HOW WE ACQUIRED OUR LANDED ESTATE

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Karl S. Landstrom

U.S. DEPARTMENT OF AGRICULTURE
How we acquired our landed estate. How we got our land is the core of our history, beginning with the Thirteen Colonies and continuing with the Louisiana Purchase (4 cents an acre for 529,911,680 acres), Florida, the Northwest Territory, Alaska, Texas, the Pacific Southwest, the Gadsden Purchase, and others—until the national domain extended from sea to shining sea and beyond the seas. By Karl S. Landstrom, lands officer, Bureau of Land Management, Department of the Interior.

The landed estate of the American people is the resource base on which the American economy functions. How it was acquired is the core of our history.

The national domain is all land, public and private.

The public domain is the remaining portion of lands originally acquired by our Government.

The public domain, at its broadest extent, consisted of three-fourths of the continental United States and nearly all of Alaska, a total of 1,807 million acres.

The public domain was acquired by cessions from the Thirteen Original States, 1781 to 1802; the Louisiana Purchase, 1803; the Spanish Cession of Florida, 1819; the Oregon Compromise, 1846; the Mexican Cession, 1848; the Texas Purchase, 1850; and the Gadsden Purchase, 1807. Alaska was purchased from Russia in 1867.

The thirteen original states made up the area of the United States at the close of the Revolutionary War. The boundaries of the new Republic were established by treaty with Great Britain. The western boundaries of the Original States were ill defined. There had been overlapping and rival claims, based on conflicting crown grants.

Six of the States had clearly defined boundaries in the sense that they were bounded by the claims of other States to westward. The other seven—New York, Virginia, North Carolina, South Carolina, Georgia, Massachusetts, and Connecticut—held claims to “wilderness” to the west. The claims extended to the Mississippi River.

The attention of the Government of the newly formed Confederation was early drawn to the problem of the western land claims of the States. The States having no western claims contended that the western claims of the other States should be ceded to the Confederation.

Maryland contended that the unsettled domain to the west had been wrested by “common blood and treasury” and should be made their common property. Future unequal representation was feared as the larger States would grow with westward migration.

The Articles of Confederation had left the sale and disposition of western lands to the exclusive control of the States owning them. Some States had opened land offices, made private grants, granted land bounties, or otherwise disposed of portions of their domain.

The Continental Congress in 1779 passed a compromise resolution recommending that the States withhold further grants of western lands for the
duration of the War. Eight States voted for the resolution, and three voted against it.

New York tendered her claims to western land to the Congress without reservation in 1780 to alleviate dissatisfaction of the smaller States. The Congress adopted a resolution "earnestly" requesting other States to do the same.

New York had claimed an area of undefined and unsettled lands west of Pennsylvania and north of the Ohio River. These lands, ceded in 1781, are now in Erie County in Pennsylvania.

Virginia's western possessions north of the Ohio River were ceded in 1784. The present State of Kentucky was ceded directly to that State. Kentucky accordingly is one of the States that never contained public domain of the United States.

Massachusetts succeeded to the ownership of its vacant lands and became proprietor of unoccupied lands in Maine. These lands were disposed of under State laws.

To the United States in 1785 were ceded claims to western lands that overlapped Virginia's claims in what is now Pennsylvania, Illinois, Wisconsin, and Michigan.

Maine took charge of her own lands and made no cession to the United States.

South Carolina in 1787 ceded a strip of land that now lies in the northern parts of Georgia, Alabama, and Mississippi.

North Carolina ceded her western lands forming what is now the State of Tennessee, in 1790.

Connecticut's claim to western unoccupied lands, except to a tract known as the Western Reserve, in Ohio, was relinquished to the United States in 1786.

Georgia completed the cessions of the original States in 1802 by ceding lands that now are part of Alabama and Mississippi. Payment for this transfer was made by the United States of 6,300,000 dollars, which was approximately 11 cents an acre.

Pennsylvania, Rhode Island, and Vermont made no cessions.

Delaware, Maryland, and New Jersey had no western lands to cede.

These cessions and the United States title to 236,825,600 acres of land and water area, as computed in 1912 by a committee representing the General Land Office, Geological Survey, Bureau of Statistics, and Bureau of the Census. This was the nucleus of the land to be known as the public domain. The Government of the United States assumed the role of proprietor of these lands and trustee for the people.

By events listed thus far, citizens of the United States and the Nation by 1802 had acquired title to lands west to the Mississippi River. At that time, Florida was claimed by Spain, and Louisiana was claimed by France.

LOUISIANA, which included the Mississippi Valley, was early recognized as having geographic and economic importance on the American continent. The Ohio and Mississippi Rivers and their tributaries afforded an avenue to their sea, but the mouth of the Mississippi River was under the control of foreign powers.

France's claim to territory in the Mississippi Valley and along the Gulf of Mexico was based on LaSalle's voyage and proclamation of 1682. The eastward boundary of Louisiana thus claimed was the "River Palms." This is identified as a river in what is now Florida; it empties into Palm Sound, now called Sarasota Bay.

France's Louisiana Territory was ceded to Spain in 1762. The area was described as "the whole country known under the name of Louisiana, together with New Orleans and the island on which that city stands."

By treaty in 1763, France and Spain ceded to Great Britain all of Louisiana east of the Mississippi. Twenty years later, in boundary settlements at the close of the Revolutionary War, the United States took over from Great Britain all that part of the original Louisiana ceded to it by France.

Spain in 1800 ceded back to France the Louisiana Territory less the part east of the Mississippi and north of latitude 31°, which had been acquired by the United States in 1783 from Great Britain. Before that time, the ministers of the United States in Europe had been instructed to prevent, if possible, the return of Louisiana to Spain. France was urged to consent to the sale of the City and Province of New Orleans to the United States. The urgency of purchase was heightened by the temporary closure of the port of New Orleans to the United States in October 1802.

President Thomas Jefferson, in December 1802, obtained the consent of the Congress to negotiate for the purchase of New Orleans from France. Negotiations were conducted by James Monroe and others. France agreed to the sale for $15,000,000.

It is said that when Napoleon Bonaparte instructed his minister of Marine, the urgency regarding the Louisiana sale he ventured the forecast that the country that would hold the Mississippi Valley would eventually become the most powerful country on earth.

The boundaries of Louisiana as purchased from France were indefinite. Definite boundaries were established later by a treaty with Spain and a series of treaties, concluded in 1817, with Great Britain.

The cost of 259,911,680 acres of land and water surface acquired in the Louisiana Purchase was 32,213,568 dollars, or about 4 cents an acre.

FLORIDA was claimed by Spain by discovery and exploration.

Spain ceded Florida to Great Britain in 1763, but in 1783, after the conclusion of the treaty between the United States and Great Britain, Florida was ceded back to Spain. The boundaries of Florida were in dispute between Spain and the United States.

President James Madison issued a proclamation in 1810 taking possession of the east bank of the Mississippi River under the authority of the treaty of purchase with France. The proclamation left the question of ownership for future settlement. After a series of incidents, John Quincy Adams for the United States and Don Luis de Onis for Spain signed a treaty of cession of Florida to the United States in 1819.

The Florida purchase cost the United States 5,794,057 dollars for 46,144,640 acres of public domain—about 14 cents an acre.

THE NORTHWEST TERRITORY was established as part of the United States by the treaty with Great Britain in 1846.

Long before the purchase of Louisiana, the interests of the United States had been directed toward the unknown interior country west of the Mississippi. Several land journeys were begun, but none was brought to a conclusion.

The northwestern coasts had been visited by ships of several countries. Captain Robert Gray, an American, discovered the mouth of the Columbia River and sailed many miles upstream.

The American claim to "Oregon Territory" was based upon Captain Gray's discovery and later expeditions by land and water.

President Jefferson asked the Congress in 1809 to appropriate 2,500,000 dollars for an overland expedition, which was begun the next year by Meriwether Lewis and William Clark. Furtherance of the American claim was the prime motive of the expedition. Exploration of the newly purchased Louisiana Territory was also an objective.

The Lewis and Clark expedition began by water from the mouth of Wood River on the Illinois bank of the Mississippi, opposite the mouth of the Missouri River. The party reached an Indian village at Mandan by October 26. There, on the north bank of the Missouri, a fort, called Fort Mandan, was erected.

The route followed in 1805 passed through the lofty Bitter Root Range, down the Clearwater River to its junction with the Snake River, and down the Snake to the Columbia River.
Captain Clark wrote that on November 7, 1805, they saw for the first time "the object of all our labors, the reward of all our anxieties," the waters of the Pacific Ocean.

After the winter of 1805-1806 at Fort Clatsop, the party arrived at St. Louis on September 23, 1806.

The report, "Brief Account of the Lewis and Clark Expedition," published in 1805 and reissued by the Bureau of Land Management, characterizes it as influencing greatly subsequent political decisions that affected the ownership of the Oregon Territory.

Russia at that time had an undefined claim to territory in what is now Alaska. By treaty in 1824, the United States recognized Russian sovereignty over the northwestern coast from latitude 54°40' north to the North Pole. Great Britain later confirmed this treaty in 1825 and Russian sovereignty extended northward from latitude 54°40'. The eastern extent of Russian sovereignty was defined by the 49th parallel as the present eastern line of Alaska.

Sojourners over the land south of latitude 54°40' was hotly disputed by the United States and Great Britain. Disputed territory was occupied by both countries.

The northern boundary of the United States was placed by treaty in 1846 at the 49th parallel extended to the middle of a channel that separates Vancouver Island from the mainland, thence southerly along the center of the channel and of the Strait of Juan de Fuca to the Pacific Ocean. The exact location of the channel referred to was in dispute from 1846 to 1872. An exact location was determined in 1872 by Wilhelm I, Emperor of Germany, who was arbitrator without appeal, agreed upon by the two countries.

The Oregon Compromise established 183,346,804 acres as public domain of the United States. No payment of money was involved.

Texas, annexed in 1845, was originally included in French and Spanish possessions. The treaty of purchase of Florida contained recognition by the United States of the present eastern boundary of Texas as the eastern boundary of Spanish possessions.

Mexico obtained her independence from Spain in 1821.

Secretary of State Martin Van Buren in 1839 instructed the United States Minister to Mexico to offer to buy the part of Texas east of the Nueces River. Mexico refused. The Republic of Texas was proclaimed in 1836 and was recognized by the United States in 1837.

Admission of Texas to the United States was soon urged. It became a political issue. A joint resolution for annexation was adopted by Congress and was signed by President John Tyler in 1845.

The State of Texas succeeded to the ownership of all lands of the former Republic east of the Rio Grande that were included in a region bounded on the east by the Spanish-American boundary as established under the Texas treaty of 1819. These boundaries had been established by treaty with Mexico in 1828, but they were indefinite. Persons living at Santa Fe, in what is now New Mexico, denied that they were within the State of Texas.

During the Mexican War in 1847, General Stephen W. Kearney, under War Department orders, captured the Mexican province of New Mexico. As military governor, he published a series of laws for the government of the province.

An organic law for the government of the Territory of New Mexico was enacted after 3 years of military government. The law defined the eastern boundary of the Territory at the present eastern line of New Mexico, reducing thus the extent of the claim of Texas. By the act of September 9, 1850, the United States proposed the purchase from the State of Texas of its claim to lands north of latitude 36°30' and west of the 100th meridian and those north of latitude 32° and west of the 109th meridian. The State accepted, and the purchased property became public domain of the United States.

The lands added by this purchase consisted of 78,926,720 acres of land and water surface, costing 15,496,448 dollars, or approximately 20 cents an acre. These lands are now parts of Kansas, Colorado, New Mexico, and Oklahoma.

The Pacific Southwest, especially the coast of California, was early a matter of jealous attention by several rival countries.

Russians occupied a part of the California coast in 1812 by permission of Spain. A military governor was in command.

President Andrew Jackson proposed in 1835 to Mexico that the Pacific Southwest be sold to the United States. Negotiations failed. John Charles Fremont's overland expedition and Charles Wilkes' voyage under auspices of the United States added information about this area.

A formal treaty of annexation had been accepted by the Republic of Texas, President James K. Polk in 1845 ordered the United States Army to occupy and hold the western part of the Texas claim. Steps were taken to offer to the Mexican Government terms for the acquisition of the disputed western Texas Territory and lands to the west, including the bay and harbor of San Francisco.

War was declared with Mexico on May 13, 1846. After repeated failure of negotiations and resumption of hostilities, a treaty was completed by Commissioner Nicholas P. Trist, on behalf of the United States, at the city of Guadalupe Hidalgo, Mexico, on February 2, 1848. President Polk proclaimed the treaty on July 4, 1848.

This action resulted in recognition of the western boundaries of Texas and added to the public domain the lands bounded on the east by the Rio Grande River and a meridian extending north, on the north by the 42d parallel, on the west by the Pacific Ocean, and on the south by the national boundary established by the treaty. The area of public domain acquired was given by the Federal Interagency Committee in 1912 as 338,680,960 acres. The cost was 16,925,149 dollars, or approximately 5 cents an acre.

The Gadsden Purchase was completed in 1853, when Franklin Pierce was President.

James Gadsden, the United States Minister to Mexico, entered into the treaty for purchase of the western United States for the purpose of defining more clearly the boundary and making a more regular line between the United States and Mexico.

The boundaries given were the Gila River on the north, the Rio Grande on the east, and a point 20 miles below the mouth of the Gila River, on the Colorado River, on the west. The area of public domain added was 18,988,800 acres (land and water surface). The cost was 10 million dollars, or approximately 53 cents an acre.

Three parcels of territory, now securely parts of the United States, had been collectively omitted by the various formal treaties of cession or purchase.

One of these areas is what is now western Louisiana, west of the Mississippi River drainage. It was relinquished by Spain in 1819.

Another is an extensive area in Minnesota and the Dakotas. It drains northward through the Red River. It was relinquished by Britain in 1818.

The third parcel is in central Colorado. It was not included in the Louisiana or Texas Purchases but was covered by a treaty with the Ute Indians in 1868.

The total of original public domain acquired in continental United States from 1781 to 1867 was given by the Federal Interagency Committee in 1912 as 1,462,466,560 acres (land and water area). The aggregate cost was 77,879,222 dollars, or approximately 5 cents an acre.
American Indians or Indian tribes originally occupied or claimed most of the lands embraced in the treaties and purchases of the United States. At the time of acquisition from other powers, Indians were largely in possession.

In the later stages of westward migration, Indian claims to land were customarily settled by means of treaties with the tribal authorities. The treaties usually provided for areas to be reserved to Indian possession.

The total cost of Indian land claims is unknown, but it is known that it far exceeds the cost of payments to other countries. Several lawsuits against the United States on account of Indian land claims have been settled in recent years. Other large claims were pending in 1958.

An example of an Indian land claim is that of the Aleea Band of Tillamooks, et al. v. The United States, involving 2,772,580 acres. The lands are located in the coastal areas of Oregon. Suit was brought under the Act of August 26, 1935 (49 Stat. 801), which gave the Court of Claims jurisdiction over this class of cases.

The court had decided on April 2, 1945 (103 C. Ls. 494), and it had been affirmed by the United States Supreme Court (329 U. S. 40) that four of the tribes had proved their original Indian title and that the taking of the lands by the United States had been involuntary and uncompensated. Judgment was entered on January 5, 1950, for the tribes under the provisions of the Fifth Amendment to the Constitution of the United States (115 C. Ls. 463). The amount awarded was measured by the appraised value of the lands as of the date they had been taken, plus reasonable interest, offset by the value of the tribes' interests in the reservation lands allotted to them of the date the lands were taken and less the equivalent of gratuities from the United States to the tribes over the years to the latest date of accounting.

The court set the value of the lands taken at $1.20 dollars an acre as of November 9, 1855. The rate of interest on the amount due was fixed at 4 percent from 1855 to 1934 and 5 percent thereafter.

The total amount due the four tribes, with interest, less offsets, was fixed by the Court of Claims at $15,525,604.77 dollars, to which certain additional interest was to be added until the date of payment.

On reversal by the United States Supreme Court (341 U. S. 48), final judgment was entered by the Court of Claims on May 1, 1957 (121 C. Ls. 853) at $2,259,686.80 dollars.

Alaska was claimed by Russia on the basis of voyages by Vitus Bering in 1728 and 1741. After Bering's second voyage, Russian fur traders advanced along the Aleutian Islands. A Russian trading corporation, the Russian-American Company, took domination over Russian America in 1799 under a series of 20-year concessions.

During the Crimean War in 1855, Russia feared that Great Britain might seize Russian America. The area was offered to the United States, but the offer was refused.

The legislature of the Territory of Washington memorialized President Andrew Johnson in 1866 to acquire the Russian territory in Alaska. A treaty of purchase was signed in 1867 by Secretary of State William H. Seward for the United States and Baron de Stoeckl for Russia. The purchase price was $7,200,000 dollars, or approximately 2 cents an acre, for 375,296,000 acres of public domain.

Formal transfer was made at Sitka to Major General L. H. Rousseau, the United States Commissioner, on October 18, 1867.

The early progress made by Russians in Alaska may be traced today by viewing the remaining Russian Orthodox church buildings, wooden framed and turned topped. These monuments are found at Unalaska, eastward along the Aleutians, in the Kodiak-Aフガノク Island group, and at Sitka, which was the last capital of Russian America.
Thus was completed, in 1867, the acquisition of public lands of the United States.

The public domain did not include lands within American insular possessions. The Territory of Hawaii, Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, and other islands in the central Pacific have laws for the administration and disposition of their public lands.

Acquired lands are distinguished from public domain in that they have been acquired by the United States by purchase or gift or condemnation from individual landowners or from the States in individual transactions not embodied in the major acquisitions of public domain.

The desirability of Federal purchase of privately owned lands to supplement public domain reserved in national forests first arose about 1901. The subject was debated in the Congress beginning in 1909. Advocates stressed the importance of forest management in the control of runoff and hence control of floods and navigation resources. Purchases were proposed in Eastern States where there was no public domain. Opposition was based on such grounds as interference with private ownership, cost, and constitutional authority. An authorizing act, known as the Weeks Act, was adopted in 1911. Purchases under this act were limited to lands necessary to the protection of the flow of navigable streams.

The act established a National Forest Reservation Commission, consisting of the Secretaries of War, Interior, and Agriculture, and two members each of the House and the Senate. The commission approves the price and acreage of all tracts acquired under the authority of this act.

The Clarke-McNary Act of 1924 broadened the authority to include purchase of land in the watersheds of navigable streams for timber production as well as for regulation of streamflow. The United States Forest Service, as of June 30, 1956, administered 27,960,067 acres of acquired lands of the United States. Much of this area is in States from Texas eastward to Virginia, including Missouri and Kentucky and States south of them. Some of these acquired forest lands are in New Hampshire, Vermont, Pennsylvania, Michigan, Minnesota, and Wisconsin. Purchases of forest lands in the Western States are small in relation to the area of national forest consisting of reserved public domain.

An important acquisition of Federal lands was that of the resealed Oregon and California Railroad lands, known as the O & C lands. Title to almost 5 million acres of forested lands was resealed to the United States by an act of the Congress in 1916. The railroad company was paid a price of 2.50 dollars an acre for the lands on the basis that it had been the intention of the Congress in the prior land grant to have given the company a grant of that amount.

A different form of Federal land purchase consisted of purchase of farmlands in submarginal uses during the 1930's. Purchases were made under various funds established by the emergency relief acts, the Agricultural Adjustment Act, and later the Bankhead-Jones Farm Tenant Act of 1937. The purchases under this group of programs included some 11 million acres. Nearly half of these lands were in the northern part of the Great Plains.

A Special form of land purchase requirement is that for military purposes. Such purchases during the Second World War aggregated some 7 million acres. Other lands were leased.

The Department of Defense, for military purposes, held for the United States 7,675,275 acres of acquired lands as of June 30, 1956. For civil functions of the Corps of Engineers, the area of acquired lands held on that date was 3,647,999 acres.

Few purchases of privately owned lands were made to provide lands for wildlife refuges. Wildlife refuges have been established or augmented by condemnation and purchases, as well as by reservation or withdrawal of public lands. The first purchase of land for a wildlife refuge was for the bison range on the Flathead Indian Reservation in 1909. General purchase authority was granted by the Congress in the Norbeck-Anderson Act of 1929. Extensive areas were added in the 1930's from lands purchased as submarginal lands.

Acquired lands administered by the Fish and Wildlife Service as of June 30, 1956, aggregated 2,770,646 acres. These lands for the most part are considered incapable of sustained use as cropland because of wetness, dryness, or accelerated erosion.

Lands acquired under the reclamation program and administered by the Bureau of Reclamation totaled 1,538,016 acres as of June 30, 1956. The Atomic Energy Commission administered 667,926 acres and the Tennessee Valley Authority held 740,930 acres as of June 30, 1956.

All lands acquired by Federal agencies by purchase, donation, or transfer amounted to 50,082,299 acres throughout the world as of June 30, 1956, compared with 724,504,778 acres of public domain (reserved and unreserved) held on that date in continental United States and Alaska.

 Federally owned real property outside the continental United States as of the same date totaled 365,082,217 acres. Defense agencies held 2,676,538 acres of this property. Civil agencies held the remaining 362,405,679 acres. The Department of Defense did not report the locations of its acreage throughout the world. However, for civil agencies outside of Alaska, Federal holdings were as follows: North America, 405,868 acres; South America, 52 acres; Europe, 798 acres; Africa, 932 acres; Asia, 1,272 acres; Australasia, 743 acres; Pacific Islands, 17,000 acres; Hawaii, 197,339 acres; and Wake Island, 2,600 acres.

In foreign countries, civil agencies of the United States held 5,150 acres, including Department of State, 2,008 acres; United States Information Agency, 1,449 acres; and General Services Administration, 1,137 acres. These lands were used for office building locations, 500 acres; harbor and port terminals, 56 acres; and housing, 1,360 acres. Other land and vacant land totaled 3,434 acres.

Centralized records of public domain of the United States are maintained by the Bureau of Land Management of the Department of the Interior. Records of acquired lands are maintained by the various acquiring or administering agencies. Inventory reports of federally owned real estate are prepared annually as of the end of each fiscal year and are issued early in each session of the Congress. The General Services Administration, in collaboration with the General Accounting Office, develops and supervises agency procedures for the maintenance of real property accounts and the reporting of inventory data.

By means of inventory reports and exchange of information, Federal agencies are able to avoid unnecessary acquisitions, effect economies through joint use, facilitate transfers or exchanges of administration, and return surplus federally acquired lands to private ownership.
ACQUISITIONS

TERRITORY OF THE ORIGINAL THIRTEEN STATES
- North Carolina cession to the United States 1790
- United States cession to Tennessee, 1806 and 1846
- The Original Thirteen States (present area) plus the District of Columbia

TERRITORY OF THE REPUBLIC OF TEXAS
- (Annexation of Texas, 1845)
  - United States purchase from Texas 1810
  - State of Texas (present area)

OTHER ACQUISITIONS BY THE UNITED STATES
- Louisiana Purchase from France 1803
- Basin of the Red River of the North
- Treaty with Spain (ceded Florida and adjustment of claims) 1819
- Oregon Compromise with Great Britain 1846
- Cession from Mexico 1848
- Gadsden Purchase from Mexico 1853

ALASKA
Purchased from Russia March 30, 1867

1803
1846
1848
1850
1853
Land Acquisitions U.S.

1. Original 13 states

2. Texas Republic Annexation 1836
   U.S. Purchase from Texas 1845

3. Louisiana Purchase from France 1803

4. Oregon Compromise with Great Britain 1846 (Oregon, Washington)

5. Cession from Mexico
   California, Nevada, Utah, Arizona
   & part of Oregon, Colorado and New Mexico 1848

6. Gadsden Purchase from Mexico
   Part of New Mexico 1853
Spanish explorers arrived in Florida in the early 16th century. The Spanish established missions and missionized the indigenous peoples. This led to clashes between the Spanish and the indigenous peoples. The Spanish also introduced European goods and ideas to the Americas. In 1565, the French established a colony in Florida, but it was short-lived. In 1583, England established a colony in Florida, which lasted until 1587. The English established a settlement at St. Augustine in 1565. The Spanish and the English competed for control of Florida for many years.
A program has been outlined, having as its objective the keeping of private ownership as fully in the range picture as reasonable financial returns permit, by the removal of existing handicaps and the solution of existing problems.

The swing from public to private ownership has gone so far, however, that the maximum feasible self-help by private owners supplemented by everything that the public can reasonably be expected to contribute will still leave a major problem on a part of the 376 million acres of range land now privately owned. The classes of land involved are:

1. Approximately 15 million acres of range land on which the dry-farming effort has clearly failed, and on which private ownership now seems to be at the end of its rope. Failure has led to tax delinquency, abandonment, excessive relief rolls, and a long train of other adverse social and economic consequences. Unless artificial revegetation costing from $3 to $3.50 per acre is resorted to, natural processes will not restore the forage cover for years or even decades. The cost of revegetation or the alternative of protracted holding of unproductive land are both beyond the capacity of the private owner. Some other constructive action is therefore called for on what was, and is potentially, some of the best or most needed western range.

2. Range lands submarginal for private ownership, because of low or uncertain forage productivity, excessive depletion and slow recovery, high ownership costs such as investments required, improvements, taxes, etc. Low productivity and high costs are both accentuated by marketing costs, which are very high for all of the far western range States except California, in comparison with those of the Middle Western States. Taking all factors into account, the tall-grass prairies and the short-grass plains east of the Rockies offer the most favorable opportunities for private ownership, and the salt-desert shrub and southern desert shrub of the Intermountain and Southwest regions the least favorable. The best approximation which can now be made places 118 million acres of this category in the problem class.

3. Coinciding closely with the submarginal land area is a large area of range lands having high public values for watershed protection. The constructive management of these lands is a critical watershed problem, and because of the cost of the range restoration, restricted grazing, and other special erosion-control measures required, from many of which the public rather than the private owner will benefit, it is difficult if not impossible to hold them under private ownership. The total area of such watershed lands is about 118 million acres. It includes about 107 million acres of more or less seriously eroding land contributing silt to important western streams.
Land Acquisition by U.S.

1803  Louisiana Purchase from Spain
1819  Treaty with Spain, small area of Florida
1845  Annexation of Texas, became a state
1846  Oregon Compromise with Great Britain
1848  Resignation of Mexico
1850  US Purchase from Texas
1853  Gadsden Purchase from Mexico
Land Areas Acquired by U.S and Turtle States

4. 1846 Oregon Compromise with Great Britain
   States
   Oregon, Washington, Idaho
   Portions of states
   Montana, Wyoming (West edge)

5. 1848 Cession from Mexico
   States
   California, Nevada, Utah
   Portions of states
   Wyoming, Colorado, New Mexico, Arizona

6. 1853 Gadsden Purchase from Mexico
   Portions of states
   Arizona, New Mexico

7. 1803 Louisiana Purchase from France
   States
   North Dakota, South Dakota, Nebraska
   Kansas, Oklahoma
   Portions of states
   Montana, Wyoming, Colorado
① 1850  U.S. Purchase from Texas
      Portions of states
      New Mexico, Colorado, Wyoming, Kansas, Oklahoma

② 1819  Treaty with Spain
      Portion of state
      Colorado

③ 1845  Annexation of Texas
      States
      Texas
The handling of State range land has been based almost wholly on a desire to secure the maximum current revenue. Sale of the maximum acreage has been encouraged without regard for the fitness of the land for private ownership. Leasing has usually been with a view to securing the greatest possible price. No provision has been made for the protection of the range and watershed resources through wise management. A search through the last annual land report of all the range States fails to reveal any mention of the condition of the lands. Without exception they are mere financial statements made up largely of figures of acreages and dollars. The measure of success seems to be based entirely on the ability of those responsible for the lands to obtain the maximum revenue from lease or sale regardless of the effect on the resource.

In every case responsibility for administering State lands rests with those whose major function is revenue collection. In no instance has the land been turned over to an agricultural agency. Surprising as it may seem, even where a qualified State agricultural department is provided it has been permitted to have no part in State land management other than that which could be exerted indirectly through influence. Clearly, in the interest of good land management, the administration of State grazing land should be closely tied in with the interrelated agricultural interests. Sound land-use management requires this action.

To sum up: The distribution pattern of State lands is of such character as to complicate any attempts at improved range management. No provision at all to control numbers of stock or season of use is exercised in leases. Supervision of the use of the land is not provided. The responsible agency is primarily interested in securing the greatest current revenue through sales or leases. The services of existing qualified agencies such as the State agricultural departments, the agricultural experiment stations, and the Extension Service are little used.

INDIAN LANDS

The land ownership problem within the western Indian reservations, especially those of the Northwest, is little if any less complicated than with the land in other forms of ownership or control. Until very recently the objective in Indian administration seems to have been to lead or force the Indian to accept the same mode of living and standards of civilization that have proved to be satisfactory to the white man. This has included the principle of individual, private ownership of land as the ultimate solution. As a result, five distinct classes of land titles are intermingled on most of the reservations. This situation is fully discussed in another section (pp. 278-285) and therefore will not be repeated here. It should be said, however, that the resultant land-ownership pattern has been one of the major obstacles to the practice of proper range management on Indian lands. Progress in recent years has been encouraging and should be more rapid under the broad authority vested in the Interior Department by the Wheeler-Howard Act of 1932.

**Beginning later in the day, individuals began to realize that there was neither feasible solution to the public pressure nor any certain conservation plan. The public domain has been very much in favor of public management, creating the national parks, power-site without much such special purpose. Stock driveways, and reclamation of the extent, as record of the Interior, is shown in:**

National forests... National parks and reservations... Indian reservations... Military, naval, and air... Bird and game refuges... Stock driveways... Reclamation warehouse... Water power reservoirs...

As a residue first provided for is on the one hand the State lands on July 1, 1934, of the public domain, of the States. For the purposes of Table 45 are considered.

**TABLE 45.—Public domain of the States:**

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<th>State</th>
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<td>Arizona</td>
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</tr>
<tr>
<td>California</td>
<td></td>
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<tr>
<td>Colorado</td>
<td></td>
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<tr>
<td>Idaho</td>
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<tr>
<td>Montana</td>
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<tr>
<td>Nevada</td>
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<tr>
<td>New Mexico</td>
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<tr>
<td>Oregon</td>
<td></td>
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<tr>
<td>Utah</td>
<td></td>
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<tr>
<td>Washington</td>
<td></td>
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<tr>
<td>Wyoming</td>
<td></td>
</tr>
<tr>
<td>Kansas</td>
<td></td>
</tr>
<tr>
<td>Nebraska</td>
<td></td>
</tr>
<tr>
<td>North Dakota</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

On June 28, 1934, some degree of federal ownership or control.

**Fig. 62 shows the total land use in federally owned or controlled areas...**

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REMAINING PUBLIC DOMAIN

Beginning late in the nineteenth century, a few farsighted individuals began to realize that for certain lands private ownership was neither feasible nor desirable. As a result, partly owing to public pressure but more largely to the political astuteness of certain conservation leaders, a large area of the remaining public domain has been withdrawn from all forms of entry and reserved for public management. Chief among these reservations were those creating the national forests, national parks and monuments, and power-site withdrawals. Also a great area has been reserved for such special purposes as Indian reservations, reclamation sites, stock driveways, and mineral reservations. Although there is a material amount of overlapping as between various reserves, their general extent, as recorded in the 1934 report of the Secretary of the Interior, is shown in the following partial tabulation:

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>National forests</td>
<td>138,120,193</td>
</tr>
<tr>
<td>National parks and monuments</td>
<td>8,692,196</td>
</tr>
<tr>
<td>Indian reservations (estimated net)</td>
<td>56,676,585</td>
</tr>
<tr>
<td>Military, naval, and similar reservations (approximately)</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Bird and game refuges</td>
<td>1,512,371</td>
</tr>
<tr>
<td>Stock driveways</td>
<td>9,771,386</td>
</tr>
<tr>
<td>Reclamation withdrawals</td>
<td>20,208,821</td>
</tr>
<tr>
<td>Water power reserves</td>
<td>5,147,654</td>
</tr>
</tbody>
</table>

As a residue from the combined effects of the land-disposal policy on the one hand and the reservation policy on the other, we still had, on July 1, 1934, 165,695,479 acres of unappropriated and unreserved public domain, of which 162,188,181 acres were in the range country. For the purposes of this section grazing districts as shown in table 45 are considered to be public domain.

TABLE 45.—Public domain areas in the range States, included and not included in “grazing districts”

<table>
<thead>
<tr>
<th>State</th>
<th>Included in grazing districts</th>
<th>Not included in grazing districts</th>
<th>Total, public domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>California</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Colorado</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Idaho</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Montana</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Nevada</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>New Mexico</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Oregon</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Utah</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Washington</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
<tr>
<td>Wyoming</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
<td>1,000 acres</td>
</tr>
</tbody>
</table>

Total | 65,523 | 96,065 | 161,588

On June 28, 1934, the Taylor Grazing Act, which provides for some degree of public control of grazing on 80 million acres of the public domain, became a law. Although the restriction in acreage

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Fig. 62 shows the location and extent of some of the more important classes of federally owned or controlled land.
still leaves more than 85 million acres of Federal public land without provision for control, it seems inevitable that some sort of management will be provided very shortly. This can be provided through amendment to the Grazing Act to include the entire area, through a division of the area between this and other agencies in the interest of consolidation and conservation, or through a combination of these measures. Consideration of the good and bad features of the Grazing Act will be found elsewhere. It is necessary here to present the effects on the land pattern which this immense acreage of predominating range land exerts and to describe in some detail its condition and the reasons therefor.

The public domain of the West is made up of remnants left after careful culling by many agencies. The homestead, desert homestead, and grazing homestead laws eliminated much of the best of the natural range area. State, railroad, and other grants, with their provision for lieu selection of indemnity land, still further reduced the average quality. The national forests, Indian reservations, reclamation withdrawals, and so forth, each have absorbed grazing land better than that which remained. Clearly the residue of 165,695,479 acres consists of the least desirable of the original 1,442,220,320 acres. Certainly, it includes the poorest 10 percent of the lands west of the Mississippi River.

Not only is the land poor in quality but its geographic distribution often makes administration difficult. Except those semidesert, or extremely low-value areas where there was little demand for the land, it is scattered in units too small to administer separately and badly intermingled with other ownerships. As has already been emphasized, absolute lack of proprietorship on the public domain resulted in the worst kind of abuse through overgrazing and use during improper seasons. Wherever there is any public domain used as open range, it is in virtually every instance in a more advanced state of depletion than similar land under any other form of ownership.

Along with forage depletion has gone, more often than not, the top soil, and along with it the soil fertility. The forage and soil resource is generally so badly deteriorated that the land has lost not only its grazing values but also its ability to regulate run-off and prevent erosion.

Reasons for Delay in Adopting a Constructive Range-Land Policy

Failure to correct the evils of our Federal range-land policy is hard to understand. As early as 1878, Lieutenant Powell, then Chief of the Geological Survey, after a rather thorough field examination, prepared a report on the necessity for revising our land laws to fit conditions in the semiarid West. His report (107), with remarkably clear foresight, pointed the way for future action. He recognized the desirability of combining range and irrigable land, of the protection of water holes for widest possible use, and of preventing nonirrigable lands from going into crop agriculture. No action was taken.

In 1898 the American National Livestock Association, well knowing that the range resource was being destroyed, passed resolutions
# Table 3.—Disposition of public lands, 1781-1976

<table>
<thead>
<tr>
<th>Type of Disposition</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposition by methods not elsewhere classified</td>
<td>303,500,000</td>
</tr>
<tr>
<td>Granted or sold to homesteaders</td>
<td>287,500,000</td>
</tr>
<tr>
<td>Granted to States for:</td>
<td></td>
</tr>
<tr>
<td>Support of common schools</td>
<td>77,600,000</td>
</tr>
<tr>
<td>Reclamation of swampland</td>
<td>64,900,000</td>
</tr>
<tr>
<td>Construction of railroads</td>
<td>37,100,000</td>
</tr>
<tr>
<td>Support of miscellaneous institutions</td>
<td>21,700,000</td>
</tr>
<tr>
<td>Purposes not elsewhere classified</td>
<td>117,500,000</td>
</tr>
<tr>
<td>Canals and rivers</td>
<td>6,100,000</td>
</tr>
<tr>
<td>Construction of wagon roads</td>
<td>3,400,000</td>
</tr>
<tr>
<td><strong>Total granted to States</strong></td>
<td>328,300,000</td>
</tr>
<tr>
<td>Granted to railroad corporations</td>
<td>94,300,000</td>
</tr>
<tr>
<td>Granted to veterans as military bounties</td>
<td>61,000,000</td>
</tr>
<tr>
<td>Confirmed as private land claims</td>
<td>34,000,000</td>
</tr>
<tr>
<td>Sold under timber and stone law</td>
<td>13,900,000</td>
</tr>
<tr>
<td>Granted or sold under timber culture law</td>
<td>10,900,000</td>
</tr>
<tr>
<td>Sold under desert land law</td>
<td>10,700,000</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>1,144,100,000</td>
</tr>
</tbody>
</table>

1. Chiefly public, private, and preemption sales, but includes mineral entries, script locations, sales of townsites and townlots.
2. The homestead laws generally provide for the granting of lands to homesteaders who settle upon and improve vacant agricultural public lands. Payment for the land is sometimes permitted, or required, under certain conditions.
3. Universities, hospitals, asylums, etc.
4. For construction of various public improvement (individual items not specified in the granting acts), reclamation of desert lands, construction of water reservoirs, etc.
5. The Government has confirmed title to lands claimed under valid grants made by foreign governments prior to the acquisition of the public domain by the United States.
6. The timber and stone laws provided for the sale of lands valuable for timber or stone and unfit for cultivation.
7. The timber culture laws provided for the granting of public lands to settlers on condition that they plant and cultivate trees on the lands granted. Payments for the lands was permitted under certain conditions.
8. The desert land laws provide for the sale of arid agricultural public lands to settlers who irrigate them and bring them under cultivation.

**NOTE.**—Data are estimated from available records.
Dear Friend:

The President's 1979 Environmental Message signaled a renewed recognition of the important values of the resources of the public rangelands and confirmed a national commitment to making the investments needed to improve the productivity of these resources to ensure a wide variety of economic and social benefits for the Nation as a whole.

The message, and passage of the Public Rangelands Improvement Act last year, reflect the tremendous increase in demands placed on these lands for food and fiber, energy, recreation, wildlife and other national needs. And while we have stopped the long decline in the productivity of these lands, we have a long way to go before we can bring them back to an optimum ecological condition. We have reached a point in history in which all the parties involved—the livestock industry, the wildlife and environmental community, the States, the Congress, and the Federal Government—recognize that their interests are best served by a clear and cooperatively developed program to bring these lands into effective management.

The Bureau of Land Management's responsibility is to improve and sustain the long-term health of the rangeland ecosystem—its vegetation, soils, water—to produce a variety of benefits for the direct and indirect users of these lands across the Nation. At the same time, we recognize the special closeness to these lands felt by communities throughout the West that have depended upon them for economic stability for generations, and we feel a special responsibility to manage these lands in ways which maintain that way of life.

"Managing the Public Rangelands" was drafted by the Bureau of Land Management to describe our overall management philosophy, our goals for these lands, and the ways by which these goals can be realized. But for the rangelands management program to meet future demands successfully, it must be shaped in a manner which reflects the needs and objectives of all rangeland users.

Therefore, I ask that you examine closely this draft management strategy and share with us your comments and suggestions. I would appreciate hearing from you by January 31, 1980.

Sincerely,

Frank Gregg
Director
MANAGING THE PUBLIC RANGELANDS
NOVEMBER 1979

A public discussion document describing Bureau of Land Management policies, objectives, and processes for restoring and maintaining the productivity and balancing the uses of the Nation's public rangelands.

U.S. Department of the Interior
Bureau of Land Management
The public rangelands of the United States, the near-forgotten remnants of the land rush days of the last century, today are being called upon to play a central role in the Nation's future. As the Nation struggles to meet its growing energy, food and fiber, timber, water, recreational and other needs, attention is turning increasingly to the rich potential of the resources of the public rangelands—attention that is long overdue.

The vast public rangelands managed by the Bureau of Land Management are currently far below their productive potential. The reasons are varied, but the principal causes are a legacy of unwise and uncontrolled use from the last century and a history of inadequate public investment in this century. Improving the productivity of these lands today is complicated, in part, by the real conflict in many cases (and a perceived conflict in almost all cases) between the immediate economic needs of individual livestock operators—the principal range users—and the longer-range interests of the operator, his community, and the Nation as a whole.

The central challenge, therefore, is to increase the productivity and economic value of these resources in an economically efficient and fiscally responsible manner that ensures a better future for all users of the land. Fundamentally, this means managing rangeland vegetation to improve the health of the entire rangeland ecosystem so that it can produce the full range of potential practicable economic and social benefits.

We have never had a better opportunity to achieve this goal. We have a clear mandate in the Federal Land Policy and Management Act of 1976 to bring these resources under effective management. In the court-ordered environmental impact statements we are currently preparing, we have a special opportunity to gain a better understanding of the basic capability of the vegetation and soils of these lands and the needs and desires of the people who use them. We have, in the passage of the Public Rangelands Improvement Act of 1978, a basic objective of improving the range condition of our public grazing lands—which was warmly supported by the livestock industry, the wildlife and environmental community, and the Administration—a national commitment to making appropriate investments in measures that will ensure a more productive rangeland for all uses. And we have in the 1979 Environmental Message Presidential recognition of the critical contributions these lands will be called upon to make to the Nation's future. Finally, we have reached a point in history at which all the parties involved—the livestock industry, the wildlife and environmental community, the States, and the Congress—recognize that their own self-interests are best served by working cooperatively to revitalize these lands.
Our interests, and the interest of the Nation, are to manage the
resources of the public rangelands to serve a wide range of
uses and to do so in ways that maintain the long-term
economic vitality of Western communities that depend on those
resources. The livestock industry is the economic and social
core of many Western communities and sustains a cherished
way of life for a relatively small number of very fortunate
people—a way of life that is very important to the way America
feels about itself.

Managing the Public Rangelands was prepared to describe, in
a simple and straightforward manner, how the Bureau will
manage these resources to maintain that way of life and to
ensure the benefits of the public rangelands for all Americans.

Frank Gregg
Director
Chapter 1.
INTRODUCTION

Of the 174 million acres of public land administered by the Bureau of Land Management in the 11 Western States, 170 million acres—roughly equivalent to the combined area of the mid-Atlantic and Northeastern United States—are classified as "rangelands." (See figure 1.) The term "rangeland" refers to lands on which the native vegetation is predominantly grass, grasslike plants, forbs, or shrubs. The character and natural productivity of these rangelands vary considerably, from grasslands, woodlands and sub-alpine meadows to savannahs, sagebrush plateaus, shrublands, and desert. Taken as a whole, the Nation's rangelands provide a tremendous wealth of products and values: wood products; water; recreational opportunities; base mineral and energy commodities; habitat for wildlife and wild horses and burros; grazing for livestock; extraordinary scientific, historical, and cultural value; and stunning natural beauty. But there is a vast gap today between the potential capability and present productivity of these lands.

The history of the use of these rangelands was for decades the history of the American West—colorful, wide-open, and largely uncontrolled. And the effect of uncontrolled use of the land was dramatic. By the close of the last century, competition among livestockmen and, to a lesser extent, other users of the range, had left much of these lands depleted and exposed to the elements. Bitter winters and severe droughts, combined with the deteriorating condition of the rangelands, crippled the range livestock industry and it became clear that some control over the use of the public land was necessary.

The increasingly heated national debate on the condition of the public rangelands resulted in passage of the Taylor Grazing Act (TGA) in 1934, the first law passed specifically for the purpose of regulating livestock grazing on the public lands and the beginning of the trend of increasing Federal involvement in rangelands management. Under the Act, specific parcels of the Federal range were allotted for grazing use and efforts were made to bring that use into balance with the productive capacity of the range. The principal shortcomings of the Act were its implied single purpose, to regulate livestock grazing, and its single constituency, the livestock operator. The steady increase in interest in public land resources during the 1960's led to the first articulation of the concept of multiple use management in the Classification and Multiple Use Act of 1964.

Despite these initiatives, by 1974 roughly 135 million of the 170 million acres of rangeland managed by BLM were still in only fair condition or worse. How much the public rangelands have deteriorated and why are matters of considerable dispute. However, there is no question that vegetation production is far below potential. As conflict over what forage was available increased, it became clear that important rangeland values, livestock operations, and the farm and ranch economies of the West would be sharply affected.
Superimposed upon these circumstances was the enactment of the Wild Free-Roaming Horse and Burro Act of 1971. Passed without a single dissenting vote in either House of Congress, this Act established a clear national policy that these feral animals would also have a permanent place on the public rangelands and that their requirements must be acknowledged in the management of a tenuous forage production base.

In 1976, Congress passed the Federal Land Policy and Management Act (FLPMA), requiring that the Federal Government protect and manage the public lands for a wide range of benefits under the principles of multiple use and sustained yield. FLPMA provided for a management system characterized by comprehensive planning and full public participation. FLPMA also settled the lingering question of what would ultimately happen to the millions of acres of public land by establishing that they would be retained in Federal ownership unless in specific cases disposal of a particular parcel was determined, through land use planning, to be in the national interest.

FLPMA established, for the first time in the Nation's history, the broad policy guidance by which the public lands would be managed, but Congress went beyond FLPMA to focus special attention on the Nation's rangelands.

In the Public Rangelands Improvement Act of 1978 (PRIA), the Congress found, after nearly a half of century of uneven Federal involvement in managing the use of rangelands, that:

- the rangelands were still producing below their potential;
- they would remain in unsatisfactory condition—or decline even further—under present levels of and funding for management; and that
- the unsatisfactory condition of the public rangelands presents a high risk for soil loss, siltation, desertification, water loss, loss of valuable wildlife and fish habitat, loss of forage for livestock and other grazing animals, degradation of water quality, flood danger, and threats to local economies.

To turn this trend around, Congress authorized "an intensive public rangelands maintenance, management, and improvement program involving significant increases in levels of rangeland management and improvement funding for multiple use values." Moreover, the Congress backed up this mandate with a significant commitment: authorizing the investment of $365 million over the next 20 years for a program of intensified rangeland management, but subject to annual appropriations over the next two decades. Coincident with these new congressional initiatives, the Bureau of Land Management is also required to respond to a major Federal court mandate. On December 30, 1974, the U.S. District Court for the District of Columbia found, in Natural Resources Defence Council (NRDC), et al. v. Rogers C. B. Morton, et al., that the Bureau was in violation of the National Environmental Policy Act by failing to prepare environmental statements for livestock grazing decisions for specific areas of the public lands it administers. Consequently, BLM was eventually required by an amended court order in 1978, to prepare 144 individual environmental statements by 1985, covering all lands grazed by domestic livestock (170 million acres).

BLM's rangeland management program is guided by its responsibility for good stewardship of the land, for restoring productivity and maintaining it, and for providing for the best combination of uses over time. The planning and management requirements of TGA, FLPMA, and PRIA and the environmental statement schedule determined by the Federal court are the principal forces guiding the program.

The purpose of this report is to describe BLM's program for meeting the mandate of the laws and the court for improving the management and, ultimately, the soil, water, and vegetation condition of the Nation's rangelands. Specifically, this report describes:

- the Bureau's rangeland management policy and the management philosophy behind it;
- the specific objectives of the program and targets of accomplishment;
- how rangeland decisions will be made and implemented;
- the opportunities and challenges presented by the environmental impact assessment process;
- how new improvement funds will be integrated with existing budgetary authorities to support a comprehensive rangeland management program;
- the schedules for completion of the various component programs; and
- who will be involved in the program and how.

The problem of improving rangeland productivity varies from place to place throughout the Western States. Where successful rangeland improvement has been enhanced through effective management, BLM will work with those involved to learn from these successes. Where basic scientific questions block resolution of management issues, BLM will work closely with the scientific community to find answers to these questions. And when hard decisions must be made, BLM will work closely with those involved to ensure that, to the extent possible, they represent the best collective judgment of those responsible for or affected by these decisions. Neither BLM nor the interests involved can expect unilateral decisions to be effective for very long. In the long run, the interests of those who depend upon
the rangelands for their way of life, and the interests of the public at large, will be best served by a long-term commitment to multiple use and cooperation in management.

Chapter 2.
Rangeland Management Policy and Objectives

The Federal Land Policy and Management Act of 1976 explicitly establishes the balance inherent in the concept of multiple use. The Act states that the public lands will be managed in a manner:

- that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use (P.L. 94-579, Section 102(a)(8)); and
- which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands. (P.L. 94-579, Section 102(a)(12)).

Policy

In accordance with these mandates, it is BLM's policy to manage efficiently the basic resources of the public rangelands to improve and maintain their productive capability to serve the full range of natural, social, economic, and environmental needs. In carrying out this policy, the Bureau will be guided by the management requirements for protecting and improving the basic soil, water and vegetation resources; the importance of maintaining a stable and sustainable livestock industry; the need to protect and improve habitat for fish and wildlife resources; the need to maintain viable herds of wild horses and burros; and many other public benefits that these resources are capable of providing.

Management Philosophy

Each rangeland unit is a complex ecosystem composed of plant and animal communities and basic soil types, all responsive in one way or another to natural processes (rain, wind, sunlight) and the activities of man.

These ecosystems are the potential source of a variety of economic and social benefits and are critical to the stability of many Western communities. The key to unlocking these benefits is wise management of the vegetation resource. The reasoning is straightforward: rangeland vegetation provides cover, litter, and the root structure needed to protect the soil, prevent erosion, and conserve moisture and forage for livestock and food and habitat for wildlife, wild horses and burros.

No single element in the rangeland ecosystem is so readily managed, and with such far-reaching effects, as is vegetation. Consequently, maintaining or improving the vegetation component of this ecosystem is the key to enhancing the resource values of a rangeland area to permit a balanced mix of uses and to ensure sustained yield.
The productivity of this resource is enhanced through a wide variety of management actions designed to secure the desired quantity and quality of vegetation to meet society's needs. Distribution of the benefits of current and increased production is achieved through the allocation of vegetation among competing uses. Decisions about the allocation of these resources are made after the present condition, potential productivity, and trend of the vegetation (improving, static, or declining) has been measured. Then, priority in the allocation of the vegetation will be given to:

- maintaining or improving natural systems and processes to achieve desired plant cover to protect or enhance the entire ecosystem's capability for maintaining soil productivity, reducing erosion and runoff, protecting water quality, and ensuring sustained production of vegetation;
- protecting any plant or animal species or its habitat listed as threatened or endangered, as required; and
- providing forage and habitat for the mix of grazing animals present, including livestock, wild horses and burros, and wildlife; protecting fisheries values; and enhancing scenic and other values to produce the full range of public benefits.

The management of rangeland vegetation affects grazing by domestic livestock, wildlife, and wild horses and burros, both in intensity and in patterns and periods of use. At the same time, however, properly managed livestock grazing can also be an important and valuable influence on the range ecosystem. To the extent practicable, therefore, such grazing will be used as a management tool to ensure plant vigor, growth, and reproduction and to ensure the maintenance of desired plant species and rangeland ecosystems. To this end, grazing systems will be developed with the participation of livestock operators, specifying the number of animals to be grazed and the grazing treatment to be used. In a similar manner, wild horse and burro populations will be managed to ensure proper balance with available habitat and allocated forage and, in cooperation with State agencies, big game animals will be managed to achieve equilibrium with the carrying capacity of their habitats. This will involve joint habitat management and enhancement activities.

The Bureau's objectives for rangelands management are shaped by Administration policy, the clear mandates of the Federal Land Policy and Management Act, the Public Rangelands Improvement Act, and the expressions of need of the various users of the public rangelands articulated through involvement in the Bureau's planning process. BLM is also guided by technical data on rangeland condition, trend, and potential and short and long-term demand and supply projections for consumptive and non-consumptive needs for vegetation resources on the public rangelands.

Within this context, BLM will pursue the following objectives during implementation of the program. In all cases, proper management of the vegetation will be the means for meeting each of these objectives, especially those relating directly to the basic soil, water and vegetation resources. Where appropriate, targets for accomplishment are included:

1. Improve the condition of rangeland vegetation and maintain it at desired levels of quality, quantity, and diversity.
   **Target:** Improve 135 million acres of vegetation currently in poor or fair condition to higher classes.

2. Reduce erosion, minimize sedimentation and siltation, promote infiltration and ensure the stability and productivity of rangeland soils.
   **Target:** Reduce erosion occurring on 68 million acres currently in severe, critical, or moderate condition and stabilize 80 million acres now in slight erosion condition.

3. Ensure that water of sufficient quantity and quality is available to provide for the basic needs of the vegetation, protect ground water recharge, meet Federal and State water quality standards, and provide for recognized uses.

4. Minimize short-term disruption and ensure the long-term stability of the Western livestock industry and the economies of many Western communities dependent upon the public lands through cooperation in management.

5. Increase forage supplies for livestock, wild horses and burros, and wildlife as a principal output of improvement of the rangeland ecosystem.
   **Target:** Double the current annual forage production from 5.8 million tons to 11.2 million tons per year.

6. Ensure the protection of threatened or endangered plant and animal species and their habitat.
   **Target:** Provide appropriate management on 54 million acres of potential habitat for six endangered species presently identified in recovery plans until further information on the location of and kinds of habitat protection needed is more precisely determined.
7. Provide and protect habitat for fish and wildlife to ensure stability and natural diversity; enhance streamside, shoreline, emergent, and submersed vegetation, and provide water of a quantity and quality necessary for fish, other aquatic organisms, and waterfowl.
   **Target:** Protect and enhance 155 million acres of terrestrial habitat; improve and protect 6,500 miles of streams.

8. Regulate and manage flood plains and wetlands to ensure protection of people and property and to improve and conserve riparian systems.

9. Protect areas of special natural, scenic, historical, cultural, and scientific value, and protect the public from areas of natural hazards.

In the pursuit of these objectives, the Bureau will ensure public involvement through coordination, consultation, and cooperation with Federal, State, and local government representatives, the academic and scientific community, and the private sector in planning, managing, and administering the Nation's rangeland resources.

**Chapter 3.**

**THE RANGELAND MANAGEMENT DECISION PROCESS**

When the Congress decided, in the Federal Land Policy and Management Act (FLPMA) of 1976, that the Federal Government would retain and manage for broad public benefit the land within the Bureau's jurisdiction, it also required that comprehensive land use plans be prepared to guide the management and use of these lands. The Public Rangelands Improvement Act of 1978 reiterated this requirement and gave special emphasis to the need for a continuing inventory of rangeland condition and trend so that management actions and rangeland resources uses could be modified accordingly.

This chapter describes the process by which rangeland management decisions will be made, within the context of the Bureau's overall land use planning system; how these decisions will be carried out; and how the effects of these decisions will be monitored.

The components of this comprehensive planning process are familiar ones; they have been a part of the rangeland program for some years. However, as the direction of resource management changed from dominant use to multiple use, the content of each component has also changed. For example:

- **Inventory work**, which in the past focused almost solely on assessments of livestock grazing capacities, will now assess the total production potential of all vegetation species and the soils in rangeland ecosystem—for livestock, wild horses, wildlife, and a variety of other uses.
- **Land use plans**, which had been designed primarily to determine how available vegetation would be allocated among grazing users, will soon cover a wide variety of potential uses—not just livestock but also wildlife habitat, soil and water protection, wild horses and burros, and aesthetics, among others.
- **Environmental statements**, which have been written on specific, and therefore isolated, grazing activity plans, will be written instead, beginning in 1984, on comprehensive Resource Management Plans which cover all resource use decisions.
- **Grazing management and range improvements** which have largely related to livestock needs will now be designed to enhance the basic resources for a much greater variety of needs and uses.

A principal criticism of past planning efforts has been that inventory and planning work has lacked clear focus on publicly perceived resource management problems. To rectify this problem, as early as two years before revising or developing new land use plans, BLM will work with local and State officials, other Federal agencies, interest groups, and residents of the area under study to identify problems, issues, conflicts, and needs. For rangeland management, this process—called "preplanning analysis"—will examine the quality and level of information available or needed on vegetation and soils; water values for desired uses; existing and potential conflicts for the
use of the land; and socio-economic concerns. The preplanning analysis will serve as both the first stage in the process of public involvement in rangeland management and as a vehicle for identifying information needs, the level of planning required, and time and manpower requirements for the balance of the planning process.

One of the principal purposes of inventory is to measure the vegetation currently being produced in a particular rangeland area and compare it to what the site is potentially capable of producing. Vegetation production varies from area to area and this measurement takes into account the current rainfall and weather conditions as to arrive at a reasonable estimate of production in an average year. The quantitative assessment of present vegetation production and species composition compared to the potential is expressed as the ecological condition of the site. Basically, the present condition and productivity of the rangeland resource is the starting point for management decisions designed to bring the resource to a desired level of productivity and quality. Vegetation condition and productivity of the rangeland resource is the starting point for management decisions designed to bring the resource to a desired level of productivity and quality. Vegetation condition and productivity of the rangeland resource is the starting point for management decisions designed to bring the resource to a desired level of productivity and quality. Vegetation condition and productivity of the rangeland resource is the starting point for management decisions designed to bring the resource to a desired level of productivity and quality.

The present ability of the ecosystem to support specific uses— as distinct from its ecological condition—is measured as "rangeland quality." Quality can be expressed as, for example, how well the existing kind and amount of vegetation available will protect the site against excess erosion and runoff; the ecosystem's ability to produce a stable and predictable supply of preferred livestock forage; or the capability of the system to provide for wildlife habitat needs. Thus, where ecological "condition" is an expression of the degree of achievement of the potential of the rangeland ecosystem, "quality" is an expression of its ability to meet specific use demands.

In conducting rangeland inventories, BLM will use techniques and procedures that conform to existing national standards, such as the National Cooperative Soil Survey. The Bureau is working with four other agencies (Forest Service, Soil Conservation Service, U.S. Fish and Wildlife Service, and U.S. Geological Survey) to develop common classification systems for soil, vegetation, land forms, and aquatic parameters. BLM will continue to work with these and other agencies to utilize new techniques (such as remote sensing) and develop common methodologies, definitions, terms, and data processing, storage and retrieval systems to increase the speed, accuracy, and efficiency of inventory work.

The determination of stocking rates for livestock stemming from the inventory data must be viewed in proper perspective. While BLM tries to be as accurate as possible, because of all of the variables in nature, these are initial stocking rates only, and monitoring studies must be implemented to evaluate management programs over time and to provide the basis for adjustments as necessary.

For each resource area, the Bureau develops land use plans, (formerly called Management Framework Plans) designed to respond to the management responsibilities of the Bureau and the concerns and use conflicts identified through preplanning analysis by the various public interests and governments in that area. These plans are the heart of the Bureau's work as managers of the public land and are central to rangelands management. The rangeland components of these plans are developed by interdisciplinary teams with extensive and continuing public participation. They consider the present and potential productive capability of the rangeland ecosystem described in the inventory process, identify a sense of alternative ways to resolve identified problems and meet resource needs in light of that productive capability, and finally, identify specific steps to be taken to maintain or improve the rangeland resource and accommodate multiple use demands.

In addition to resolving such traditional questions as where, when, how much, and in what manner use will occur on the rangeland unit, these plans will also determine:

- how much and what kind of vegetation is needed to maintain or enhance soil productivity and provide protection against erosion and water quality degradation?
- what measures must be taken to protect and preserve cover and habitat for threatened or endangered species and their habitats?
- what manner, degree and periods of use by livestock grazing is appropriate to achieve an economically viable—stable—industry while achieving other rangeland benefits as mandated by national policy?
- what management techniques are needed to ensure the availability of sufficient forage and cover for wildlife and wild horses and burros?

The allocation of scarce vegetation is a fundamental issue in rangeland management and is a key decision in the rangeland planning process. Before the Bureau can allocate vegetation for consumptive uses, it has to determine the nonconsumptive needs, such as the minimum growth requirements of the plant species in the area, the vegetation needed for soil stability and
watershed protection, and the cover requirements of certain species of wildlife.

In determining how much consumptive use by grazing animals can be accommodated in a given area, the Bureau will consider the variety of ecological and land-use factors. These include the species of vegetation present, physiological needs of the individual plants, the amount of use the various plants can withstand, current range condition and trend, plant species composition desired to accomplish multiple-use objectives, diet of the grazing animals during the period in which grazing use occurs and other objectives in land-use plans.

The mix of grazing animals and the degree to which they compete for the same species of vegetation determine the number of each kind of animal that can be accommodated and still achieve the objective of maintaining or improving the condition of the range.

A further constraint on the allocation of vegetation is the suitability of a particular area for livestock or other types of grazing. The Bureau applies four major criteria to determine whether areas that may be "usable" in terms of vegetation can actually be grazed without damage or will be grazed only after other areas have been overgrazed. To determine whether an area is suitable for livestock or other identifiable grazing and can be credited to the overall forage supply for allocation, the Bureau examines each area and considers the following factors to the extent they are applicable:

- **Slope**—areas with a slope in excess of 50 percent are usually not suitable for livestock grazing. Consequently, although forage may exist, livestock will normally graze the more accessible slopes before utilizing steeper topography.

- **Distance from water**—areas more than four miles from water in fairly level terrain, and somewhat less than four miles in steeper country, will normally not be grazed until the forage nearer to water is exhausted. Thus, if the objectives is to keep these areas from being damaged, the forage value of more distant areas cannot be credited since they will only be used after areas closer to water have been completely overgrazed.

- **Low Forage Production**—areas producing less than 25 pounds of forage per acre, particularly when intermingled with higher producing areas will normally not be grazed until the higher producing sites have been exhausted.

- **Highly Erodable Areas**—areas where the erosion or soil surface factor (SSF) is 60 or above would be heavily damaged by grazing, accelerating erosion further, and are therefore unsuitable for use by livestock.

As the planning process approaches a decision point, the Bureau manager moves to incorporate the needs and desires of various user groups, other resource interests, and the general public into the catalogue of data collected on the rangeland area. Armed with information on the capacity and suitability of the rangeland area for a variety of uses, and expressions of need from various public interest groups, the livestock operators, and the communities involved, the Bureau can determine how many of each kind of grazing animal can be accommodated in an average growth year during a given period of use while still ensuring maintenance or improvement of rangeland conditions and attainment of multiple-use objectives. Since the competing demands for available vegetation virtually always exceed the supply, the Bureau's responsibility is to strike a balance which best meets the needs of all users within the biological limits of the resource and the information available.

In the spring of 1971, shortly after passage of the National Environmental Policy Act, BLM began drafting a programmatic environmental impact statement (EIS) to cover decisions made in the rangelands program. In October 1973, seven months after a preliminary working draft of the EIS was circulated for informal review by representative groups, the Natural Resources Defense Council (NRDC) filed suit in the U.S. District Court of the District of Columbia to require BLM to prepare individual site specific EISs for grazing management decisions covered in allotment management plans. A year later, on December 30, 1974, the Federal Court found in favor of NRDC and directed the preparation of a subsequent agreement with BLM which required the preparation of 212 EIS's (now consolidated to 144) over a 13-year period ending on September 30, 1988. According to the Court:

"Each EIS contemplated by this Order shall discuss, in detail, livestock grazing activities and all reasonable alternatives thereto. Livestock grazing activities as used in this Order shall mean all existing or proposed livestock grazing, all grazing authorization issued or contemplated to be issued by the BLM as well as those substantial activities which are supportive of and related to livestock grazing administered by the BLM, such as fencing, seeding, and brush removal . . . ."

Basically, this meant that the Bureau must openly and objectively analyze the impacts of alternative levels and systems of livestock use on the land itself, on soil stability, water, wildlife, and other values and make a judgment, based on careful consideration of these alternatives, that provides for the best combinations of uses.

The Bureau's grazing environmental impact statements (EIS's) display proposed management actions for an area and the process by which those actions were determined to be necessary. The EIS describes the information collected and how it was analyzed, the alternatives examined and their impacts, and the proposed action presented in the plan. By
1984, rangeland EIS's will cover not just livestock grazing but the full range of activities and uses of the rangeland area. At present, however, the EIS's focus is on livestock grazing and related actions. Because the EIS's are disclosure documents and not decisions themselves, the Bureau is now preparing concise and plainjly written Rangeland Management Program documents which describe management actions for grazing within the context of all the resources in the area, including for example, wildlife habitat enhancement, practices for watershed protection, and others. A Rangeland Management Program document is released after each final EIS is filed and prior to or concurrently with the issuance of individual decisions about adjustments in grazing use. Local BLM managers use these documents as the vehicle for describing all of the management decisions for the area to affected rangeland user groups and individuals.

Generally the text of each such document covers:

- a brief description of the history of the area, and the existing uses of the rangelands;
- a description of what the management program is and what it does—the substantive actions resulting from the decision related actions, likely environmental, economic, and social results, and why the decision was made;
- an examination of the alternative actions considered and why they were or were not selected;
- how the public was involved in the process and how their wishes were handled; and
- how the program will be implemented, including administrative actions, range improvements, grazing use adjustments (both increases and decreases), estimated costs and timing of implementation, and methods of monitoring results.

These program documents will serve as a bridge between livestock grazing issues and the broader management concerns in the area.

The Bureau intends to use the process of preparing the court-ordered EIS's consciously and deliberately as a vehicle for generating broadly based understanding and involvement in the management of the Nation's rangeland. The broad public participation requirements of NEPA, applied to each of the 144 individual EIS's, provide an unprecedented opportunity for creating widespread awareness of the less than satisfactory condition of the Nation's rangeland resources and the mounting demands on those resources, and for securing participation and support at the local level and in the Congress for multiple use decisions. For individual Western communities, each EIS offers a special opportunity for cooperation and consultation with the Bureau, related Federal and State resource management agencies, and a wide cross section of interest groups, in the management of the public rangelands.

**Social and Economic Impacts and Mitigation Opportunities**

The Bureau's first responsibility is to secure effective management of all public land values including rangeland resources. FLPMA and PRIA and the decision of the Federal Court are clear in this regard. This means management to maintain the basic soil, water, and vegetation resources, and management of the use of these resources by livestock, wild horses and burros, and wildlife and protection of other public values.

There is, however, very real potential conflict in these management decisions between the short-run economic interests of individual livestock operators and the long-run interests of the community, the operator himself, and the Nation as a whole in improving the condition of the rangeland resource. As part of the EIS process, the Bureau assesses the short-term social and economic impacts of management actions on community and individual incomes and lifestyles, availability of capital, impacts on the local labor market, and implications for subdivision and land speculation. The use of typical ranch budgets of various sized operations and the assessment of grazing decisions on the economics of such operations are being integrated into the analysis process. By the same token, the Bureau also assesses the likely effects on other sectors, such as the increased value of wildlife, fisheries, soil stabilization, water quality, and recreation to the community. But these benefits often accrue not to the affected rancher but to others in the community. And while BLM seeks to display both the adverse short-term effects of needed stocking rate reductions where such action is deemed necessary against the long-term benefits of increased rangeland productivity, essentially the same problem remains: the benefits, if too far in the future, may accrue to someone else.

Still, given the generally unacceptable condition of the Nation's rangelands, it is clear that grazing use will be subject to some adjustment in nearly all of the EIS areas both for domestic livestock and for wild horses and burros where they occur. But the nature of these adjustments will vary. In the nine areas for which EIS's were completed in 1978, for example, downward adjustments for authorized livestock use were required of 44 percent of the allotments while 14 percent were allowed increases and 42 percent remained essentially unchanged. Subsequent EIS's are likely to follow this trend. In most cases, such adjustments are neither inflexible, immediate, nor unexpected.

First, adjustment in authorized grazing use (in AUM's of allowable use) may be imposed by changing (a) the period of use and/or (b) the number of animals permitted to use the public rangeland within an allotted area. How the reductions are taken is negotiated with the operator and may result in no change in numbers of livestock grazed, but a shortening of period of use.
Second, adjustments in authorized livestock use are usually the culmination of a four to five year process which includes inventory, planning, preparation of EIS's and issuance of decisions. While the exact amount of the adjustment may not be known until the decision is rendered, grazing permits usually have sufficient advance knowledge of impending adjustments so that they have the opportunity to arrange for alternative sources of livestock forage or to make other management adjustments needed to balance out their operation. It is the Bureau’s intent to issue decisions as far in advance as possible of the beginning of the first affected grazing season to give operators time to adjust to revised forage allocation. In any event, where reductions are called for in authorized grazing use (AUM’s) they can be scheduled over a three year period if consistent with resource conditions and needs. This schedule will be worked out with the grazing permittee so that both the well-being of the resource and the needs of the permittee can be accommodated as nearly as possible. Where the reductions are needed, the difference between the amount of grazing use authorized and the permit preference will be held in a suspended status. As range productivity is restored, all or part of this suspension may be reactivated.

In addition to working closely with individual operators and phasing the implementation of downward adjustments over several years, BLM is developing a strategy for mitigation of short-term negative effects in two ways. First, within its existing authorities, BLM is trying to find ways to ameliorate techniques for understanding the effects of grazing actions on individuals and communities and, through the stewardship program provided for in PRIA and direct discussions with livestock industry representatives, seeking innovative approaches to the fundamental problem of allocating limited vegetation to competing uses.

Second, BLM is researching avenues open to the rancher and the livestock community for helping themselves through short periods of adversity immediately following reductions in use. Steps available to ranchers might include, for example, using existing Federal cost-sharing programs to improve the productivity of their own land, exploring short-term leasing of non-Federal land, and financial assistance available through a variety of private lending institutions, among others.

The Bureau’s long-term objective, however, is to increase the total economic and social value of rangeland resources to provide a better future for the individuals and communities that depend on public lands—and for all user interests of these resources—by managing the use of the land in a way that increases its productivity potential.

Implementation of the recommended actions in the land use plan for a resource area is guided by a series of functional activity plans. There are Herd Area Management plans for wild horses and burros, Habitat Management Plans for wildlife, Allotment Management Plans for livestock grazing, and others. Each plan explicitly details planned programs and management actions designed to accomplish proper land and resource management for the full mix of public uses.

Decisions about the levels of livestock use that can be permitted in the area are made expeditiously following the lengthy process of inventory, planning, EIS, and public review. It is the policy of the Bureau that these decisions will be placed in “full force and effect” so that management programs can be implemented without delay. Decisions become effective at the beginning of the next grazing year (March 1) in the fiscal year following completion of the EIS and Rangeland Management Program document. The manner in which reductions or increases in use are taken can be worked out with the permittees and can be phased in over a three-year period.

To provide needed periodic rest from grazing at critical stages of plant growth, the Bureau will initiate a specific grazing system as part of the implementation program. The system employed is developed in cooperation with the livestock permittee and has been drafted to fit the characteristics and needs of the area, management objectives, the types of vegetation present, kinds of grazing animals, periods of use, etc. No single system works well everywhere or under every circumstance. From the choice of grazing systems available, the operator and Bureau determine the best combination and sequence of grazing treatments for meeting the management objectives and needs of the area. The cost of fencing, water, vegetation treatment, moving livestock and other factors necessary to carry out the system are carefully weighed.

Timely and efficient completion of on-the-ground maintenance and improvement work are key factors supporting management actions to achieve rangeland improvement objectives. Implementation plans include, as appropriate, the scheduling of soil protection measures, land treatments (e.g., seeding, burning, brush control, etc.), water facilities, and other practices. Generally, priority will be given to those improvements that, in combination with management, are the most economically efficient and will achieve the earliest benefits.

Proper and reasonable stocking levels for grazing animals, intensive grazing management systems, and investments in supporting range improvement projects are essential ingredients in the range management program. So long as stocking levels are too high, grazing systems cannot succeed and investments in improvements cannot be prudently made.
Chapter 5.
PUBLIC INVESTMENTS AND BENEFITS

The Budget Strategy

While the Bureau's rangelands management program is driven by the legislative mandates of FLPMA and the PRIA and the court-ordered schedule for completion of grazing environmental impact statements (EIS's), the program derives its financial support through a variety of budget authorizations. This chapter describes how these authorizations will be used in carrying out the programmatic components of the program (inventory, planning, EIS's, improvement projects).

FLPMA gives the Bureau the basic responsibility and authority for managing the public lands within the principles of multiple use and sustained yield and provides for four-year budget authorizations for carrying out programs to meet these objectives.

Congress and the Administration underscored their commitment to improving the quality and productivity of the public rangelands with the Public Rangelands Improvement Act (PRIA) and the 1978 amendments to the Sikes Act. These two laws direct the Bureau to place special emphasis on improving and managing basic soil, water, wildlife, and vegetation resources to enhance their value for a variety of public uses and provide complementary and supplementary budget authorizations for the Bureau's on-going range, wildlife, and soil and water programs.

The four-year authorizations under Section 318 of FLPMA will provide the basic funding authority for the range, wildlife, soil and water management as well as all other programs developed by BLM, including data collection, planning, environmental assessment, project design, and on-the-ground maintenance and development work.

Section 5 of PRIA provides additional funding authority to augment the basic authorization in FLPMA. It directs that no less than 80 percent of funds appropriated under this authorization be used for on-the-ground work for multiple use benefits.

Finally, Title II, Section 209 of the Sikes Act provides additional funding authority for rangeland-related programs and activities over and above any other authorizations. As shown in Figure 2, the Sikes Act provides for a wide variety of rangeland improvement projects and, in particular, increases opportunities for fish and wildlife habitat enhancement.

These three building blocks—FLPMA, PRIA, and Sikes—provide authorization for rangeland management programs over the next two decades. In addition to these three programs, funding support for on-the-ground work is also available through the range betterment funds derived from 50 percent of the grazing fees paid by livestock operators using public lands.
**Figure 2—Comparison of Activities Authorized Under Major Range Management Funding Sources**

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<tr>
<th>Activities</th>
<th>FL/PMA</th>
<th>Range Betterment</th>
<th>PRIA</th>
<th>Sikes Act</th>
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<td>Rangeland Improvements/Maintenance</td>
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<td>Water Developments - Livestock</td>
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<td>Animal Population Manipulation - Wildlife</td>
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<td>Artificial Habitat Structures (perches, islands)</td>
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<td>Resource Inventories - Soils/Vegetation</td>
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Figure 2 displays the relative flexibility of each of the funding sources for meeting program needs and illustrates the somewhat limited applicability of both PRIA and range betterment funding.

**Figure 3—Funding for Range/Soil, Water and Wildlife Programs**

**Figure 4—Funding Authorization Versus Projected Funding Needs for Range/Soil, Water and Wildlife Programs**
Figure 3 illustrates how each of these authorizations will be used in the Bureau's rangeland management strategy. Sikes Act and PRIA funds build upon the Secretary's requested four-year authorization and, to a greater or lesser degree, can fund the full range of management actions. As noted above, grazing fee monies can only be used for on-the-ground work including project survey, design, maintenance, contract administration, and other functions that directly support the implementation of on-the-ground work.

Figure 4 illustrates how these four authorizations build over time and compares them with appropriations to date under the Bureau's existing rangeland management program. Indications are that there is ample authorization for the range management program through fiscal 1981. Available authorization levels from fiscal 1982 on are largely uncertain due to pending reauthorization of the Sikes Act and the scope of the range-related requests under FLFMA's next four-year authorization for BLM, which would cover fiscal years 1982 through 1985.

For many reasons—because the rangelands constituency has been small, narrow, and regional; because the decline in rangeland productivity is undramatic; perhaps even because the overall budget for rangeland management is modest to begin with—funding for rangeland management programs has historically failed to receive emphasis in annual budgets. However, passage of PRIA and the reauthorization of the Sikes Act reflect the growing recognition of the importance of improving rangeland resources.

The concern for good stewardship of these lands was expressed by President Carter in his Environmental Message of August 2, 1979—the first time in recent memory that these lands were a distinct topic in such a message. The President has committed his administration "to purposeful management of the public lands and resources administered by the Bureau of Land Management." He has directed the Secretary of the Interior to establish a comprehensive "program development process" for managing all BLM lands which will analyze programs "designed to achieve environmentally sound, fiscally responsible and economically efficient investment, development, protection, and resource use." He has specifically acknowledged "a concerted federal effort...now underway to reverse the declining productivity of the 170 million acres of rangeland ecosystems managed by the Bureau of Land Management for livestock, wildlife, soil and moisture conservation, and other beneficial purposes." He has also pledged that "the Federal Government will be a good neighbor" and provide full opportunity for those affected by our management decisions to be involved in making them. The Bureau and the Interior Department will work closely with other Administration officials, with key congressional committees, and with the major interest groups to achieve these goals and policies of the President.

**Figure 5—Rangeland Inventory Acreage Annually and Cumulatively**

Rangeland inventory acreage peaks in fiscal 1980 at about 26 million acres and will decrease gradually over the next several years as resource management planning and implementation activities increase. By 1984, initial resource inventories will be completed on an additional 80 million acres. These inventories are geared to those soil, vegetative and wildlife inventories needed to support subsequent land use plans and resultant environmental impact statements. Completion of land use plans (and later resource management plans) is highest in fiscal 1979 and 1980 (Figure 6), with plans covering roughly 25 million acres each year, decreasing to roughly 16 million acres in fiscal 1983. As with inventories, these figures, however, relate only to those land use plans scheduled to meet the timetable for completion of the court-ordered grazing EIS's. By the end of fiscal year 1983, these plans will cover a total of 104 million acres of western rangelands.
The court-ordered schedule for completion of livestock grazing EIS's, based on the amended final judgment and the Bureau's preliminary schedule for fiscal 1983 through 1988, peaks in fiscal 1980 with EIS's completed on roughly 26 million acres in that year. The annual completion schedule (Figure 7) drops off gradually through 1988, at which time EIS's will have been completed on 170 million acres of rangeland.

Activity plans to implement the recommendations encompassed in land use plans will be completed shortly after the completion of the land use plan for a given planning unit. As an example, completion of new allotment management plans (Figure 8) for livestock management on rangelands will peak in fiscal year 1982 and 1983, with roughly 1,000 AMP's each year. AMP completions begin to taper off steadily after fiscal 1986. By fiscal 2000 nearly 7,000 individual allotment management plans are targeted for completion. Implementation of such plans will be subject to investment criteria including analysis to insure economic efficiency; and improvements will be undertaken when the evaluation indicates positive public benefits.
FIGURE 8 — ALLOTMENT MANAGEMENT PLANS ANNUALLY AND CUMULATIVELY (IN AMPs COMPLETED)

Cumulative

Annual

FISCAL YEAR

NUMBER OF ALLOTMENT MANAGEMENT PLANS

0 1000 2000 3000 4000 5000 6000 7000

SOURCE: BUDGET INFORMATION DATED 9/22/78
THESE ARE NEW ALLOTMENT PLANS AND DO NOT INCLUDE THOSE IMPLEMENTED BEFORE FISCAL YEAR 1980.

FIGURE 9 — TARGETS FOR ACCOMPLISHMENTS OF RANGELAND IMPROVEMENT PROJECTS AND PRACTICES

• RANGELAND & HABITAT IMPROVED, EROSION REDUCED.
   (IN MILLIONS OF ACRES):

WILDLIFE HABITAT IMPROVED
RANGELAND IMPROVED
EROSION REDUCED

ACRES (MILLIONS)

FISCAL YEAR


• ADDITIONAL FORAGE (MILLIONS OF TONS):

ADDED ANNUAL FORAGE PRODUCTION

TONS OF FORAGE (MILLIONS)

FISCAL YEAR

FIGURE 9 (CONTINUED)

- STREAMS ENHANCED (THOUSANDS OF MILES):

**STREAM MILEAGE ENHANCED**

![Graph showing stream mileage enhancement over time](image)

**Projected benefits from sustained investments and support in the grazing management and rangeland improvement program will accrue in five major categories: acres of rangeland improved, reductions in erosion, additional forage for all uses, habitat improvement, and stream restoration. The Bureau's rangeland management program, with continued support can result in:**

- improvement in the condition of 135 million acres of rangeland;
- forage production doubled from 5.6 million tons to 11.2 million tons;
- reduction of erosion on 88 million acres;
- habitat improvement for wildlife and wild horses and burros on 155 million acres; and
- restoration of 6,500 miles of riparian streams.

This will achieve a substantial improvement in the overall condition of rangelands for the maintenance of soil; the improvement of water quality and vegetation cover; for livestock production; for the stabilization of viable herds of wild horses and burros; and for improved habitat for numerous species of fish and wildlife.

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Chapter 6.

**INInvOLVING THE ENTIRE RANGELAND COMMUNITY**

It is clear that the public rangelands are gaining a wider national constituency. This is true both in terms of the dramatic increase in demands for the use of the rangeland resource and in the many voices calling for more effective management of the nation’s rangelands.

Recreationalists, wildlife advocates, wilderness enthusiasts, amateur archeologists and rock hounds who, not long ago had never heard of BLM, have now joined livestock interests in considering the public lands, including the rangelands, as their lands. While public attention was focused on the issue of how grazing fees would be set, it was this unprecedented coalition of interests that helped get the Public Rangelands Improvement Act passed in the closing weeks of the 95th Congress.

Just as it requires a funding commitment, rebuilding the public rangelands will require an unprecedented level of commitment, cooperation and compromise by all users of rangeland resources. While a few years ago such a coalition of interests would have been very unlikely, there are signs that public land interest groups are willing to abandon traditional adversary relationships and work together. Part of this willingness is a recognition that, whatever their differences, fundamentally they hold common objectives with respect to the need for improving and maintaining the productivity of rangeland ecosystems.

A principal component in the Bureau’s rangeland management strategy will be an aggressive across-the-board increase in consultation and cooperation with all rangeland user groups, the range science and academic community, State and local government authorities, and individuals. This chapter briefly describes the programs being designed to achieve this objective.

Throughout the Bureau’s rangeland planning and management programs, from preplanning analysis to on-the-ground work, public involvement will be a continuing process in decisionmaking. Recognizing that stringent deadlines for filing EIS’s in accordance with court-approved schedules may not provide the time for review that some would like, BLM will nonetheless strive to seek a broad spectrum of public input and provide as much time as possible for that input.

Interested individuals and groups will be consulted regularly in each planning area and given continuing access to the planning process so that they can express their own needs and objectives. BLM managers and their staffs will provide information at each step in the planning process and will actively seek public participation in preplanning analysis to gain insights about perceived problems and issues; in inventory to gain local information on resource condition and trend; and on rangeland quality during analysis to ensure that all viable alternatives are examined; during the environmental assessment...
process pursuant to the National Environmental Policy Act; and finally, up to the rendering of decisions affecting the allocation of the rangeland resource values. Bureau staff will work closely with affected individuals and groups at the local level to attempt to arrive at an agreement on the schedule for implementing management decisions and to identify needed improvement projects within the framework of existing policy.

At the national level, the Bureau will keep major environmental, wildlife, and commodity groups informed on the progress of the rangeland program, solicit their advice on major decisions, and facilitate their involvement in the formal review process for each range EIS.

The Bureau is currently studying opportunities for working with third-party organizations to coordinate the participation of specific interest groups in rangeland management programs in general, and in the range EIS schedule in particular.

Given the extent of federally managed lands in the Western States, close liaison with State and local governments through the rangeland management program is essential. The principal responsibility for developing close and cooperative working relationships with State and local governments will continue to rest with the Bureau's State Directors and their respective District and Area Managers. In most areas, these grassroots relationships have been carefully cultivated. More can and will be done.

At the national level, the Bureau will establish regular liaison with the National Governors Association (NGA) through its subcommittee on rangeland management. The Bureau will use the NGA subcommittee as a principal channel for communicating the goals and objectives of the rangeland management program, for understanding the interests and concerns of the Governors and for exploring new management approaches, and for exchanging views with respect to the direction and emphasis of the program.

In addition, several Western States have established State rangeland committees. The Bureau will work closely with each such committee and urge those States which have not already done so to establish their own committees to provide a central focus for State coordination.

An important element in expanding public understanding and involvement in the rangeland program is the use of citizen advisory panels. The Federal Land Policy and Management Act of 1976 (FLPMA) provided for the establishment of District Grazing Advisory Boards (Sec. 406), and many such boards have been chartered at the request of permittees within BLM Districts. Even though their functions are limited by law to offering the District Manager advice on the development of Allotment Management Plans and the expenditure of range betterment funds returned to the District, the boards offer good opportunities for direct contact between Bureau employees, livestock industry representatives at the local level, and interested publics who are afforded early notice of each board meeting and have opportunities to offer their views.

Still, the loop is not entirely closed at the District level. Given the multiple use emphasis of FLPMA, there is a clear need for the advice and counsel of a cross section of the users of the public rangelands. Congress agreed with constituent suggestions that the Bureau should establish District Multiple Use Advisory Councils and so amended FLPMA by inserting such a requirement in the Public Rangelands Improvement Act of 1978 (Sec. 13). The new language makes mandatory the establishment of such councils and also instructs the Bureau to move quickly to seek nominations and approve appointments to the district councils.

The broadest possible context is applied to a multiple use advisory council; that is, its advice to the District Manager should cover all program elements under his jurisdiction. Further, the Bureau is moving away from designating individual categories of membership on a multiple use council with such rigid terms as livestock, forestry, water quality, etc., to assure that thorough attention is given to the larger public interests involved.

Finally, the Bureau is in the process of establishing a 15-17 member National Public Lands Advisory Council. This group will offer the Director and the Secretary advice on the full range of national resource management policy issues.

Section 12 of the Public Rangelands Improvement Act of 1978 authorizes and directs the Secretaries of Interior and Agriculture:

"...to develop and implement, on an experimental basis on selected areas of public rangelands which are representative of the broad spectrum of range conditions, trends, and forage values, a program which provides incentives to, or rewards for, the holders of grazing permits and leases whose stewardship results in an improvement of the range condition of land under permit or lease. Such program shall explore innovative grazing management policies and systems which might provide incentives to improve range conditions."

The Bureau sees this "Stewardship Program" as an outstanding opportunity for developing a climate of cooperation among all of the users of rangeland resources, for ensuring orderly implementation of completed resource management plans, for identifying new needs and conditions to modify existing plans,
and for developing innovative methods for increasing the productivity of the rangeland resources.

The Bureau is especially interested in opportunities the experimental program may have for identifying incentives and rewards for grazing permittees whose sound management results in improved range conditions and for finding better ways of coordinating the management of intermingled public and private lands.

The Bureau and the Forest Service have developed a statement of principles for the program and have begun to identify opportunities for exploring a wide range of incentives. Some of the possibilities being considered by BLM include:

- Increased freedom of operation for permittees who have demonstrated the skill to improve range conditions. Achievable goals would be identified benchmarks and checkpoints for monitoring progress. Within specified limits, permittees could test their own innovative approaches to improving range condition.
- Analysis of the feasibility of using a credit reduction against grazing fees to offset costs of experimentation with livestock manipulations that lead to improved range condition.
- Provisions that increased livestock forage that results from the stewardship effort will accrue to the permittee whose efforts caused that increase.
- Public recognition for permittees who clearly demonstrate good stewardship.
- Cooperative range management projects on selected areas where land ownership is mixed and there is a broad representation of resource users and interests. Experimental project areas will be selected to provide a full spectrum of range conditions, trends and forage values. These projects will be designed to foster a greater degree of cooperation among the Federal and State agencies charged with the management of the rangeland, local rangeland users and representatives of other interests.

As this program evolves, additional incentives and approaches to improving range conditions will be identified and tested. The results of the experimental stewardship effort must be reported to the Congress by December 31, 1985.

The Scientific Community

An important element in enhancing the new coalition for rangeland management is the involvement of the resource sciences community. To this end, the Bureau will establish a science and research staff and is working with the National Academy of Sciences on a review of channels for involvement by the scientific community in Bureau programs. Rangeland management will be the first area examined.

In addition, the Bureau will take steps to identify rangeland management research and scientific information needs, methods of making more effective use of both its own limited research budgets and opportunities for participation in the research programs of other Federal agencies such as the Forest Service and the Science and Education Administration. In developing the rangeland management research program, the Bureau will work closely with established research organizations and academic institutions with recognized expertise in rangeland science.

It is clear that many basic scientific and methodological questions will have to be resolved before a successful rangeland management program can be fully implemented. Fundamental disagreements exist within the range science community and among federal agencies and range user groups over definitions, methods of measurement, the effectiveness of specific management techniques, and other questions which, until resolved, will hamstring effective management.

To help achieve resolution of these issues, the Bureau, with cooperation from other Federal agencies, will sponsor a continuing series of scientific workshops and symposia to be conducted by the National Academy of Sciences and designed to deal with clearly focused and defined scientific and methodological questions. Participation will be broad and the objective of each session will be to reach consensus on the resolution of the question or methodology being examined. The issues to be examined in these symposia, beginning in fiscal year 1980, include:

- Vegetation allocation.
- Socio-economic concerns related to the rangeland management program.
- Rangeland measurements and criteria for unsuitability for livestock use.
- Range improvements.
- Grazing systems.
- Management of livestock grazing on riparian and wetland areas.
Chapter 7. CONCLUSION

Our subject is the Nation's public rangelands, owned by all Americans—and managed in the broad public interest by the Bureau of Land Management. Few Americans are aware of this national legacy or the contributions it makes to their lives. But those who, like their fathers before them, gain sustenance from it are keenly aware of their stake in the land and its productivity. And it is equally clear that a growing body of people—some far removed from the land—have different but nevertheless legitimate expectations and exert their own demands upon this last, largely uncommitted, public estate.

All reasoned voices will be heard and considered and involved in shaping a management philosophy for the great national legacy. That philosophy must evolve and encompass the broad center of national thought, opinion and interest in order to be viable and lasting.

The proper balance of protection, development and use of these lands is our collective challenge. There is room enough and potential productivity enough for most aspirations. Together we must forge a clear policy and work to make it a reality.
The rangeland management program is developed under Federal laws that provide authority to regulate rangeland use, and Federal laws that establish a national policy framework within which rangeland management is conducted to protect associated values. The policy guiding laws generally consist of resource and environmental protection laws that may be implemented through executive orders or other executive branch guidance. The more important executive guidance will be highlighted.

I. Legislation

A. The Federal laws providing regulatory authority for management and improvement of the public lands are as follows:

1. The Taylor Grazing Act of 1934, as amended (43 U.S.C. 315 et. seq.).


B. The Federal laws that provide a national policy framework within which the rangeland management program must function are as follows:


3. Federal Water Pollution Control Act and Amendments (33 U.S.C. 1251 et. seq.).


18. The following Federal laws establish policy with respect to special areas, resources, animal species or groups of species:


II. EXECUTIVE ORDERS

Additional policy direction affecting the rangeland management program is transmitted to the Bureau of Land Management through the following executive orders.

A. E.O. 11583 — provides for protection or salvage of cultural resources.
B. E.O. 11987 — relates to restricting the introduction of exotic species.
C. E.O. 11988 — provides for protection and management of floodplains.
D. E.O. 11990 — provides for protection of wetlands.

GLOSSARY

A

Accelerated Erosion: Soil movement or loss caused by disturbances due to man’s activities, which exceeds normal geologic erosion.

Appropriation: Funds made available by Congress to the Administration for carrying out specific programs.

Authorization: The action by Congress which establishes authority to appropriate funds. An authorization does not provide funding.

C

Critical Habitat: Any air, land or water area, including any elements thereof, which the Secretary of the Interior or the Secretary of Commerce has determined (and has published in the Federal Register) to be essential to the survival of wild populations of an endangered or threatened species or to be necessary for their recovery.

E

Environmental Assessment: A written analysis of the anticipated environmental impacts resulting from a proposed action.

F

Forage: That collective portion of browse and herbaceous plant material on a given rangeland area which is properly utilizable by grazing animals.

G

Grazing Management: Direction, control and manipulation of grazing by livestock, wildlife ungulates and wild free-roaming horses to achieve a desired result.

Grazing System: Systematic application of grazing treatments to a management unit in a prescribed sequence over recurring periods of time.

Grazing Treatment: The use of grazing animals in a specified manner to achieve a desired result. Grazing treatments include non-use, deferment and rest from grazing use, and rotation of grazing use. Various treatments applied sequentially to a specific area result in a grazing system.

H

Habitat: The natural abode of a plant or animal, including all biotic, climatic, and edaphic factors affecting life.

J

Job Document Report: A multi-purpose Bureau of Land Management form used to document pertinent information concerning each rangeland improvement project for purposes of annual work planning, progress reporting and project data maintenance.

M

Management Principles: Standards and practices which will be applied in planning, organizing, directing, controlling, and evaluating the rangeland management program.

Multiple Use: "...the management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and non-renewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output." (Section 103(c), Federal Land Policy and Management Act of 1976.)
Prescribed Burning: The use of fire as a management tool under specified conditions for burning a predetermined area.

Rangeland Condition: The quality of rangeland reflected in its ability to support various levels of productivity in accordance with multiple use objectives and land use plans. The term relates to (1) plant communities, soil quality, forage values, watershed protection, scenic values and habitat for wildlife, livestock, and wild free-roaming horses and burros, (2) the present state of vegetation of a rangeland site in relation to the potential plant community for that site and (3) the relative degree to which the kinds, proportions, and amounts of vegetation in a plant community resemble that of the desired community for that site.

Rangeland Ecosystems: Plant and animal communities on rangelands which, along with interrelated abiotic factors of soil, topography and climate, comprise an interacting system.

Rangeland Improvements: Any practice or project on or relating to rangelands which is designed to improve production of forage; change vegetative composition; control patterns of use; provide water; stabilize soil and water conditions; and provide habitat for livestock and wildlife. The term includes, but is not limited to, structures, treatment projects, and use of mechanical means to accomplish the desired result.

Rangeland Improvement Practices: The wide variety of methods used and actions taken to accomplish rehabilitation, protection, and improvement of the rangelands and their affiliated resources and resource values.

Rangeland Improvement Projects: Structures, developments, or treatments used to rehabilitate, protect or improve the public rangelands with regard to vegetation conditions, watershed protection, scenic values, and habitat for fish, wildlife, livestock, and wild free-roaming horses and burros.

Rangeland Management: Making provision for and regulating consumptive and non-consumptive uses of resources coordinated with all other activities and uses within ecosystems. This includes rangeland practices.

Rangeland Management Program: A planned systematic approach to restore and maintain the productivity of rangelands. Such a program will affect and be affected by other renewable and non-renewable resource programs, but it will not develop or implement recreation use plans, mineral leasing plans, energy development plans, timber harvest plans, forest management plans, cultural resource management plans and other activity plans for non-renewable resources.

Rangeland Resources: Products occurring on or developed from public rangelands which have value, either real or intrinsic.

Recovery Plan: A comprehensive plan to bring about the removal of a threatened or endangered species from the official list. The plan concentrates on a designated species and identifies factors affecting its biological status, the problems to be overcome and actions that must be taken for successful restoration.

Resource Activities: Actions which relate to one or more of the multiple values found on public lands.

Resource Management Plan: A land use plan as prescribed by the Federal Land Policy and Management Act. It establishes (1) coordination and allocation between the various resource uses, (2) goals for resource conditions and uses, and (3) general strategies for resource management actions.

Species Composition: The proportions of individual plant species in relation to the total on a given area.

Study: Periodic and systematic data collection and evaluation to monitor resources and their uses.

Supervision and Observation: The direction, inspection and attention to, and the noting and recordation of uses and the effects they have on the various parts of the rangeland ecosystem.

Sustained Yield: The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

Vegetation Allocation: The apportionment of current and projected vegetation among competing uses to achieve and/or maintain a desirable ecosystem and determined multiple use objectives. This includes allocation of vegetation for ecosystem maintenance and allocation of forage for consumptive use by livestock, wild free-roaming horses and burros, and wildlife in such a manner as to provide for nonconsumptive vegetative requirements for watershed protection, aesthetics, habitat, cover, and other uses.
STATE OFFICES
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ALASKA:
701 C Street
Box 13
Anchorage, AK 99573

ARIZONA:
2400 Valley Bank Center
Phoenix, AZ 85073

CALIFORNIA:
Federal Building, Room E-2841
2800 Cottage Way
Sacramento, CA 95825

COLORADO:
Colorado State Bank Building
1600 Broadway
Denver, CO 80202

STATES EAST OF THE MISSISSIPPI RIVER, PLUS
IOWA, MINNESOTA, MISSOURI, ARKANSAS, AND
LOUISIANA:
Eastern States Office
350 S. Pickett St.
Alexandria, VA 22304

IDAHO:
Federal Building, Room 398
550 West Front Street
P.O. Box 041
Boise, ID 83724

MONTANA, NORTH DAKOTA, AND
SOUTH DAKOTA:
222 N. 32nd Street
P.O. Box 3057
Billings, MT 59107

NEVADA:
Federal Building, Room 3008
300 South Street
Reno, NV 89509

NEW MEXICO, OKLAHOMA, AND TEXAS
U.S. Post Office and Federal Building
P.O. Box 1449
Santa Fe, NM 87501

OREGON AND WASHINGTON:
720 N. E. Oregon Street
P.O. Box 2965
Portland, OR 97208

UTAH:
University Club Building
136 East South Temple
Salt Lake City, UT 84111

WYOMING, KANSAS, AND NEBRASKA
2515 Warren Avenue
P.O. Box 1839
Cheyenne, WY 82001