the Government has secured other lands, usually in relatively small parcels, by purchase, condemnation, and gift. In total, these "acquired lands" have not been significant until recent years. Lands purchased for civilian purposes probably totalled less than 10 million acres when the purchase program was greatly expanded with the recovery and conservation activities of the early New Deal. By the time World War II ended the program, the Federal civilian agencies doubled their purchased holdings. The war agencies increased their acquired-land holdings manifold prior to and during World War II and held about 10 million acres at the end of the War.

8. APPROXIMATE AREA OF FEDERAL LANDS IN THE STATES, 1781-1950

The net result of the transactions involved in the acquisition of the public domain, in the operation of the disposal laws, in the acquisition of "acquired lands," and in other policies can be subdivided roughly into four periods. From 1781 to 1803 total Federal ownership in the States rapidly increased, acquisition of public-domain areas far outstripping disposal activities. From 1803 to 1845 disposals exceeded to a relatively small extent the acquisition of new areas and the total area in Federal ownership dropped slightly. Between 1846 and 1850 acquisition of new areas again far exceeded disposals and the peak of Federal ownership in the States, 1 billion 200 million acres, was reached. After that peak, disposals steadily and consistently reduced the area in Federal ownership to below 500 million acres. The last period starting perhaps in the late 'twenties or early 'thirties is one in which accession of "acquired lands" exceeded disposals of public-domain lands, resulting in a minor increase in total Federal land ownership. The outlook for the immediate future does not appear to promise much relative change in the size of Federal ownership although acquisitions and disposals still continue.

9. TOTAL PRESENT AREA OF FEDERALLY OWNED LAND IN THE STATES

The area of Federal lands in the States at present is a little more than 450 million acres. Of this, 90% are public domain and 10% are "acquired lands." About 90% of all the lands are concentrated in the eleven westernmost States. The bulk of the



9. TOTAL PRESENT AREA OF FEDERALLY OWNED LAND IN THE STATES (Continued)

public-domain lands are in the eleven westernmost States while the great proportion of the "acquired lands" are in the other States. The great proportion of Federal lands are thus public domain lands located in the rough and mountainous and arid and semi-arid regions of the Far West. The "acquired lands" vary much more in characteristics and quality. Federal holdings are located in all the States and vary from 85% of the area of the State of Nevada to 0.3% of the total area of Iowa. Included in the above data are about 57 million acres of Indian lands.

10. PRINCIPAL MERIDIANS OF THE FEDERAL SYSTEM OF RECTANGULAR SURVEYS

Fundamental to the management of the public domain, including disposal activities, was the necessity for the subdivision of the "wilderness" into small, readily identifiable, and manageable units. In 1785, the Congress enacted the system of rectangular surveys which, with improvements, has been maintained to this day. Under this system a series of "initial points" have been established through which have been run "principal meridians" and their "base lines." These points, meridians, and base lines control the survey of the areas adjacent to them.

11. GENERALIZED DIAGRAM OF THE RECTANGULAR SYSTEM OF SURVEYS

The major subdivision of the public domain is the "township" which is generally 6 miles square, more or less. The township is iden-

tified from its position in relation to the "initial point." The township, in turn, is subdivided into 36 "sections," each of which is about 1 mile square and identified simply by number. Each section is subdivided, wherever suitable, into aliquot parts, i.e. quarter sections and quarter-quarter sections. A "perfect" township contains 23,040 acres; a "perfect" section, 640 acres; a quarter-section, 160 acres; and a quarter-quarter section, 40 acres. Irregular subdivisions are often called "lots."

12. LOCATION OF DISTRICT LAND OFFICES

To provide local facilities to serve the settlers who were clamoring for public lands, the Congress in 1800 instituted a system of district land offices, formerly under the jurisdiction of the General Land Office and now managed by its successor the Bureau of Land Management. Because the settlement of the country was largely the settlement of the public domain, the location of the district land offices reflects the westward migration of settlement of the United States. In 1820 settlers on public lands were pushing along the Ohio River to the Mississippi and around the lower reaches of the "Father of Waters." By 1850 settlement was spreading out over practically the entire forested region of eastern United States and was looking out towards the Great Plains. By 1890 the frontier "disappeared," as had the bulk of the public domain in the East. District land offices blanketed the West and only a few remained in the East. The year 1890 saw the peak number of district land offices in existence. As the amount of public lands suitable for private ownership decreased, and as





12. LOCATION OF DISTRICT LAND OFFICES (Continued)  
transportation and communication facilities improved so that fewer offices could serve the public equally well, the number of district land offices decreased until today there are only 12 in the 11 westernmost States. Three offices in Alaska today symbolize America's new settlement "frontier."

13. NET AREA OF FEDERAL RESERVATIONS IN THE STATES

Concurrent with the disposal of most the agricultural public lands and with the emergence of noticeable indications of depletion of important natural resources, a policy of conservation gradually developed. One of the earliest manifestations of this policy was the program of reserving for public management areas of public domain valuable for various resources. In later years, as discussed before, the Government went further by embarking on a program of purchasing private lands to add to public reservations. The first major reservation was Yellowstone Park in 1872. The National Park System was gradually built up over the years but received added impetus in the 1930's. The national forest system started in 1891, realized tremendous growth under President Theodore Roosevelt, and after a short period of downward adjustment, resumed its upward trend about 1920. The forest system also benefited from the conservation upsurge during the Presidency of Franklin Roosevelt. Both the Indian reservations and the open public range suffered greatly under existing policies until 1934, the first largely because of white demand for native lands, the second largely because of failure to provide suitable laws for the

public range. Further fragmentation of Indian reservations was stopped in 1934 although their expansion was not promoted as fully as originally planned. In a few short years after 1934, most of the open public range was organized for management as grazing districts.

14. MINERAL PRODUCTION UNDER LEASE FROM PUBLIC-DOMAIN LANDS

Most of the resources of the public lands are exploited by private enterprise under the supervision of the Federal conservation agencies. Public-domain deposits of oil and gas, coal, potash, and a few other fuel and fertilizer minerals are leased to private operators. In general, there has been a steady increase in both the volume and value of production of these minerals from the public lands.

15. VOLUME OF TIMBER SOLD FROM MAJOR FEDERAL LANDS

Harvesting of timber from the public lands is also done by private enterprise. The volume of timber removed from Indian reservations and from "O. and C." lands in western Oregon (Bureau of Land Management) has steadied in recent years as operations approached the sustained-yield capacity of the lands. With the serious depletion in privately owned stands and with the high sustained demand for timber during and since World War II, reserved and relatively inaccessible stands managed by the Forest Service have been opened to sustained-yield exploitation to help meet the lumber needs of the nation. Timber production from national forests thus has risen several-fold in recent years.

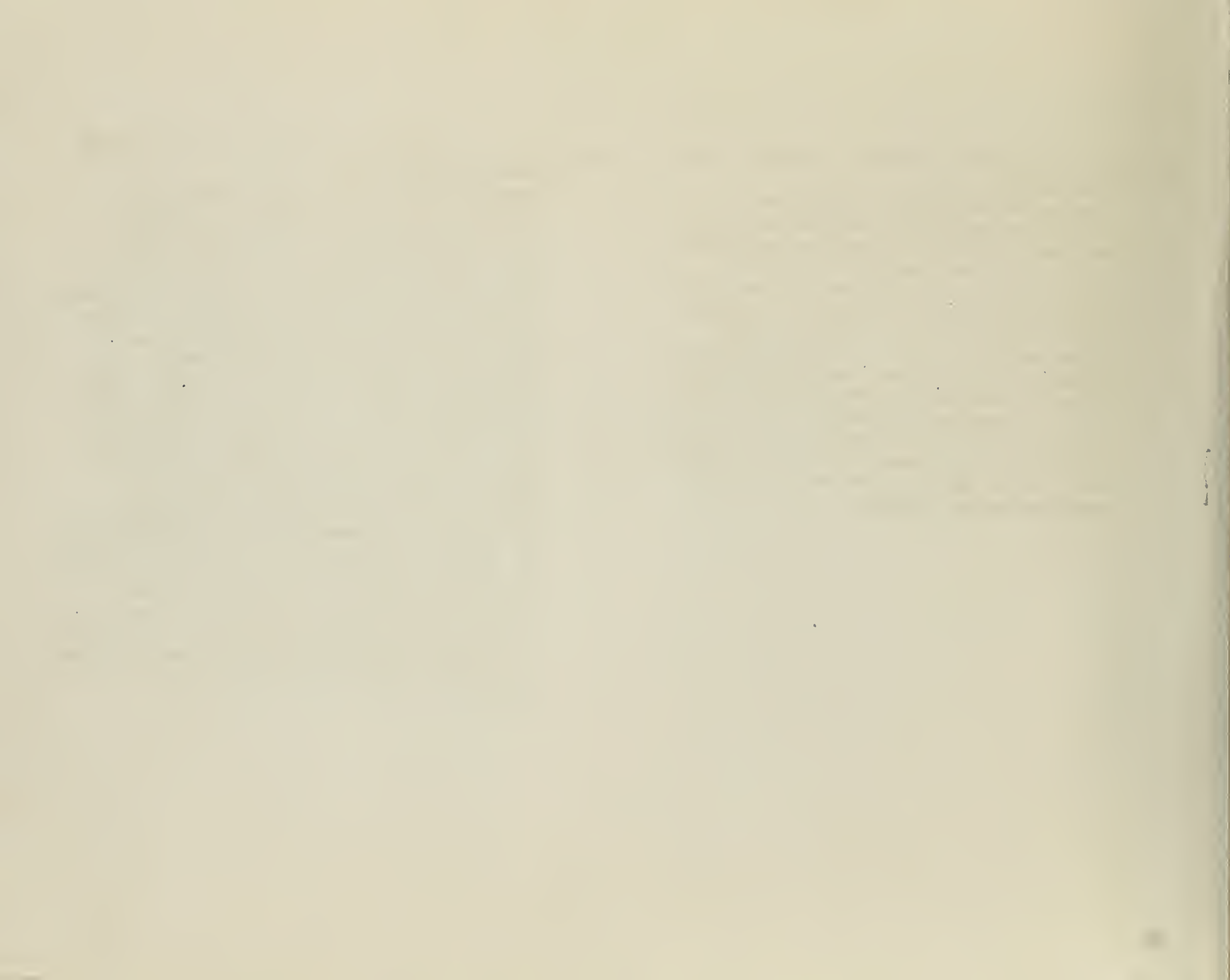


16. NUMBER OF VISITS TO NATIONAL FORESTS, PARKS,  
AND MONUMENTS

A major use of Federal lands by the American people is for recreation. Visits to national forests, parks, and monuments, perhaps the best known of the Federal recreational areas, reflect the increasing well-being, leisure, values, and mobility of the United States. Until the early 1930's visits to these areas gradually but steadily increased over the years, thereafter to increase very rapidly until World War II. After the naturally diminished use of recreational areas during the war, the American people resumed where they left off and returned to the parks and forests in ever-increasing numbers.

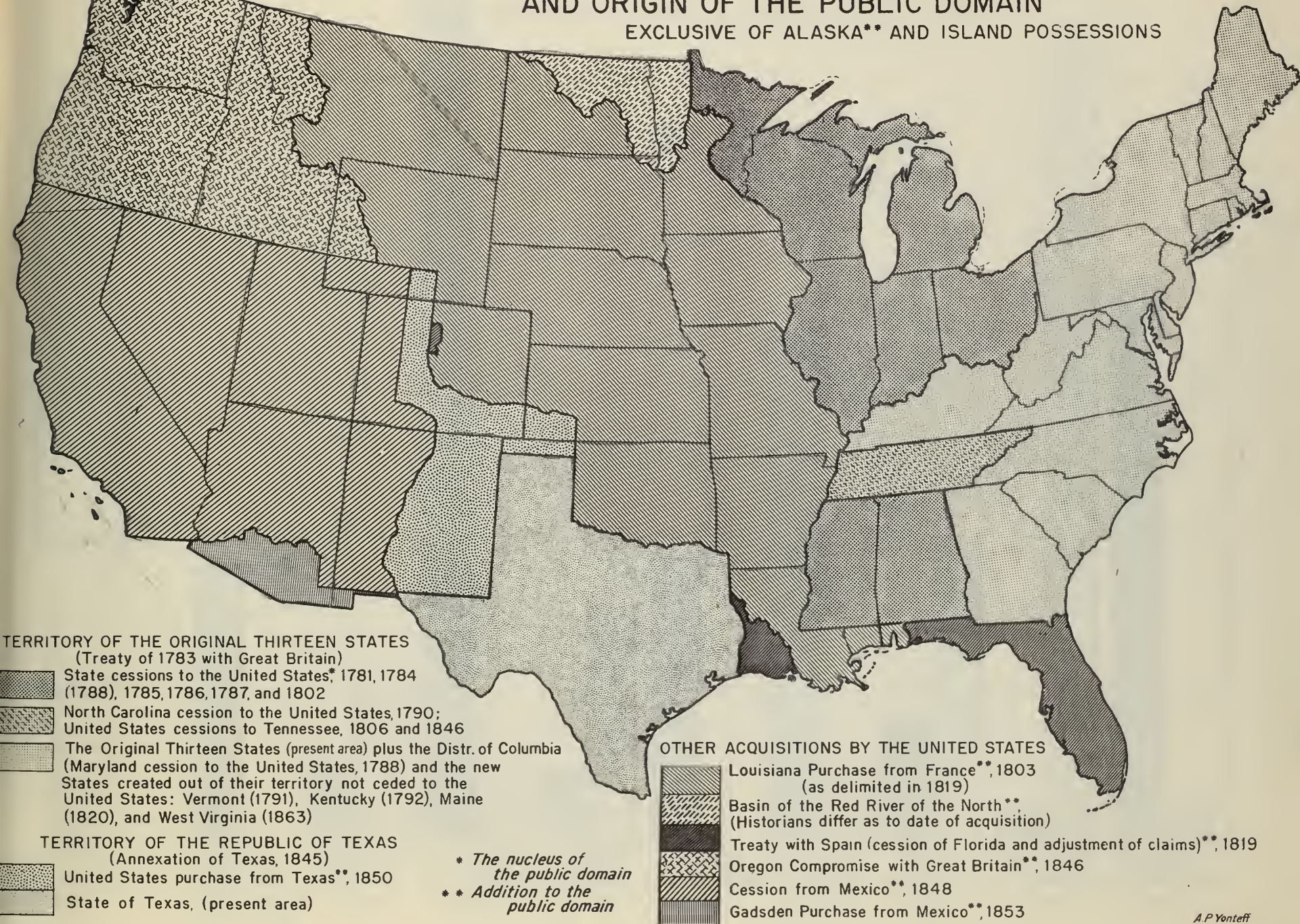
17. NUMBER OF LIVESTOCK GRAZED IN NATIONAL FORESTS  
AND GRAZING DISTRICTS

Another major use of Federal lands is the grazing of domestic livestock by private farmers and ranchers. The Forest Service began managed grazing in 1905 and since 1918 has been accomplishing a consistent reduction in grazing on the national forests, chiefly on the grounds of the necessity for rehabilitating depleted forest ranges. The numbers of permitted livestock have been about halved from its peak of nearly 4 million animal units. An animal unit is roughly the equivalent of 1 mature cow (or horse) or 5 mature sheep (or goats). Management of grazing within grazing districts was authorized in 1934 and permitted numbers of livestock have been fairly constant since then. Some adjustments may be necessary in the course of accomplishing two of the major objectives of grazing-district administration - stabilization of the dependent livestock industry and rehabilitation of the range. Use of both forest and grazing-district lands reflect the partial shifting in recent years of private ranching operations from sheep to cattle.



# ACQUISITION OF THE TERRITORY OF THE UNITED STATES AND ORIGIN OF THE PUBLIC DOMAIN

EXCLUSIVE OF ALASKA\*\* AND ISLAND POSSESSIONS



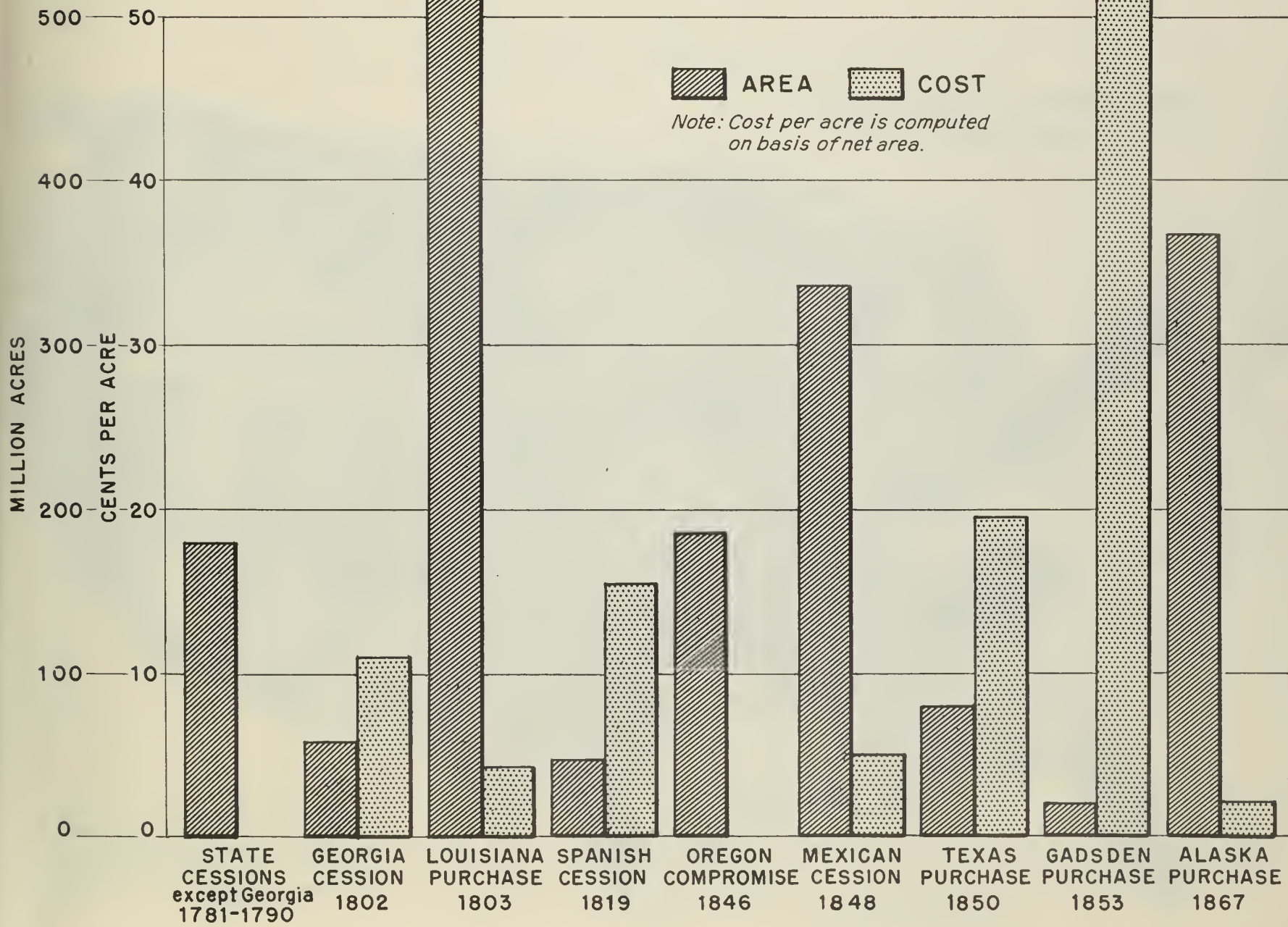
A.P. Yonteff

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Map BLM-W-LR-2



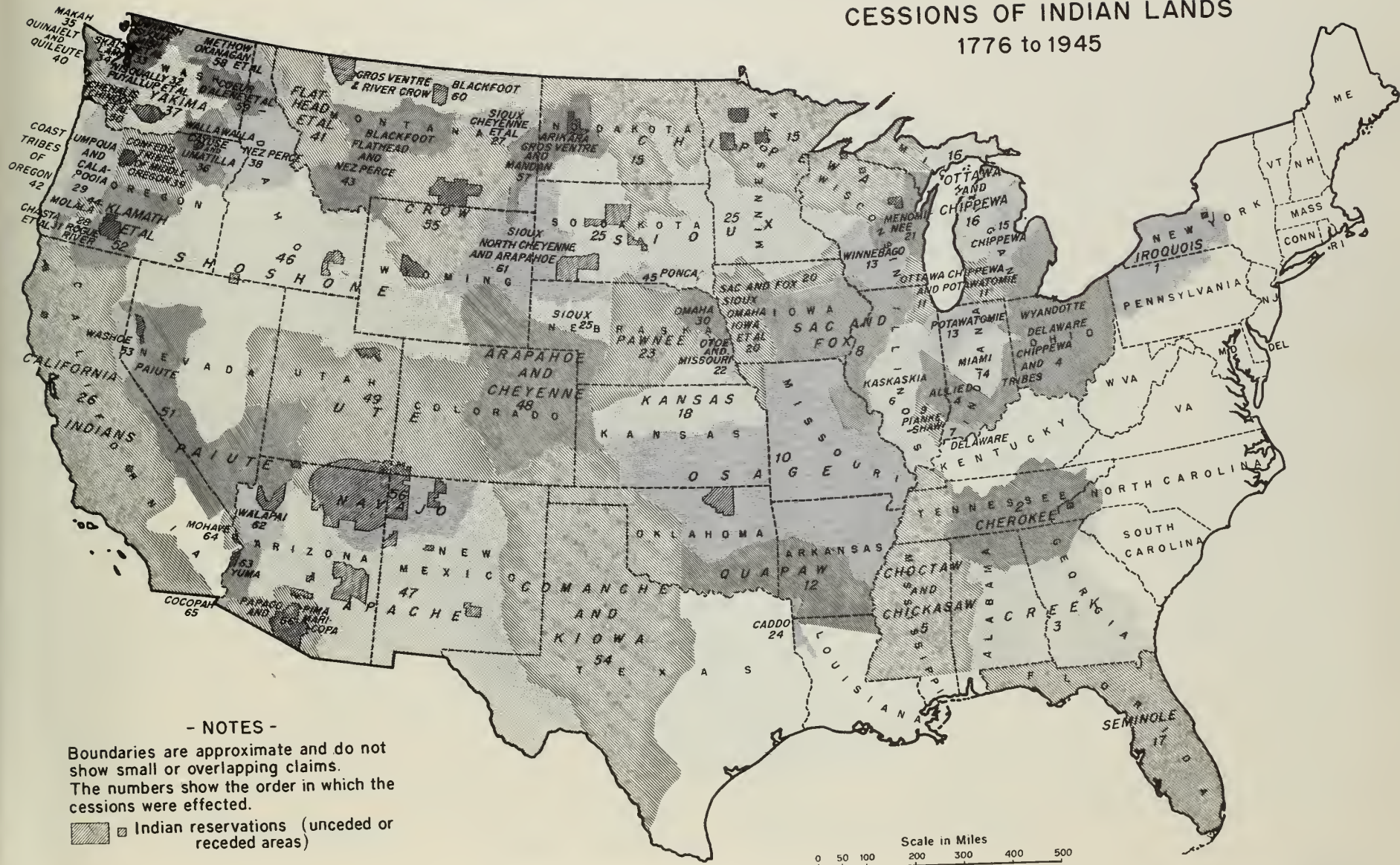
# NET AREA AND COST PER ACRE OF MAJOR LAND ACQUISITIONS BY THE UNITED STATES 1781-1790





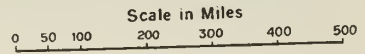


# CESSIONS OF INDIAN LANDS 1776 to 1945



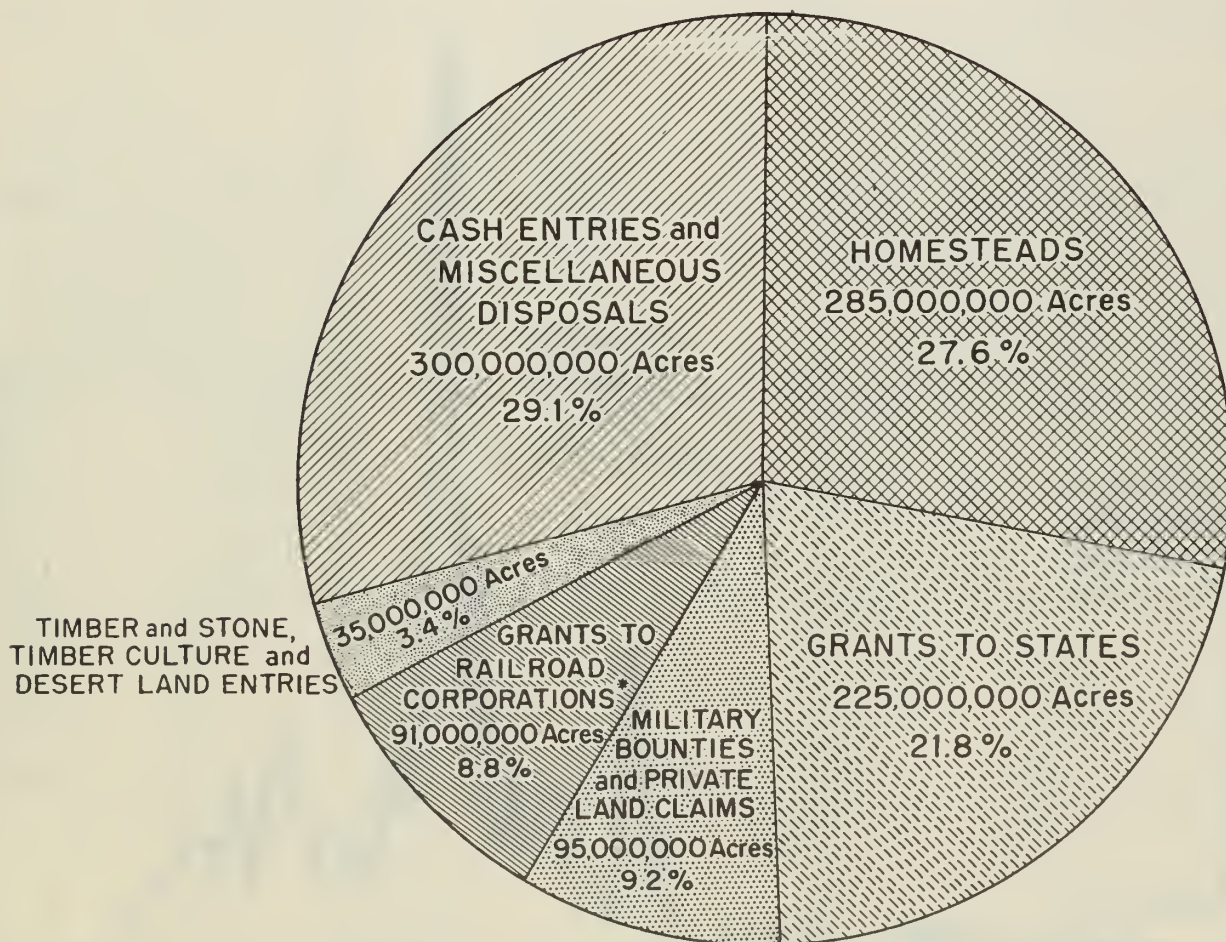
**- NOTES -**

Boundaries are approximate and do not show small or overlapping claims.  
The numbers show the order in which the cessions were effected.  
▨ Indian reservations (unceded or receded areas)





# APPROXIMATE AREA OF THE PUBLIC DOMAIN DISPOSED OF UNDER THE PUBLIC-LAND LAWS



\* Exclusive of revested area

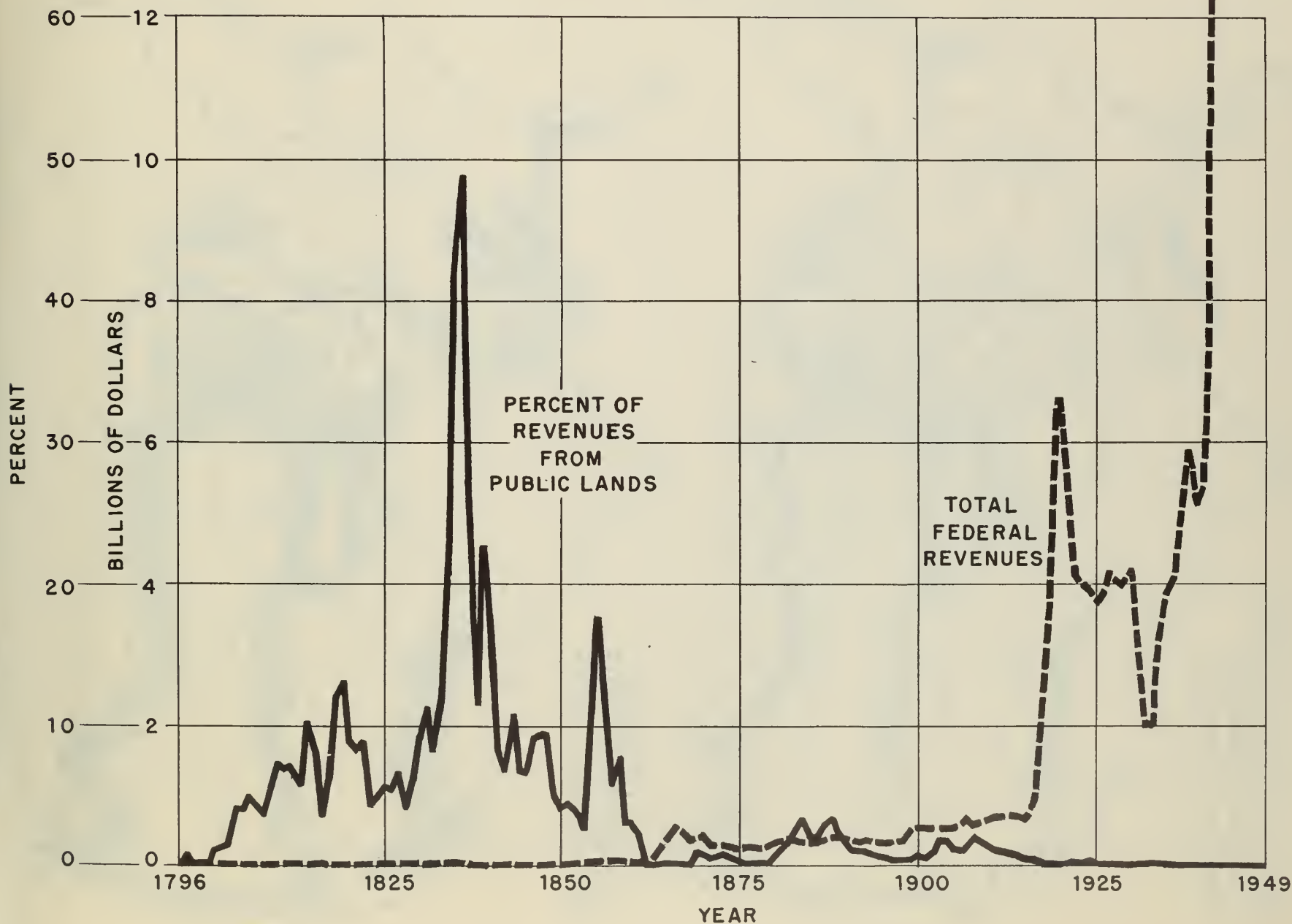
TOTAL DISPOSALS 1,031,000,000 ACRES

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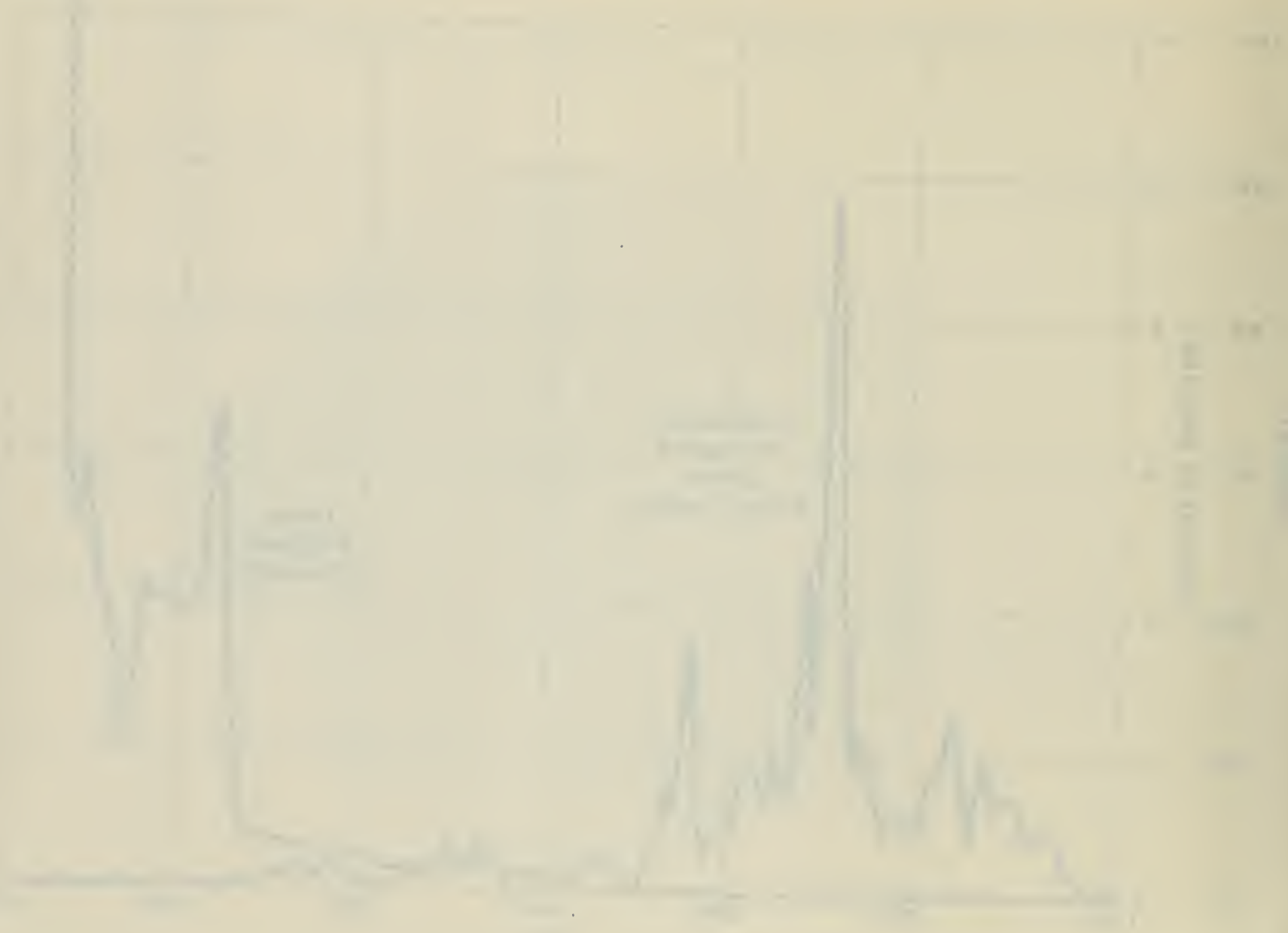


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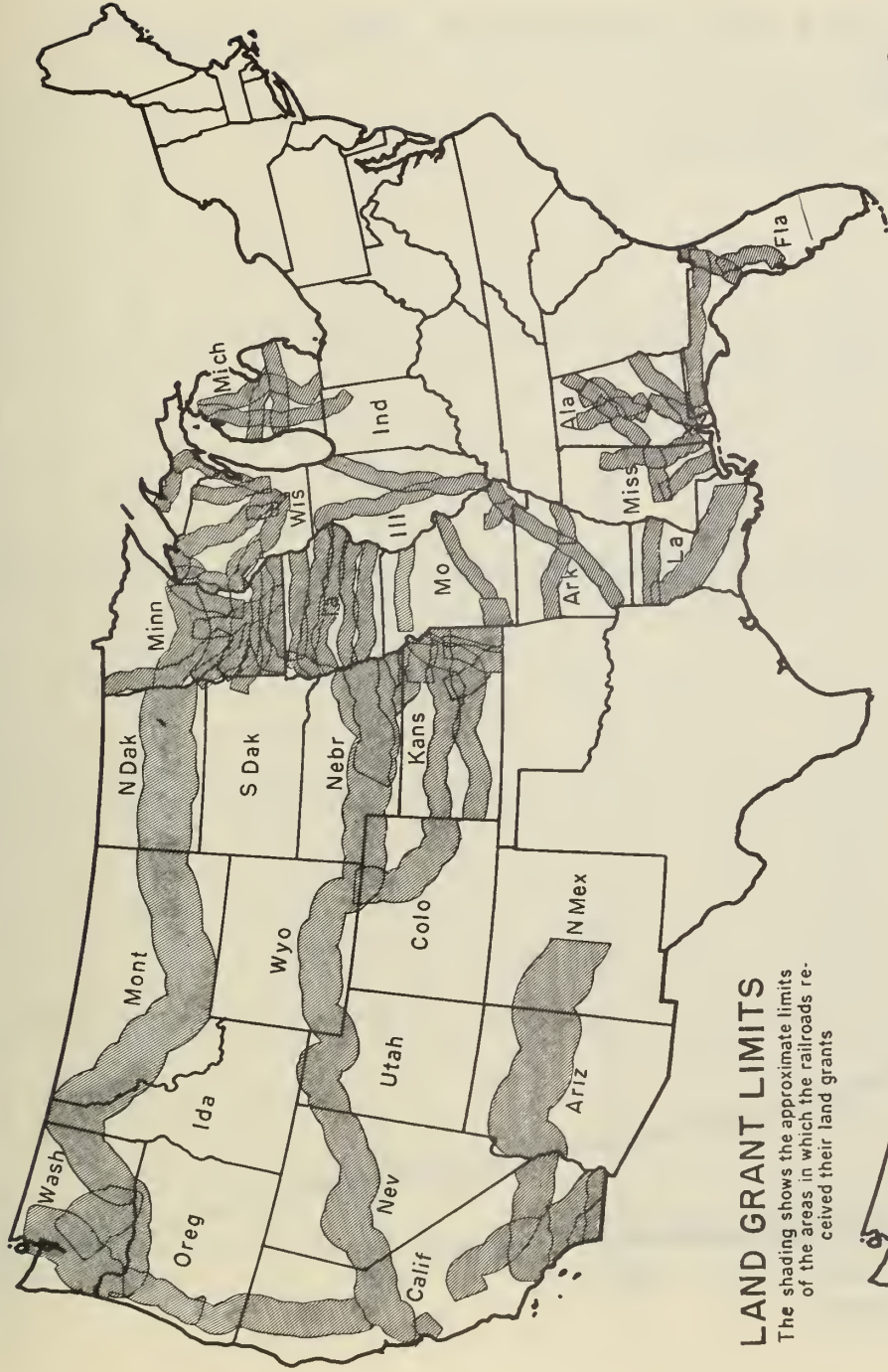
# RELATION OF FEDERAL LAND REVENUES TO TOTAL FEDERAL REVENUES 1796 to 1949



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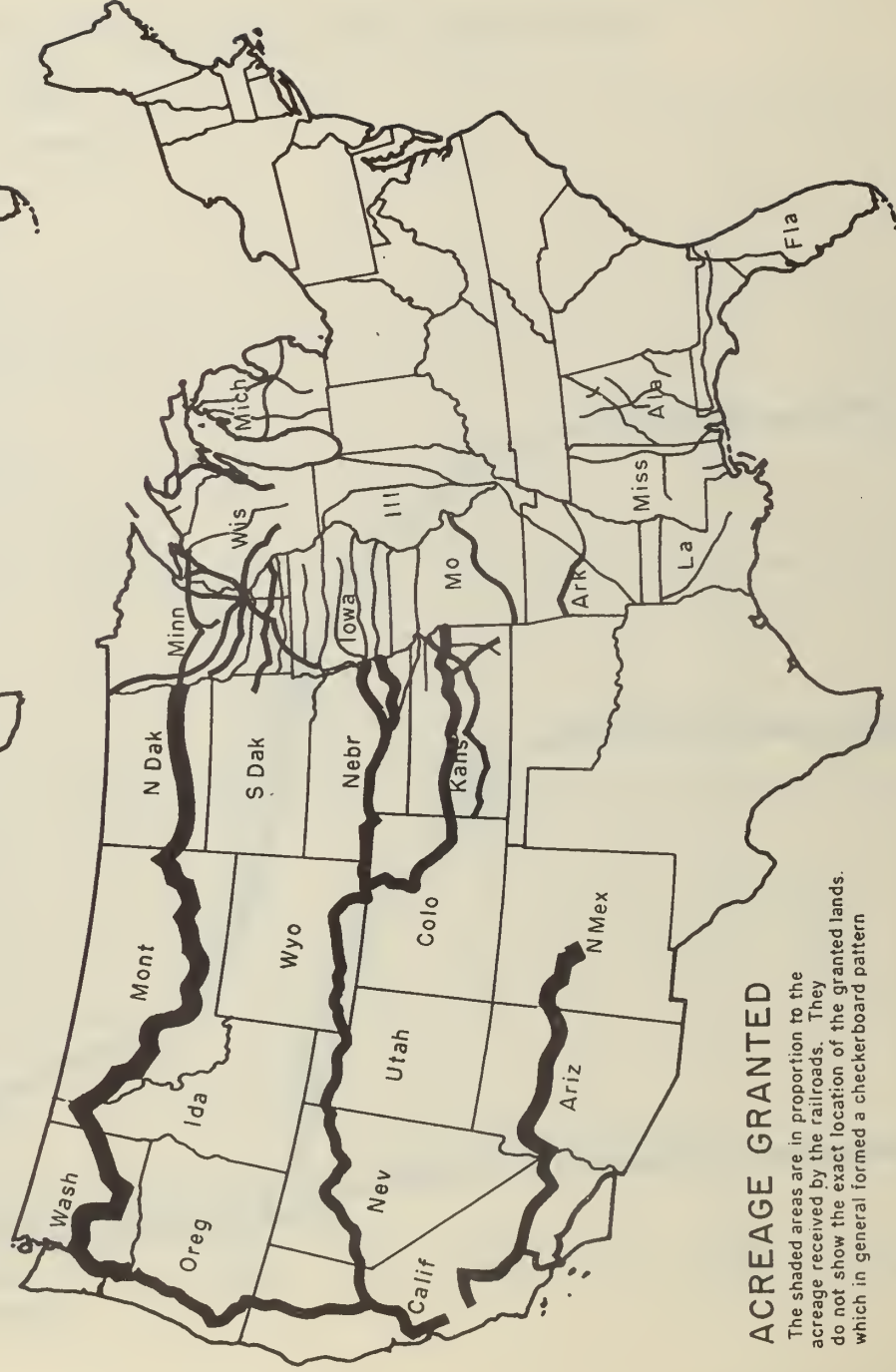


# FEDERAL LAND GRANTS FOR RAILROADS



## LAND GRANT LIMITS

The shading shows the approximate limits of the areas in which the railroads received their land grants



## ACREAGE GRANTED

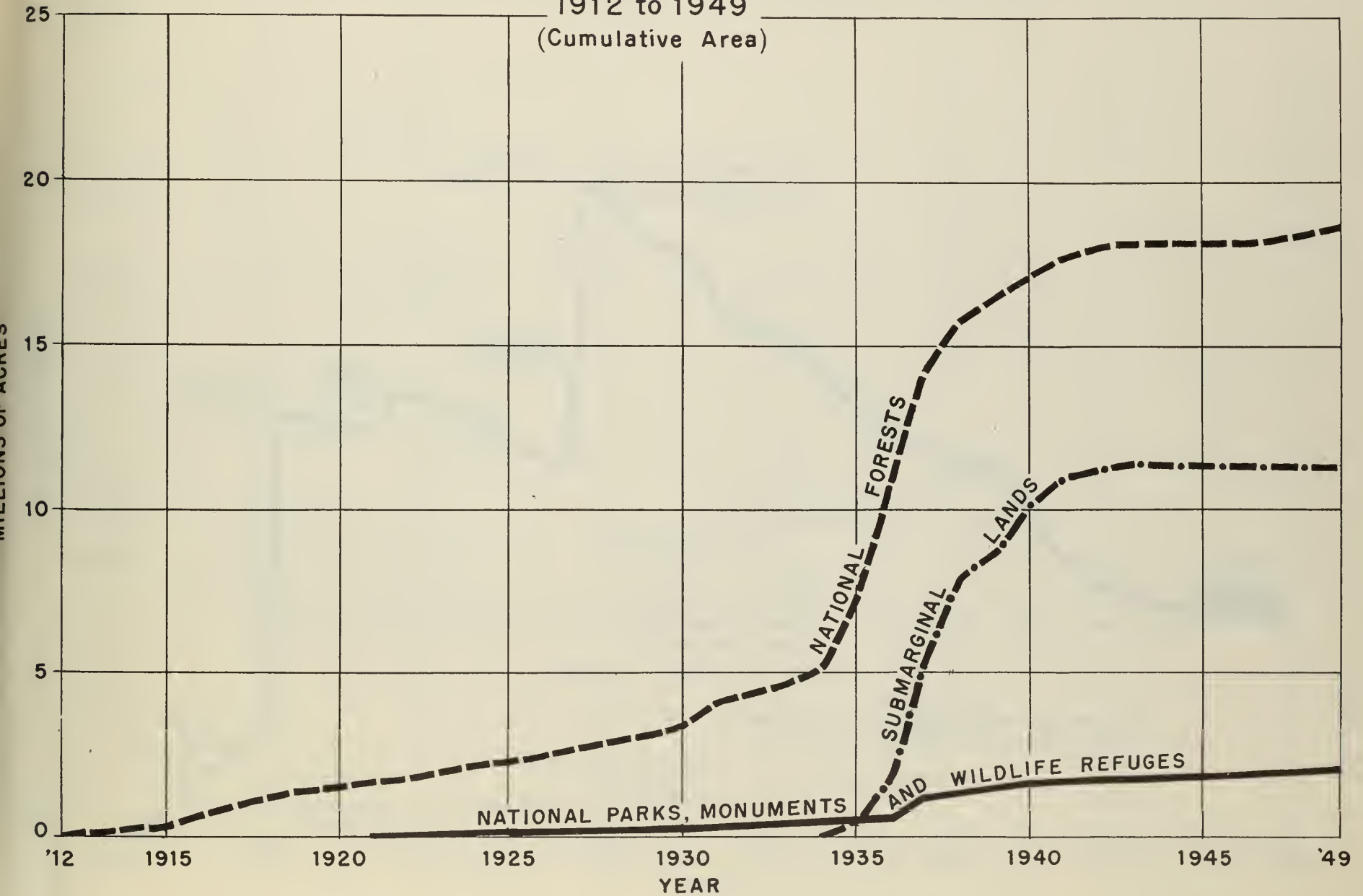
The shaded areas are in proportion to the acreage received by the railroads. They do not show the exact location of the granted lands, which in general formed a checkerboard pattern





# MAJOR LAND PURCHASES BY FEDERAL CIVILIAN AGENCIES

1912 to 1949  
(Cumulative Area)

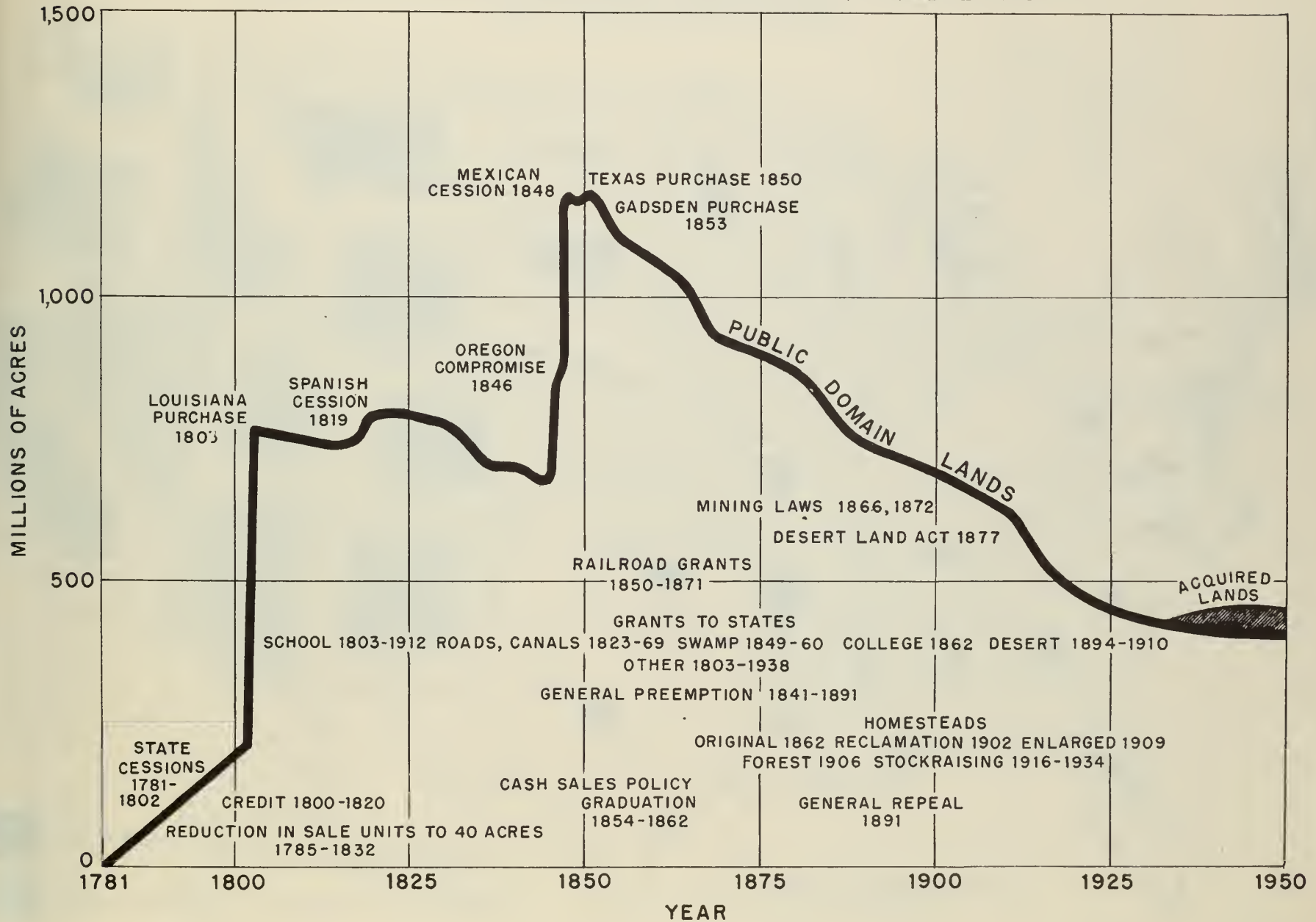


PHYSICS DEPARTMENT  
CHICAGO, ILL.



# APPROXIMATE AREA OF FEDERAL LANDS IN THE STATES 1781-1950

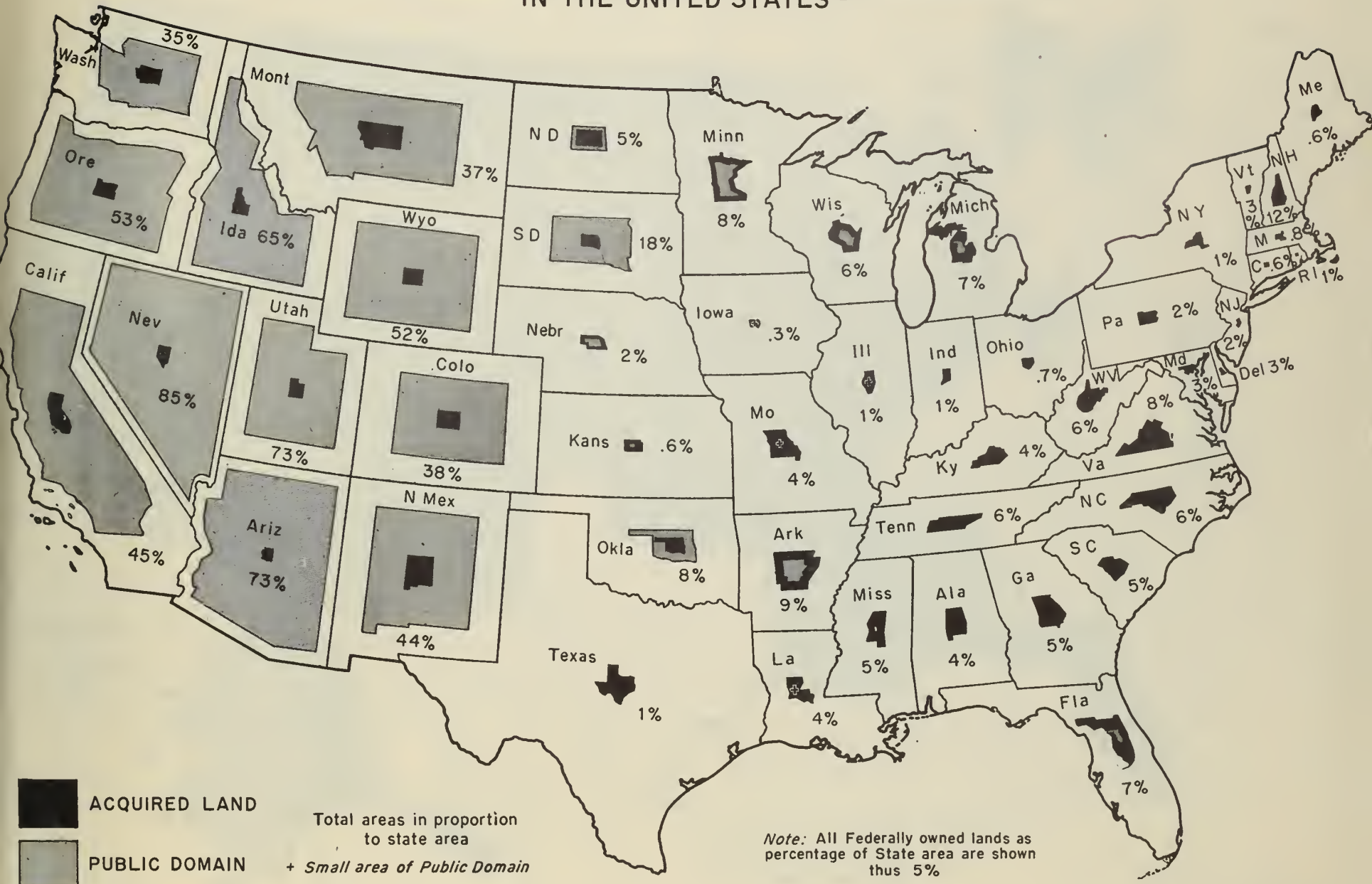
## WITH DATES OF IMPORTANT ACQUISITIONS AND LAWS



THE EFFECT OF TEMPERATURE ON THE RATE OF  
REACTION OF HYDROGEN PEROXIDE WITH  
FERROUS SULFATE



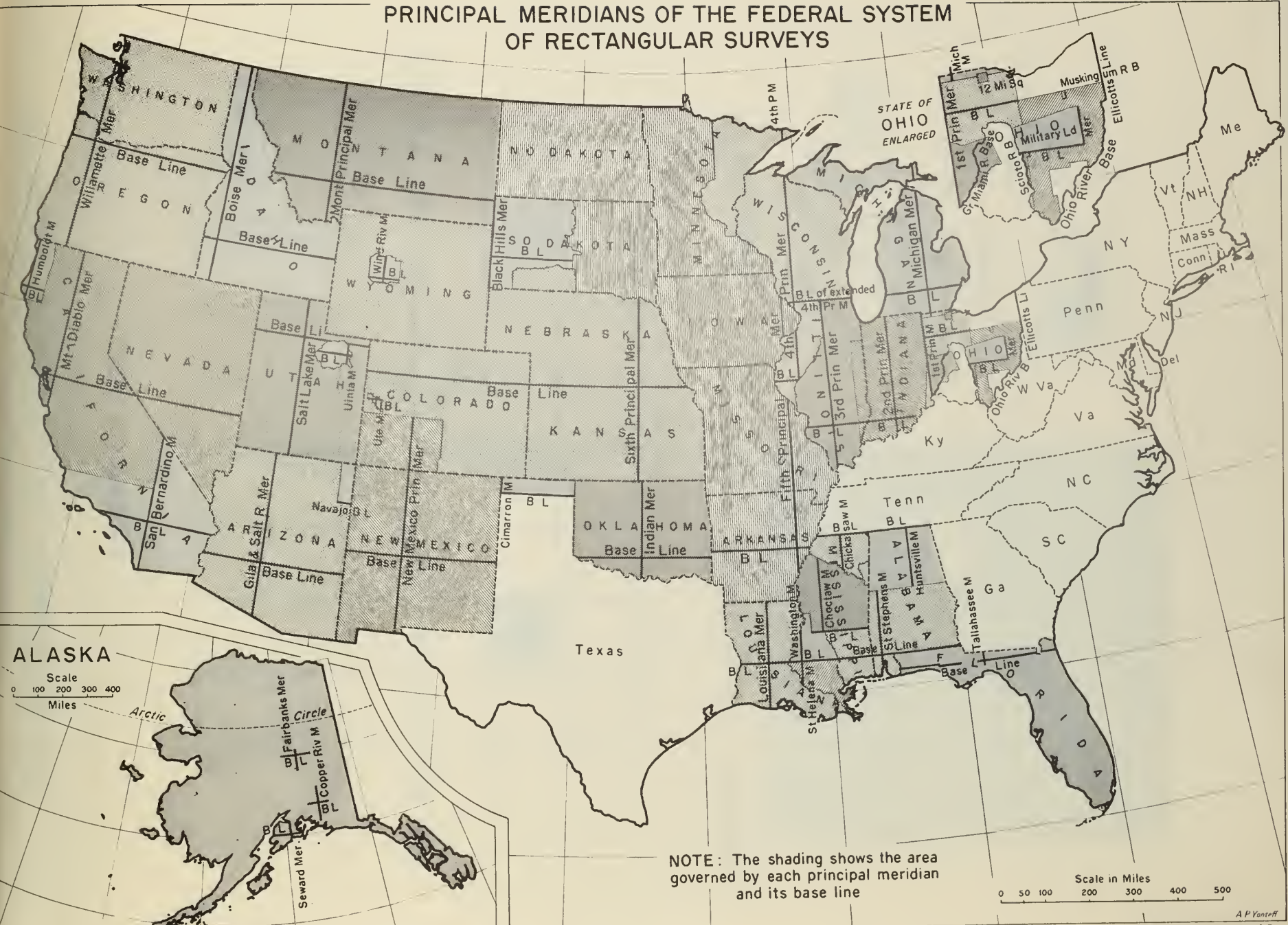
# TOTAL PRESENT AREA OF FEDERALLY OWNED LAND - IN THE UNITED STATES -



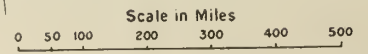
UNITED STATES GEOLOGICAL SURVEY  
GEOLOGIC MAP OF THE UNITED STATES  
1894



# PRINCIPAL MERIDIANS OF THE FEDERAL SYSTEM OF RECTANGULAR SURVEYS



NOTE: The shading shows the area governed by each principal meridian and its base line



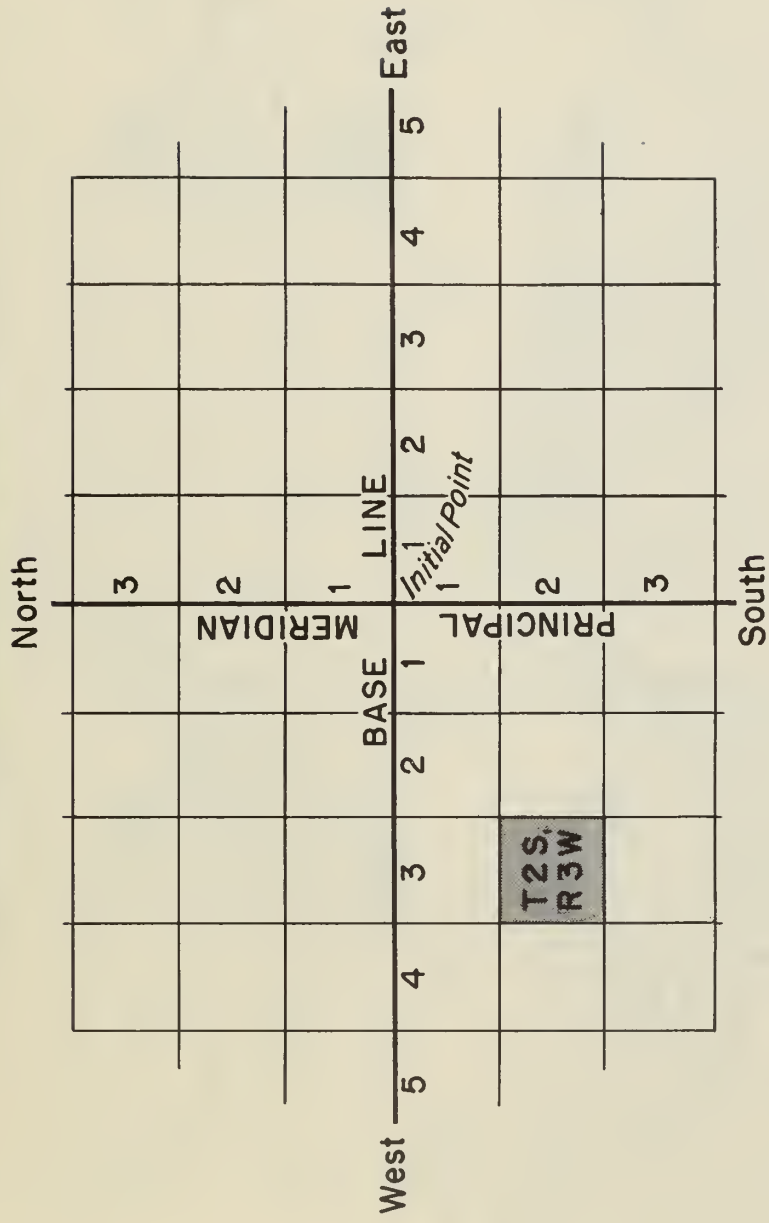
THE HISTORY OF THE  
CITY OF BOSTON





# GENERALIZED DIAGRAM OF THE RECTANGULAR SYSTEM OF SURVEYS

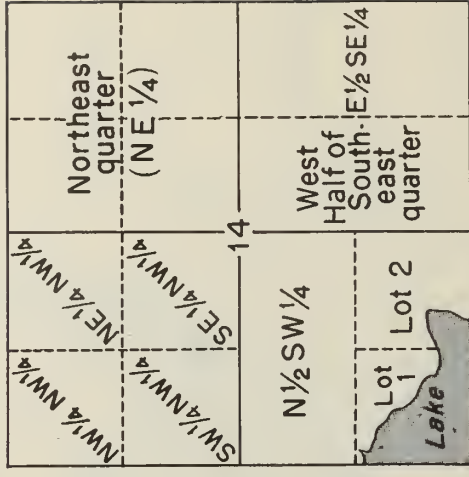
## - TOWNSHIP GRID -



## TOWNSHIP 2 SOUTH, RANGE 3 WEST

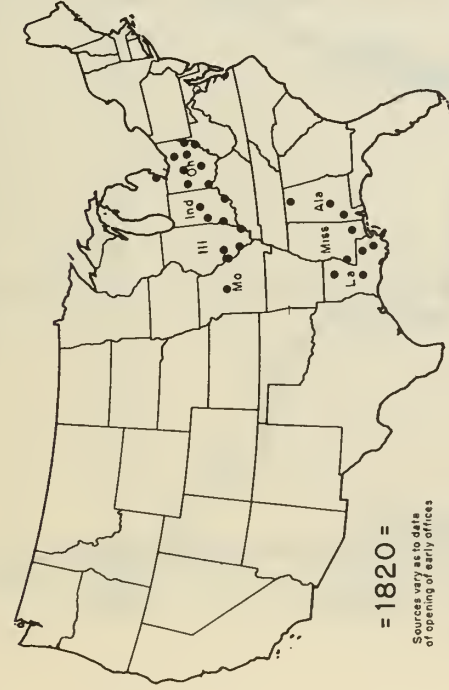
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	Section 14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

## SECTION 14

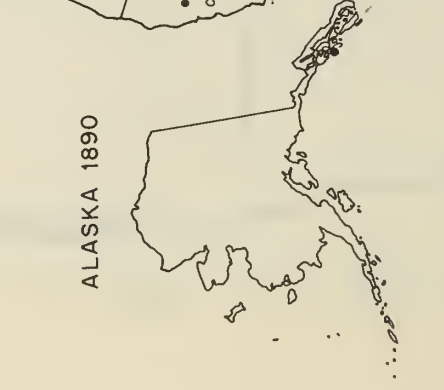
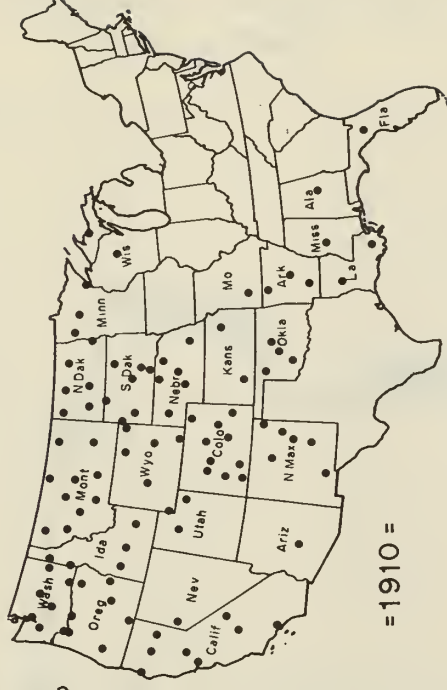
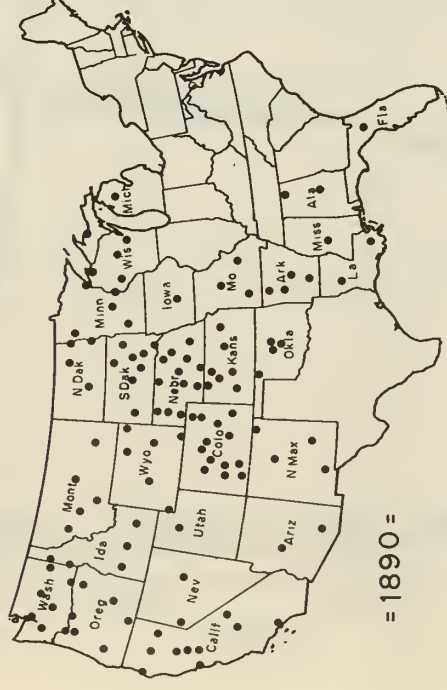
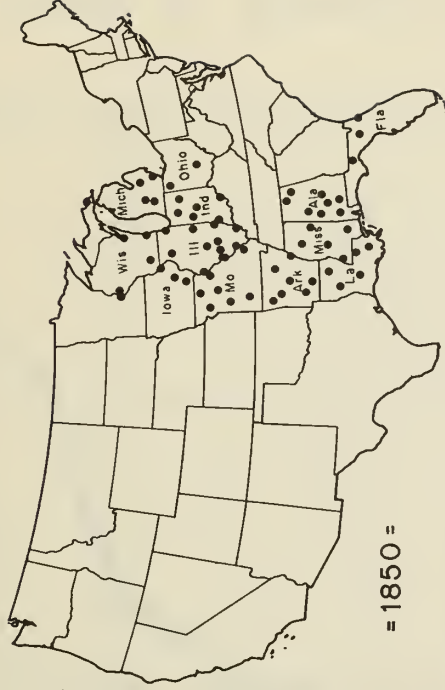




# LOCATION OF DISTRICT LAND OFFICES



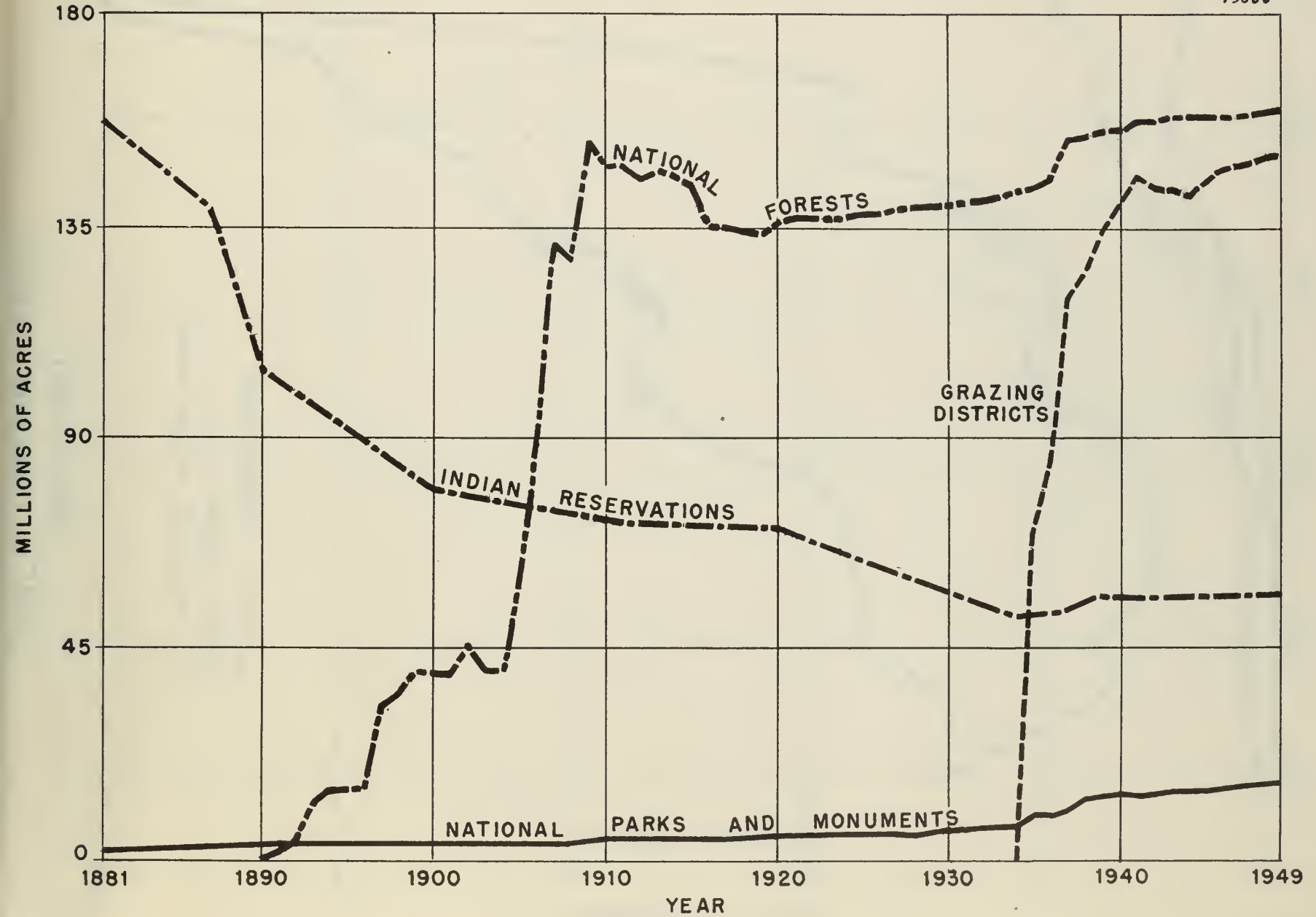
Sources vary as to date of opening of early offices





# NET AREA OF MAJOR FEDERAL RESERVATIONS IN THE STATES 1881 to 1949

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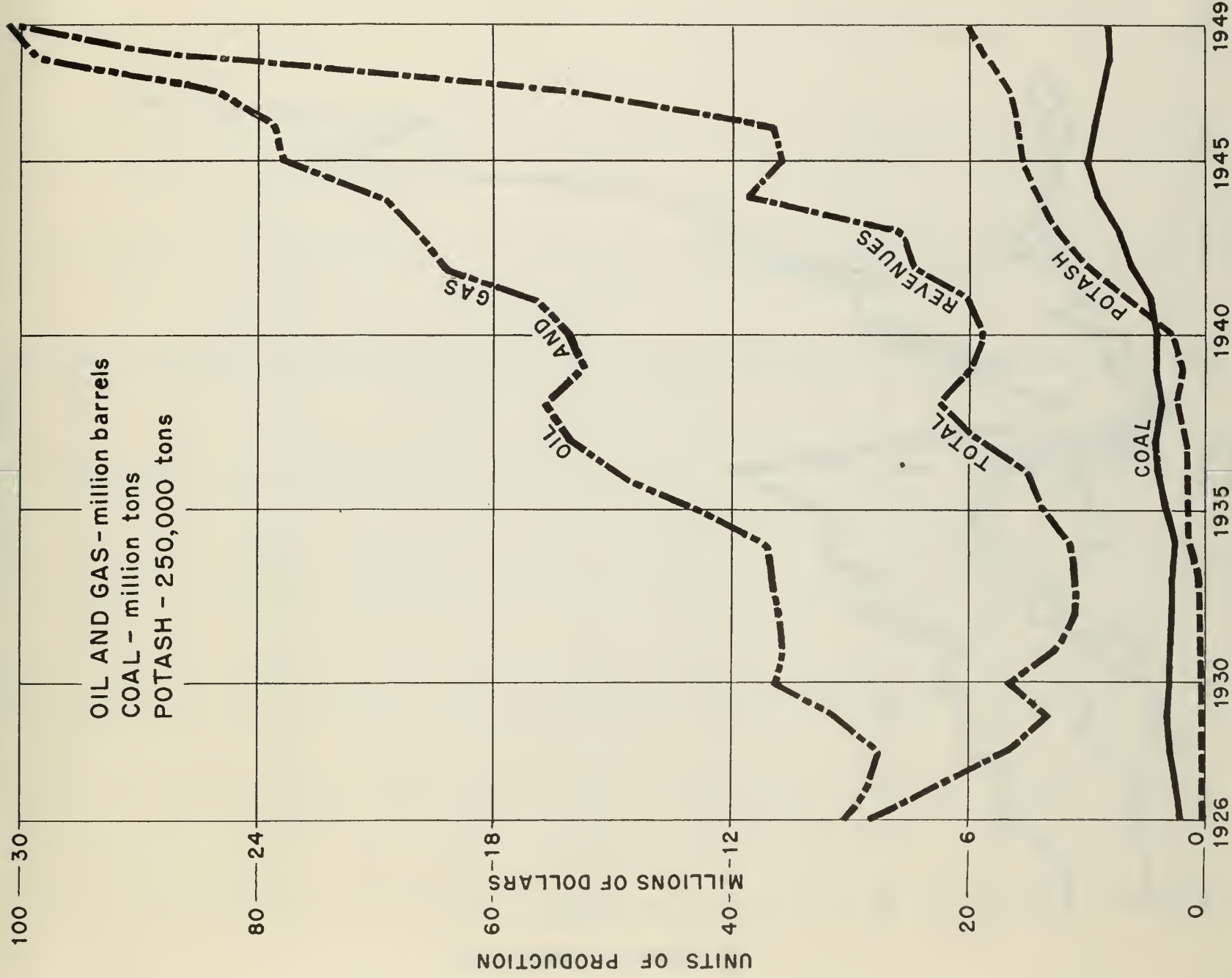
U.S. DEPT. OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

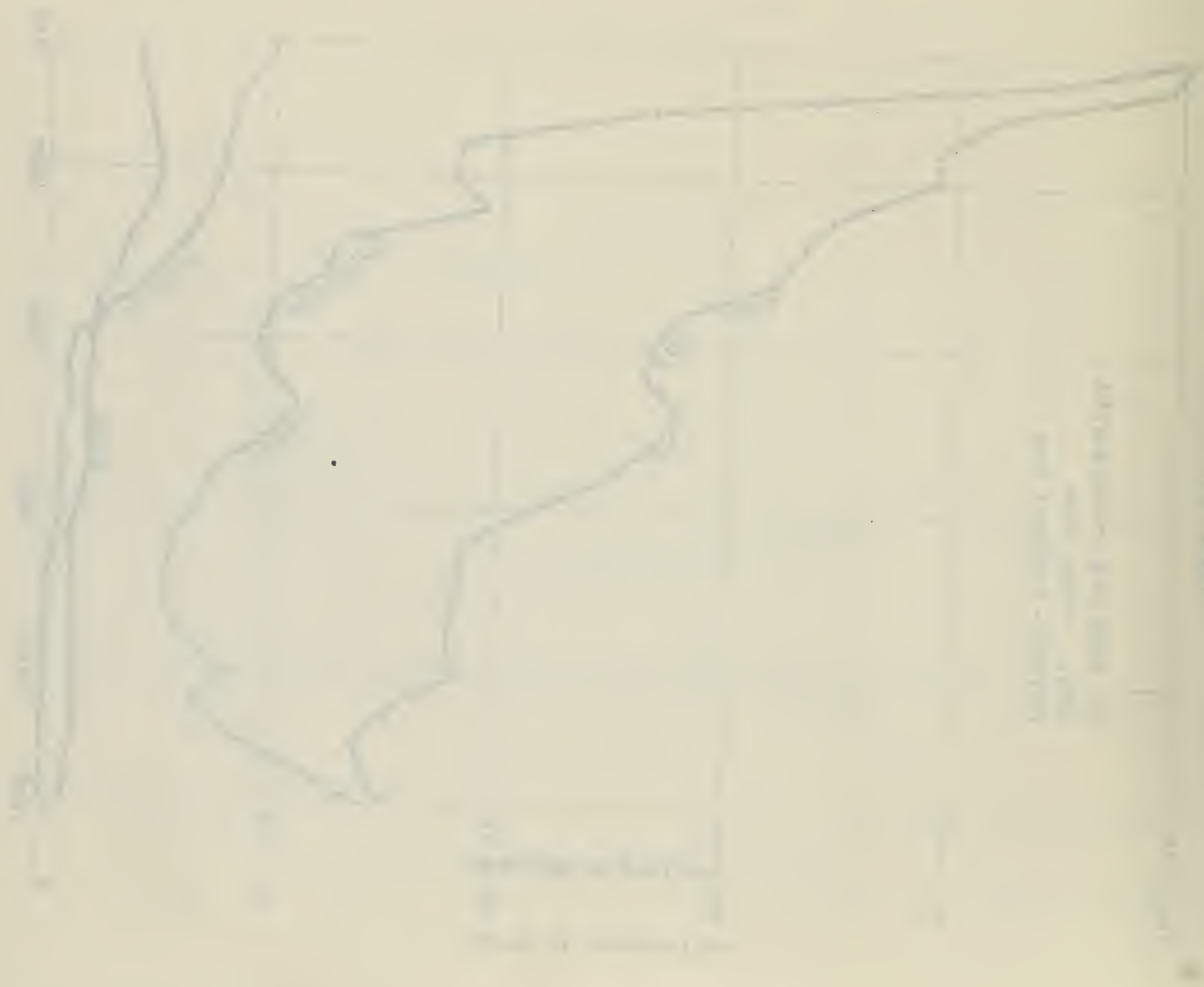
NET AREA OF MAJOR FORESTAL RESERVATIONS IN THE UNITED STATES



MINERAL PRODUCTION UNDER LEASE OF  
PUBLIC DOMAIN LANDS

1926 to 1949

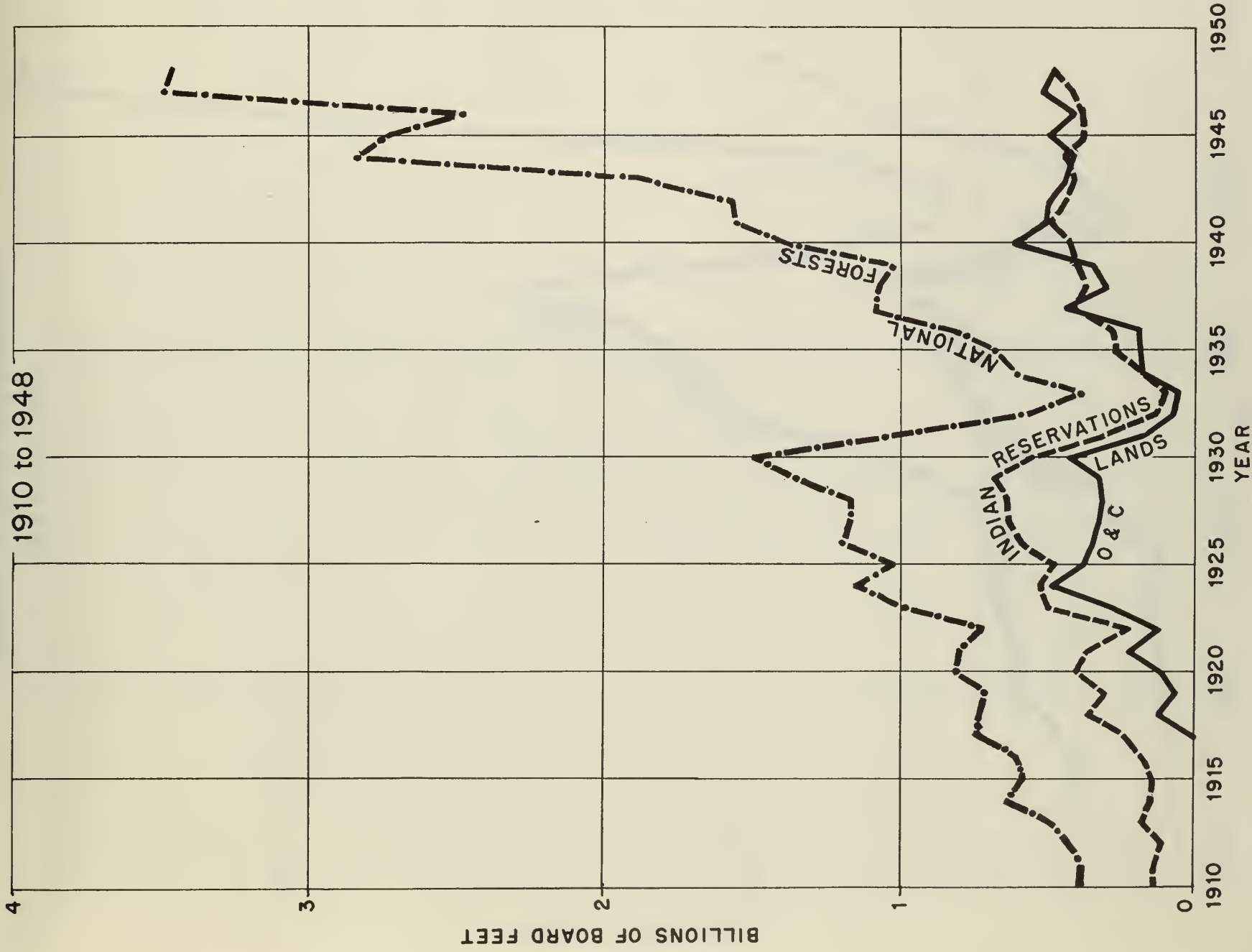




Contour Map  
 Elevation (ft)  
 Distance (m)



VOLUME OF TIMBER SOLD FROM  
MAJOR FEDERAL LANDS

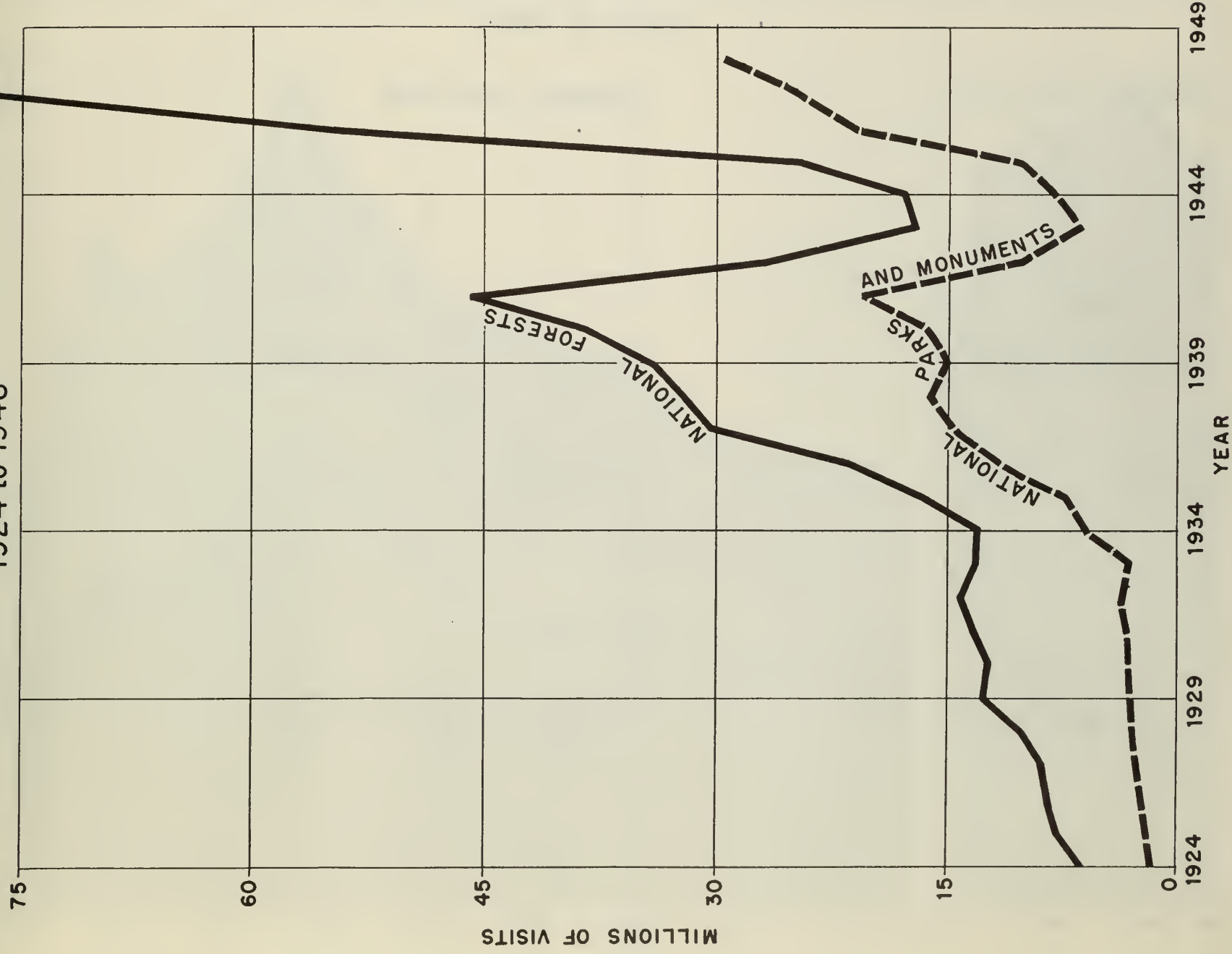




# NUMBER OF VISITS TO NATIONAL FORESTS,

# PARKS, AND MONUMENTS

1924 to 1948





NUMBER OF

LIVESTOCK GRAZED IN NATIONAL FORESTS AND GRAZING DISTRICTS

1905 to 1948

