OPPORTUNITY AND CHALLENGE

The Story of BLM

U.S. Department of the Interior
Bureau of Land Management

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by
James Muhn
Hanson R. Stuart

designed by
Peter D. Doran

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Cover and Chapter Illustrations — *Peter D. Doran*

Portrait Drawings — *Jennifer Reese*

Graphics — *Jennifer Reese, Kelly Sorenson*

Page Layout — *Peter D. Doran, Jennifer Reese, Kelly Sorenson*

Graphic Assistance — *Herman Weiss, John D. Montoya*

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PREFACE

To the uninitiated, the Bureau of Land Management is a bewildering array of programs. BLM manages a variety of resources, ranging from the more traditional resources of timber, range, and minerals, to exotics such as cultural resources and air quality. On any given day, a BLM employee might be found evaluating wildlife habitat in the morning, reviewing a report on the impact of off-road vehicles on archaeological sites that afternoon, and attending an evening public meeting on the construction of a power transmission line across public land.

BLM administers more than 270 million acres of public land, most of it in Alaska and the western states of Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming. The Bureau is also responsible for more than 570 million acres of federally owned minerals. In managing these lands, BLM is guided by the principles of multiple use and sustained yield and a recognized need to protect and enhance the natural and human environment.

Fulfilling this responsibility is difficult. There is intense competition for the public lands among user and interest groups with conflicting needs and philosophical positions on natural resource management: coal companies want to open mines, ranchers need grazing land, and environmentalists seek to preserve wilderness. The challenge to BLM is allocating public land resources in a manner that allows for each interest to enjoy the opportunities the public lands offer.

BLM uses professional resource management principles and standards in making resource allocation decisions. Conflicting laws and user group demands, however, significantly influence the decisionmaking process, thrusting the Bureau into the midst of controversy and making politics a fact of everyday life for the agency.

Many BLM employees decry the influence of politics. But politics has always been a part of the public land question. Political controversy gave birth to the public lands; politics has shaped the laws that govern their disposition and administration. Political controversy and influence will not disappear. Recognition of this is important if Bureau employees are to understand the role the agency plays and the important part they have in helping it carry out its mandates and responsibilities.

People are another factor that has significantly shaped BLM. It is people who make decisions and implement policies. BLM's creativity and innovation—its "can do" attitude—are traits the Bureau has become known for. "The resilience and dedication of Bureau personnel," in the words of natural resources professor Sally K. Fairfax, "is the BLM's major resource for future development."

BLM's people give substance and meaning to the agency. As employees, we need to know how past public land policies contributed to the land patterns and resource controversies that BLM deals with today—especially as we prepare for the opportunities and challenges of the future. That is the

purpose of this book: to provide BLM employees and other readers with a sense of the agency and its mission.

This history is a brief overview. It explores the broad aspects of public land policy and the growth of BLM into a multiple use management agency. The first chapter deals with BLM's predecessor agencies, the General Land Office and Grazing Service; it outlines the policies by which the public lands were administered. The chapter also details the events that led to the creation of BLM. Chapter Two is concerned with BLM's early years. It explores the problems the new agency faced and how it worked toward assuring proper management of the public lands and building a professionally competent staff.

The third chapter deals with the BLM during the 1960s, when Secretary of the Interior Stewart Udall introduced new programs into the Bureau as part of America's "Third Conservation Wave." The chapter describes how the Classification and Multiple Use Act changed the Bureau and covers events up to the report of the Public Land Law Review Commission in 1970. The next chapter looks at passage and implementation of the National Environmental Policy Act and the Federal Land Policy and Management Act. The effects of other environmental legislation on BLM and its management of the public lands are also discussed. Chapter Five covers events in the 1980s, bringing us to the present.

There is no way two authors can capture the diversity and spirit of BLM. To broaden the book's coverage, employees and retirees throughout BLM have written articles on people, events, and offices that contributed to the Bureau's development. These articles are interspersed in each of the chapters where they relate to the text.

At the end of each chapter, readings on public land issues and topics are given. Most of these references are books which direct readers to additional sources.

In reading this history, we hope that you will find the book as interesting and enjoyable as we did in researching and writing it.

CHAPTER 1

PROLOGUE:
The Public Domain From 1776-1946

There was nothing but land: not a country at all,
but the material out of which countries are made.

—Willa Cather
My Antonia, 1918

PROLOGUE
The Public Domain from 1776-1946

Overview

The Bureau of Land Management (BLM) today administers what remains of the nation's once vast land holdings—the public domain. The public domain once stretched from the Appalachian Mountains to the Pacific and "constituted," in historian Frederick Jackson Turner's mind, "the richest free gift that was ever spread out before civilized man." Of the 1.8 billion acres of public land acquired by the United States, two-thirds went to individuals, corporations, and the states. Of that remaining, much was set aside for national forests, wildlife refuges, national parks and monuments, and other public purposes, leaving BLM to manage some 270 million acres, as well as 570 million acres of mineral estate.

Lands managed by BLM are often scattered and take on checkerboard, jigsaw, and patchwork patterns, but in much of the Great Basin, desert Southwest, and Alaska, solid blocks of public land predominate. These land patterns are inherited: the result of the public land policies pursued by the country prior to the agency's founding in 1946.

To the young American nation the public domain represented challenge and opportunity—a wilderness waiting to be transformed into an agricultural Eden. The nation also needed revenue. A policy of disposing of public lands through auction seemed to meet both these needs. As the need for revenue lessened, policy shifted to one of development and lands were generously provided to settlers, corporations, and the states. But as the public domain diminished, the government chose to set aside timber, mineral, and grazing lands and regulate their development as a means of preserving the opportunity of the public domain.

ACQUISITION OF THE PUBLIC DOMAIN

Original Public Domain

"The back Lands [sic] claimed by the *British Crown,*" contended Maryland legislators in November 1776, "if secured by the blood and treasure of all, ought in reason, justice, and policy...be considered as a common stock." With that declaration, Maryland raised the issue of what should become of the territory between the Appalachian Mountains and the Mississippi River. The issue proved contentious and threatened the bonds that held the new union of states together.

Seven states had claims to the region. Virginia, Massachusetts, Connecticut, North Carolina, South Carolina, and Georgia had early colonial charters from England granting them title to the lands beyond the Appalachians. New York's claim resulted from concessions by the Iroquois Indians. The remaining states had no claims to the area.

For states without land claims, like Maryland, the disposition of western lands was of major importance. They needed land to reward the

soldiers who served in their regiments against the British. Maryland also feared that if Virginia and the other land-claim states took title to lands in the trans-Appalachian West, they would dominate the nation economically and politically. Maryland demanded that the land-claim states relinquish their title to the central government and vowed not to sign the Articles of Confederation until that was done.

The land-claim states resisted Maryland's demand at first. Virginia, Maryland's chief antagonist, declared that the central government had no claim to the western lands. The resolve of Virginia and the other land-claim states, however, weakened as they realized the importance of having Maryland in the union and recognized that their conflicting claims to the western lands could threaten their relations with each another. New York in 1780 took the first step toward compromise by offering to cede its claim to lands beyond the Appalachians to the central government. Maryland reciprocated by signing the Articles of Confederation.

The United States accepted New York's cession in 1781. Three years later, Virginia ceded its interests to the territory north of the Ohio River. Then came the cessions of Massachusetts (1785), Connecticut (1786), South Carolina (1787), North Carolina (1790), and Georgia (1802).

Not all the western lands were ceded. Virginia had granted much of Kentucky to soldiers and other interests during the Revolution and so retained this area. Tennessee, carved from North Carolina, was also withheld from the public domain for much the same reason.

Louisiana Purchase

The public domain rapidly grew beyond the bounds of the trans-Appalachian West. In 1803, President Thomas Jefferson acquired from France (through the Louisiana Purchase) the immense region drained by the Mississippi River's western tributaries. The purchase doubled the size of the nation.

Red River Country

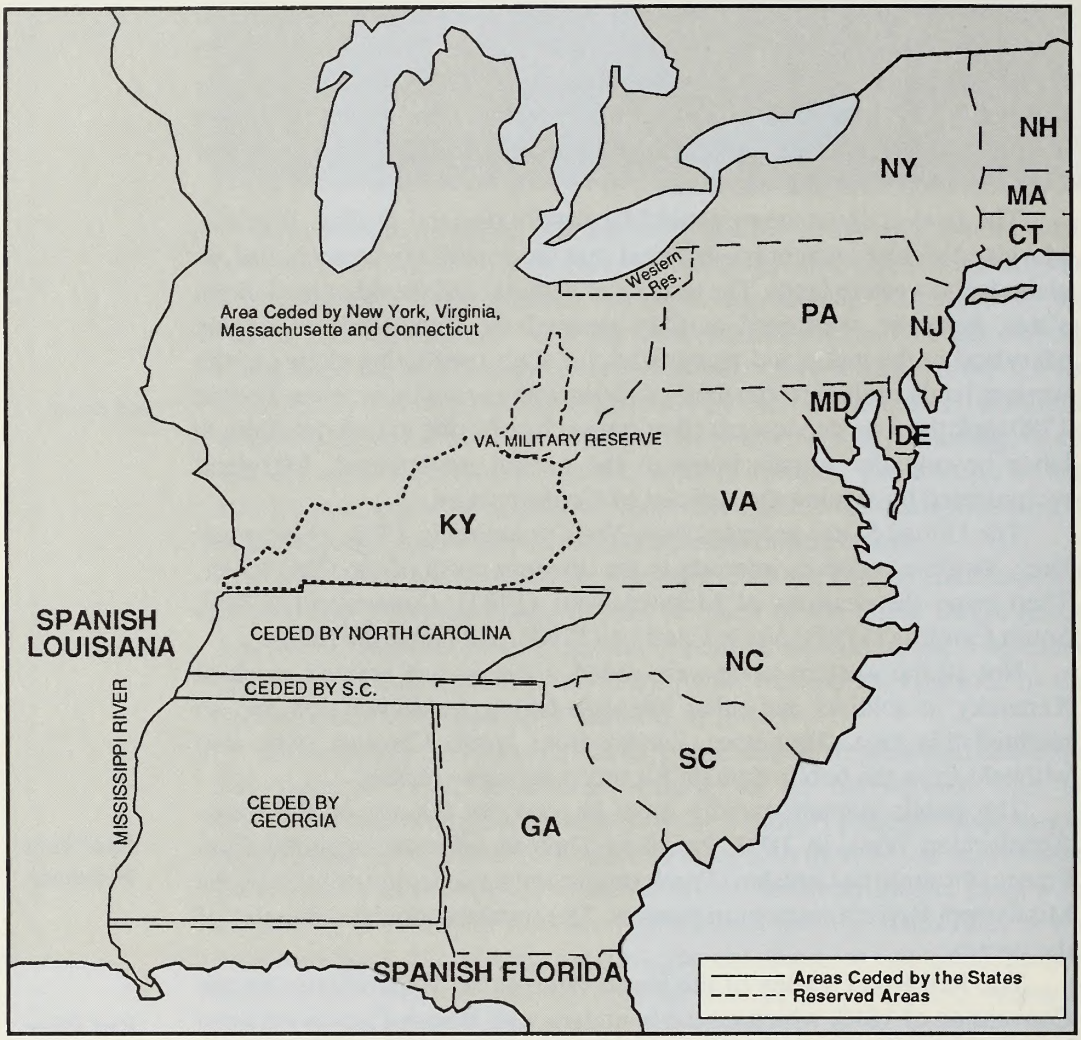
The Red River Valley of the North came to the United States by the Convention of 1818, which set the boundary with British Canada between Lake Superior and the Rocky Mountains at the 49th Parallel. By treaty with Spain the following year, Florida was acquired and the western border of the Louisiana Purchase redrawn.

Oregon Country and the Southwest

America's "Manifest Destiny" to span the continent was fulfilled in the 1840s. The United States and Britain in 1846 ended their joint occupation of the Oregon Country by dividing the region along the 49th Parallel. That same year also saw the beginning of war with Mexico. American troops seized control of New Mexico and long-coveted California, and by the Treaty of Guadalupe Hidalgo in 1848, the United States took title to the Southwest from Mexico for $15 million.

Texas and the Gadsden Purchase

When Texas joined the Union in 1845, it retained title to its vacant and unappropriated lands. The federal government, however, purchased the northwest portion of Texas in 1850 and added it to the public domain. Three years later, James Gadsden negotiated the purchase of 19 million acres along the Mexican border needed for a southern transcontinental railroad route. The region was described at the time by Missouri Senator Thomas Hart Benton as "utterly desolate, desert, and God-forsaken."



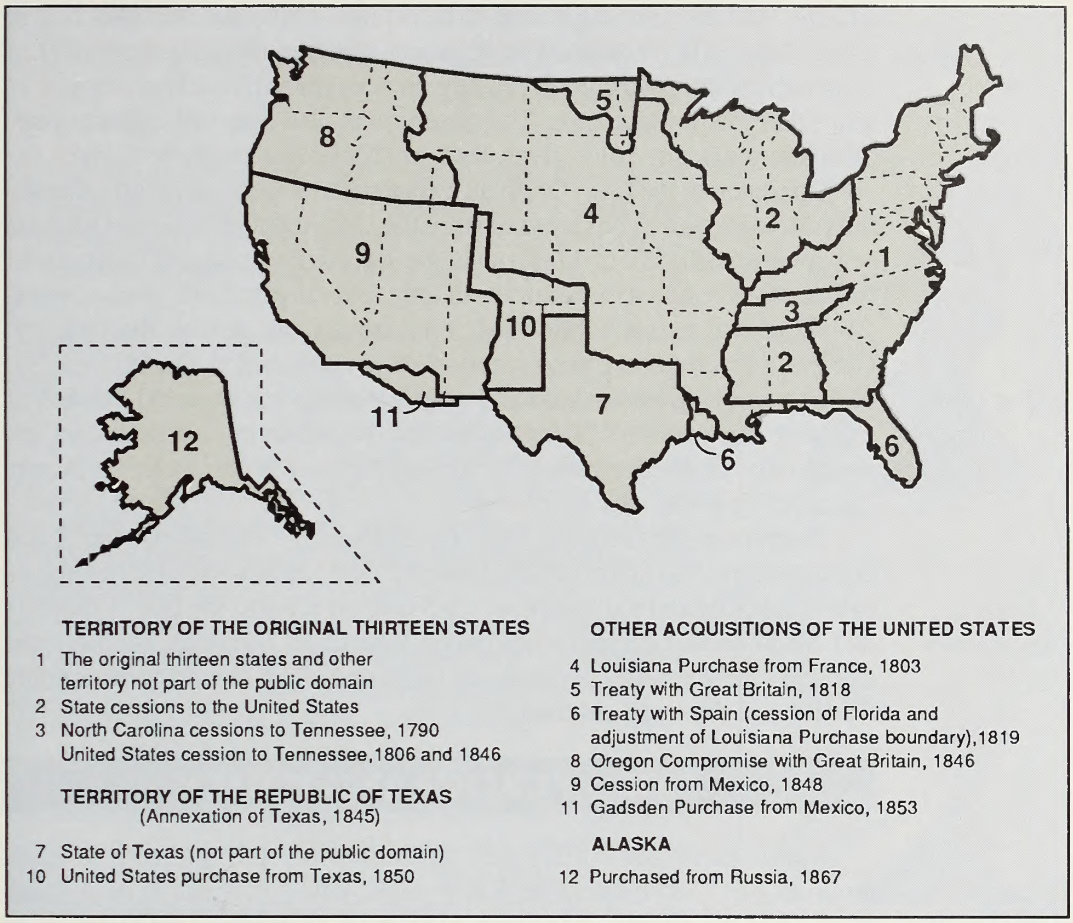
Western land cessions by the original states

Alaska

"Most astonishing of all the United States' acquisitions of territory," in public land historian Paul Wallace Gates' mind, "was the purchase of Alaska." Americans had expressed no interest in the *northern icebox*. The Russian Tsar, however, wanted to sell, and in 1867 Secretary of State William H. Seward obliged. For $7.2 million, the United States acquired more than 365 million acres and made its last addition to the public domain.

THE LAND ORDINANCE OF 1785

When New York offered to relinquish its claim to the western lands in 1780, the Congress of the Confederation responded with a pledge that "the unappropriated lands that may be ceded or relinquished to the United States, by any particular state...shall be disposed of for the common benefit of the United States." This raised the issue of how public lands should be disposed of.



Aquisition of the public domain

Land System Debate

Most in Congress agreed that the public lands should be used as a source of revenue for the nation's cash-starved treasury and provide land, as promised, to soldiers who had enlisted in the Continental Army. There was sharp difference, however, as to how disposal should be carried out.

Most southern delegates favored a system of indiscriminate location and subsequent survey, as had been the practice in their states. Others advocated more orderly settlement, voicing arguments set forth by Thomas Jefferson, that indiscriminate location with subsequent survey led only to costly and protracted lawsuits as owners sought to establish boundaries. What they wanted was a system, like in New England, where survey preceded settlement.

Land Ordinance Provisions

The Confederation in the Land Ordinance of May 20, 1785, opted for the policy of orderly settlement. After Indian title issues had been quieted by treaty, the public lands were to be surveyed and numbered by the Geographer of the United States into townships, 6 miles square, and seven ranges. (In this, a rectangular survey system, townships are numbered in a north-south direction; ranges, in an east-west direction.) One-seventh of the townships, selected at random, were to be used to satisfy military land warrants. The remaining townships were to be auctioned at not less than $1

an acre. Half the townships were to be offered whole and the other half in "lots," later called sections, 1-mile square. The United States reserved Lot 16 in each of the townships to provide revenue for public schools as well as four other lots for later sale. The government also reserved rights to one-third interest in any gold, silver, lead, or copper that might be found.

Surveys Begin

Operation of the Land Ordinance disappointed Confederation officials. Surveys were slow. The Geographer of the United States Thomas Hutchins began work in the fall of 1785, but dense forests, swamps, and the threat of Indian attack resulted in the survey of only four ranges after 2 years of work.

First Land Sale

Impatient to sell public lands and bring revenue into the treasury, Congress ordered the completed townships auctioned in the fall of 1787. Not one whole township sold and only 108,431 acres were bid for. Indian troubles, the distance of the lands from agricultural markets, and the availability of cheaper lands in the original 13 states were all factors contributing to the lack of interest.

Sales to Speculators

Desperate for revenue, the Confederation abandoned the Land Ordinance of 1785 and contracted to sell public lands, without competition, to two speculative land companies: 1.5 million acres to the Ohio Company and 1 million to a company headed by John Cleve Symmes. Both offered Congress mere pennies per acre but, in the end, were able to purchase only a portion of the lands contracted.

EARLY PUBLIC LAND POLICY

Constitution and the Public Domain

The United States ratified the Constitution in 1788, rendering the Land Ordinance of 1785 inoperable. A new public land policy had to be enacted. By Article IV, Section 3, Clause 2, of the Constitution, the task fell to Congress, for it had the "Power to dispose of and make all needful Rules and Regulations respecting the Territory and other Property belonging to the United States."

Land System Debate Renewed

Congress debated the public lands questions for several years but no general policy was enacted until 1796. Interestingly, the debates did not center on whether the public lands should continue as a source of revenue, since the national debt continued to be troublesome, but rather to whom the lands should be sold. Secretary of the Treasury Alexander Hamilton wanted the lands sold to capitalists and land companies who could pay top price for public lands. Pennsylvania Congressman Albert Gallatin, an adherent of Thomas Jefferson thinking on public land matters, did not oppose Hamilton's thinking, but did urge that cash poor farmers be accommodated.

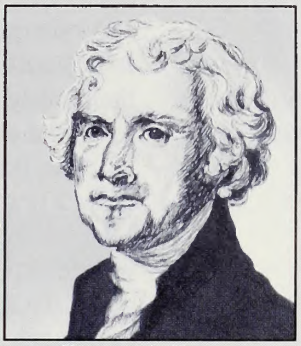
Land Law of 1796

The Land Law of 1796 sought a compromise between the positions. The law provided for the disposal of the public lands north of the Ohio River by the Department of the Treasury. Lands could be purchased in unlimited quantities at the minimum price of $2 per acre, with the full balance not due for a year. Half the townships sold in quarter townships, the other half was offered in 640-acre sections. Congressman Gallatin and his supporters hoped that settlers would pool their resources to buy the 640-acre tracts, but when bidding for prime agricultural land, monied interests had the

JEFFERSON AND HAMILTON AND THE PUBLIC LANDS

by Jerry A. O'Callaghan
Volunteer Historian

Thomas Jefferson, the nation's first Secretary of State, and Alexander Hamilton, its first Secretary of the Treasury, had strong opposing views on which social/economic groups could best guarantee the future of the new nation.



Thomas Jefferson

Jefferson, a Virginia landowner, wanted self-sufficient family farmers as the base from which to build the new nation. He assumed they would produce enough to feed and clothe themselves, and sell the surplus to buy other necessities. Because they were landowners, Jefferson also assumed they would take an interest in public affairs. Their rural lives would allow them to study public issues and officials, unswayed by the commercial, industrial, or financial preoccupations of cities.

Jefferson wanted the government to sell public lands to small farmers in tracts that would provide the self-sufficiency he envisioned. In short, Jefferson's public lands strategy was to retail small tracts at cut rate.

Alexander Hamilton

Hamilton, a New York lawyer, cast his lot with, in his words, "the rich, the able, and the well-born," who could organize and finance commercial and industrial enterprises. Hamilton's plan was more complicated. He saw public lands as a way to back the government bonds sold to merchants, bankers, and others. He favored auctioning public lands in large blocks to promote maximum revenue with low overhead. By investing in land, "the rich, the able, and the well-born" helped guarantee revenue that would return their capital with annual interest.

Hamilton's strategy, then, was to sell public lands at wholesale and bind the merchants and bankers to the new nation. Hamilton's view prevailed in the Public Land Act of 1796. Hamilton's plan required small farmers to buy their farms from those who had the money to respond to his strategy. Small farmers did not stand still for such treatment. Their aggravation brought on the Land Act of 1800, which authorized local land offices, reduced the minimum size for purchase and extended credit. In 1820 credit was abolished, but the minimum price was lowered. The ultimate in the retail policy was the Homestead Act of 1862. Under it, at no cash costs other than fees, settlers could buy 160-acre, self-sufficient farms with their time and labor.

Jefferson's views quickly supplanted Hamilton's. Nevertheless Hamilton has prevailed overall with national and international markets placing a premium on one-crop farming—the antithesis of self-sufficient farming. Such commercial agriculture gives great economic rewards. It also takes them away. Jefferson's influence is present in federal agricultural policy to mitigate wide market swings and natural disasters such as drought.

advantage.

Another notable feature of the Land Law of 1796 was the retention of the rectangular survey system established by the Land Ordinance of 1785. As before, public lands were to be surveyed before sale. Surveys were to be contracted to independent surveyors who would follow the direction of a surveyor general. In executing township surveys, they were to note "all mines, salt licks, salt springs, and mill-seats...all water-courses...and also the quality of the lands" in their notebooks, so that purchasers could be informed about the character of the lands being offered.

Rectangular Survey System

The sale of public lands came 2 years later. The results, as with the earlier Land Ordinance, were disappointing. At auctions held in Philadelphia and Pittsburgh, less than 50,000 acres sold. Congress reacted to the poor showing by amending the Land Law of 1796.

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

Township configuration under the Land Ordinance of 1785

The Land Law of 1800 embodied many provisions advocated by frontier interests. Tracts offered for sale were reduced to half sections (320 acres) and purchasers were given 4 years to pay the amount bid, with an 8 percent discount if the entire amount was paid at the time of auction. Another important feature of the act was the establishment of land offices in Cincinnati, Chillicothe, Marietta, and Steubenville. The offices were near the lands being sold and gave westerners an opportunity to bid on the offered lands.

Land Law of 1800

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

Township configuration under the Land Law of 1796

The local land office became an important center of activity on the frontier. Here, people made entry for the public lands. Administering the offices were a register and receiver, appointed and removed at the discretion of the President. The register entered the land applications in the record books and on the survey plats of the office. The receiver handled all payments and receipts. These actions were supervised by the Secretary of the Treasury in Washington. Land offices were moved or closed as the public lands within their jurisdictions dwindled or as new public lands were being surveyed and

Local Land Office System

opened to entry. More than 360 district land offices were ultimately established.

The Land Law of 1800 stimulated a sharp increase in land sales. By the close of 1802, more than 750,000 acres had been sold. Further stimulation came with the Land Law of 1804, which extended credit payments and reduced the size of tracts offered for auction from 320 to 160 acres.

Land Law of 1804

Congress also opened the public lands south of Tennessee to sale. The Land Law of 1803 ordered the region surveyed under the rectangular system and sold in the manner set forth by the Land Law of 1800. Hundreds of thousands of acres in the South were soon put on the market and sold.

Public Lands in the South

THE GENERAL LAND OFFICE

To handle the rapidly growing public land business, Congress created the General Land Office (GLO) in 1812. Headed by a commissioner, the GLO was given the responsibility to "superintend, execute, and perform all such acts and things touching or respecting the public lands of the United States." Previously, public land sales had been handled directly by the Secretary of the Treasury, while the Department of War had administered military land warrants and the State Department, land patents. The General Land Office was placed within the Treasury Department until 1849, when it was transferred to the new Department of the Interior.

Duties and Function

BLM

Edward Tiffin

Responsibility for organizing the GLO went to Edward Tiffin, its first commissioner. Tiffin, a physician, former U.S. Senator, and farmer, set about the task without delay. With a chief clerk and staff of eight, Tiffin consolidated the land records spread throughout Washington and began the daily business of processing land entries.

First GLO Commissioner

THE BOOM AND BUST CYCLES OF PUBLIC LAND SALES

Public land sales declined with the outbreak of war with Great Britain in 1812. After the war, however, there was an unprecedented rush for public lands. Land cessions by the Indians defeated during the War of 1812 opened the trans-Appalachian region to farmers and speculators, but the main catalyst for the coming boom was the rise in agricultural prices. The GLO auctioned off 1.5 million acres of public land in 1815; within 4 years, 5.5 million acres had been sold. Competition for land was intense. In some parts

Land Rush

COMMISSIONERS OF THE GENERAL LAND OFFICE

by Jerry A. O'Callaghan
Volunteer Historian

Editor's Note: *Jerry O'Callaghan, a 21-year veteran of BLM, has been a volunteer historian for the Bureau since retiring in 1982 as Assistant Director of Lands and Minerals.*

The Commissionership of the General Land Office has been one of the nation's most prestigious and sought-after posts. When Abraham Lincoln's strong bid in 1849 failed, he was so disappointed that he took a long leave from politics.

Thirty-four Commissioners of the General Land Office presided over the distribution of one billion plus acres of public lands—roughly half of the United States' total land area. The distribution is possibly the largest and most beneficent real estate deal in history, giving the language an idiom, "doing a land office business," for a high volume of retail trade.

The General Land Office was created in 1812 to relieve the Secretary of the Treasury from having to oversee directly the local land offices. It was a quasi-judicial, ministerial office centralized in Washington, and became part of the newly formed Department of the Interior in 1849.

Edward Tiffin, the first commissioner, combined a long public career with the practice of medicine. When the British burned Washington's federal buildings in 1814, Tiffin arranged for the removal of the land records to safety across the Potomac River.

So he could return to Ohio, Tiffin arranged a trade with Josiah Meigs, the Surveyor-General, with Tiffin himself becoming Surveyor-General stationed in Cincinnati. Incidentally, Tiffin has been considered a superb Surveyor-General, a position closely related and equally important to that of the Commissioner of the General Land Office to which it later became subordinate.

No commissioner became President, but John McLean became an Associate Justice of the United States and was often talked about as a presidential candidate. Thomas A. Hendricks, after his commissionership, served in the U.S. House of Representatives and U.S. Senate. He was able to serve only nine months of his term as Vice President before his death.

Although he served as commissioner a short time, James Shields must have been very persuasive. He went on to become a senator from Minnesota, California, and Missouri.

William Sparks was an aggressively forthright commissioner. His efforts to redress what the public saw as preferential treatment of the land grant railroads, syndicates and speculators, to the disadvantage of actual settlers, aroused congressional and press ire. Three of his annual reports in the mid-1880s were cogent arguments for public land reform. Both L.C.Q. Lamar, Secretary of the Interior, and President Cleveland backed him, but Sparks resigned before his term was over in a difference with Lamar on a railroad case.

Many commissioners had been state governors. The last, Fred Johnson, was also, briefly, the Bureau of Land Management's first director.

of the South, prime cotton land sold for as much as $78 an acre.

Then came panic.

America's economy collapsed in 1819. Cotton and other agricultural prices plummeted and banks failed. The economic depression threatened the financial stability of the United States. During the land rush, speculators had taken advantage of the federal government's liberal payment terms; at the time of the collapse, nearly $23 million was still owed to the Treasury.

Congress quickly abandoned the credit system. The Land Law of 1820 discontinued the sale of lands on credit. Full payment for land had to be made at the time of purchase. However, buyers could now purchase land for as little as $1.25 an acre and the size of tracts could be as small as 80 acres. The buyers could still purchase public lands in unlimited quantities and lands not sold at auction were subject to private entry at the minimum price.

Land Law of 1820

Land speculation did not end with the Land Law of 1820. Although sales declined with the panic of 1819, they increased steadily during the 1820s. A big jump in land sales came in 1835 when the acreage sold climbed to 12.5 million acres from the previous year's 4.6 million acres. In 1836, more than 20 million acres were sold. This surge in sales resulted from an improved economy, an expanded road and canal system in the West, available money, and the opening of new lands west of the Mississippi River created by the federal government's removal of trans-Appalachian Indian tribes.

Land Sales in 1830s

The federal government was "doing a land-office business" and the increased sales enabled it to pay off the national debt. The rampant speculation, however, was being financed by state bank-issued currency of uncertain value. This fact forced President Andrew Jackson to issue the Specie Circular of 1836 requiring all payments for public land to be made in gold and silver coin. This action brought an end to the land sale boom and sales once again declined.

MILITARY VETERAN LANDS AND PRIVATE LAND CLAIMS

The General Land Office was concerned with more than land sales during these years. There were also military land warrants and private land claims.

At the outbreak of the Revolution, the Continental Congress and states offered land bounties to recruits who joined the army and navy. The federal government offered the same incentives used to raise an army for the War of 1812. Giving land for military service was a time-honored practice. Historian Paul Gates points out that the practice recognized "that land was not always easy to obtain, was much in demand, and that a land bounty might prove more attractive than anything else the government could promise."

Military Land Bounties

The amount of land offered to soldiers varied according to rank. Privates in the Continental Army during the Revolution received 100 acres, whereas major generals got 1,100 acres.

The call for Virginia and the other land-states to relinquish their claims to the region west of the Appalachian Mountains was partly spurred by the need to provide land to soldiers and sailors. The Land Ordinance of 1785 provided that one-seventh of the townships surveyed in the first seven ranges be set aside for the location of military land warrants. Congress later established a military district in Ohio for the location of these warrants. Other military bounty land reserves were established in Illinois, Missouri, and Arkansas after the War of 1812. In 1842, Congress began permitting veterans to select public lands outside the military districts.

The policy of giving land bounties for military service continued until the Civil War. War veterans were then given the privilege of deducting all or part of their military service from the period of residence and cultivation required under the Homestead Act.

Private Land Claims

Private land claims were another concern for the General Land Office. With each addition to the public domain, the United States recognized land titles granted by previous sovereigns. This required verifying claims and issuing patents to confirm titles.

Adjudication of private land claims was difficult. Claims often conflicted and rights of ownership complicated by missing documents. Fraudulent title papers were another problem. Sorting out the titles required lengthy hearings to determine the legitimacy of the claims.

The first claims came with the acquisition of the trans-Appalachian frontier. With the purchase of Louisiana from France the GLO was swamped with private claims given by both the French and the Spanish. Thousands of claims were presented, most for lands in Missouri and Louisiana. To expedite adjudication, Congress established land commission boards, but the poor documentation for most title claims slowed their confirmation. Several thousand claims remained outstanding for more than 50 years.

THE POLICY OF PREEMPTION

Pioneer Dilemma

The federal government's policy of auctioning public lands had always placed frontier settlers at a disadvantage compared with monied capitalists and speculators. Frontier farmers found money hard to come by, forcing many to build a home, clear land, and eke out what income they could on unsurveyed public lands.

Action Against Squatters

The policy of orderly settlement, however, sought to dissuade such squatting activity. The Confederation used troops to remove trespassers who had settled north of the Ohio River. The federal government used the same tactic, and an 1807 law provided for the removal, imprisonment, and fining of trespassers. These efforts, however, did little to deter the squatters.

Claim Clubs

As surveys and sales progressed westward, squatter communities formed "claim associations" to protect their interests and regulate how lands were claimed and recorded. They also protected members from "claim jumpers" and worked to intimidate anyone who dared bid against a member's claim at auction.

The government did, though reluctantly at first, provide some of these settlers with relief by extending the privilege of preemption. Preemption was the preferential right of an individual to purchase, at the minimum price, public lands that he or she had improved. The preemption concept had been used in southern colonies prior to the Revolution, but the Confederation and federal government initially rejected the practice in favor of selling lands for revenue.

Preemption Concept

Frontier interests did not let the idea of preemption lapse. Congress received petition after petition asking that the privilege be allowed. In 1799, Congress gave Ohio settlers, who had been duped by a speculator, the right to preempt the lands they had settled. Limited rights of preemption were then granted to settlers in Indiana, Illinois, Alabama, Mississippi, and other public land states and territories. The first general grant of preemption came in 1830 but applied only to those who had settled on public lands prior to the law. The grant allowed claimants to enter 160 acres at the minimum price as long as the right was exercised prior to the auction of a tract and within 1 year of the law's passage. The law was extended temporarily several times until 1841 when Congress passed a permanent preemption measure.

Early Preemption Laws

The Preemption Law of 1841 allowed "every person, being the head of a family, or widow, or single man over the age of twenty-one years," and who was a citizen or declared his or her intent to become a citizen, the one-time privilege of entering up to 160 acres of surveyed public land at the minimum price per acre. The claimant, or entryperson, had to reside on the tract entered and to have cultivated the land. Public lands occupied as towns or places of trade, containing known mines, or those reserved by the government, could not be entered.

General Preemption Law

This Preemption Law, in the words of historian Roy Robbins, was a "frontier triumph." Congress had come to recognize the plight of frontier farmers and had decided that allowing settlement of the public domain was as important a consideration as the raising of revenue. The new law allowed tens-of-thousands of farmers to obtain title to the lands they had worked so hard at improving.

Frontier Triumph

THE GRADUATION PRINCIPLE

The rapid westward movement of the frontier bypassed scattered tracts of public land. These were the less desirable lands—rough and broken in character, often with inferior soils. Missouri Senator Thomas Hart Benton, a champion of frontier interests, pointed out as early as 1824 that these "worthless" lands sold at the same minimum price per acre as the best public lands—$1.25. The Senator argued for years that these less desirable lands would sell only if the price was reduced, and that reducing the price would actually increase revenue to the government. Benton also wanted the lands sold to the actual settlers rather than monied interests and speculators.

Forgotten Lands

In 1854, Congress adopted Senator Benton's proposal. The Graduation Law provided that the less desirable lands open to private entry for (a) more than 10 years be offered for $1 an acre; (b) more than 15 years, 75 cents an

Graduation Law of 1854

acre; (c) 20 or more years, 50 cents; (d) more than 25 years, 25 cents; and (e) over 30 years, 12-1/2 cents. Buyers had to live on or own a farm adjacent to the parcel purchased, and no more than 320 acres could be bought by any one individual.

Graduation Law Sales

The effects of the law were immediate. Public land sales in 1854 exceeded 7 million acres, a 700 percent increase over the previous year. The figure more than doubled in 1855. Unfortunately, speculators were again the beneficiaries through the use of fraudulent entries, forcing Congress to repeal the law in 1862.

"FREE LAND" AND THE HOMESTEAD ACT

Demand for Free Land

The Graduation and Preemption Laws helped placate frontier demands for land but what pioneer farmers really wanted was "free land." They argued that free land was their due. They transformed the public lands from wilderness to farmlands. They were the bulwark against Indian hostilities. And upon their efforts rested the country's economic, political, and social strength.

Early Land Donation Laws

Congress had on occasion offered free land in regions the nation wanted settled. The Armed Occupation Law of 1842 offered 160 acres of land to each person willing to fight the Indian insurgence in Florida and occupy and cultivate the land for 5 years. Between 1850 and 1853, Congress offered 320 acres to single men and 640 acres to couples who had settled in the Oregon Country or who migrated there. A similar, but less generous proposition was extended in 1854 to include the New Mexico Territory.

The Homestead Principle

Debate over a free land or homestead law began in the 1840s. Frontier advocates of the homestead principle were joined by eastern labor reformers who envisioned free land as a means by which industrial workers could escape low wages, job insecurity, and deplorable working conditions. Against the proposal were industrialists from the Northeast who feared a homestead law would empty cities of workers and weaken their domination over labor. The South also worried. The delicate political balance between the slave and free states in the Senate could be undermined by opening the undeveloped territories to small, independent farmers opposed to slavery.

Homestead Law Vetoed

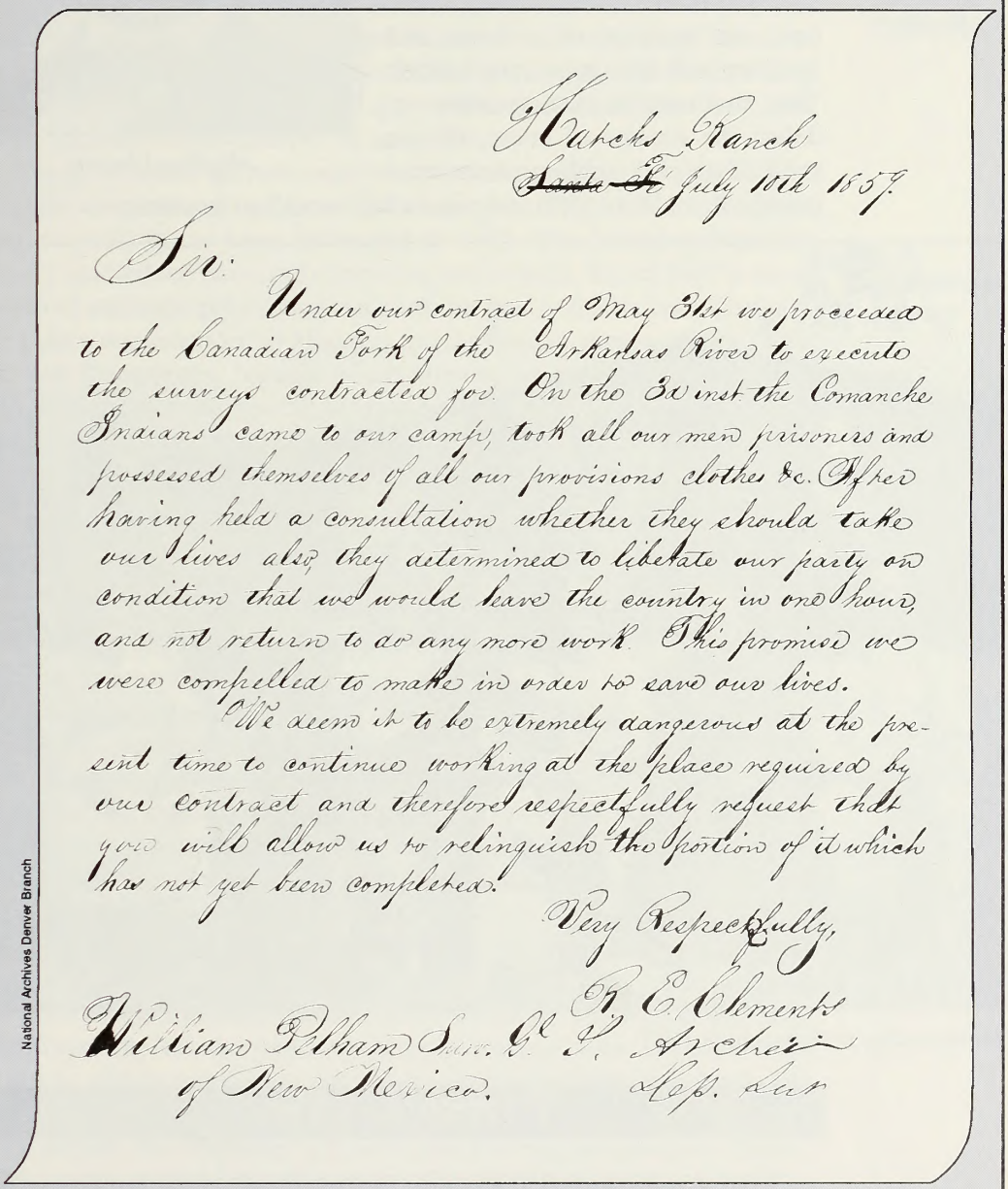
Despite opposition, support for the idea of homesteads increased over time. In 1860, Congress finally passed a compromise measure whereby settlers could purchase 160 acres at 25 cents an acre if they resided on and cultivated their tracts for 5 years. President James Buchanan, however, vetoed the legislation, stating that the law would reduce public land revenues and undermine the present land system. Furthermore, Buchanan thought the law was unconstitutional.

The Homestead Act

The Republican Party's 1860 presidential platform called for passage of a homestead measure. With Abraham Lincoln's election and the South's secession from the Union, Republicans made good on their promise. Under the Homestead Act of May 20, 1862, heads of households, widows, and single persons over 21 years old could apply for 160 acres subject to entry under the Preemption Law. Patent for the land would be issued after 5 years

SURVEYING NEW MEXICO TERRITORY IN 1859

The men employed by the General Land Office to survey the public lands in the 1800s were often on the cutting edge of the frontier. In the wilderness these deputy surveyors and their crews faced myriad dangers and many lost their lives. Indian problems were one hazard often encountered by survey crews and in 1859 two surveyors wrote the following about their near brush with death.



Hatches Ranch
~~Santa Fe~~ July 10th 1859

Sir:

Under our contract of May 31st we proceeded to the Canadian Fork of the Arkansas River to execute the surveys contracted for. On the 3d inst the Comanche Indians came to our camp, took all our men prisoners and possessed themselves of all our provisions clothes &c. After having held a consultation whether they should take our lives also they determined to liberate our party on condition that we would leave the country in one hour, and not return to do any more work. This promise we were compelled to make in order to save our lives.

We deem it to be extremely dangerous at the present time to continue working at the places required by our contract and therefore respectfully request that you will allow us to relinquish the portion of it which has not yet been completed.

Very Respectfully,
R. E. Clements
Asst. Surv.

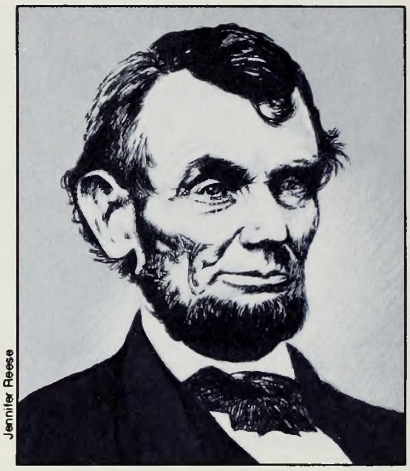
William Pelham Surv. Gl. N. M.
of New Mexico.

The Surveyor General of New Mexico granted this request.

Vision and Reality

of residence and cultivation or, if applicants so chose, they could commute their claim before the end of 5 years to a cash entry, paying the minimum price per acre.

The Homestead Law was seen as a great democratic measure by its supporters. The law, however, was but a promise; not all could take advantage of it. The Homestead Law offered free land but building of a home and breaking soil for crops took capital. The environment also worked to defeat the dreams of many. Of the more than 1.3 million homestead entries filed before 1900, only about half would go to patent.



Jennifer Reese

Abraham Lincoln

Denver Public Library Western History Collection

Homesteading in Nebraska in 1887

TOWNSITE LAWS

Townsite Laws

Congress also turned its attention to townsites on public lands. As early as 1824, counties were allowed to preempt a quarter section (160 acres) of land for county seats. In 1844 towns founded on the public lands were

allowed to preempt up to 320 acres, and in 1864 and 1867 Congress enacted new provisions that permitted towns to take title to even larger areas. Most communities established on the public lands did not take advantage of the townsite laws, but cities such as Denver, Boise, and Carson City did.

MINERAL LAND POLICY

California Gold Rush

The discovery of gold in California in 1848 caught the United States without a general mineral land policy, and Congress took no immediate steps to institute one. Miners, who quickly spread their search for precious metals across the Pacific Coast and Rocky Mountains, were forced to develop their own laws and regulations. Prospectors organized mining districts and devised rules as to how claims were staked and "title" was held. These rules were then enforced by miner courts.

Early Mineral Policy

The government did have experience in dealing with mineral lands. The Confederation had reserved a one-third interest in all gold, silver, lead, and other minerals in the Land Ordinance of 1785. The federal government initially ignored the issue, only reserving saline lands. But in 1807 it chose to reserve and lease public lands valuable for lead in the Indiana Territory. The policy was extended to Missouri and the Great Lakes region by 1816. The War Department, because of the importance of lead in making rifle shot, administered the leasing program, but found it could not cope with miners' resistance to government oversight.

The leasing of lead deposits in Missouri ended in 1829. In 1845, President James Polk told Congress that the "system of managing the mineral lands of the United States is believed to be radically defective," costing the government more to administer than the royalties it received. Congress agreed, and from 1846 to 1850, the lease policy was abandoned in favor of the disposal of lead, copper, and iron deposits in the Great Lakes region by preemption and sale.

Congress, however, avoided the mineral question in the West. Presidents, Secretaries of the Interior, and General Land Office Commissioners repeatedly asked for enactment of a policy—be it lease, preemption, or sale—but Congress remained silent until 1866.

Lode Mining Law of 1866

The first mining law was introduced by Senator William Stewart of Nevada. As enacted, the Mining Law of 1866 declared that "mineral lands of the public domain...be free and open to exploration and occupation," and deal with the patenting of lodes—claims containing gold, silver, or other precious metals occurring in veins. Lode claims were subject to the customs and rules of local mining districts, as long as they did not conflict with federal law. The law also provided for the patenting of lode claims on which at least $1,000 in actual labor and improvements had been completed. The length of a claim could not exceed 200 feet and the miners could follow the "dips, angles, and variations" of their lodes into adjacent property. Metes-and-bounds surveys of the claims were to be made under the direction of the Surveyor General, and the cost of patenting a claim was $5 an acre.

In 1870, Congress passed a second mining statute, this one pertaining

WILLIAM MORRIS STEWART - "FATHER" OF THE MINING LAW

by William Condit
Mining Law and Salable Minerals, Washington Office

William Morris Stewart was the chief protagonist in debates to secure passage of laws that recognized the governance system miners had established by organizing into mining districts in the remote and largely lawless West.

William M. Stewart

Born in upstate New York in 1827, Stewart turned to study law in 1849 and went off to Yale to pursue a degree. He quit school the next year to join the rush to the California gold camps. There he engaged in gold mining, but with little success. Stewart again turned to study law and was admitted to the California bar in 1852. Two years later he became Attorney General of California.

In 1860, news of the fabulous silver discoveries on the Comstock Lode drew him to Virginia City in the Nevada Territory. For the next several years Stewart represented mining interests in fierce litigation battles over possessory rights to portions of the Comstock Lode. By all accounts he was domineering in the courtroom, a trait that served him well later in life. (Stewart allegedly waved a gun while interrogating a witness of "questionable veracity"!)

Based on his accomplishments in territorial politics, Stewart was elected to serve as one of Nevada's first U.S. senators. Stewart proved an eloquent "apologist" for lode and placer miners occupying the public lands in technical trespass. Since no federal statute authorized the settlement and mining of mineral lands, he championed their system of self-governance. He believed "free mining" by U.S. citizens should be encouraged by enactment of a law granting patents to the discoverers of mineral wealth who diligently worked their deposits under the rules of their mining districts.

After the Senate was persuaded, only the powerful chairman of the House Committee on Public Lands, George Julian of Ohio, stood between Stewart and passage of a lode law. Julian could bottle up the bill in committee indefinitely. Stewart out-maneuvered his foe by substituting his lode bill for one that had already passed the House, dealing with rights-of-way for ditch and canal owners on public land. Upon Senate passage, it was sent back to the House where Julian was unsuccessful in having the bill referred to his committee. On July 28, 1866, the full House of Representatives passed Stewart's bill by a vote of 77 to 34, a remarkable margin considering that most seats were held by eastern congressmen who were expected to support legislation that produced federal revenues from the public land.

In 1870, Stewart sought to persuade Congress that placer miners on the public lands needed similar legislative recognition of their possessory rights and an opportunity to patent their claims. Julian continued to protest "free mining" policies but to no avail; Congress went with Stewart's views again. On May 10, 1872, Congress merged the lode and placer statutes and made technical amendments, such as granting defined preemptive rights to lode claimants for the discovered lode and the area of land flanking the lode.

Placer Mining Law of 1870

to placer claims. The act defined placers as "all forms of deposit, excepting, veins of quartz, or other rock in place." Claims could be as little as 10 acres but no one person or association of persons could have a single claim for more than a quarter section. Claims had to conform with the legal subdivisions of the surveyed townships, but metes-and-bounds surveys were allowed in unsurveyed areas. The cost of patenting a placer claim was set at $2.50 an acre.

General Mining Law of 1872

Congress restated its mining policy in 1872 with the passage of the General Mining Law. This law declared that "valuable" mineral deposits rather than simply "mineral deposits" as stated in the Lode Mining Law of 1866, were to be "free and open to exploration and purchase." Local mining customs were still recognized. Lode locations, however, could be no more than 1,500 feet long and 600 feet wide. Furthermore, individual claimants were limited to 20 acres, while associations or groups could still have 160-acre claims. To protect their claims from others, claimants had to perform $100 of assessment work yearly and show at least $500 worth of improvements before the claims could be patented. Milling or processing sites could be entered on nonmineral lands but could not exceed 5 acres. Survey requirements and the per-acre cost of patenting a claim remained the same as before.

State Historical Society of Colorado

Placer Mining at Cripple Creek, Colorado in 1893

The enactment of the mining laws transformed miners from trespassers into legitimate occupants of the public lands. Valid claims were given a status akin to private property. More important, the development of minerals on the public lands was given priority over other possible land uses.

Coal Lands Law of 1873

In 1873 Congress provided for the sale of public lands valuable for coal deposits. The law replaced an 1864 statute that offered coal lands at auction for no less than $20 an acre and an 1865 law that permitted miners who had developed coal deposits prior to enactment to preempt their mines. Neither law had been effective. The new statute was intended as a remedy,

providing for the location, development, and preemption of 160 acres to individuals and up to 640 acres to associations that had spent at least $5,000 in development. The minimum price was set at $20 an acre if the claim was within 15 miles of a railroad and at least $10 an acre, if further out.

GEOLOGICAL SURVEYS

Early Exploration

After the Civil War, Congress began funding scientific and geologic explorations of the West to further encourage mineral development of public lands. Ferdinand Hayden, Clarence King, Lieutenant George Wheeler, and John Wesley Powell conducted expeditions over large areas of the Great Plains, Rocky Mountains, and Great Basin, mapping the terrain and describing the resources. In 1879, Congress consolidated these independent efforts into one organization, the U.S. Geological Survey.

U.S. Geological Survey

The Geological Survey was responsible for "the classification of the public lands and examination of the Geological Structure, mineral resources and products of the national domain." Under its first Director, Clarence King, and his successor, John Wesley Powell, the Geological Survey established itself as a competent, scientific organization. Its studies became highly valued by private industry and the General Land Office came to depend on its geologic and hydrographic knowledge.

STATE AND RAILROAD LAND GRANTS

Congress shared the bounty of the public domain with more than miners and settlers. Soon after passage of the Homestead Act, it provided immense grants of lands to the states and railroad corporations.

Public Lands for Colleges

The Morrill Act of 1862 provided each state within the Union 30,000 acres of public land for each senator and representative to finance agricultural and mechanical arts colleges. States with public lands chose the acreage from the public lands within their boundaries. States having no public land, or little remaining acreage, were given scrip. Scrip, which was issued in 160-acre increments and sold to private parties by the states, could be used to locate and pay for any nonmineral public lands open to sale or private entry. From this grant, schools such as Cornell and Illinois State University were established.

Early Grants in Aid of Education

By providing lands to the states for the establishment of agricultural colleges, Congress was simply continuing its tradition of granting public lands for schools. The Confederation, in the Land Ordinance of 1785, had reserved Section 16 in each township to finance public education in the Ohio Country. The federal government reinstituted this practice when it admitted Ohio into the Union in 1802. The practice was continued with other states, partly to placate them for having to disclaim any right, title, or interest to the public lands within their boundaries. After 1848, states received two sections of land from each township, which increased to four sections with the admission of Utah, Arizona, and New Mexico.

Congress also provided public lands to the states to finance institutions

Internal Improvement Grants

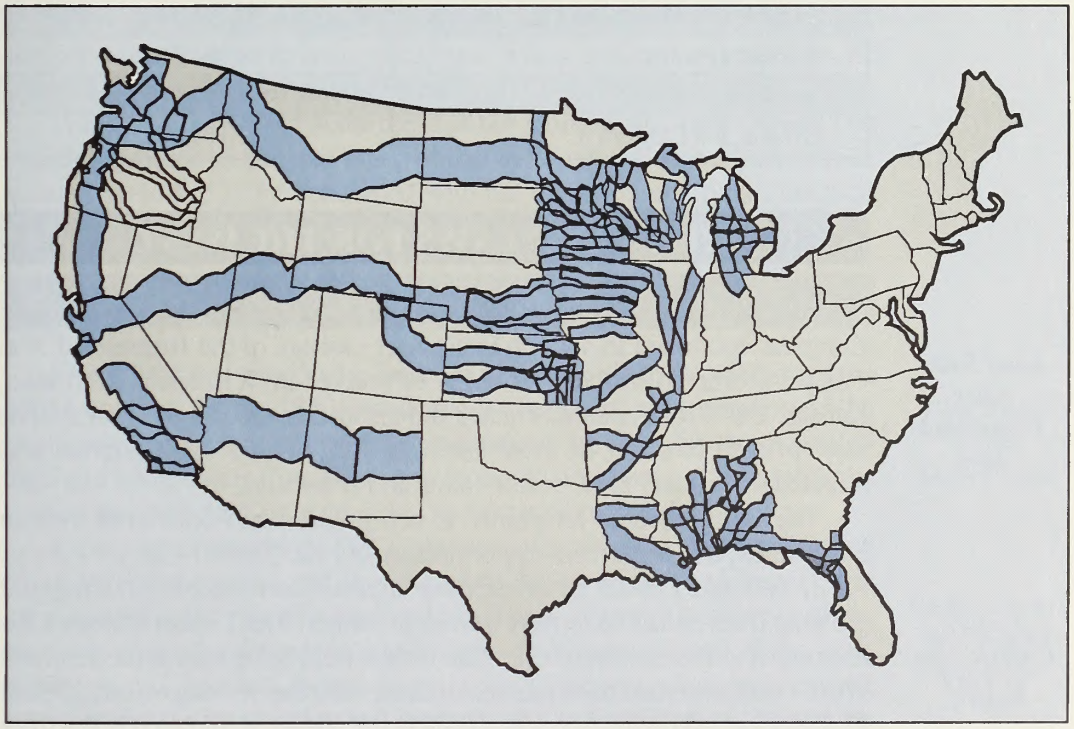
such as schools for the deaf and blind, and prisons. Most important to the economic development of the public land states were the grants for internal improvements. Under the land grants, roads and canals could be built and waterways improved. In 1841, Congress granted each of the public land states 500,000 acres of land for such purposes. Congress also gave lands classified as swamp and overflow to various states prior to the Civil War.

First Transcontinental Railroad Land Grants

The day before President Lincoln signed the Morrill Act, he approved a law granting lands to aid the construction of the first transcontinental railroad. Congress gave the Central Pacific and Union Pacific railroad companies "every alternate section of public land, designated by odd numbers, to the amount of five alternate sections per mile on each side of said railroad, on the line thereof, and within the limits of ten miles on each side of said road." In 1864, the grant was increased to 20 alternate sections for each mile of track. Lands reserved by the United States, to which a preemption or homestead claim had been attached at the time the railroad's route was fixed, were excluded, as were all mineral lands except those known to be chiefly valuable for iron or coal.

Early Railroad Land Grants

Before the Central Pacific and Union Pacific grant, Congress had given public lands to the states to encourage railroad construction. The practice began in 1850 with the Illinois grant for the Illinois Central Railroad and extended to other states in the Midwest and South in the decade that followed. But with few states between the Missouri River and the Pacific Ocean, and a vast territory to be crossed, a new policy for granting lands directly to railroad corporations became necessary.



Limits of the railroad land grants

Northern Pacific Railroad Land Grant

The Central Pacific and Union Pacific grant was followed by others. The largest went to the Northern Pacific Railroad Company, which built a line from Lake Superior to Puget Sound. Northern Pacific received 20 odd-numbered sections for each mile of right-of-way across states and 40 odd-numbered sections for each mile across the territories. The massive grant, if it had been entirely fulfilled, would have provided 47 million acres of public land to the company, more than twice the acreage provided for the first transcontinental route. From 1862 to 1871, Congress granted nearly 128 million acres to corporations for the construction of railroads.

End of Railroad Land Grant Policy

These multimillion-acre "checkerboard" empires came under criticism in the late 1860s. Many westerners raised the cry of monopoly as railroads failed to bring their lands to market; the people demanded that the public lands be reserved for actual settlers. They called for an end to the grants and for the forfeiture of unearned and unsold land grants. Congress responded at first by placing "homestead clauses" on any railroad land grant legislation that required companies to sell their grants in quarter-section tracts for $2.50 an acre to actual settlers. After 1871, Congress refused all further railroad land grants. Legislation on forfeiture came years later, but few land grants were revoked as a result.

Selected Railroad Land Grants as of 1941	
Company	Acres
Central Pacific	11,199,560
Union Pacific	19,156,460
Santa Fe Pacific (Atlantic & Pacific)	11,595,341
Northern Pacific	39,064,567
Southern Pacific	7,907,966
Oregon and California	2,777,632

NEW LAND LAWS FOR THE WEST

Land Sales After Homestead Law

As if settlers did not already have enough competition for public lands, Congress continued to auction lands after passage of the Homestead Act. Congress ordered millions of acres to market in Wisconsin, Nebraska, Kansas, California, and other states and territories. Good agricultural lands were offered at many of these auctions. But, after 1870, Congress was reluctant to put any more public lands up for auction.

Timber Culture Law of 1873

The Congressional reluctance to sell public lands coincided with an effort to expand settlement opportunities. By the Timber Culture Law of 1873, 160 acres could be entered by anyone interested in planting and growing trees on land naturally devoid of timber. The Timber Culture Law responded to the common belief that trees would bring rain to the semiarid West. Forty acres had to be planted in trees, with the trees set no farther than 12 feet apart. No residence was required and patent would pass if the trees had been kept in "healthy, growing condition for ten years." Amendments

to the law in 1874 and 1878 reduced the acreage planted to 10 acres and permitted patenting within 8 years.

Desert Land Law of 1877

The Desert Land Law was passed in 1877. It applied to public lands "exclusive of timber lands and mineral lands which will not, without irrigation, produce some agricultural crop." Entry could be made for a full section (640 acres), at a cost of $1.25 per acre, and patents if irrigation was accomplished within 3 years. The law applied only to the States of California, Oregon, and Nevada, and to the Territories of Washington, Idaho, Utah, Dakota, Montana, Arizona, New Mexico, and Wyoming. The State of Colorado was included in 1891. Like the Timber Culture Law, no residence was required.

Timber Culture and Desert Land Law in Operation

Congress had enacted the Timber Culture and Desert Land Laws to give settlers flexibility. Both laws recognized that the public lands west of the 100th Meridian were semiarid in character and that settlers needed more land than east of the meridian for successful farming operations to be established. The laws allowed settlers to acquire up to 1,120 acres when used in conjunction with the Preemption and Homestead Laws.

Proving up—successfully patenting lands—under the Timber Culture and Desert Land Laws, however, was difficult. The Timber Culture Law, after its amendment in 1878, required claimants who had entered 160 acres to have 6,750 trees in "living (and) thrifty" condition at the end of 8 years. In the semiarid West this was difficult to achieve, and only 65,000 of the 260,000 entries filed under the law were patented under the tree planting provisions of the law.

Success under the Desert Land Law was little better. Construction of irrigation works was expensive and most settlers found they could not comply with the requirements of the law. Many settlers responded to the situation by resorting to fraudulent methods of proving up on their claims.

Fraud was also used with the Timber Culture and other laws. The situation became so bad that much of the work in the General Land Office became more and more concerned with the detection and prosecution of fraudulent claims.

LAND FRAUD

First Public Lands Commission

Fraud, as stated previously, had been a problem since the creation of the public domain. By the 1870s, evidence of the illegal appropriation of the public lands and resources became pronounced. In 1879, Congress created the first Public Lands Commission to look into how the land laws might be revised but then paid little attention to the recommendations.

Commissioner McFarland and Land Fraud

In his annual report for 1882, Commissioner of the General Land Office Noah McFarland noted that investigations by his bureau had found "that great quantities of valuable coal and iron lands, forests of timber, and the available agricultural lands in whole regions of grazing country have been monopolized." Mineral, livestock, and timber companies had people make entries under the Preemption and Homestead Laws and then purchased the claims after patenting requirements had been met so they could amass large

THE BEAUBIEN-MIRANDA (MAXWELL) MEXICAN LAND GRANT

By Andrew Senti
Realty Specialist, Colorado State Office

Editor's Note: The United States has, with each acquisition of the public domain, recognized land titles granted by the previous sovereign. Of the thousands of private land claims and grants patented, those in New Mexico and California were the largest and among the most complicated to adjudicate.

The Beaubien-Miranda grant (within present Colorado and New Mexico) had its origin in a brief period when the territory was under Mexican rule. On January 8, 1841, a fur trader of French-Canadian ancestry named Carlos Beaubien and Guadalupe Miranda, a Mexican citizen, filed a petition with the Civil and Military Governor of New Mexico asking for a grant of land that they promised to settle and develop. The grant given to Beaubien and Miranda was the largest of several large private land grants approved by Mexican officials in 1843-1844.

The grant consisted of a 1,714,765-acre tract of land in the County of Taos. Its boundaries were described by a metes-and-bounds description that used natural boundaries - streams, mountain ranges, etc. A portion of the grant's boundary description went as follows: "commencing below the junction of the Rayado and Red Rivers from thence in a direct line to the east to the first hills from thence following the course of the Red River in a northerly direction to the junction of Una de Gato with Red River."

The grant to Beaubien and Miranda far exceeded the 11 square leagues (44,800 acres) allowed under Mexican law. In historical perspective, these large, rather hastily processed grants appear to have been an attempt to foster occupancy along the vulnerable northern and eastern boundaries of the Mexican Territory and encourage settlement and at least agricultural development.

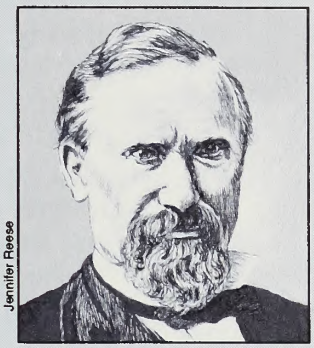
Beaubian sold his half of the grant in 1858 to Lucian B. Maxwell, an American who had married Beaubian's daughter in 1842. It thereafter became commonly known as the Maxwell Grant.

By the Treaty of Guadalupe Hidalgo of 1848, the United States acquired New Mexico and pledged to recognize the land grants made by the Mexican government. The General Land Office recommended patenting of the Maxwell Grant in 1857. Congress confirmed the grant on June 21, 1860, but conflicting claims of interest in the grant by others, delayed final confirmation of the grant by the U.S. Supreme Court until 1887.

Perhaps some of the ordeal of confirming the Maxwell and other land grants can be attributed to centuries-old Spanish philosophy toward land tenure that clashed with Anglo-American attitudes. Anglo-American thought leaned toward economic aspects, while Spanish social and political thought valued land as a territorial dimension of society. Anglo-Americans found this difficult to understand.

COMMISSIONER WILLIAM A. J. SPARKS CONFRONTS PUBLIC LAND FRAUD

Annual Report of the Commissioners of the General Land Office, 1885



William A J. Sparks

At the onset of my administration I was confronted with overwhelming evidences that the public domain was being made the prey of unscrupulous speculation and the worst forms of land monopoly through systematic frauds carried on and consummated under the public land laws.

In many sections of the country, notably throughout regions dominated by cattle raising interests...entries were chiefly fictitious and fraudulent and made in bulk through concerted methods adopted by organizations that had parceled out the country among themselves and inclosures defended by armed riders and protected against immigration and settlement by systems of espionage and intimidation.

In other cases...individual speculation, following the progress of public surveys, was covering townships of agricultural land with entries made for the purpose of selling the claims to others, or by entries procured for the acquisition of lands in large bodies. Again, in timbered regions, the forests were being appropriated by domestic and foreign corporations through suborned entries made in fraud and evasion of law. Newly-discovered coal-fields were being seized and possessed in like manner.

The question of my own duty, as the administrative officer immediately charged under the law with seeing that the public lands were disposed of only according to law, was at once forced upon me. Should I continue to certify and request the issue of patents by the President indiscriminately upon entries which there was every reasonable ground to believe were fraudulent...or should I withhold such final action until examinations could be made and the false claims separated from those that were valid? Should I disregard cumulative evidences of the universality of fraudulent appropriation of public lands and become an official instrumentality of their consummation, or should I say: "I mean to know what I am doing before I ask the President of the United States to sign any more land patents?"

As a measure...of indispensable precaution I notified the several divisions...that final action should be suspended upon entries made in states and territories in which the greater degree of fraud had been developed, and where the larger disposable area of public lands remained.

This notification, or order, was not expected to be acceptable to those whose purpose it is falsely and fraudulently to acquire title to public lands, nor to those whose profitable vocation was to promote the speedy obtainment of patents for compensation for fee. It was a public measure in the public interest...intended to check...conspiracies against the government.

I have caused lists of suspended entries to be placed in the hands of special agents for examination and report, and am convinced that it is not safe to issue patents on pre-emption, commuted homestead, and other entries in which fraud most largely prevails without such examination.

landholdings. The Timber Culture Law was used by speculators to secure interests in lands they knew later settlers would buy. Stockraisers used the Desert Land Law to control access to streams and rivers. They also fenced public lands to exclude other ranchers and settlers from rangelands they used. In Colorado alone, 3 million acres were fenced.

McFarland established a corps of agents to investigate illegal entries and fencing. The new agents joined others already assigned to investigating illegal timber cutting. These agents, however, were few; a single investigator was often responsible for an entire state or territory, limiting what could be accomplished. To help, the Commissioner called for the repeal of the Preemption and Timber Culture and the other land laws being fraudulently used. He also called for enactment of an anti-fencing statute, the only request Congress acted on.

Commissioner Sparks and Land Fraud

McFarland's successor, William A. J. Sparks, continued the fight against fraud. Sparks saw illegality everywhere. To combat it, he suspended all pending patent applications under the various land laws and began reinterpreting the land laws and their requirements to prevent their misuse.

The new Commissioner was joined in his crusade against fraud. His New Mexico Surveyor General, George Julian, also railed against illegal practices. Julian was particularly concerned about private land grant claims made by Spain and Mexico. Charged with adjudicating these claims, the Surveyor General of New Mexico found many of the claims to be forgeries or excessive in the lands they included.

The zeal of Sparks and his lieutenants brought protests. The *Cheyenne Sun* in 1887 derided the Commissioner by declaring that the West "shalt have no other god than William Andrew Jackson Sparks, and none other shalt thou worship." Such protests became too much for President Grover Cleveland and he eventually had to ask for Sparks' resignation.

Public Land Law Reform

The efforts of McFarland and Sparks had a telling effect on fraud. While not eliminating it, they reduced fraudulent activity on the public lands. The two commissioners also clearly brought the problem to the attention of Congress. Public land law reform was needed, and Congress, always slow to react on land matters, did eventually react. In 1890, individuals were restricted from acquiring more than 320 acres of public land. Under the General Public Lands Reform Act of 1891, Congress stopped auctioning public lands under the Land Law of 1820, repealed the Timber Culture and Preemption acts (though not without some saving clauses), and reduced Desert Land entries to 320 acres.

THE DWINDLING PUBLIC DOMAIN

Opening Indian Lands

By 1891, the public domain was rapidly diminishing. In 1887, Congress, seeking to satisfy the nation's hunger for land, had adopted a policy of giving individual farms to reservation Indians and opening the remaining Indian lands to settlers. The Great Sioux Indian Reservation in South Dakota, Chippewa lands in Minnesota, and the famous "land rush" openings in Oklahoma, were among the many Indian reservations opened

LAND RUSH IN OKLAHOMA TERRITORY

by Anthony Rice
From OUR PUBLIC LANDS (Summer 1976)

Editor's Note: *In 1889 the opening of Indian lands in Oklahoma Territory to homesteaders began. Early openings provided opportunities for settlers to race for homestead tracts. The last "rush" came with the opening of the 6,500,000-acre "Cherokee Strip" in 1893. Among the 45 clerks hired by the General Land Office to handle homestead applications was Anthony Rice, who wrote the following account of his experience of the Cherokee Strip.*

It was a "Public Land Opening," in its wildest sense. I will attempt to describe it as I saw [it] and as it in reality was.

In order to prevent parties who had no rights under the homestead laws from entering the land and thereby defeat the chances of those who were entitled thereto, the "booth" or registration system was adopted. Accordingly, nine booths were established, five of which were on the northern and four on the southern line of the [Cherokee Strip].

The booths were open from September 11 to September 19, 1893, between the hours of 7 A.M. and 6 P.M. Over 115,000 persons registered, while the lands fit for homesteading would provide for only about 20,000.

I registered a blind man and in order to satisfy my curiosity, I inquired of his guardian what possible chance the poor fellow had in this wild scramble and how he proposed to make the race. The guardian replied that he would stand him on the line and as soon as the gun was fired, he would make one jump and plant his flag. I am afraid that this fellow, if he got in front of that crowd, was himself planted, instead of the flag.

The hardships endured were indescribable. Persons slept on the line for two and three days, waiting to be registered....And all this was endured for what? In the bare hope of realizing that which is so characteristic of our present speculative generation — the desire to get "something for nothing."

At high noon on September 16, 1893, the soldiers fired their guns and off started the greatest and most wonderful race of all times. About 150,000 persons went pell mell, helter skelter. Some went on horseback, some in vehicles of every conceivable description, some by train and some on foot.

The trains were loaded. Every inch of the roofs were covered and many hung on the sides of the cars by holding to the window sills, while the open windows furnished room for some.

You have often heard of doing a "Land Office Business." We did it there.

BLM

to settlers. But the opening of Indian reservations did little to alleviate the increasing demands.

Questions of how and to whom public lands would be allocated became increasingly divisive; competing interests struggled to gain control of the lands and resources they needed. This was complicated by the federal government's more active role in administering the use of public lands and resources, as the idea of conservation began sweeping the nation.

THE COMING OF CONSERVATION

Early Attitudes Toward Timberlands

Early conservation efforts focused on public timberlands. When Americans moved west from the Appalachian Mountains pioneers gave little thought to conserving forests. Forests were an impediment to progress. Trees were everywhere and made the clearing of land for farming difficult.

Timber and Stone Law of 1878

The federal government disposed of these timberlands like any others. Most forested areas east of the Mississippi River were sold at auction. Agricultural lands with timber could be settled under provision of the Preemption and Homestead Laws. In 1878, Congress passed the Timber and Stone Law providing a quarter-section of land chiefly valuable for timber or stone at the minimum cost of $2.50 an acre. Until 1892, the law applied only to California, Nevada, Oregon, and Washington; afterwards it included all the public land states.

Timber Famine Scare

Timberlands were quickly disappearing by the late 1800s. Many areas around the Great Lakes had been clear cut and timber production in the South was rapidly increasing. Fear arose that the nation would soon have no more forests and calls for conserving what timberland remained began to be heard.

Forest Reserve Law of 1891

The first response to this concern came with passage of the General Public Lands Reform Law of 1891. The last section of the law allowed the President to withdraw and reserve public lands "wholly or in part covered with timber and undergrowth, whether of commercial value or not" from settlement and location. The provision, which had been a last minute amendment to the law and went forward without serious debate, was a radical change from the disposal policies long followed by Congress.

First Forest Reserves

No sooner had the 1891 law been enacted than President Benjamin Harrison created the first "forest reserve" adjacent to Yellowstone National Park. By 1893, 16 more reserves had been created, with nearly 18 million acres of public land set aside. Administration of the forest reserves went to the Department of the Interior and the General Land Office. Congress, however, failed to provide authority to administer use within the forest reserves and Secretary of the Interior Hoke Smith halted the creation of more reserves until Congress did so.

Forest Management Act of 1897

After much debate, Congress passed the Forest Management Act of 1897. The law permitted the President to modify, suspend, and revoke the forest withdrawals he made. It also gave the Secretary of the Interior authority to regulate occupancy and use within the reserves, develop mineral resources, provide for fire protection on the reserves, and permit the

sale of timber. Further, the law allowed owners of private property within the reserves to exchange their lands for nonmineral, public lands of equal acreage outside the withdrawals.

Administration of the reserves remained with the GLO, which had a small corps of superintendents, supervisors, and rangers. The GLO was assisted by the Geological Survey, which surveyed and mapped the reserves, and the Department of Agriculture, which provided scientific expertise on grazing and timber management matters.

THEODORE ROOSEVELT AND THE CONSERVATION ETHIC

Theodore Roosevelt became President after the assassination of William McKinley in 1901. A New Yorker born to wealth, Roosevelt had as a young man gone to the Dakota Territory and run a cattle ranch. He had a great love of the outdoors and hunting. Under his leadership, the federal government would mount a crusade for the conservation of public lands and resources.

Roosevelt Conservation Philosophy

The central theme of Roosevelt's conservation philosophy, according to Gifford Pinchot, chief architect of the policy and first head of the Forest Service, was to provide "the greatest good for the greatest number for the longest time." This called for developing public lands in a manner that promoted the best and highest use of resources, accomplished through scientific and technical efficiency.

Early Irrigation Policy

Roosevelt's first conservation crusade involved irrigation. Low precipitation mandated irrigation in many parts of the West and Congress' enactment of the Desert Land Law of 1877 had been an admission of this fact. In 1888 Congress, wanting to learn more about irrigation possibilities in the West, ordered the Geological Survey to investigate potential reservoir, ditch, and canal sites on the public lands in the West, only to cancel the effort in frustration over the slowness of the work.

Carey Land Act of 1894

The Carey Land Act of 1894 was then passed to encourage state- and territorial-sponsored irrigation projects on public lands. The states and territories could receive patent to any arid public lands they had irrigated—up to 1 million acres. The projects were to be constructed by private companies, but the lands had to be sold in 160-acre tracts to actual settlers. The effort proved disappointing, as few projects were built.

Reclamation Law of 1902

To Roosevelt and other conservationists, irrigation was a chance to make "worthless" lands valuable and to increase agricultural opportunities. In 1902, the President and his supporters pushed a reclamation law through Congress. The law provided for the construction of federal irrigation projects in the western states and territories, using proceeds from the sale of public lands. Lands selected for reclamation were to be withdrawn from settlement but then opened to settlers under the Homestead Law after the construction of projects. No one person could receive more than 160 acres within a project and settlers were to eventually repay the government for the costs of construction.

THEODORE ROOSEVELT ON CONSERVATION

Special Message of the President Transmitting Report of the National Conservation Commission, January 22, 1909

Theodore Roosevelt

The policy of conservation is perhaps the most typical example of the general policies which this Government has made peculiarly its own during the opening years of the present century. The function of our Government is to insure to all its citizens, now and hereafter, their rights to life, liberty, and the pursuit of happiness. If we of this generation destroy the resources from which our children would otherwise derive their livelihood, we reduce the capacity of our land to support a population, and so either degrade the standard of living or deprive the coming generations of their right to life on this continent.

We should do all in our power to develop and protect individual liberty, individual initiative, but subject always to the need of preserving and promoting the general good. When necessary, the private right must yield, under due process of law and with proper compensation, to the welfare of the commonwealth...no man and no set of men should be allowed to play the game of competition with loaded dice.

All this is simply good common sense. The underlying principle of conservation has been described as the application of common sense to common problems for the common good.

Our public-land policy has for its aim the use of the public land so that it will promote local development by the settlement of homemakers; the policy we champion is to serve all the people legitimately and openly, instead of permitting the lands to be converted, illegitimately and under cover, to the private benefit of a few. Our forest policy was established so that we might use the public forests for the permanent public good, instead of merely for temporary private gain. The reclamation act, under which the desert parts of the public domain are converted to higher uses for the general benefit, was passed so that more Americans might have homes on the land.

We are striving to add in all ways to the habitability and beauty of our country. We are striving to hold in the public hands the remaining supply of unappropriated coal, for the protection and benefit of all the people. We have taken the first steps toward the conservation of our natural resources, and the betterment of country life, and the improvement of our waterways.

The nation, its government, and its resources exist, first of all, for the American citizen, whatever his creed, race, or birthplace, whether he be rich or poor, educated or ignorant, provided only that he is a good citizen, recognizing his obligations to the nation for the rights and opportunities which he owes to the nation.

The tasks this nation has to do are great tasks. They can only be done at all by our citizens acting together, and they can be done best of all by the direct and simple application of homely common sense.

Soon dozens of federally sponsored irrigation projects were underway in the West. Construction and management of the irrigation systems went to the Reclamation Service, later renamed the Bureau of Reclamation, but handling of Homestead entries remained with the General Land Office.

Fraud Resurgence

Another of Roosevelt's public lands issues was the resurgence of fraud. Ranchers were again fencing public lands; speculation and fraud surrounded Homestead, Desert Land, and Timber and Stone entries. The President created a second Public Lands Commission to look into the problem.

Second Public Lands Commission

The Commission, chaired by Gifford Pinchot, found the public land laws "antiquated and ill-suited to conditions of the remaining public domain." It called for changes in the Homestead and Desert Land Laws to prevent fraud and asked that the Timber and Stone Law be repealed because timber companies were using it illegally to acquire large forest holdings. A few the recommended changes were enacted by Congress, but Roosevelt had to largely rely on the GLO's corps of investigators to reduce fraudulent and illegal activity.

Roosevelt's Conservation Initiatives

President Roosevelt pushed other conservation measures with greater success. In 1905, he stepped-up creation of wildlife reserves (establishing more than 50 by the end of his term), and created the Forest Service within the Department of Agriculture to administer the forest reserves (soon after renamed national forests). He began the withdrawal of lands from settlement thought to be valuable as sites to build dams for the generation of electrical power. The President also pushed passage of the Antiquities Act of 1906.

Antiquities Act of 1906

The Antiquities Act provided for the protection of historic and prehistoric objects on public lands. Any "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest" were to be designated as national monuments. Roosevelt created the first national monument that year with the withdrawal of Devils Tower in Wyoming. Ten years later, 35 natural areas and prehistoric sites, ranging from one-half acre to nearly 300,000 acres, had been set aside.

National Monuments

The General Land Office was given the responsibility to manage and protect the national monuments, but Congress never appropriated the needed funds. In 1916, administration of the monuments was transferred to the newly created National Park Service, which also took over management of the national parks from the Secretary of the Interior.

COAL AND OTHER MINERAL POLICIES

Another of Theodore Roosevelt's conservation concerns dealt with the mineral values of the public domain. Much of his attention focused on coal; vital to the nation's industrial economy and the heating of homes.

Roosevelt's Coal Lands Policy

Fraudulent acquisition of coal lands had been a problem for years; to stop the problem, Roosevelt wanted to withhold these lands so the Geological Survey could determine whether the lands were more valuable for coal than for other purposes. The President did this in 1906. Roosevelt,

however, had no explicit authority from Congress to make such withdrawals, but he did contend, that as chief executive, the President could do whatever was necessary in the interest of the people, as long as the Constitution did not specifically prohibit it. Many in Congress disagreed with this rationale; but a year after Roosevelt left the White House, Congress enacted the General Withdrawal or Pickett Act of 1910, giving the President power to "temporarily" withdraw public lands from settlement and location for public purposes.

The coal land withdrawal action, which embraced more than 66 million acres by November 1906, shocked western politicians and business interests. They clamored for revocation of the withdrawals, claiming that withholding coal lands from development would result in winter coal shortages and that the withdrawals kept lands from homesteaders.

Reserving Coal to the U.S.

To solve the problem, the President advocated settlement if the coal could be reserved to the government. On the last day of his presidency, Roosevelt signed the Act of March 3, 1909, which provided patents to homesteaders who had settled previously unclassified coal lands, as long as they consented to the United States' reservation of the coal. The Act of June 22, 1910, permitted homesteaders to file for known coal lands under the same condition.

Reserving Oil and Gas to the U.S.

The policy of reserving mineral rights was also extended to petroleum lands by Roosevelt's successors. Public land valuable for oil could be patented under the placer mining law; to protect that resource, President William Howard Taft in 1909 began to withdraw suspected petroleum lands from agricultural entry. In 1912, Congress permitted nonmineral entries on oil and gas lands in Utah, as long as those minerals were reserved to the United States. Two years later, during Woodrow Wilson's administration, the policy was extended to all public lands and the list of minerals that could be reserved was enlarged to include phosphate, nitrate, potash, and asphaltic minerals.

Mineral Leasing Debate

As part of the mineral policies initiated during his Presidency, Roosevelt had advocated a leasing policy for coal and petroleum lands, but Congress resisted the idea. In 1917, potassium deposits could be leased because potassium was essential to America's production of military explosives during World War I. This prompted the policy to extend leasing to coal, petroleum, natural gas, sodium, phosphate, and oil shale in 1920.

Mineral Leasing Law of 1920

Under the Mineral Leasing Act individuals and companies could prospect for and develop the minerals listed. Preference-right leases were issued to those who discovered previously unknown deposits or were able to develop deposits previously thought unworkable into marketable minerals. Competitive leases were issued for public lands known to have valuable mineral deposits. Of the royalties received by the United States from production of minerals under these leases, 10 percent went to the U.S. Treasury, 37 1/2 percent to the states in which production occurred, and the remainder to a fund for the construction of federal irrigation projects.

The law was administered among three Interior Department agencies. The Geological Survey, through its Land Classification Branch (later

HISTORY OF THE U.S. GEOLOGICAL SURVEY'S CONSERVATION DIVISION

by Larry Godwin
Geologist, Washington Office

On March 3, 1879, Congress established the U.S. Geological Survey (USGS) in the Department of the Interior and charged it with the responsibility for classifying public lands and examining the geologic structure and mineral resources and products of the national domain.

Conservationists were becoming increasingly alarmed over the waste of coal and other mineral resources caused by poor mining methods and apathy toward conserving nonrenewable resources. During the 1890s many large companies fraudulently obtained coal land by paying others to homestead lands having coal in the subsurface. Most of the western coal fields were unmapped and had not been classified. Accusations of fraud increased until, in 1906, President Theodore Roosevelt ordered coal basins in the western United States withdrawn from agricultural entry until they could be classified. That same year the USGS began mapping and classifying coal fields on the public lands, establishing the Land Classification Board to oversee the efforts.

In 1920, Congress passed the Mineral Leasing Act which changed the disposal of oil and gas, coal, and other minerals to leasing. The Bureau of Mines was given full responsibility for managing oil and gas leasing operations. In 1922, Interior Secretary Albert B. Fall approved the issuance of leases in the Teapot Dome Naval Petroleum Reserve without competitive bidding. Congressional investigation revealed that Fall had accepted money in return for the leases. As a result of this scandal, Fall's successor, Hubert Work, in 1925, transferred the mineral-leasing responsibilities to the USGS.

The Conservation Branch was established to incorporate these new functions with the Land Classification Board. It was authorized to classify lands according to their highest use; protect the public interest in undeveloped minerals, water power, and agricultural resources; and promote economical and efficient development of mineral deposits on public and Indian lands. In 1948, the Conservation Branch became the Conservation Division.

The Outer Continental Shelf (OCS) Lands Act extended the jurisdiction of the United States to include the continental shelf outside the 3-nautical-mile zone. The act authorized the Secretary of the Interior to grant OCS mineral leases through competitive bidding. In 1953, the Division became responsible for OCS mineral exploration and development.

By 1970, the Conservation Division was responsible for (1) managing exploration and development of OCS minerals; (2) classifying federal onshore lands as to their mineral and water power value and managing exploration and development of minerals on federal and Indian leases; and (3) collecting royalties from federal and Indian leases.

The Nixon, Ford, and Carter administrations considered merging BLM, the Forest Service, and the Conservation Division into one agency. Finally, on January 19, 1982, the Reagan Administration established the Minerals Management Service (MMS) and transferred to it all functions of the Conservation Division. On December 3, 1982, all MMS's onshore minerals management functions were transferred to BLM.

renamed the Conservation Division) classified public lands according to mineral value. The General Land Office issued leases and collected fees and royalties, and the Bureau of Mines oversaw lease development.

HOMESTEADING AND CONSERVATION

The Conservation Movement did not mean that the nation's settlement policy for the public lands had come to an end–far from it. The country's commitment to providing farms to the landless is well illustrated by the Reclamation Act of 1902 and other acts.

Forest Homestead Law of 1906

The Forest Homestead Law of 1906 opened agricultural lands within the forest reserves to settlement.

Enlarged Homestead Law of 1909

The most significant settlement law passed during the Roosevelt years, however, was the Enlarged Homestead Law. The new law responded to the dryland farming movement that grew soon after the turn of the century. Lands previously thought to be valuable only for grazing now became valuable for agriculture as farmers adopted techniques of deep plowing, soil compacting, summer fallowing, and seeding drought-resistant crops. Dryland farming, however, required greater capital investment and more land.

The Enlarged Homestead Law gave 320 acres to farmers who entered public lands that could not be irrigated. As with the 1862 Homestead statute, homesteaders had to reside on the land. One-eighth the area entered now had to be planted, whereas the 1862 statute had no specific requirement and

BLM

The El Reno District Land Office, Oklahoma Territory, 1901

settlers who had made 1862 Homestead entries were permitted to make additional entries that would increase their total holdings to 320 acres. Representatives from California, Idaho, Kansas, North Dakota, and South Dakota originally asked that the law not be extended to the public lands within their boundaries, but by 1915, the new law, in one form or another, had been extended to those states as well.

Three-Year Homestead Law of 1912

Congress further liberalized the homesteading laws in 1912 with passage of the Three-Year Homestead Law. This law reduced the 5-year residence and cultivation requirements to 3 years.

Homestead Boom

The Enlarged Homestead and Three-Year Homestead Laws further stimulated a homestead rush already underway in the West because of dryland farming promotion, increased precipitation, rising land values, and escalating agricultural commodity prices. Millions of acres were turned by the plow and new communities sprang up across the West. In Montana, the Enlarged Homestead Law pushed entries from the 7,500 filed in 1909 to nearly 22,000 the following year. The crush of settlement activity led to more Homestead entries being patented after 1900 than before.

Homesteading Bust

The rush for homesteads, however, ended with America's entrance into World War I in 1917. Many homesteaders were drafted into the military, while others left to take well-paying industrial jobs in the cities. After the war the bust continued as drought swept across many parts of the West and agricultural and livestock economic prices collapsed.

THE PUBLIC LANDS GRAZING ISSUE AND PASSAGE OF THE TAYLOR GRAZING ACT

Another reason that homesteading dwindled after World War I was the fact that the public domain had little good agricultural land remaining. Excluding Alaska, there was little more than 200 million acres of vacant, unappropriated, and unreserved public land remaining. Much of the land was located in the eleven westernmost states, and most of it was described by the General Land Office as arid, broken, mountainous, or grazing in character.

Grazing the Commons

It would be wrong to call this remaining acreage, as so many have, the "land no one wanted." Many western ranchers still depended on the remaining public domain to support their herds. They had no right to these lands, but used the range for all it was worth. "It was," as the Forest Service's Chief of Grazing, Will C. Barnes, put it in 1926, "a clear case of first come, first served and the devil take the hindmost." Never assured use of the same range year after year, ranchers crowded and allowed overgrazing of public lands and, by doing so, were destroying the foundation upon which their ranches were built.

Crowding and overgrazing the public domain had been a long-term problem for the western livestock industry. As early as the 1870s, there was more livestock than the range could provide for. Cattle ranchers first tried to use livestock associations and organized roundups to control the situation. The coming of sheepherders and farmers, however, complicated

matters. Ranchers, as pointed out earlier, began fencing the range with barbed wire to keep others out and gain control of scarce water sources through the use of fraudulent land entries. The federal government, however, ordered the fences down and investigated the illegal claims.

The root of the ranchers' problem was that the federal government was not meeting their needs. Stockraisers had to have more than 160 acres of range for their herds. By 1900, some ranchers were advocating a grazing lease system for public lands, and in 1905, Theodore Roosevelt's Public Lands Commission seconded the recommendation. Opposition to the proposal was strong and Roosevelt's effort to enact such a law in 1907 was rejected by Congress.

Stockraising Homestead Law of 1916

In 1916, Congress decided that the answer to the public lands grazing problem was not leasing but larger homesteads. The Stockraising Homestead Law allowed individuals to enter 640 acres (one section) of public land chiefly valuable for grazing and the cultivation of forage crops. Settlers had to reside on the land and make improvements equal to a $1.25 an acre. All coal and other minerals were reserved to the United States. Those who had already made entry under other homestead laws could make additional entries until their holdings equalled 640 acres.

The new law offered great hope. In its first year of operation, about 60,000 applications were filed for some 20 million acres of public land. Most of the entries, however, had to be suspended until the public lands could be classified as to their character as grazing lands.

Within a few years, attitudes had changed. Agricultural economists agreed that a section of land was inadequate to support enough livestock for a family ranch. By 1923, the General Land Office contended that few making entry under the law could comply with the law's requirements in good faith. Another policy was needed.

Department Rivalry

Grazing policy debate in the 1920s focused on a leasing system for the public domain. As important as the question of what type of lease arrangement would be provided was the question of who would administer the policy: the Department of the Interior or the Agriculture Department. Rivalry between the departments was keen, but in 1924 Interior gained the edge after the Forest Service alienated ranchers with a proposal to raise national forest grazing fees.

Mizpah-Pumpkin Creek Grazing District

In 1928, Congress established the Mizpah-Pumpkin Creek Grazing District in southeastern Montana under the direction of the Interior. The reserve comprised just over 100,000 acres of federal, state, Northern Pacific Railway Company, and private lands. Congress provided for the leasing of public lands to an association of ranchers who proposed to block ownership and ensure conservative grazing. Congress hoped this experiment would indicate the policy direction they should pursue.

Third Public Lands Commission

Before the Mizpah-Pumpkin Creek Grazing District could do that, however, President Herbert Hoover proposed giving the remaining vacant, unappropriated, and unreserved public lands to the states. Hoover felt the states could better manage the remaining public domain and in 1930 established a Committee on the Conservation and Administration of the

Public Domain. In its 1931 report, this third public lands commission supported the Hoover initiative, and called for the cession of the public lands. Overwhelming opposition to the proposition, both in the East and the West, killed the recommendation.

Grazing Issue Debate

The rejection of the Hoover proposal gave the leasing idea new life. The Mizpah-Pumpkin Creek Grazing District was so successful, that ranchers from across the West petitioned Congress and the Department of the Interior to create similar grazing reserves in their areas. Supporters of leasing, however, wanted a law that applied to all public lands.

Led first by Congressman Don Colton of Utah and then by Congressman Edward Taylor of Colorado, general grazing lease bills were introduced, but opposition to them was strong. The deadlock was not broken until 1934, when Secretary of the Interior Harold Ickes threatened to withdraw the public lands and begin regulating grazing under his own authority. This, along with a worsening drought in the West, forced the opposition to capitulate. In signing the Taylor Grazing Act, President Franklin D. Roosevelt declared it "a great forward step in the interests of conservation, which will prove of benefit not only to those engaged in the livestock industry, but also the nation as a whole."

Taylor Grazing Act of 1934

The Taylor Grazing Act sought "to stop injury to the public grazing lands [excluding Alaska] by preventing overgrazing and soil deterioration; to provide for their orderly use, improvement, and development; [and] to stabilize the livestock industry dependent upon the public range" through lease of the public domain to stockraisers. Pending the "final disposition" of the public lands, the Secretary of the Interior was permitted to place 80 million acres of public land chiefly valuable for grazing and forage crops into grazing districts. Section 3 of the law provided for the lease of grazing district lands to landowners and homesteaders in or adjacent to the reserves first and the issuance of 1 to 10 year leases. The public lands within grazing districts were withdrawn from nonmineral entry, but lands classified as valuable for agricultural development under Section 7 could, at the Secretary's discretion, be opened to homesteading. Private lands within the grazing reserves could be exchanged for outside public lands. Isolated and disconnected tracts of public land no larger than 640 acres could now be sold to facilitate district administration, an effort to consolidate federal and private land holdings. Public lands outside grazing districts could, under Section 15, be leased to ranchers with contiguous property.

After signing the law, President Franklin D. Roosevelt withdrew from nonmineral entry all vacant, unreserved, and unappropriated public lands in the West so that grazing districts could be set aside and the remaining public lands classified as to their best use.

THE TAYLOR GRAZING ACT AND THE DIVISION OF GRAZING

Division of Grazing

Secretary of the Interior Harold Ickes created a Division of Grazing within his department to administer the grazing districts created under the

Taylor Grazing Act. To head the division, he selected Farrington "Ferry" Carpenter, a northwestern Colorado rancher who had studied law at Harvard and Princeton.

Immediately after his appointment, Carpenter set up a series of local and state meetings with ranchers and state officials to discuss grazing policy and to determine grazing district boundaries. The first district was established in Wyoming on March 20, 1935. Others followed in California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, and Utah. By June 1935, more than 65 million acres had been incorporated into grazing districts.

Creating Grazing Districts

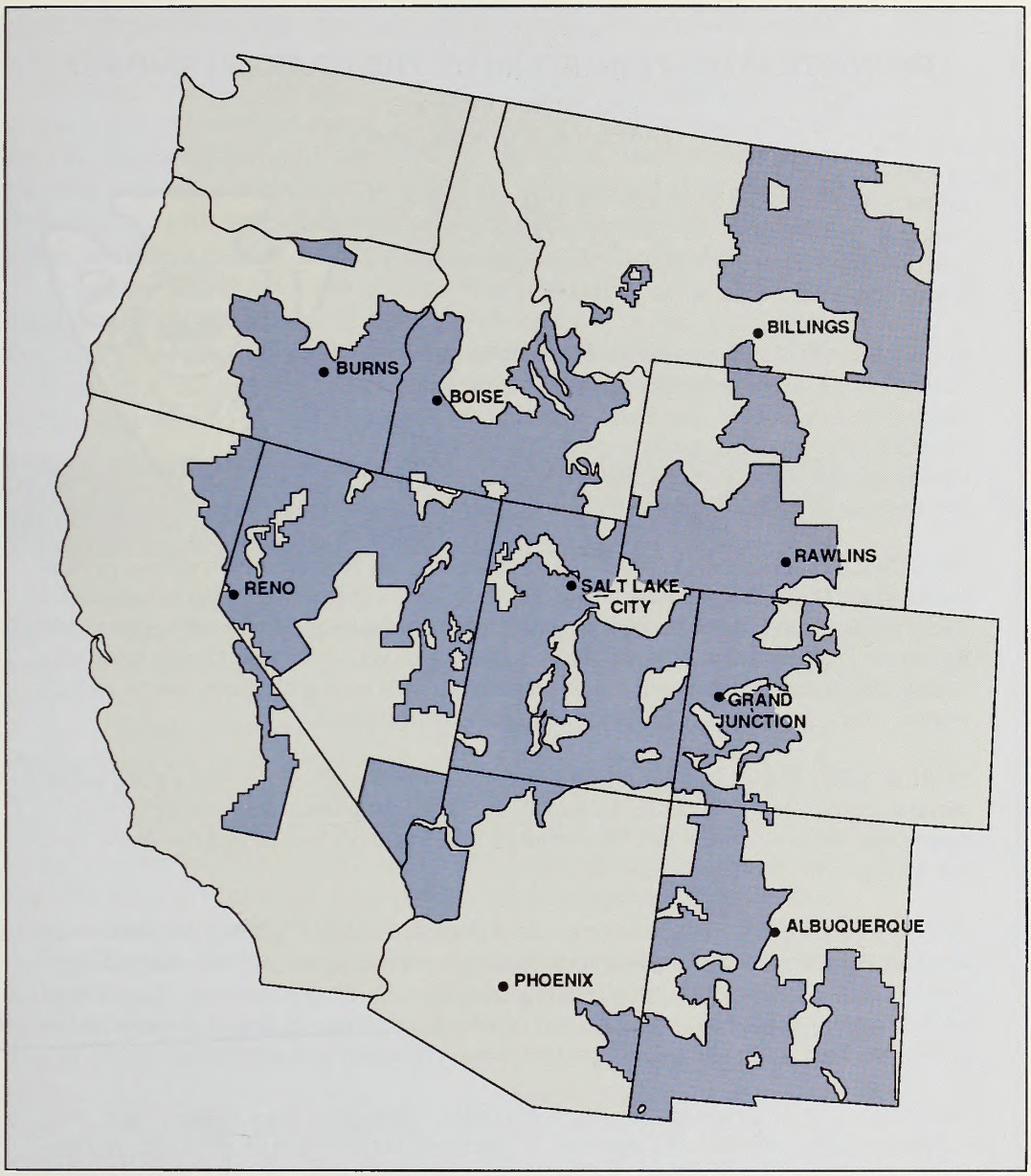
Farrington Carpenter

Ranchers recommended the establishment of 50 grazing districts covering 142 million acres, 62 million more than authorized under the Taylor Grazing Act. Congress consented to this recommendation in 1936. Eventually, the acreage limitation was entirely eliminated.

Determining Range Use

With the creation of grazing districts, rules and regulations to control grazing use had to be promulgated. In granting grazing permits to ranchers, the first priority was to those who had adequate private land to support their herds when not using the public range and who had a history of range experience. Others would be given permits using criteria that weighed property ownership and traditional use. For the privilege of using the public lands, ranchers and sheepherders were assessed a fee of 5 cents per animal

New Mexico Grazing District No. 6's advisory board allocating use of the public range in 1936



Taylor Grazing Districts (January 1937) and regional offices

unit month (AUM), which was judged to be the cost of feeding one cow, one horse, or five sheep for 1 month.

Grazing Advisory Boards

To help administer the grazing districts, Carpenter set up district advisory boards. From these boards, he sought advice and recommendations on district grazing boundaries, range conditions, and the apportionment of public rangelands among users. This "home rule on the range" was successful and ensured the cooperation and help of ranchers in implementing the Taylor Grazing Act.

Congress gave the district advisory boards legal status in 1939. The following year, a National Advisory Board Council composed of district

ADMINISTRATIVE PRINCIPLES OF THE GRAZING SERVICE

by Richard Rutledge
Director, U.S. Grazing Service

Editor's Note: Grazing Service Director Richard Rutledge sought to establish an effective conservation agency. To achieve this, he set forth principles of conduct for his District Graziers. Here are some of the principles.

SELF-RELIANCE—There is often the tendency upon receiving a tough assignment to push it aside and wait until you can ask the boss a lot of questions concerning the way he wants the job done. This results in procrastination and in a leaning attitude on the part of the doer. Stand on your own feet and take responsibility.

ORGANIZATIONAL ATTITUDE—No organization can be successful if cliques or jealousies exist. These things tend to retard and to break down the spirit of the organization. Likewise, feuds and personal fights are extremely detrimental and are bound to react upon someone. Troublemakers have no place in the organization. Rating officers must take recognition of such things. The ability to get along with and work with others, and the attitude toward others, are important factors in efficiency determination.

PUBLIC SERVICE—Let's get firmly fixed in our minds at the outset that we are public servants, employed by the public and paid by the public from funds provided by taxation in some form. We are responsible to the entire public and are not bureaucratic bosses to work our will upon the public as we see fit.

SHARP PRACTICES—There can be no place in an administrator's thoughts or actions for anything that approaches sharp practices. Stockmen are usually not as well informed as the administrator. Many times they are trusting, depending upon the administrator. There should be no tendency toward scheming around or taking advantage of lack of information or ignorance. Your actions should always be square, with equity and fairness.

MIXING—This is somewhat akin to friendliness, although it goes farther. It is very necessary that an administrator mix with or contact all kinds of people, meetings, associations, church groups, and others. Be a part of the community.

SELF-JUSTIFICATION—One of the very worst habits that an administrator can fall into is that of trying to justify his actions under all circumstances. If an administrator has made a mistake, the thing to do is to face the situation and correct the action. An administrator can lose the respect and confidence of his users very quickly by adopting an attitude of self-justification.

CAPRICIOUSNESS—The administrator should avoid actions which might be termed capricious. Any funny notion or foolish idea, or snap judgement, may take the turn of capriciousness. Keep your feet on the ground and remember that you are business men [sic], doing business.

board representatives was organized, and later state advisory boards came into being.

In administering the grazing districts, Carpenter sought both to conserve and to restore the range. To do this, he enlisted the assistance of the Civilian Conservation Corps (CCC). The CCC workers developed watering sources to more evenly distribute livestock on the range and erected fencing for better range management. CCC crews also worked on rodent and insect control, soil erosion measures, and fought fires.

CCC and the Public Range

Secretary Ickes, who had disliked Farrington Carpenter from the beginning, finally fired him in 1939 and replaced him with Richard H. Rutledge. Under the new director, a former Forest Service employee, the Division of Grazing was renamed the U.S. Grazing Service and its headquarters transferred to Salt Lake City in 1941.

THE TAYLOR GRAZING ACT AND THE GENERAL LAND OFFICE

The Taylor Grazing Act gave the General Land Office new responsibilities. Its previous function had primarily been to dispose of public lands and minerals. Now the GLO had authority to manage these resources.

The Secretary of the Interior gave the GLO responsibility for administering the leasing of rangelands outside the grazing districts as provided by the Taylor Grazing Act. It also handled all land exchanges, land sales, settlement entries, and mineral leasing within the grazing districts. The largest responsibility given to the GLO, however, was the classification of public lands to further the conservation and development of public land resources outside grazing districts.

New Responsibilities

President Franklin D. Roosevelt's executive order of November 1934 directed that all remaining public lands in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, and Wyoming be temporarily withdrawn, investigated for possible inclusion in grazing districts, and classified for agricultural values. Public lands could not be allocated until their best and highest use had been determined. In February 1935, the order was extended to include public lands in the states of Alabama, Arkansas, Florida, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Nebraska, Oklahoma, Washington, and Wisconsin.

FDR's General Withdrawal Order

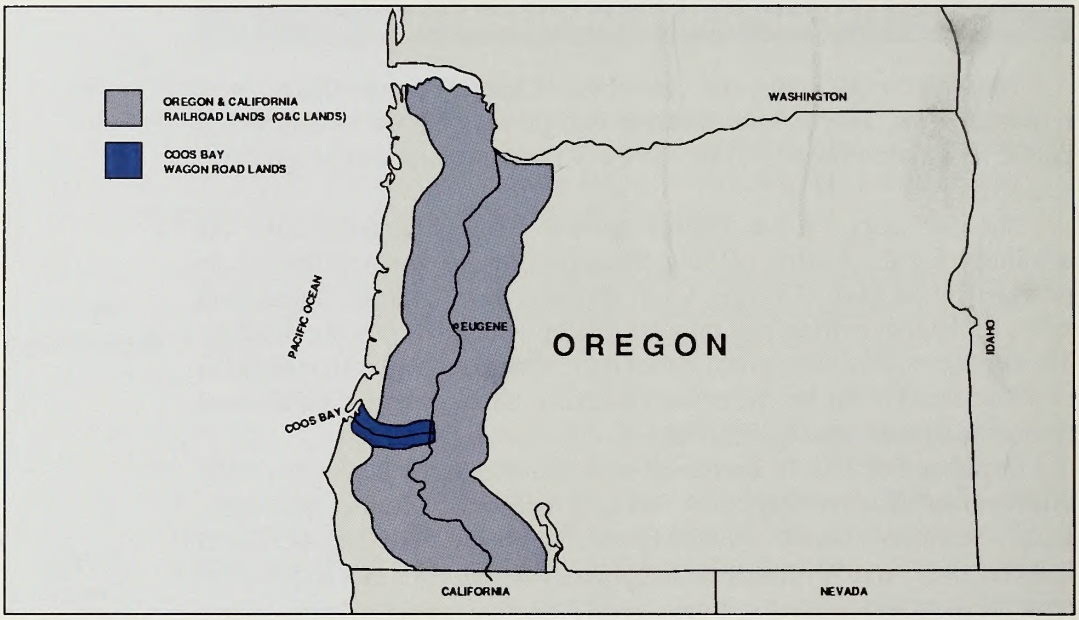
The move toward conservation required a major reorganization of the GLO. It was no longer just a disposal agency. A Range Development Service was created in 1939 to plan and oversee construction of range improvements. The inventory and classification of public lands went to a Branch of Planning, Use, and Protection, while a Branch of Research and Administration aided conservation efforts by abstracting agency land records so that federal land and mineral interests could be identified. Transfer of the Interior Department's Division of Investigations to the GLO in 1942 enabled the agency to better investigate illegal use of public lands.

GLO Reorganization

THE OREGON AND CALIFORNIA REVESTED LANDS

O&C Railroad Grant

The Oregon and California Revested Lands Sustained Yield Management Act of August 28, 1937 gave the General Land Office even more conservation responsibilities. The revested lands had been granted in 1866 to the Oregon and California (O&C) Railroad Company for construction of a line from Portland to the California border. Congress stipulated in 1869 that the 3.7 million acres granted the railroad had to be sold in tracts no larger than 160 acres to actual settlers and for no more than $2.50 an acre. The company and its successors ignored the conditions; so, in 1916, after lengthy litigation, Congress revoked title to more than 2 million acres of the grant. In 1919, the federal government reclaimed another 93,000 acres from the nearby Coos Bay Wagon Road Grant.



Revested lands of the Oregon and California Railroad and the Coos Bay Wagon Road

Early Administration of the O&C Lands

The revested lands had some of the best timber stands in the United States. Naturally, the Forest Service wanted jurisdiction over the former land grant lands, but Congress gave it to the General Land Office because of the ill will Oregonians had toward the Forest Service. The GLO's mandate was to classify the revested lands in terms of their value for power sites, agriculture, or timber. Lands were then to be disposed of accordingly, although, trees on timberlands had be cut before the land itself was sold. Revenues from the lands and timber sold were to be divided among the federal government, Oregon, and the counties in which the lands were located.

The GLO immediately began classifying the O&C lands with a small staff of surveyors and timber cruisers. As timberlands were identified, they

were offered for sale at auction to the highest bidders, who then had 10 years to cut the timber. Timber sales were disappointing over the next 20 years and the GLO came under increasing criticism for its management of the area.

The Oregon and California Revested Lands Sustained Yield Management Act of 1937 sought to enhance the GLO's administration of the O&C lands. The law called for implementation of a sustained yield cutting program (lumber production would not exceed forest regeneration), so that continuous forest production could be assured. Lands could be used for grazing and recreation, and watersheds, wildlife, and other resources were to be protected. Receipts from the sale of timber were generously shared with counties having O&C lands.

An O&C Revested Lands Administration was placed under the General Land Office in 1938 to implement the act, and Walter Horning was appointed chief forester. Under his guidance, district offices were established, timber cutting regulations written, rights-of-way acquired, and timber inventory work begun.

Along with the establishment of the O&C Administration, Secretary of the Interior Harold Ickes appointed an O&C Advisory Board. The board represented state government, county, lumber, and public interests and advised the O&C Administration's chief forester on policy matters. District advisory boards were also established.

To supplement the O&C Administration's meager budget, several Civilian Conservation Corps camps were assigned to the revested lands. CCC enrollees constructed roads, planted trees, worked on insect control, and fought fires. This work did much to conserve and improve the management of O&C lands.

BLM

Civilian Conservation Corps Camp in the O&C area of Oregon

PUBLIC LAND POLICY IN ALASKA

Land Apart

The General Land Office's new conservation program also included public lands in Alaska. Alaska was truly the United States' last frontier; the region had long been ignored, and little of its 378 million acres developed. Alaska was a land apart. None of the public land laws of the contiguous United States applied to Alaska, unless expressly provided.

Acquisition

There had been no public interest in acquiring Alaska before its purchase in 1867. After the area was bought a few hardy Americans rushed north to take advantage of whatever opportunities the new territory might offer. Commissioner of the General Land Office Joseph S. Wilson spoke of Alaska's potential in 1868. He estimated 150,000 acres of good agricultural land existed and noted deposits of gold, silver, copper, coal, and other minerals. Wilson recommended that the public land system be extended to Alaska so "settlers, present and prospective, may enjoy the privileges similar to those conceded to our people elsewhere in the public domain."

Mining Laws

Congress paid no attention to Alaska until the discovery of gold in the early 1880s. The Act of May 17, 1884 extended the mining laws to the region and established a local land office to handle mining claim patent applications. That was, however, all Congress chose to do, for it then declared that "nothing contained in [the] Act shall be construed to put in force in said district the general land laws of the United States."

Townsite and Other Laws

Two years later Commissioner of the General Land Office William A. J. Sparks still saw no need to change the situation. "No information," he pointed out, "indicates either the necessity or expediency of extending the public land laws over the territory at present." Sparks noted that only one mineral application had been filed and the value of Alaska's agricultural lands was questionable. He felt it best to hold the region for future occupation. Congress agreed, but did in 1891, provide for the establishment of townsites and 160-acre trade and manufacturing sites.

Homestead and Other Laws

The Klondike discovery in 1896, which brought thousands of gold seekers north, forced Congress to extend other public land laws to Alaska. The Act of May 14, 1898 granted railroad rights-of-way, allowed timber cutting, and permitted entry of 80-acre tracts under the Homestead Law. The public land survey system was extended to the region in 1899, and the year after that, the Coal Land Law of 1873 was also implemented.

Alaska Railroad

The new laws had little impact on Alaska. By 1914, fewer than 200 Homestead applications had been filed and little of the territory's coal had been mined. To encourage the settlement and development of Alaska, Congress that year funded construction of a railroad from the Pacific coastline to Fairbanks and provided for the lease of coal deposits. Neither action achieved the intended result; however, construction of the Alaska Railroad, completed in 1923, did lead to the founding of Anchorage.

The federally sponsored Alaska Resources Committee reported to Congress in 1938 on the resources and potential development of the territory. Committee members pointed out that there was no population pressure nor raw resource demand requiring rapid development. Alaska's

BLM

GLO auction of Anchorage townsites in July 1915

resources, however, did need protection until development. This was particularly true for timber and the committee stated that "establishment of a fire-protection organization on the open public domain [was] an essential first step in...bringing the public-land resources under a reasonable degree of control."

GLO in Alaska

The General Land Office responded to the Alaska Resources Committee report by gathering information on the economic resources of Alaska. The agency also looked at the protection of the Territory's resources, and in 1939, persuaded Congress to appropriate funds for fire suppression in Alaska. This resulted in the creation of the Alaskan Fire Control Service.

Alaska Fire Control Service

The Alaskan Fire Control Service (AFCS) was a bare-bones operation. It had a chief forester and 10 permanent staff members. During the summer it was augmented by temporary fire guards and later with CCC crews. The vastness of Alaska, however, restricted most fire suppression work to areas accessible by railroad or highway.

WORLD WAR II AND THE PUBLIC LANDS

The coming of war had a significant impact on the activities of the General Land Office and the Grazing Service. Both agencies were looking at ways they could contribute to the national defense program. They tried to continue their conservation efforts on the public lands, but this became increasingly difficult when America entered into World War II.

War's Impact

The General Land Office and the Grazing Service found themselves understaffed and underfunded. Civilian Conservation Corps camps were

THE ALASKAN FIRE CONTROL SERVICE

by Roger R. Robinson
Former Director, Boise Interagency Fire Center

The Congress authorized the establishment of the Alaskan Fire Control Service (AFCS) beginning July 1, 1939 in the USDI under the aegis of the General Land Office. Its mission: the detection and suppression of wild forest and range fires on the Public Lands in the Territory of Alaska.

Western and interior Alaska for years had suffered from large fires burning unchecked during its 5 to 6 month fire season; fires started by trappers, miners, farmers and generally careless travelers. It was not until AFCS had been in operation a year that it was found lightning was in some years a major cause!

Fifty years ago relatively few people in the contiguous states knew anything about Alaska and most of their "facts" were wrong! The quirk of fate: Secretary Ickes on his honeymoon trip in 1938 visited Alaska and was confronted by Alaskans and shown the ravages of wildfires and the ever-present threat to the cities and homes of the pioneers. Anchorage had to build a major fire break (600 feet wide and 3 miles long) to protect itself from fires started by the government-owned Alaska Railroad. Secretary Ickes was impressed and upon his return to Washington pushed for the establishment of a firefighting agency in Alaska.

The head office was set up in Anchorage under W. J. McDonald, Chief, R. R. Robinson, Associate Chief, and C. W. Butler, Chief Clerk. Two stenos, a mechanic, and a warehouseman rounded out the Anchorage operation. Fairbanks District had a fire control officer, a mechanic, a warehouseman and a steno. A very small amount of equipment and 10 temporary fire guards completed the roster. Although we were responsible for detection and suppression of fires on some 125 million acres, we obviously could do little except work on fires along the few miles of road around Anchorage and Fairbanks. Our major effort was getting to know the country and trying to find out what, where and how the fire control job could be effectively accomplished. We also had to begin an intensive education campaign to prevent fires.

With the start of World War II the Congress cut appropriations for all "old line agencies"—for FY 1941 we received $27,000! We survived only because all Civilian Conservation Corps (CCC) activities on Alaska's public lands lands were turned over to the AFCS in the fall of 1940. Their funds and personnel were used by us until the CCC was terminated in 1942.

Beginning in 1940, the Alaska Defense Command was establishing a military presence throughout Alaska. The Army realized the importance of fire control in all military areas—not only for its installations, munition dumps, etc., but also the real necessity to keep the vital air lanes to Alaska free of smoke. We developed specially trained and equipped fire crews and had aircraft assigned as needed for transport to the back country. AFCS, young as we were, became a leader in the use of aircraft in fire suppression.

AFCS survived the war years up to 1946, at which time the BLM was created by combining the General Land Office and the Grazing Service. Alaska became a separate region within the BLM and the AFCS became the Division of Forestry.

closed in 1942 and the work of enrollees had to be abandoned. For the Grazing Service, this meant a halt to range improvements and a reorganization of their firefighting program. The GLO replaced its CCC camps on the O&C with Public Service Camps staffed with conscientious objectors, and the Alaskan Fire Control Service received invaluable assistance from the Army. But still conservation of the public lands suffered. Livestock trespasses increased on public rangelands and timber harvesting on the O&C lands went above allowable levels in an effort to meet wartime demands.

As the end of the war neared, the GLO and the Grazing Service began to look at ways to resurrect conservation efforts. The General Land Office's postwar policy called for "continued management under progressive conservation policies for...in no other way [could] the domestic demands for maximum beneficial use of the land and resources of the public domain, adequately be met." To accomplish that, the GLO argued that new laws had to be provided. It recommended a review of the public land laws and a congressional restatement of the nation's public land policy. It also called for authority to lease acquired mineral estates, a uniform trespass law, and the decentralization of administrative and adjudication functions to regional offices.

Postwar Plans

The General Land Office was particularly concerned with Alaska. Construction of the Alaska Highway during the war had made the Territory more accessible. Military and civilian personnel who had gone to Alaska were expected to stay. The GLO believed its jurisdiction over much of Alaska's land made it responsible for the orderly development of the Territory. It asked for land classification authority and laws better suited to Alaska's conditions.

Alaska Plans

DEMISE OF THE GRAZING SERVICE

Grazing Service officials also concerned themselves with postwar policies. They wanted to reinstitute range studies and range improvement projects. Their efforts to do this, however, were hampered by congressional attacks.

The Grazing Service problems came from its effort to raise grazing fees. The initial fee of 5 cents per animal unit month (AUM) had been reasonable in the mid-1930s when poor economic conditions prevailed, but prosperity had returned to the livestock industry by the eve of World War II. In 1941, a Grazing Service study showed that the 5-cent fee was considerably below that charged for private and state lands and one-sixth that charged by the national forests. The Grazing Service recommended tripling its existing fee.

Grazing Fee Controversy

Ranchers using grazing district lands opposed the proposal. Resistance was particularly strong in Nevada, where ranchers had just lost a suit before the U.S Supreme Court demanding that the Grazing Service be restrained from interfering with their free use of the public range. Faced with this opposition, Secretary of the Interior Harold Ickes backed off the proposed fee increase.

Fee Increase Abandoned

Fee Increase Resurrected

The appointment of Clarence Forsling as Grazing Service Director in 1944 resurrected the grazing fee issue. Like his predecessor Rutledge, Forsling came from the Forest Service and viewed the 1941 fee increase proposal as fair when compared with that of the Forest Service. He asked the National Advisory Board Council to agree to a 1941 fee increase but the board turned him down cold.

Grazing Fee Debate

Forsling was not without allies in his call for a fee increase. The House of Representatives' Appropriations Committee favored the proposal. Appropriations for administration of the grazing districts appeared high to many legislators and they wanted the Grazing Service to cover most of its own expenses through the fees it collected. Senator Pat McCarren of Nevada and other westerners in the Senate opposed such an idea.

Grazing Service Dilemma

By 1946, the Grazing Service was caught between a House committee demanding a fee increase and western senators warning against it. The trapped Grazing Service decided not to pursue the matter further. The House Appropriations Committee reacted by cutting the agency's funding to little more than $200,000, one-eighth of the Grazing Service's requirements. Senator McCarren felt the reduction too drastic. He wanted the Grazing Service subservient, but did not want it destroyed. He worked to have the budget increased to half of what the agency had requested. This appropriation forced the Grazing Service to cut its personnel from 250 to 86 and to close 11 of its 60 district grazing offices.

BUREAU BEGINNINGS

Consolidation Idea

As the Grazing Service's relations worsened with Congress, Interior officials looked at merging it with the General Land Office. Both agencies were responsible for grazing issues, but the division of duties was awkward. The Grazing Service dealt primarily with grazing policy, while the General Land Office handled settlement, land sale, land exchange, and mineral entries in the grazing districts. The GLO also administered grazing lands outside grazing districts, a task the Grazing Service could better handle. Both agencies were responsible for land classification and planning within grazing districts, and consequently, both competed for funds to do the work. By integrating the agencies' responsibilities, more effective management of the public land's resources could be achieved through better utilization of skills and experience. Yet, a departmental committee, seeing no need for reorganization, recommended against the proposal in late 1945.

Reorganization Plan No. 3 of 1946

In January 1946 Secretary of the Interior Harold Ickes, perhaps concerned over the Grazing Service's troubles with Congress, decided to again recommend a merger. In May, President Harry S. Truman forwarded the proposal to Congress as part of his Reorganization Plan No. 3 of 1946.

A New Agency Created

By law, the proposed merger could only be prevented if both houses of Congress passed nonconcurrent resolutions. The House of Representatives did this, but the Senate, after much debate, did not. On July 16, 1946, the Grazing Service and the General Land Office became the Bureau of Land

Management, and "with that date," notes historian E. Louise Peffer, "there...opened 'a new chapter in the history of...[public] land administration in the United States.'"

FURTHER READINGS

There are several good general public land history overviews. Benjamin Hibbard's *A History of the Public Land Policies* (1924) is quite helpful in sorting out the numerous land laws and their requirements. *The Lure of the Land: A Social History of the Public Lands from the Articles of Confederation to the New Deal* (1970) by Everett Dick is written for general readers, as is Roy M. Robbins', *Our Landed Heritage: The Public Domain, 1776-1970* (Revised edition, 1976). The authoritative *History of Public Land Law Development* (1968) written by Paul Gates is mandatory reading for anyone truly interested in the history of public land policy.

For books with readings on various aspects of public land policy, see *The Public Lands: Studies in the History of the Public Domain* (1962) edited by Vernon Castensen and Paul Gates, ed., *Public Land Policies: Management and Disposal* (1979).

On the early aspects of public land policy, Malcolm J. Rohrbough's *The Land Office Business: The Settlement and Administration of American Public Lands, 1789-1837* (1968) is outstanding. On military land bounties, see Jerry O'Callaghan's, "The War Veteran and the Public Lands," in *The Public Lands: Studies in the History of the Public Domain* (1962), edited by Vernon Carstensen.

On the General Land Office and its operation, see Malcolm Rohrbough's, "The General Land Office, 1812-1826: An Administrative Study," Ph.D. dissertation, University of Wisconsin, 1963; F. H. White's, "The Administration of the General Land Office, 1812-1911," Ph.D. dissertation, Harvard University, 1912 and Milton Conover's, *The General Land Office: Its History, Activities and Organization* (1923).

Closely intertwined with public land questions has been the federal government's policy toward Native American possession of land. Francis Paul Prucha's two volume *The Great Father: The United States Government and the American Indians* (1984) is a comprehensive look at federal Indian policy.

The process of surveying the public lands is a subject of interest to many. For an instruction to the subject, readers should refer to Joseph Ernst's, *With Compass and Chain* (1979); Lola Cazier's, *Surveys and Surveyors of the Public Domain, 1785-1975* (ca. 1975); and C. Albert White's, *A History of the Rectangular Survey System* (1982). The impact of the rectangular survey system on the environment is well addressed by Hildegard Binder Johnson in *Order Upon the Land: The U.S. Rectangular Land Survey and the Upper Mississippi Country* (1976).

The federal government's grants of land to the states was an important feature of public land policy. Of interest here is Matthais Orfield's, *Federal Land Grants to the States with Special Reference to Minnesota* (1915).

Grants of public lands for the construction of railroads is a topic that has attracted the attention of numerous historians. A few of the works available

are Carter Goodrich's, *Government Promotion of American Canals and Railroads, 1800-1890* (1960); Thomas E. Root's, *Railroad Land Grants from Canals to Transcontinentals* (1986); William S. Greever's, *Arid Domain: The Santa Fe Railway and Its Western Land Grant* (1954); and Ross Cotroneo's, *The History of the Northern Pacific Land Grant, 1900-1952* (1979).

Private land claims and grants have not received the attention they deserve. Claims that are a consequence of early land acquisitions of the United States' are discussed by Paul Gates' "Private Land Claims in the South," in *Public Land Policies: Management and Disposal* (1979) edited by Paul Gates. Mexican and Spanish grants in New Mexico are taken up by Victor Westphall in *Mercedes Reales: Hispanic Land Grants of the Upper Rio Grande Region* (1983).

The settlement laws and their operation in the later half of the nineteenth century are discussed in numerous books and articles. Those interested in this subject might consider starting with "The Homestead Law in an Incongruous Land System" by Paul Gates in *The Public Lands: Studies in the History of the Public Domain* (1962) edited by Vernon Carstensen. Also good is John T. Ganoe's, "The Desert Land Act in Operation, 1877-1891," in *Public Land Policies: Management and Disposal* (1979) edited by Paul Gates. Harold Durham's *Government Handout: A Study in the Administration of the Public Lands, 1875-1891* (1970) is indispensable to serious students of public land policy. For homesteading after 1900, see Mary W. M. Hargreaves', *Dry Farming in the Northern Great Plains, 1900-1925* (1957); Paula M. Nelson's, *After the West was Won: Homesteaders and Town-Builders in Western South Dakota, 1900-1917* (1986); and Barbara Allen's, *Homesteading the High Desert* (1987).

Few histories have been written on the administration and disposition of the public domain within their borders. Some of those that have been written are Paul Gates' *Fifty Million Acres: Conflicts Over Kansas Land Policy, 1854-1890* (1954); *The Public Domain in New Mexico, 1854-1891* (1965) by Victor Westphall; Stephen Strausberg's, *Federal Stewardship on the (Indiana) Frontier* (1979); and *The Disposition of the Public Domain in Oregon* (1979) by Jerry O'Callaghan.

Mineral policy is discussed by Robert W. Swenson in "Legal Aspects of Mineral Resources Exploitation" in Paul Gates' *History of Public Land Law Development* (1968), and in *Public Domain—Private Dominion: A History of Public Mineral Policy in America* (1985) by Carl Mayer and George Riley. Petroleum policy is taken up by John Ise in *The United States Oil Policy* (1926). On early federal government geological investigations and the U.S. Geological Survey, see Richard A. Bartlett's, *Great Surveys of the American West* (1953); Wallace Stegner's, *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the West* (1954); and Mary C. Rabbitt's, *Minerals, Lands, and Geology for the Common Defense and General Welfare: A History ... of the U.S. Geological Survey, Before 1879-1939*, 3 vols. (1979, 1980, 1986).

Irrigation and water in the West are addressed by Donald Worester's,

Rivers of Empire: Water, Aridity and the Growth of the American West (1986); Donald J. Pisani's, *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931* (1984); and Michael C. Robinson's, *Water for the West: The Bureau of Reclamation, 1902-1977* (1979).

On timber and forestry in general, refer to the work of Thomas Cox, Robert Maxwell, P. D. Thomas, and Joseph Malone, in *This Well-Wooded Land: Americans and Their Forests from Colonial Times to the Present* (1985). On the development of national forest policy, see Samuel T. Dana's, *Forest and Range Policy: Its Development in the United States* (1956), and Harold Steen's, *The U.S. Forest Service: A History* (1976). The O&C revested lands are discussed in Elmo Richardson's *BLM's Billion-Dollar Checkerboard: Managing the O&C Lands* (1980) and the *The O&C Lands* (1981) by the University of Oregon's Bureau of Governmental Research and Service.

The national park system is well-documented by Alfred Runte in his *National Parks: The American Experience* (1979).

Some books on conservation policy are Samuel Hays', *Conservation and the Gospel of Efficiency: The Progress Conservation Movement, 1890-1920* (1959); Elmo Richardson's, *The Politics of Conservation: Crusades and Controversies, 1897-1913* (1962); E. Louise Peffer's, *The Closing of the Public Domain: Disposal and Reservation Policies, 1900-50* (1951); Donald Swain's, *Federal Conservation Policy, 1921-1933* (1963); and A.L. Riesch Owen, *Conservation Under FDR* (1983).

Grazing of the public domain has received much attention from historians and other writers, particular reference should be made to George Rollins', *The Struggle of the Cattleman, Sheepman, and Settler for Control of Lands in Wyoming, 1867-1910* (1979); E. Louise Peffer's, *The Closing of the Public Domain: Disposal and Reservation Policies, 1900-50* (1951); William Voigt, Jr.'s, *Public Grazing Lands: Use and Misuse by Industry and Government* (1976); Phillip O. Foss', *Politics and Grass: The Administration of Grazing on the Public Domain* (1960). A history of the Grazing Service is much needed but see Farrington R. Carpenter's, *Confessional of a Maverick: An Autobiography* (1984), and Marvin Klemme's reminiscence about his time with the agency in *Home Rule on the Range: Early Days of the Grazing Service* (1984).

Public land policy toward Alaska has been largely ignored by historians. For some background, see Ernest Gruening's, *State of Alaska* (1958); William Hunt's, *Alaska: A Bicentennial History* (1976); and Melody Webb's, *The Last Frontier: A History of the Yukon Basin of Canada* (1985).

CHAPTER 2

THE SEARCH FOR AN IDENTITY: The Bureau of Land Management, 1946-1960

I frankly say...that the very title of the bureau raises a very big question mark in my mind. It seems to me that the very purpose to be subserved is to change the historical policy of the United States from one of holding the public lands for transfer to ownership under private persons, to one of proprietary handling on the part of the United States government.

—U.S. Senator Guy Cordon, Oregon
Congressional Record, July 13, 1946

THE SEARCH FOR AN IDENTITY
The Bureau of Land Management 1946-1960

Overview

The Bureau of Land Management (BLM) from 1946 to 1960 was an agency in search of an identity. The executive reorganization creating the Bureau simply merged the General Land Office (GLO) and Grazing Service. BLM had no new mandate, only the authorities and functions of its predecessors.

The first years found the agency struggling to survive. It was hindered in its organization effort and haunted by the Grazing Service's fee increase debacle. There was serious question as to whether the agency would survive.

In 1948, a new Director, Marion Clawson, brought life to BLM. Clawson laid the foundation for effective public land and resource management. BLM decentralized administrative and resource management functions, recognized resource interrelationships, and stressed the importance of land classification and planning to multiple use management.

Clawson was succeeded in 1953 by Edward Woozley. The new Director's conservation philosophy differed from that held by Clawson, but the basic thrust of better management through decentralization and multiple use development remained. By the end of Woozley's 8-year tenure, BLM had matured into a professionally competent land managing agency.

THE MERGER

Reorganization Plan No. 3 Act of 1946

The Bureau of Land Management came into being when the General Land Office and Grazing Service ceased to exist—the direct result of the Reorganization Plan No. 3 Act of 1946. To head the new agency, a Director was to be appointed by the Secretary of the Interior. Unlike predecessors in the GLO and Grazing Service, who were presidential appointees, the new agency chief was to be selected under the classified civil service system. Also to be appointed were an Associate Director and "so many Assistant Directors...as may be necessary."

No Mandate

The Reorganization Plan, however, did not provide a mandate for the newly formed agency. BLM was simply placed under the Secretary of the Interior and "the functions of the General Land Office and Grazing Service...consolidated to form a new agency." The Bureau, therefore, had to continue administering the public lands using the outmoded and often conflicting mandates of the 3,500 laws passed during the previous 150 years. The major statute directing BLM activities was the Taylor Grazing Act, which provided for the administration of grazing "pending final

disposition" of the public lands. "This [was] hardly a firm basis," as natural resources professor Sally Fairfax points out, "for a comprehensive land planning management scheme."

Another problem facing the Bureau was the integration of the General Land Office and Grazing Service into one organization. BLM resulted from a merging of the oldest federal agency with one of the youngest—two agencies with different organizational structures and philosophies. GLO was centralized, with most authority placed with the commissioner; the Grazing Service was decentralized. The General Land Office handled a variety of resources, while the Grazing Service dealt primarily with range management. Creating a new organization out of these two agencies posed a challenge.

GLO and Grazing Service Differences

THE EARLY YEARS

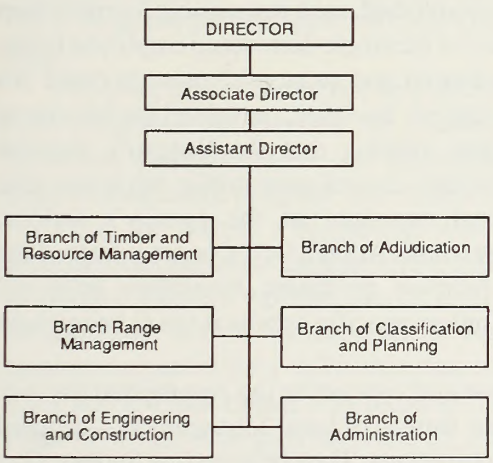
BLM struggled in its first two years to simply survive. A new organizational structure was outlined, but attempts to put it in place were hindered by congressional opposition. The nightmare of the Grazing Service appropriations debacle also haunted the agency.

Fred W. Johnson, who had been Commissioner of the General Land Office, was selected by Secretary of the Interior J. A. Krug in 1946 to be the Bureau's temporary Director. Johnson was in poor health and did not promise to be an effective leader, but Krug undoubtedly felt selecting the Grazing Service's Clarence Forsling would only have continued congressional attacks. To assist Johnson, Krug turned again to the former GLO. He appointed Joel D. Wolfsohn, the former Assistant Commissioner who had directed GLO activities for Johnson, to be Acting Associate Director, and Thomas Havell, a long-time GLO employee having good relations with Capital Hill, to be temporary Assistant Director. To Wolfsohn and Havell would go the task of molding BLM into an agency.

BLM's First Director

BLM's organization called not only for the integration of General Land Office and Grazing Service functions and personnel, but also for improved public land administration and public service through decentralized operations. A three-tiered organization was outlined which featured a Washington office headquarters and regional and district field offices. Headquarters arranged itself around the Bureau's major functions—range management, timber management, land and mineral

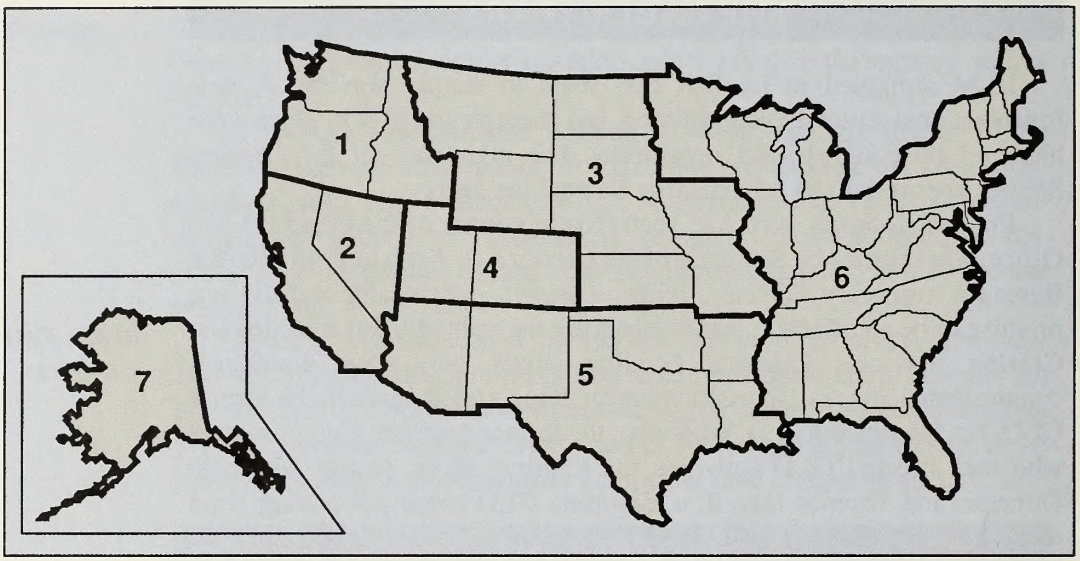
BLM's Organization



BLM organizational structure in 1946

adjudication, classification and planning, survey and engineering, and administrative services. The field offices were organized around the Grazing Service's district office system, as well as the GLO's Oregon and California (O&C) forestry offices and land and survey offices. With this type of organizational structure, the agency could maintain on-the-ground management of public lands and resources; public land users could get on-the-spot handling of administrative matters.

The key to BLM's proposed organization, however, was the regional offices. The Bureau of Land Management hoped, as director Johnson stated, to furnish "better service...through regionalized handling of cases ...affording wider opportunity than ever before for resource development under prudent conservation safeguards." This meant delegating Washington office adjudication functions to regional administrators.



BLM regions in 1946

Congressional Opposition to BLM Organization

Seven regional offices were established, each responsible for more than one state. These were used in place of the single-state setup employed by the Grazing Service so that state politicial and economic interests could not dominate regional personnel. Congress, however, prevented the transfer of responsibilities from Washington, arguing that the Bureau's regional offices would strengthen bureaucratic control over public lands and user groups and hinder congressional oversight of the agency's actions. Therefore, in the Interior Appropriations Act of 1947, Congress banned the "transfer or removal of any function or duties...heretofore held and administered in [Washington]...unless specific approval [had] been given by Congress."

Congress addressed another major concern in the Appropriations Act. The very name of the agency—the Bureau of Land Management—aroused suspicion among some western politicians. They believed, as Senator Guy Cordon of Oregon did, that the agency's title implied abandoning the

nation's long-held policy of transferring public lands to individuals and private interests in favor of a policy of federal retention and proprietorship. Congress, consequently, directed Bureau funds be used for the "disposal," as well as the management and protection of, public lands, something that had not been done in recent General Land Office and Grazing Service appropriations acts.

Solution to Grazing Fee Controversy

The Bureau's organizational efforts also suffered from the Grazing Service fee increase controversy. Congressional appropriation cuts gutted the range management program. With 86 personnel to oversee 150 million acres of grazing land, BLM could not effectively process grazing applications, monitor range conditions, prevent trespass, or build range improvements.

The grazing district advisory boards, fearing a breakdown of order on the public range, stepped in. Using monies received from Taylor Grazing Act fees for range improvements, the advisory boards paid the salaries of BLM range employees. Having the advisory boards pay agency employee salaries put the Bureau in an awkward position. "In effect," as political scientist Phillip O. Foss notes, "the regulators were being supervised by those who were to be regulated." BLM needed to be independent if it was to perform its duties properly.

The Nicholson Plan

Secretary of the Interior Krug understood this. From talks with western livestock interests, he knew that ranchers would accept a slight grazing fee increase. To study the situation, Krug appointed California rancher Rex L. Nicholson. Nicholson concluded that BLM needed only 242 people to adequately manage the public range. He recommended increasing the grazing fee from 5 cents to 8 cents per animal unit month (AUM). Two cents were to go for range improvements, with the remaining 6 cents to be distributed between the states and the Federal treasury. The federal government's share of the fee covered 70 percent of range administration costs—those functions benefiting only users. The remaining 30 percent—programs of general public good—would be funded by Congress. The National Advisory Board Council accepted Nicholson's formula and, in 1947, Congress gave its approval to the grazing fee increase and distribution plan.

The plan, however, did not help BLM. Congress could not adequately fund programs not covered by grazing fees. This, and the fact that Nicholson's administrative cost estimates were too low, left the Bureau's range management program little better off than before.

Thus, the Bureau's beginnings were not auspicious. Its inability to implement an organizational structure and secure adequate funding made it ineffective. Secretary of the Interior Krug called BLM "one of the...worst run Bureaus" within his Department. Employee morale was low. Many employees, particularly in Washington, looked upon their work as simply a job, and few had a sense of dedication. The future looked bleak, but a new Director would soon turn the situation around.

MARION CLAWSON: A SENSE OF MISSION

Search for New Leadership

The Bureau of Land Management was invigorated in 1948 with the appointment of a new Director. Western ranchers and congressional supporters did not feel Fred W. Johnson was sufficiently attuned to their needs and demands. Secretary of the Interior Krug agreed new leadership was needed but rejected suggestions of livestock interests for a new Director. He wanted someone who would be accepted by stockraisers, yet would exercise independence. He turned to Marion Clawson.

Director Marion Clawson

Clawson was BLM's regional administrator in San Francisco. He had joined BLM in 1946 after many years with the Department of Agriculture's Bureau of Agricultural Economics. A Nevadan, Clawson had an undergraduate degree in agricultural economics from the University of Nevada and a doctorate in economics from Harvard. He also understood the ranching business. His father had a small ranch in Nevada and his dissertation at Harvard had been on the economics of the western livestock industry.

Clawson did not think his work at BLM was challenging and was disheartened by the agency's inability to decentralize and secure adequate funding for its programs. He was searching for other work when Joel Wolfsohn, who was resigning, asked him if he wanted the Associate Director position with BLM. Clawson declined, commenting that he would not be able to accomplish anything unless he was Director. Soon afterwards, Interior Secretary Krug offered him the directorship.

Mandate for Change

The Secretary bluntly told Clawson that he considered the Bureau of Land Management to be poorly managed. Krug made it clear to Clawson that the agency needed new blood if change was to be made. Clawson had his mandate—to transform BLM.

Clawson's first task was to reorganize the Bureau. Assistant Director Thomas Havell had to go because of his "old GLO" attitude. So did the chiefs of most of the branches. Clawson replaced these people with individuals from outside BLM. For Assistant Director, and later Associate Director, he selected Roscoe Bell, who had worked many years in the Department of Agriculture. Clawson filled a number of other positions with people he had known in the Bureau of Agricultural Economics.

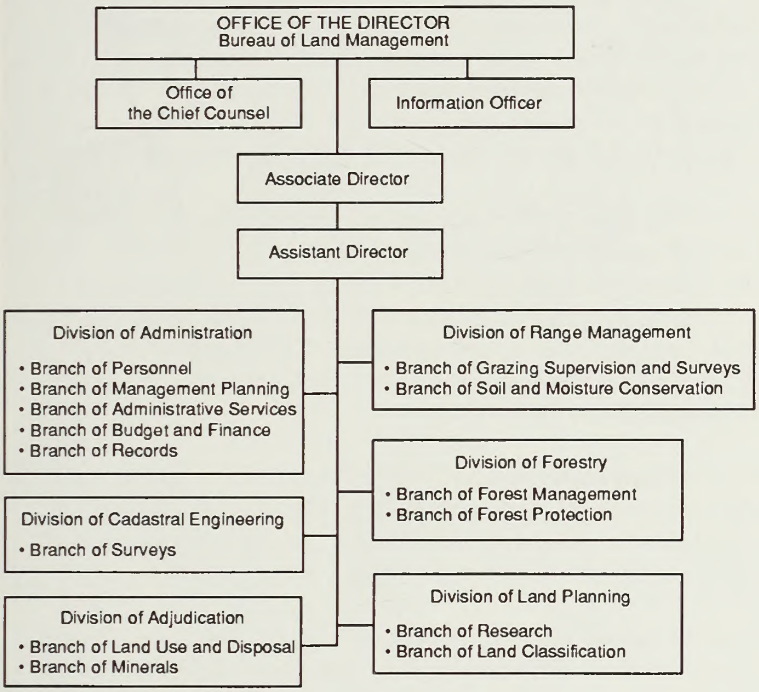
Decentralization of BLM Functions

Director Clawson pursued decentralization. He believed strongly that decentralization was essential if BLM was to become effective, efficient, and responsive. Clawson convinced Congress in 1948 to remove most of its restrictions against delegating authority to the regional administrators. The next year, no restrictions were imposed; by the end of fiscal year 1949, 85 percent of the Bureau's adjudicative functions had been decentralized to the regional and district offices.

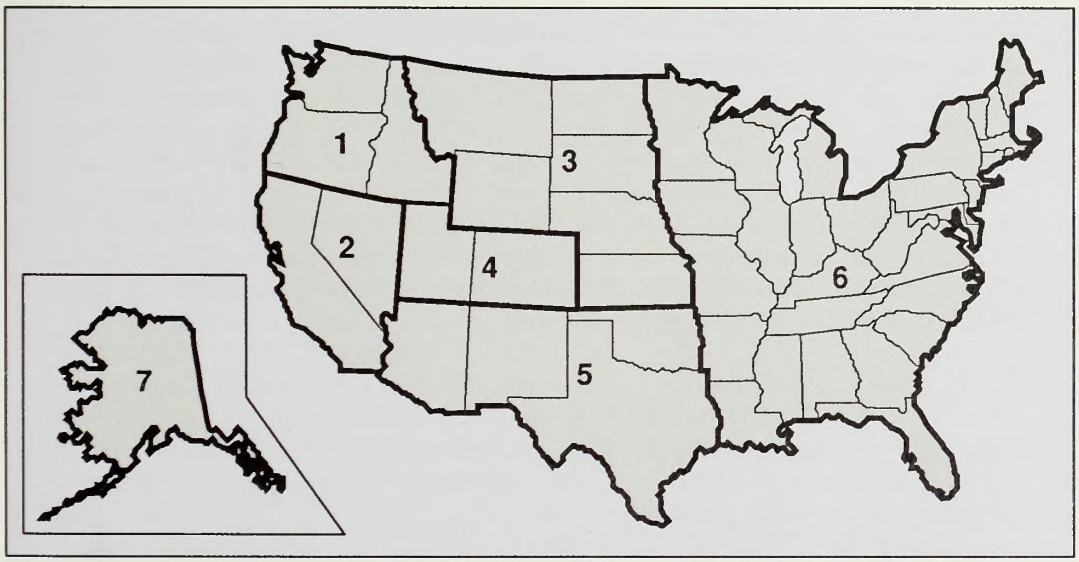
Clawson's reorganization made Washington responsible for overall supervision and development of long-range management and conservation programs for the public lands. The Director's technical expertise rested with the Washington office's six branches, which he transformed into divisions

and subdivided into other branches.

Beneath the Washington Office came the regions. Regional Administrators were directly responsible to the Director. The regions handled most case adjudications and developed the long-term plans for the public lands and resources within their jurisdictions. Regional staffs were organized along lines similar to those of the Washington Office and provided technical advice to district offices.



BLM organizational structure in 1950



BLM regions in 1950

A DIRECTOR'S PERSPECTIVE: 1948-1953

by Marion Clawson

Marion Clawson

Editor's Note: *Marion Clawson began his career with the Bureau of Agricultural Economics in 1929 after graduating from the University of Nevada, Reno, with a degree in agriculture. He moved to BLM in January 1947 as its first Regional Administrator in San Francisco. The following statement has been excerpted from a chapter about Clawson's BLM experience in his latest book,* From Sagebrush to Sage—The Making of a Natural Resource Economist *(Washington, DC, Ana Publications; 1987).*

The five years from March 1948 to April 1953 when I was Director of the Bureau of Land Management (BLM) was the most exciting, rewarding and sometimes frustrating period in my life. We had many interesting bureaucratic adventures, from surviving drastic cuts in our budget to obtaining BLM's first supplemental appropriations for range and forestry programs. My main contributions to the Bureau were to make its work more efficient and to decentralize its operations to regional and field offices.

In December 1947, Assistant Secretary Davidson asked me to come to Washington to discuss my becoming Associate Director of BLM. I replied that I was unwilling to consider the job, because real power in the Bureau lay with Tom Havell and this was a case where one had to be the unquestioned top officer or not take on any responsibility of top leadership.

I met with Secretary of the Interior Julius Krug and his Under Secretary for exactly 16 minutes and was offered the position of Director. After I accepted, Krug said that I would have to bring some new blood into the Bureau. I agreed, but then added that it was more important to get some old blood out, and he said, "It can be done." So that was my charter.

About noon on 4 March 1948, I was sworn in as Director of BLM. Within a month the House and Senate held budget hearings. In all my professional life I have never had a more difficult and strenuous time than the two hours or so I spent before the appropriations subcommittee in the Senate, when our appropriation request was under review. I was fighting to get funds restored to the levels we had asked, to save the regional offices (which I thought were basic), and to get permission to decentralize. I thought the latter was extremely important for a number of reasons: decentralization would put routine decisions nearer the land and the people they affected, it would put the same routine decisions in the hands of new people who were anxious to make a good showing, and it simply was inefficient to have paper constantly flowing from the field to Washington and back again.

In the end, we emerged as well as could be expected, given that a struggle was underway between a Congress of one party and a President of the other. As I recall, we got our requested funds with a provision that was immensely helpful to me—Washington office funds were cut and field funds were increased by the same amount. There was no prohibition against decentralization and our regional offices survived.

During the years I served as Director, the demand for nearly all natural resource commodities rose and this had a substantial impact on the public lands. Range management, soil and moisture conservation, oil and gas leasing, and O&C forest management were major programs during my tenure. The number and variety of applications for use of the public lands or for records about them never ceased to amaze me. For instance, we experienced a six-fold increase in applications for oil and gas leases.

Our staff developed a new application form that greatly speeded the leasing process and prevented clever applicants or agents from tying up lands by filing slightly conflicting applications (thereby creating nearly cost-free options to lease the land). I can still recall the glee with which we and Assistant Secretary Davidson received outraged complaints from applicants that we had become too efficient and it was costing them money!

Appropriations are the lifeblood of every federal agency. Policy is as often made and/or implemented in decisions about appropriations as it is in decisions about substantive legislation. Two incidents produced breakthroughs in getting adequate funding for BLM.

The spread of a poisonous weed, halogeten, into various western grazing areas enabled us, with the approval of the Assistant Secretary, to obtain a supplemental appropriation to reseed depleted ranges—which was desirable irrespective of halogeten. In the end, we got something in excess of $2 million supplemental—and this at a time when our regular appropriation was around $6 million. With that, BLM launched a large-scale program of reseeding rangelands. This increase went into our "base" in all the other years I remained at BLM.

The other breakthrough concerned timber access roads in the O&C area of Oregon. The GLO and BLM never had appropriations to build access roads but were dependent upon timber purchasers building roads. This lack of roads often meant a greatly reduced competition and hence a much lower price for the timber sold.

One winter an unusually severe storm along the Oregon coast blew down a great deal of timber. In some of these areas an infestation of bugs was already killing live trees. These bugs could thrive even better on blowdown timber and from that base more aggressively infest stands of live trees. The solution was to harvest both blowdown and intermingled standing live trees, as rapidly as possible; and for this access roads were needed. We got a supplemental road-building appropriation of something between $2 and $3 million: this was the beginning of BLM's road-building in the O&C area.

In the area of communications, I utilized staff meetings as a major management tool. I started them early on because I genuinely wanted our divisions to know what was going on and I was convinced that an informed Director's staff meeting the last hour of the day on every Wednesday —the hour chosen so that people who talked too long held everyone to overtime. A newsletter was then distributed to all employees.

At this time I formulated my second law of administration: keep them galloping. If one can provide real leadership, develop goals and likely means of reaching those goals, and generally run both a tight and an innovative organization, there is much less time for petty gossiping and dilatory actions. I did my best to keep BLM galloping. As with the actual running of wild horses, a certain amount of whooping and hollering was necessary.

Four types of field offices operated beneath the regional level: district land offices, public survey offices, district grazing offices, and district forestry offices. Here BLM carried out most of its management, protection, and disposal activities. A manager headed each office and was accountable to the regulating Regional Administrator.

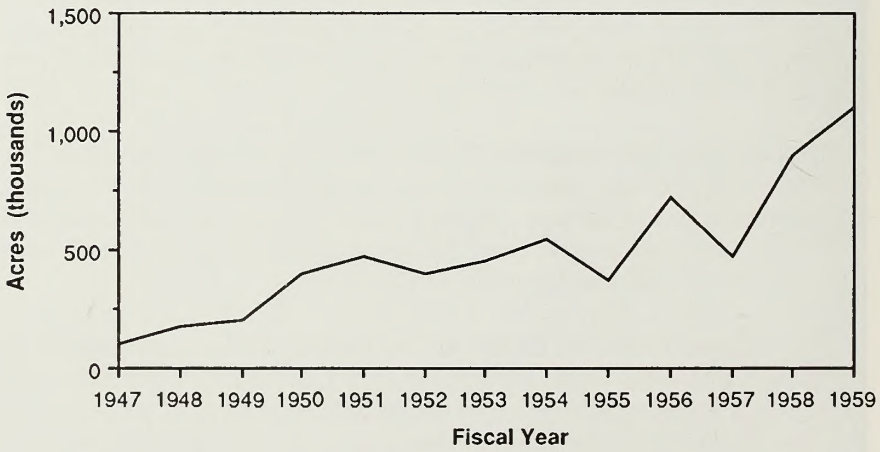
Multiple Use Ethic

Clawson also gave BLM a sense of mission and purpose by instituting a "dynamic program for resource management." Key to this agenda was the concept of multiple use management. "Multiple use," according to Clawson, "is [a] system under which the same area of land is used simultaneously for two or more purposes, often by two or more different persons or groups." These uses could be complementary, or, as was most often the case, competitive with one another. Clawson thought multiple use management desirable and wanted it practiced on BLM-administered lands.

Multiple use management offered BLM managers considerable opportunity and challenge. Land use decisions had to take into account not only the benefits and impacts of an activity but also their interactions with other activities. Managers now needed to know the resource values of the public lands under their jurisdiction. This required inventory and classification actions, so that the best and highest priority uses of public lands, along with the most advantageous land-tenure arrangements to promote them, could be determined.

Land Inventory and Classification

Clawson emphasized land inventory and classification. The Taylor Grazing Act directed that lands in grazing districts be classified before disposal, and President Franklin D. Roosevelt's general withdrawal orders of 1934 and 1935 directed the same be done (except in Alaska) for public lands outside the grazing districts. The Grazing Service and General Land Office had inaugurated studies, but little of the public domain was inventoried and classified. The classification work generally responded to individual applications for land disposal, but case-by-case classifications



Acres classified under Taylor Grazing Act authority

did not give BLM managers an overall picture of an area's character and economics. This required more general classifications of larger areas.

The Missouri River Basin Project, an interagency land inventory effort begun after World War II, helped facilitate the agency's gathering of resource data. BLM also inaugurated smaller area studies, usually small drainage basins where BLM had complex land and resource use problems to resolve. The data gathered was then, as Clawson noted, integrated into the development of long-term range plans "wherein all tenure, protection, rehabilitation, development, and use activities are properly and effectively balanced and implemented...initiated by BLM, rather than in response to uncoordinated private demands for public lands and resources."

Area Administration Concept

Carrying out that objective required considerable coordination. Clawson wanted to address that need through what he called "area administration" to achieve better and cheaper management of the public lands. Area administration meant having in a district office all resource and technical specialists necessary for district managers to make informed, effective, and efficient land disposal and use decisions.

Clawson's "area administration" concept, which he introduced in the summer of 1952 and his emphasis on decentralization, land inventory and classification, along with other innovations, pushed BLM toward becoming a viable conservation and multiple resource agency. By the end of his tenure in 1953, range and timber lands were better administered, wildlife and recreation resources were given added attention, and the management of lands and minerals programs was improved.

BLM emblem introduced by Marion Clawson in 1953 illustrated the agency's development and management program

THE RANGE MANAGEMENT DILEMMA

Range Staffing Problems

Clawson knew successful implementation of his conservation policy depended much on what BLM could accomplish on the public range. The lands needed improvement, and this could only be accomplished through better supervision and the institution of rangeland plans and programs. However, these required more employees and additional funding. Clawson knew that and attacked the problem head on.

The limited number of range management personnel threatened to forestall any attempts at improving the program. Nicholson's 1947 grazing proposal had stated that at least 242 personnel would be needed for BLM to carry out its Taylor Grazing Act responsibilities. Despite implementation of the 8-cent per AUM fee increase that Nicholson said was necessary to cover range administration costs, BLM in 1948 had little more than half the

personnel (123) recommended. The following year the staff had climbed to 182, but by 1950 the number had dropped to 176.

Grazing Fee Increase

BLM's grazing monitoring program, trespass enforcement efforts, and range condition studies were hampered. Clawson had to correct the situation if any progress was to be made. The 8-cent an AUM fee was simply not providing sufficient funding and an increase was obviously needed. He persuaded the National Advisory Board Council to raise the AUM fee by 4 cents so that he could increase his range management staff to 250 employees. In 1951, grazing district fees were raised to 12 cents per AUM, with 2 cents of the fee still going for construction of range improvements.

Range Program Advanced

The fee increase allowed BLM to hire new employees, many of whom had college degrees in range management, and enabled the Bureau to intensify its range management and supervision efforts. Detection of grazing trespasses increased. Range resource inventories and surveys of dependent ranch properties were begun in all regions to facilitate adjudication of range use privileges. All of this helped BLM's efforts to stop deterioration of the public range.

Range inventory work was particularly important. Knowing the condition of public rangelands, BLM could take steps to prevent further range deterioration. District managers could reduce the number of livestock grazed, although stockraisers opposed these reductions and usually succeeded in stopping the grazing cuts. Range improvement and rehabilitation plans could be implemented. Fencing and water source development permitted livestock to be distributed in a manner that prevented overgrazing, while reseeding gave new life to depleted range.

Range Improvement Needs

BLM financed the construction of range improvements with the 2 cents received from the AUM fee assessed ranchers and from appropriations under the National Soil Conservation Act for soil erosion control projects. Ranchers and grazing advisory boards also contributed money, materials, and labor. BLM, however, could still do little more than maintain existing projects. Director Clawson in his 1951 report *Rebuilding the Federal Range* asked Congress for more funds, noting that more than 38,000 stock-watering improvements and 68,000 miles of fence, along with other items, needed to be constructed. However, Congress made no effort to provide the additional funding Clawson wanted.

Congress responded more favorably to BLM efforts to rehabilitate the range. The Director in his 1951 report on public range conditions noted that 22 million acres of public land needed revegetation. He was again unable to get direct funding for this effort, but he was indirectly successful by getting Congress to enact the Halogeton Control Act of 1952.

Range Depletion and the Halogeton Problem

Halogeton is a weed poisonous to livestock that establishes itself on range in poor condition. The weed, however, can be controlled through maintenance and redevelopment of healthy ranges. The Halogeton Control Act sought to arrest halogeton's rapid spread across the West and, consequently, provided BLM with badly needed range restoration funds.

THE RANGE ADVISORY BOARD SYSTEM

A. D. Brownfield, Chairman, National Advisory Board Council
From* Our Public Lands, *October 1951

The range advisory boards of the Bureau of Land Management have proven in 15 or 16 years operation valuable adjuncts in the administration of the Taylor Grazing Act. The system was inaugurated by the first Director of Grazing with success...so much so, that Congress soon took notice of the good results, and by amendment to the act, made the provision for advisory boards permanent.

The Plan for selecting these advisors is in keeping with our traditional American way of choosing Government representatives—that is, by election—and thus had support from the beginning. At the outset, and in compliance with the law, in order to determine who would be allowed to vote, districts were set up in each State, and each livestock producer therein was allowed a vote for the advisors of his own districts.

Instituting the system by popular election allayed suspicion and facilitated cooperation by those users of the public range (or public domain) who had never known regulation, or considered any law necessary for their protection and guidance in the proper use of their fee lands and leased lands. It brought into the various local offices for assistance to the Secretary representative men from "the wide open spaces" better qualified to advise and recommend on proper division and use of the range, and furnish information on its past use by contending applicants, and the approximate carrying capacities of the range. It would have taken years of research and untold quantities of taxpayers' money to have gathered the information that was quickly furnished by these professionals of the range. Very little dissatisfaction has ever been registered against the system, proof of which lies in the fact that in all of the 10 Western States in which there are grazing districts, citizens of no one of these States have petitioned for a change to something different.

The method of administrative procedure was extremely simple and applicable to range use. All the range was first rated as to proper number of stock to be grazed, and seasons of use. Each applicant for a permit was required to furnish accurate information as to his owned or controlled land and water; he also had to state the numbers and class of livestock grazed on the public domain prior to the passage of the Taylor Act. Where reductions in numbers were found necessary to protect the range such reductions were on a prorated basis in community allotments. In individual allotments, reduction was made to fit the carrying capacity.

In the absence of basic data on range surveys, classification, topography, etc., these advisory board members furnished timely information until such work could be started and completed (much of which has not as yet been finished). Moreover, they serve as popular unpaid policemen for regulating grazing, trespassing, and other abuses. They also give information on necessary range improvement facilities—such as fences, wells, dams, reservoirs, stock trails, driveways, cooperative plans with State agencies, land exchanges, soil and moisture expenditures, and many other programs.

Decentralized government has made and kept America strong. There is no substitute for it. The same has proven true for good land management. Personal contact with the users of the range through the advisory board system has made "home rule" on the range work.

FORESTRY PROGRAM DEVELOPMENT

The Bureau's forestry program went through significant changes during the Clawson years. BLM introduced a new sales policy for the revested Oregon and California land grant lands in western Oregon that increased competition and laid the foundation for better management. It also inaugurated the management of public domain timberlands.

BLM found management of the O&C revested lands in western Oregon particularly challenging. When Marion Clawson became Director, the regional administrator in Portland, Walter Horning, who was formerly Chief of the General Land Office's O&C Administration, remained committed to a policy of achieving sustained-yield management for both O&C forests and private timberlands through cooperative agreements. The plan allowed private landowners to purchase stumpage rights to the intermixed O&C forest lands at appraised value and under 100-year cooperative agreements if they consented to follow sustained yield requirements developed by BLM.

O&C Policy Problems

The 100-year cooperative agreements plan, however, brought strong criticism. Many interests, particularly timber operators who did not own lands within the O&C area, felt the plan would give cooperators a monopoly. Revenues from O&C timber sales would decline, it was argued, and landowners would have no incentive to permit multiple use or implement good forestry practices. The protest, led by the Association of O&C counties, forced BLM to abandon Horning's plan in 1948 .

Director Clawson, as part of his 1948 reorganization effort, replaced Walter Horning with Dan Goldy. Goldy was an economist who had worked in the Interior Department on O&C matters. He felt that the timber operators within the O&C area had the monopoly. Goldy, fervently believing in competition and equal opportunity, developed a timber policy that would end the monopolistic and poor timber practices encouraged on adjoining private lands.

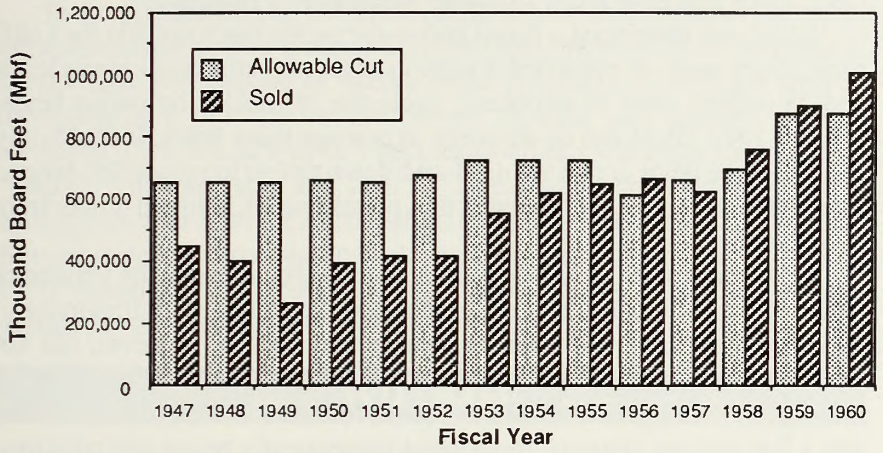
New O&C Policies

First, potential buyers had to be assured of access to BLM's O&C tracts. Most access roads within the area were privately built and controlled. The Bureau instituted a policy requiring the builders to give BLM and its timber purchasers reciprocal use of rights-of-way across adjacent private lands. BLM also sought to end its dependence on private access roads through construction of its own road system. This would not only give O&C timber purchasers access rights, but would also lead to better timber conservation practices because BLM could then build into areas of overripe or damaged timber in need of harvesting. The Bureau began building its road system in 1950. The following year, when extensive fires and wind storms damaged and downed more than 700 million board feet of timber, Director Clawson was able to get additional appropriations from Congress to build more roads into the affected areas.

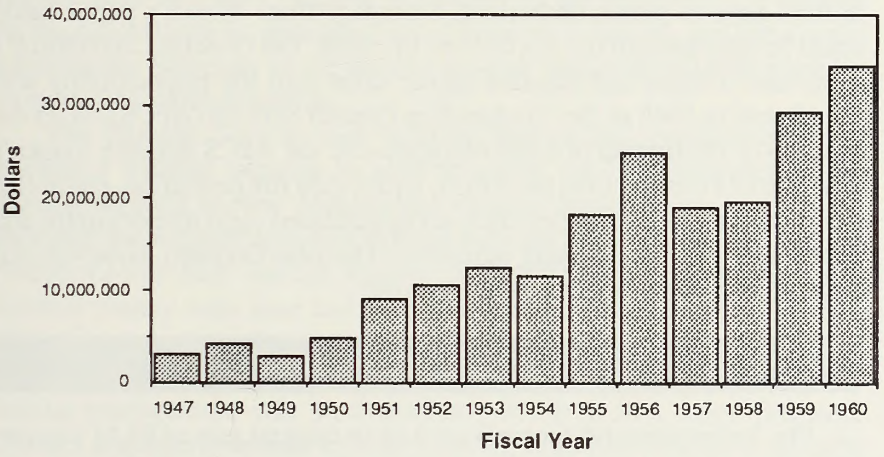
Policy further called for timber companies to submit suggestions as to what lands should be offered for sale during the following year. In

consultation with the district O&C advisory boards, BLM then developed a sales plan based on these suggestions and informed prospective buyers months before auction.

The first competitive sales under the new policy came in 1950. The volume of sales jumped from 265 million board feet to nearly 396 million. During the following year, the volume sold remained the same as in 1950, but the price bid went from $4.8 million to $8.7 million.



O&C timber sales 1947-1960



O&C timber sale values

Other changes instituted during Clawson's tenure further enhanced BLM administration of O&C lands. The forestry staff in Oregon gave new emphasis to timber inventories. Inventories were essential to determine the amount of timber that could be cut. BLM began new inventories that not only calculated the volume of available timber but provided information on the age, quality, size, and the location of stands from roads and processors. The new data was used to develop management plans and helped BLM better determine how much timber could be sold each year on a sustained

yield basis.

O&C Advisory Boards

The most significant change, however, involved the O&C advisory boards. In 1948, the Department of the Interior and BLM reorganized the boards to promote broader public representation. Members now represented not only the timber industry, State of Oregon, and counties, but also labor, mining, agriculture, recreation, wildlife, and conservation groups. This action more closely reflected the multiple use character of O&C lands and gave BLM a broader management perspective.

BLM also developed a forest policy for public lands outside the O&C area. There were an estimated 3 million acres of commercial forest lands and 25 million acres of woodland, exclusive of Alaska, on public lands. Prior to 1947, BLM had no authority to manage these lands. It could only dispose of the lands or remove dead-and-down timber to reduce fire danger. The Materials Act of 1947 changed this, permitting BLM to sell timber from public lands.

Public Domain Timber Resources

BLM recognized public domain timber would not equal the volume or value of O&C timber, but because many of the stands were important to local economies, they too needed management. BLM, however, did not have foresters to oversee or administer these lands until 1949, when an increase in funding allowed BLM to place foresters in each regional office and a few grazing districts. Inventories subsequently began and sustained yield cutting plans were developed.

Forestry in Alaska

BLM also pushed forestry efforts in Alaska. The Territory had 125 million acres of public timberland. Stumpage from Alaska's public lands could be sold through the Act of May 14, 1898. The General Land Office's local land officers had handled timber sales until the responsibility was transferred in 1946 to the Alaskan Fire Control Service (AFCS). With the creation of the Bureau of Land Management, the AFCS became Alaska's Division of Forestry. Like the AFCS, it provided fire protection, controlled forest use, supervised timber sales, set up sustained yield forestry units, and encouraged new wood-using industries. The new Division, however, put more emphasis on timber inventory work.

FIRE SUPPRESSION

Fire prevention and suppression was an integral part of BLM's timber and range management programs. When Clawson became Director, the Bureau's fire program had changed little from that of the General Land Office and the Grazing Service.

Fire Protection Contracted

Fire suppression efforts under the GLO and Grazing Service largely depended on cooperative agreements with federal and state agencies and local protection organizations. Insufficient funds forced BLM to continue this practice on the nearly 6 million acres of forest land in California, Idaho, Montana, Minnesota, Arkansas, Washington, and Oregon.

BLM Fire Program

In other areas, BLM used its grazing and forestry district personnel to develop a fire suppression organization. District fire crews were established and could be supplemented, during large fires, with personnel from other

districts.

To assist district crews, BLM in 1951 began purchasing 4-wheel-drive high-pressure pumper trucks. The vehicles, though few in number, quickly proved their value as two-person crews showed the pumpers' effectiveness in suppressing range fires. That same year, BLM also began installing high-frequency radio networks in an effort to decrease response time to fires and more effectively coordinate firefighting efforts.

Fire Protection in Alaska

In Alaska, the Bureau did what it could to maintain the small, but well-organized Alaskan Fire Control Service it had inherited from the General Land Office. Firefighters in Alaska found themselves confronted with an increasing fire problem as settlement, tourism, and military activity increased after World War II. Fire control efforts, although hampered by Alaska's immense size and lack of access were aided by cooperative agreements with other federal departments and agencies. The U.S. Weather Bureau supplied forecasts and relayed emergencies, while military and Civil Aeronautics Authority aircraft aided in fire detection and the transportation of crews and equipment.

WILDLIFE

The fire program's primary purpose was to protect forest and rangelands from damage and waste, but the program also benefited wildlife habitat. And the Taylor Grazing Act addressed the importance of wildlife on the public lands by opening grazing districts to hunting and fishing and allowing the Secretary of the Interior to work with state wildlife agencies in managing wildlife habitat.

Grazing Service Policy

The Grazing Service took wildlife habitat into consideration and permitted wildlife interests to play an active role in administering the grazing districts in New Mexico and Oregon. New Mexico stockraisers included one wildlife representative on their advisory boards. By 1939, all district boards had wildlife representatives. The Grazing Service also worked closely with state and federal wildlife officials and hunting and fishing groups.

Early BLM Policy

BLM continued the Grazing Service policy toward wildlife. Wildlife habitat management was an important part of BLM's range program. District managers worked closely with their advisory board's wildlife representative and state officials in managing wildlife on public lands. Some states helped the Bureau in rangeland reseeding efforts, which increased forage for wildlife as well as for livestock.

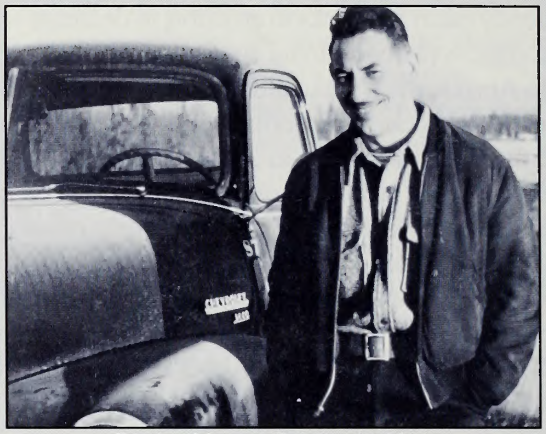
RECREATION

Recreation Act of 1926

Recreation was another important resource on public lands. The Recreation Act of 1926 provided for the transfer and lease of recreational lands to state, territorial, and local governments if they were not needed by the federal government.

TALES OF EARLY BLM FORESTRY IN ALASKA

by Edwin Zaidlicz
Former Montana State Director



Edwin "Moose" Zaidlicz in 1951.

It was the bitterly cold winter of 1949 when I joined BLM by replacing the first professional forester in the northern half of Alaska at Fairbanks. The forestry program was truly embryonic and our first responsibility had to do with containing tundra fires and as need and time warranted, we processed fire wood permits.

The Homestead Act was alive and well with our management authority and objective based on the land laws that encouraged land disposal. For a forester trained under the principle of long-term forest management under sustained uniform yield, a philosophical stress quickly developed. BLM appeared unready to accept long-term management of public land for any purpose.

I soon found myself at odds with the man in the fine office across the street—the Fairbanks Land Office manager. Until I, as the "cheechako stump jumper" arrived, his role as a "Fed" was time-honored and respected.

Then, during the next spring, Bob Robinson, our head forester in Anchorage, budgeted enough to hire three more foresters for Fairbanks.

Our "strange breed of cats" group had few regulations, no manuals other than those for fire and fiscal management and almost no direct supervision. Communications with Anchorage involved very slow mail, emergency air flights or our "Mukluk telegraph," a system of in-house war surplus radios.

Quickly we learned to use our own discretion rather than risk an undesirable and tardy decision from the south. We enjoyed a commonality of purpose, unlimited energy and enthusiasm, and an unavoidable need for creativity and innovation. State-of-the-art technical props included the radio, a Cessna 180 plane on floats or skis, a Polaroid Land camera and a handful of college text books. Undaunted, we "came out of the chute" by initiating

1) The first timber inventory of interior Alaska by sampling stands along the Yukon, Porcupine, Tanana and Chena rivers. Even then I squirmed at our audacity and possible sampling error. The Cessna and an outboard river boat served for transportation. Our aerial photography consisted of shots with hand-held cameras;

2) A small tree nursery and a post-treatment experiment. Dr. Harold Lutz, a forest soils authority from Yale and Dr. Ray Taylor, Chief of the USFS Alaskan Research station visited us. We proudly demonstrated our *Rube Goldberg* watering system. Dr. Taylor, a gentle and kindly man, expressed guarded admiration for our initiative and

novel operation. Dr. Lutz, a crusty pragmatist, made a more objective observation— "Your Herculean efforts will perhaps retard the cause of scientific forestry 100 years;"

3) Having the full support of the Air Force and the use of their vast depot of heavy equipment to take charge of any threatening tundra fires, we did some dramatic improvisation. We dispersed eight D8 caterpillar tractors in two units under a "USFS one lick fire line approach." A serious fire was quickly controlled. We were then visited by Mr. Gustafson, Fire Chief of USFS in D.C. and Mr. Blackerby of the USFS Regional Office to study our "perma-frost fire control." Gustafson, clearly impressed, observed that our "fire trails could unquestionably be seen from the moon;"

4) In an effort to improve the stagnant economy of our District, we got involved with a troubled Swedish homesteader to gather and process birch tree sap—much as is done on maple trees. While the syrup proved quite tasty, our new industry never displaced firewood cutting or muskrat trapping;

5) During the winter of '50-'51, Bob Robinson initiated the first formal timber inventory to undergird a possible timber operation in Alaska's southern district on Windy Bay. Three foresters from Anchorage and I were flown into the tract by a WWII "Goose" piloted by Bob McCormick. We had a large double canvas tent, our personal gear, grub for 30 days and explicit instructions from Bob R. For emergency use we had a special surplus-parts radio. About the time McCormick waggled his wings in his departing flyover, we confirmed the radio didn't work.

After 5 weeks, we completed our field sampling and were returned to civilization. Living in continual snowstorms and howling winds with three unwashed companions in a tent that served for cooking and living was an unforgettable experience and gave me a new meaning for the term "cabin fever." I did learn that it is possible to respect and admire another sharing the same traumatic circumstance. It was there that I made a life-long friend of the legendary Jim Scott.

Perhaps the highlight of my forestry career in Alaska occurred in the fall of 1951 when I almost succeeded in putting my admirer, the Fairbanks Land Office Manager, in jail for a fire and game violation. The word of this "forestry action" quickly spread throughout Alaska and BLM. The manager was arraigned, fined and lost his game license. Shortly thereafter, he was actually promoted to a more desirable post in the States and I got the opportunity to transfer to the O & C in Roseburg, Oregon.

My vivid recollection of those adventurous days of early Alaskan forestry highlight impressions of vast untapped resources, immense distances, unparalled natural beauty and the troubling insignificance of man's puny efforts to impact or manage any of the resources, especially timber and wildlife. Even our natural disasters were brutally intimidating; our 1951 Porcupine River fire burned 2 million acres in what seemed like a couple of days. To simply map the burn area took 5 hours of flight in a Cessna 180. We had to carry 5-gallon tins of fuel to gas up on shallow duck lakes.

Clearly the quality of humility in a neophyte forester is desirable and Mother Nature provides a dramatic setting in Alaska for developing it.

Lack of General Recreation Development Authority

BLM's lack of legislative authority to provide recreational opportunities did not dampen the agency's interest or efforts in recreation. Some BLM resource programs benefited recreationists indirectly—such as wildlife habitat management and access road construction. The Bureau's land classification program identified many potential sites for acquisition under the Recreation Act of 1926. In some areas, district personnel built facilities, such as camp and picnic grounds, even though they did not have the authority to do so.

Small Tract Act

The increasing public demand for recreational opportunities after World War II was furthered by the Small Tract Act of 1938. This law, as amended, provided for the sale or lease of tracts not exceeding 5 acres that were determined to be chiefly valuable for recreational, residential, business, or community site purposes. In 1949 there were nearly 7,500 Small Tract Act leases. Clawson commented that the Small Tract Act had become the law preferred by those seeking a home on the public domain. He was right. By 1952 the number of Small Tract Act leases had climbed to more than 25,000, and nearly 300 parcels had been sold for patent.

LAND HUNGER IN THE EARLY 1950s

Post-World War II Boom

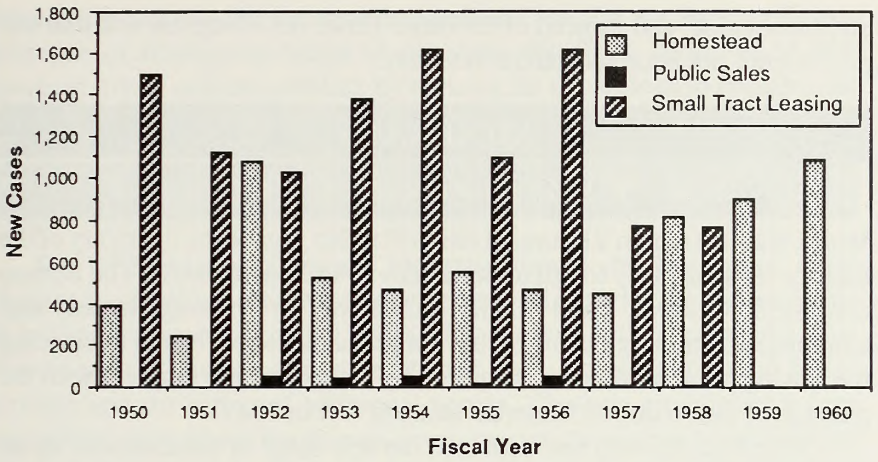
The Small Tract Act was indicative of public land activity after World War II. Homestead, Desert Land, and other types of entries increased sharply. Interest was particularly high among veterans, who received preference in making entries, but BLM had to deny many of the applications because the lands entered were not suited to agricultural development. As Director Clawson stressed, public land policy since the Taylor Grazing Act of 1934 looked to "the management and protection—and selective, rather than summary disposal—of the approximately 778 million acres of public domain and their resources in [the] continental United States and Alaska." Statements such as this did not dissuade potential settlers; the lure of the public lands was too strong.

Alaska: Land of Promise

Alaska experienced much of the boom. Thousands of military and civilian personnel sent to Alaska during World War II saw first-hand the opportunities Alaska had to offer, and many stayed to take advantage of the situation. Hundreds of others came after the war by way of the Alaska Highway, drawn by stories of the Territory's riches.

Many who came to Alaska used the Homestead Law to acquire land; from 1946 to 1953 more than 3,300 such entries were made. Competing with the Homestead Law was the Small Tract Act. Extended to the Territory in 1945, Small Tract Act sites were used to acquire lands for homesites, weekend cabins, and businesses around Anchorage and Fairbanks. By 1953, 600 sites had been sold and nearly 2,500 tracts were under lease.

Settlement and development of Alaska, however, was retarded by the lack of survey. Surveys were needed to adjudicate applications for use and disposal of public lands, but at that time only 2.5 million acres, or 1 percent of the Territory, had been surveyed under the rectangular system. BLM



New land case actions in Alaska 1950-1960

made surveys a high priority, but appropriations during Clawson's tenure permitted little more than 100,000 acres to be surveyed.

Land classification in Alaska was another important issue. BLM wanted orderly settlement and development for the Territory. The Bureau, however, had no general land classification mandate in Alaska, and so, the agency made do with the few authorities it did have.

Classifications required under the Small Tract Act were used to identify public lands values and control development around Anchorage, Fairbanks, and other Alaskan towns. The Alaska Public Sales Act of 1949 was also used to advantage. This law provided for the auction of 160-acre parcels of surveyed and unsurveyed lands to individuals and other interests who met certain criteria. Successful bidders were required to file a satisfactory plan of development for the tract and complete their project within 3 years or forfeit both the land and the money bid. In 1952, the Bureau, in cooperation with the Soil Conservation Service, launched a program of planned homestead development by identifying suitable lands and marking out farm units for prospective settlers.

Lower 48 Lands Situation

Land applications were also increasing in the "Lower 48." The Bureau's decentralization of land case adjudication to the regional offices helped speed processing, but the crush of applications was overwhelming.

In response to the increasing backlog, BLM wrote new regulations to streamline the adjudication of cases. The Bureau also began developing a new land record system. Through a microfilming process, certain land records, such as patents, could be more easily used and more effectively preserved. BLM also created a Division of Lands from its adjudication and land planning divisions in 1951 in an effort to more effectively administer the lands program.

Director Clawson called for a congressional review of public land laws. He pointed out, like the General Land Office had before him, that many of the laws under which the Bureau operated were "to a large degree outmoded

and incoherent" and in need of revision. However, Congress felt that the policies did not need substantial revision.

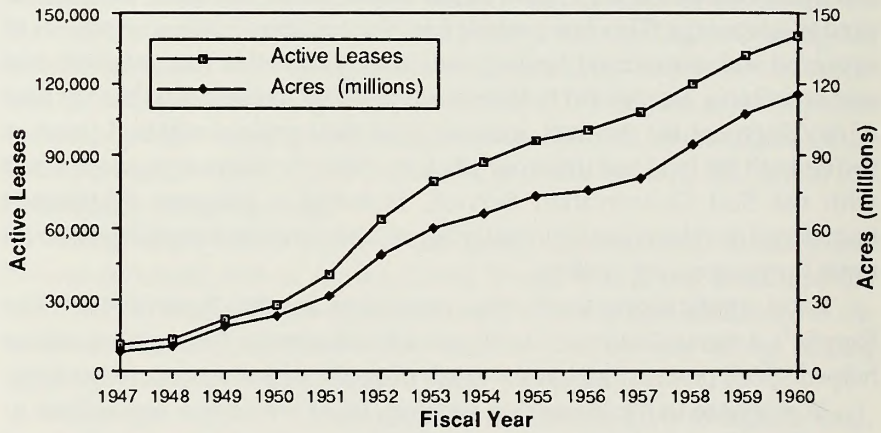
MINERALS

Mineral Leasing Responsibility

Development of federal minerals became increasingly important after World War II. Truman's Reorganization Plan No. 3 gave the Secretary of the Interior responsibility for all mineral activity on federal lands. The Bureau continued General Land Office functions by issuing leases and administering mining claims on the public lands. It also began overseeing the leasing of mineral estates acquired by the federal government with the passage of the Acquired Minerals Leasing Act in 1947.

Oil & Gas Boom

Oil and gas activity best reflected the new surge of mineral activity on the public lands. Petroleum companies had increased their lease and exploration for oil and gas during World War II and continued this activity after 1945. A boom in activity, however, did not come until 1950. That year alone saw 16,000 noncompetitive leases filed compared to the 4,000-a-year average during World War II. In 1951, BLM created a Division of Minerals at Washington headquarters to better handle the resulting workload. This action came at the right time. In that same year, an unprecedented boom in petroleum leasing came with the discovery of oil in the Williston Basin in North Dakota and Montana. The resulting "black gold fever" caused the number of new oil and gas lease applications to jump to nearly 32,000 in fiscal year 1952.



Active Oil & Gas leases for public domain lands 1947-1960

Speculation and Fraud

Increased oil and gas leasing created many headaches for BLM, but the worst was the age-old problem of speculation and fraud. Through newspaper and magazine advertisements, oil and gas brokers appealed to the desire of people to get-rich-quick by offering to file 40-acre federal leases for them. "The practice," complained Director Clawson, "not only swamped land offices with thousands of applications, but retarded the orderly exploration for oil and gas." The Justice Department called the

practices of the oil and gas brokers unethical but did not have sufficient evidence of misrepresentation to prosecute the filing firms. BLM did, however, try to end the problem by revising its regulations to prohibit the issuance of leases for less than 640 acres in areas outside producing units.

THE CLAWSON LEGACY

Clawson Accomplishments

By 1953, Marion Clawson had transformed the Bureau of Land Management into a multiple resource agency. As Director, he had been able to institute reorganization and policy changes with little controversy. The Bureau under Clawson also strengthened many programs through better funding and the hiring of additional people. Clawson established a firm foundation upon which the Bureau's resource programs could build and the agency's developing multiple use ethic could grow. It was a commendable job, but his land management philosophy differed from that of the new Eisenhower Administration; he was forced to leave the Bureau of Land Management in 1953.

THE EISENHOWER ADMINISTRATION AND "PARTNERSHIP IN CONSERVATION"

Republicans Gain the White House

The Presidential election of 1952 swept Dwight Eisenhower and the Republican Party into the executive branch after a 20-year hiatus. Republicans were not hesitant in using their victory to reshape public land policy. They did not intend a wholesale dismantling of the conservation policies inaugurated by the Democrats, but they did seek to loosen the restrictions they felt Democratic conservation policy had placed in the way of private development of public lands and resources.

New Conservation Thrust

"Partnership" was the key word of the Eisenhower Administration's public lands policy. "The best national resources program for America," stated Eisenhower in his first State of the Union Address, "will not result from exclusive dependence on federal bureaucracy. It will involve a partnership of the states and local communities, private citizens and the federal government, all working together." Eisenhower selected Douglas McKay, Governor of Oregon, as his Secretary of the Interior. McKay was more blunt in expressing the new Administration's public lands policy. After taking his new job, he declared, "we're here in the saddle as an administration representing business and industry." To accomplish this, McKay emphasized reduced bureaucracy, greater states' rights, and a freer hand for private interests. The new Secretary wanted agency chiefs who adhered to this philosophy and in McKay's view, Marion Clawson was not such a man.

Clawson Leaves

Clawson was viewed by the incoming Republicans as an advocate of central planning by government and as having the opinion that government could manage resources better than private interests. This led some Republicans to suspect Clawson of being a socialist. Clawson had to go;

Secretary McKay asked the BLM Director to resign. Clawson refused, citing his civil service status required a reason for his removal. McKay found one: insubordination.

DIRECTOR EDWARD WOOZLEY: A CHANGE IN DIRECTION

Director Edward Woozley

Marion Clawson was replaced in May 1953 by Edward Woozley. Woozley, the commissioner for state lands in Idaho, supported the Eisenhower Administration's States' rights platform and pro business and industry stance. The Idahoan was also described by supporters as "capable, imaginative, and resolute." This was a man more to McKay's liking; however, Woozley did not meet the civil service requirements for Director and so had to serve as Bureau Administrator for the first year of his nearly 8-year tenure.

BLM Reorganized

Among Woozley's first actions was the reorganization of BLM. He and Secretary McKay felt the Bureau was too centralized, even after Clawson's restructuring. A committee comprising three Departmental employees and three members of the public agreed with the assessment. They concluded that there remained "too great a concentration of operations in the Washington and regional offices."

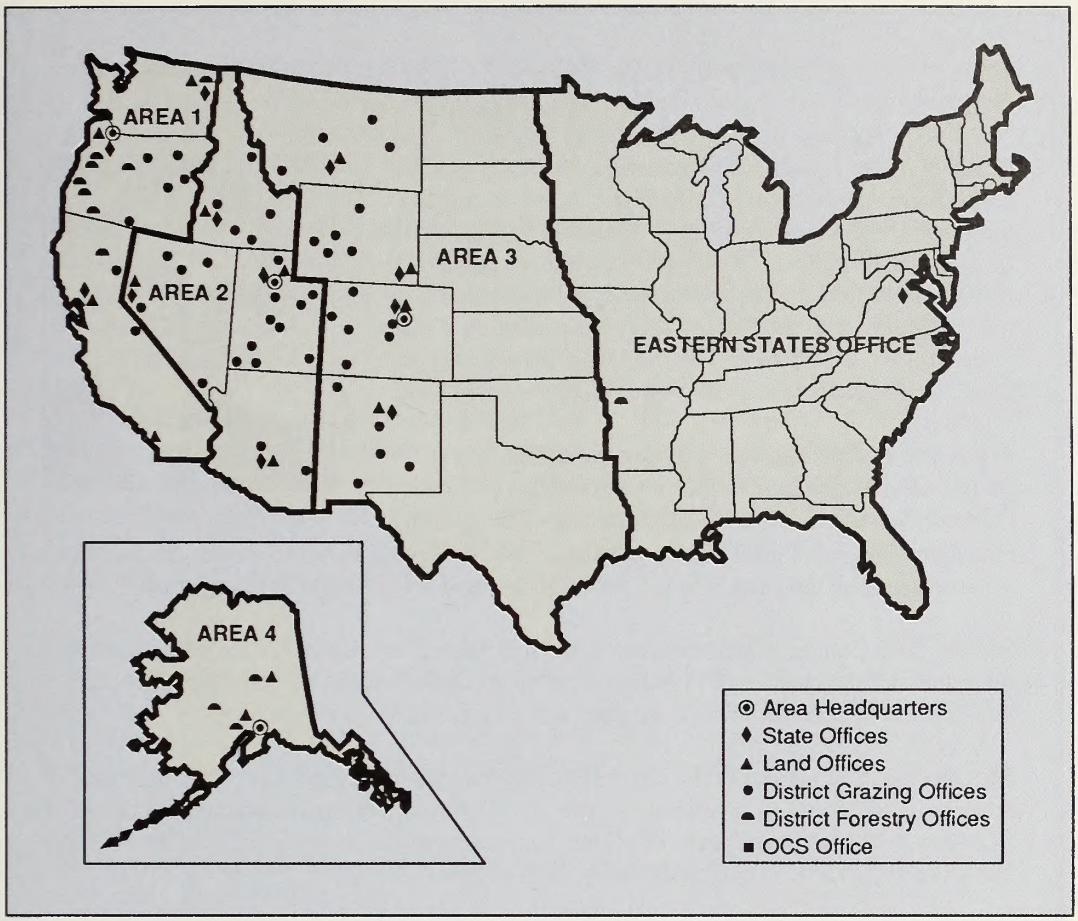
Acting on the committee's recommendations, Washington headquarters was restricted to providing major policy direction to the field organization. The regional offices were reorganized into four Area Offices—not to be confused with Marion Clawson's "area administration" initiative—with Area Administrators having general administrative and supervisory responsibility over the activities within their jurisdictions.

Most of the former regional office responsibilities went to a new organizational level called State Offices (except Alaska). These became the highest level of operations and implementation in the field, taking on adjudicative, land classification, and other land and resource functions. The State Supervisors in these offices dealt with state officials within their jurisdiction and developed long-range resource management and disposal programs. Along with their resource staffs, the State Supervisors also provided advice and technical direction to the District Offices.

District Offices continued as the lowest organizational level. The District Land Offices maintained land status records and took applications for public lands and minerals. District Grazing and Forestry Offices handled applications for range use and timber cutting as well as other actions.

Woozley, like Clawson before him, felt this decentralization of responsibilities and functions would bring public land management and decisionmaking closer to the user level, thus increasing efficiency and lowering administrative costs. The reorganization was implemented in 1954, and BLM's structure changed very little during the remainder of Woozley's tenure.

Woozley saw BLM as a business manager and felt that "the full worth



BLM reorganization of 1954

BLM is a Business

of the valuable resources on the public lands may be realized with a minimum expense to the taxpayer and that through careful cooperation with private enterprise, these lands can produce the products on which local, state, and national economy depend." This outlook would characterize the Woozley years.

RANGE MANAGEMENT ISSUES

New Range Use Controversies

When Woozley became Administrator, the range management program again became a center of controversy. The Republican Party Platform for the 1952 Presidential election had called for legislation that would better define the rights of public land users and protect those rights against administrative interference. In line with that pronouncement, Republican Congressman Wesley D'Ewart introduced legislation aimed at making the privilege of grazing on public lands a legal right by guaranteeing grazing use and providing for judicial review of administrative decisions.

Conservationists immediately attacked the D'Ewart bill. Montana Senator James Murray called it "another monumental giveaway" measure.

A DIRECTOR'S PERSPECTIVE: 1953-1961

by Edward Woozley

Editor's Note: Edward Woozley came to BLM with the Eisenhower Administration in 1953 and helped shape Secretary of the Interior Douglas McKay's "Partnership in Conservation" policy. Woozley was suited to the challenge. He had been Idaho Land Commissioner and appraised land for the Idaho State Land Board and the Production Credit Corporation. In July 1960, Director Woozley wrote of the BLM's accomplishments in the years since his appointment.

Edward Woozley

We in the Bureau have been giving much thought to the future in recent months. Our look ahead certainly told us that there still remains much to be done in managing the Nation's resources. But the enormity of the job ahead shouldn't cause us to lose sight of some of the achievements we have made in the past. The last seven years have been impressive.

For FY 1953 Congress appropriated slightly more than $14 million. For the year just ending the figure will be closer to $34 million, and the figure will probably be higher next year, if the various receipts from which we get a share, come up to expectations.

Receipts too, give an idea of the growth that has been made. In 1953, the cumulative total of receipts by BLM and its predecessors over some 140 years reached the landmark figure of $1 billion. In the last seven years, that figure has been reached for the second time. In FY 1960 alone our receipts will be approximately $375 million.

Of course our growth cannot be measured in terms of money alone. In 1953, a new record was set when 626 million board feet of timber was cut on O & C lands. For this past year the cut will be approximately a billion board feet. In 1953, we closed about 60,000 cases in our lands and minerals adjudication processes. When the final figures are totaled for 1960, the number of cases closed will be close to 220,000. Our classification and investigation program in the same period will show a gain of 35 percent over the 23,306 cases closed in 1953. In our cadastral survey program the total number of acres surveyed each year is now approaching 2,000,000, an increase of about 16 percent over 1953. But the big jump comes in original surveys, where our present program calls for surveying more than twice the acreage surveyed in 1953.

Statistics tell only part of our story. The Bureau, for example, has supported and helped prepare innumerable pieces of legislation advancing the cause of conservation and resource management. The 1954 amendment to the Recreation and Public Purposes Act has provided a tool of increasing importance to the Bureau in meeting the Nation's increasing demand for resources devoted to recreation and leisure time activity. The Outer Continental Shelf Act, passed in August 1953, already has returned to the U. S. Treasury more than $434 million, with an additional $300 million held in escrow pending final determination of its distribution by the Supreme Court.

Another major legislative milestone was the passage in 1955 of Public Law 167, the most

important piece of minerals legislation since the 1920 Mineral Leasing Act. Multiple use of surface resources, and the elimination of many serious conflicts between surface management and mining operations, became achievable realities as a result of the Bureau program developed under this law.

While legislation is behind some of the changes in the Bureau's activity, major importance must be attached to those non-legislative changes which also have been instituted. The concept of a unified and coordinated program of resource management based on state boundaries, was a major purpose of our 1954 reorganization and the increased effectiveness of operations within the various states has proven the value of that move.

Long range conservation programs tell a significant story of Bureau progress. The Bureau's reforestation program is a case in point. A comprehensive inventory in 1957 showed that more than 150,000 acres of western Oregon forest lands needed artificial reforesting. In that year the Bureau began a greatly accelerated forest land rehabilitation program and to date 75,000 acres have been planted. This program will place cutover and burned lands in production 5 to 20 years sooner than nature's normal processes.

Great strides have been made also in a variety of management activities. The deterioration of the public lands records through age and use threatened to make these vital records useless to future generations. Early recognition of this problem and the development of our long range records improvement project has enabled us to take an enormous step forward, in not only preserving them but putting them in a form that adds greatly to the clarity and ease of use.

Surveys of our land offices, our forestry programs, and the operation of our grazing districts have led to significant changes in the organization and management of our activities, thereby increasing their efficiency, and enhancing their ability to serve the public.

Speeded operations through automation have become increasingly significant in recent years. We now acquire forest inventory data through automatic data processing in Oregon; bills are automatically prepared from punched paper tape in Cheyenne; a robot typing machine prepares answers to correspondence in Los Angeles; and photocopy and other reproducing equipment enables us to prepare almost instantaneously, copies of records and maps, from originals or from microfilm.

Field techniques likewise have benefited from the adoption of new tools and equipment. The Bureau pioneered the program of fighting major fires in Alaska through airborne borate drops. Our engineering survey parties have achieved outstanding results through the use of helicopters, photogrammetry, and tellurometric equipment, the first truly major changes in surveying techniques in more than a century.

In all, these have been eventful years. Progress hasn't always been as fast as we would like, but when we look back to where we have been, it is clear that we have made great strides. The road ahead looks more promising today than ever before. When we recall the idea that "What's past is prologue," it can be said that the future looks very bright.

The Department of the Interior could not even support the bill, and the legislation, as well as an amended version in 1954, was defeated.

Woozley was sensitive to the debate on Capitol Hill and wanted to cool the controversy. Some ranchers complained that nearly half of them operated on public lands with only year-to-year leases; they wanted more secure tenures. Woozley addressed the problem by declaring it the Bureau's policy to give more than 90 percent of its range users 10-year grazing leases as fast as the necessary reappraisals of user leases would permit.

Range Adjudication Efforts

Woozley, therefore, made range adjudication the range management program's highest priority. BLM's range staff stepped up work on range condition inventories and the surveying of private ranch properties to determine carrying capacities and grazing use privileges. The work was slow because of the limited staff, but the Bureau moved ahead and made great strides in adjudicating range privileges.

BLM

Range inventory work near Dillon, Montana

The reappraisals led to controversy. BLM grazing district managers, with "hard and cold facts" in hand, often reduced range use to levels more compatible with the new carrying capacity determinations. Stockraisers did not like the cuts and resisted BLM's efforts to impose them. BLM, however, did what it could to work out the disagreements and was usually successful in reducing range use where it was needed.

Idaho Innovation

Face-to-face dealings were important in these situations, but grazing district managers seldom had time to meet with each rancher individually. To overcome this problem in Idaho, State Supervisor J. Russell Penny began in 1957 to divide his grazing district offices into subunits. Each subunit was assigned to a "Division Manager" who was responsible for public relations and range management within his division. This forerunner

to today's area manager concept was an unofficial innovation, but it worked well and helped ease the controversies that arose between BLM and ranchers.

BLM's range adjudication program was also aided by additional funding. The 12-cent AUM fee secured by Marion Clawson in 1951 was not sufficient to fund the range management program. Woozley felt that tying grazing fees to the cost of administration handicapped BLM management efforts. He therefore advocated that the range management program be funded largely from appropriations. However, he still wanted ranchers to pay a portion of this cost and felt it fair to tie the fee charged them to the price they received for their livestock at market.

Grazing Fees Restructured

Grazing Fees 1936-1960 Taylor Grazing Act Lands	
Years	Animal Unit Month Fee ($)
1936-1946	.05
1947-1950	.08
1951-1954	.12
1955-1957	.15
1958	.19
1959-1960	.22

He approached the National Advisory Board Council with the idea in early 1954. The group, after some months, agreed to the new grazing formula. The new fee would vary with the average price paid per pound for cattle and sheep in the eleven western states. Twenty-five percent of the fee was to go for range improvements.

The fee for 1955, based on 1954 livestock prices, called for an increase from 12 cents to 18 cents per AUM. Director Woozley felt the 50 percent fee hike was too drastic and had the Secretary of the Interior agree to arbitrarily set the fee at 15 cents until 1957. Drought conditions in many parts of the West in 1957 delayed institution of the new grazing formula for another year. The fee for 1958, based on 1957 market prices, was 19 cents per AUM. In 1959 and 1960 the fee went up to 22 cents.

By 1960, BLM expressed satisfaction with its range management accomplishments. The Bureau had made some mistakes in adjudicating the range, which had led to misuse and overgrazing, but overall range condition trends looked good to the agency. Three-quarters of the range was considered to be in fair to excellent condition. Range studies concluded that 24 percent of the range was improving, while only 10 percent was declining.

Range Program Accomplishments

Professionalism in the range management program had also improved, partially due to the hiring of college-educated range conservationists. The improved administration was most evident in BLM's adjudication of range privileges. "The adjudication process," contends political scientist Paul J. Culhane, "was the most important local level manifestation of the professional maturation of the BLM in the 1950s."

FORESTRY PROGRAM

The Value of Timber

Forestry in the Bureau also went through important changes during these years. Woozley was impressed by the program's money-generating potential. In 1954, he commented that the "profit margin" of timber was proof that good forest management paid. As the O&C revested lands had the Bureau's most valuable timber stands, Woozley paid particular attention to the policy for those lands.

Woozley's O&C Policy

Woozley was not keen on the competitive sales and rights-of-way program for the O&C. He regarded these policies as needless and controversial. The Director wanted to do away with both policies, but his efforts met with charges that BLM favored the big lumber companies. The outburst of protest led one BLM employee to remark that, while "the O&C lands are about 1 percent of the area managed by the [B]ureau...it seems like they cause 50 percent of our headaches." BLM , therefore, left both policies in place, although it did initiate some regulation changes.

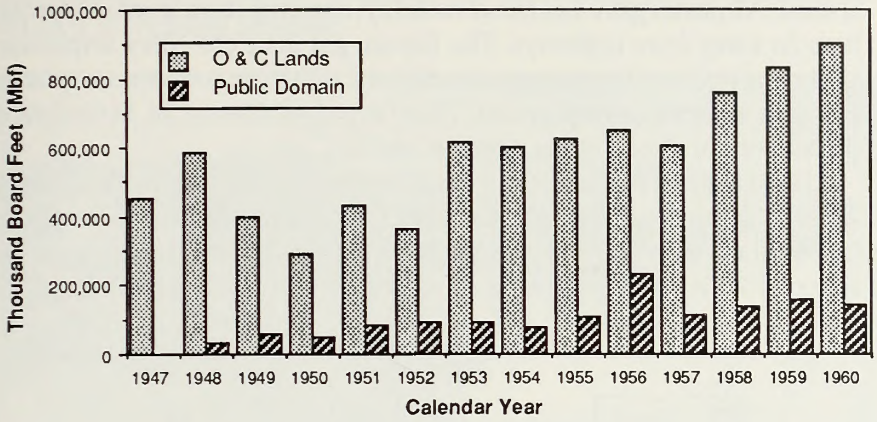
While Woozley was not able to change BLM's competitive bidding policy, he did effect other changes. BLM in the O&C worked toward more effective "grass roots" level administration for better and faster service to the logging industry. District foresters were given more timber sales authority and overall administration was improved with the introduction of "unit foresters." Unit foresters were responsible for the resources in a subdivision of a forest district office. Each unit forester was provided a small staff to help with timber management plans, engineering, and other jobs.

BLM eliminated marketing areas on the O&C. Marketing areas, an innovation introduced prior to the Bureau's creation, were designated zones where timber cut on the O&C had to processed. The concept was intended to protect the local lumber industry from outside competition, but shifts in local and national economies and the lumber industry's changing technology made the need for marketing areas unnecessary.

BLM also altered timber management practices in response to county demands for increased annual allowable, sustained yield cuts. Restrictions limiting clear-cutting to 40-acre tracts so that new growth could be regenerated by natural seeding were abandoned, with larger area cuts and artificial regeneration methods being substituted. This allowed BLM to adjust the annual allowable cut from about 693 million board feet to more than 874 million. The agency also adopted new techniques for cruising and appraising timber by using computers.

Public Domain Forestry

On the public domain, Woozley continued to expand BLM's management of timber and woodland resources. Public timberlands were still subject to disposal after classification for their highest use. The Bureau tried unsuccessfully to obtain Congressional authority to withdraw these lands from entry but did at least get the Timber and Stone Law repealed in 1955. Despite the fact that these lands could be transferred to private ownership at any time, BLM recognized the importance of these lands to the



Timber production 1947-1960

economic well-being of many local communities and carefully protected and managed the timbered public lands still in its custody. "In that way," the Bureau argued, it could "assure that anyone who may acquire them will receive them in productive condition."

BLM, therefore, continued the public domain timber inventories initiated under Clawson, and they proved enlightening. BLM found the extent of its public domain timber resources to be greater than originally thought. Through the use of annual forestry plans, BLM increased timber sales and accelerated reforestation efforts on these lands.

Alaska Timber

Forestry efforts also progressed in Alaska. BLM's 1955 *Alaska Report* estimated the territory's 125 million acres of forests and woodlands contained some 350 billion board feet of lumber. Because Bureau policy called for maximum multiple use, the protection and development of watersheds and timber resources, and protection against insects, disease, and fire, BLM increased its forest inventory and timber management planning in the territory.

Timber Program Staffing

The public domain timber program, like the range management program, was limited in what it could accomplish. In 1957, there were only 310 foresters supported by 100 nonprofessional and seasonal employees, and most were assigned to the O&C. A few forestry offices, like in Coeur d'Alene, Idaho, were opened to administer public domain forests. However, most grazing districts, many having extensive and valuable stands of pinyon-juniper and scrub oak, continued to operate without foresters.

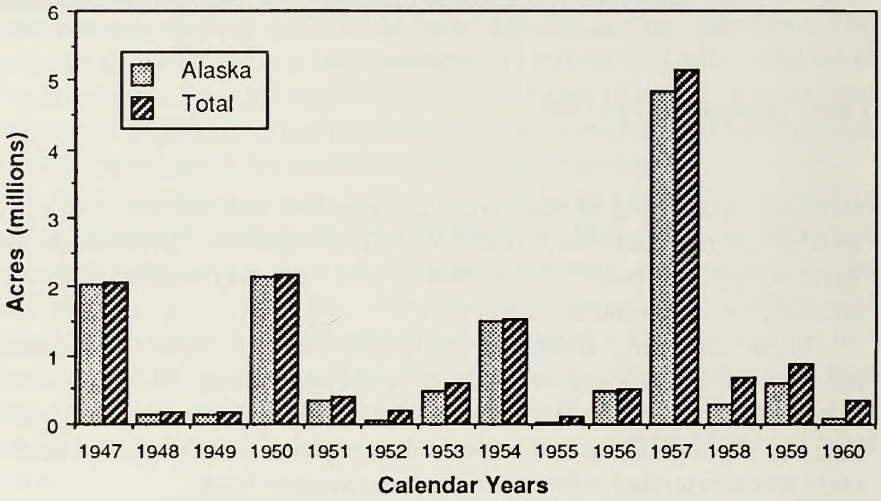
FIRE PROTECTION AND SUPPRESSION

Alaska Fire Program

It was in the area of fire protection that BLM's forestry program in Alaska made its most notable gains. When Woozley became Director, Alaska's firefighting facilities and equipment consisted of military surplus

material, with aircraft being the most important part of the firefighting arsenal. Airplanes gave fire crews mobility, enabling them to quickly reach fires far away from highways. The Bureau got three old Navy amphibian aircraft in 1953 and then supplemented them with three conventional planes to transport crews and equipment. These airplanes allowed BLM to expand its fire control efforts in the Alaskan interior.

BLM learned the limitations of its firefighting program in the territory when wildfires devastated Alaska in 1957. More than 400 fires burned close to 5 million acres. One fire, the Kuskokwin Fire, burned an area twice the size of Rhode Island. Damage to resources was put at more than $7.7 million.



BLM administered land burned 1947-1960

After the 1957 fire season, BLM worked hard to upgrade its Alaska fire program. Fire facilities were built at Fairbanks, McGrath, and Central in 1958, and six others were planned. The Bureau increased the number of fire weather stations. A fire rating system was developed and employed. Air patrols were sent into areas after lightning storms, and the use of aerial sodium borate drops, effective against small fires, was expanded. But the Bureau's highest priority was a smokejump installation in Fairbanks. In their first year of operation in 1959, BLM's 15 smokejumpers made 109 successful jumps, completely extinguishing 11 major fires.

Lower 48 Fire Efforts

BLM also improved firefighting efforts in the "Lower 48." The agency continued to contract fire protection for the 5 million acres of public domain forests that were too far away from its district offices. BLM also continued to install high-frequency radio networks in all the western states to enhance response time and to coordinate fire efforts. Pumper trucks became the backbone of grazing district firefighting arsenals because, with them, two-member crews could control 90 percent of the range fires. Aerial water drops further enhanced the effectiveness of the pumper trucks.

By 1960, the Bureau's fire response times had been reduced and fire suppression methods and equipment had been improved. Better training of

firefighting crews further enhanced the increasing professionalism of BLM's firefighting program.

BLM

A tanker truck fighting a range fire in Idaho

WILDLIFE

The wildlife program continued to expand in importance during Woozley's tenure. The Bureau's basic policy toward wildlife was still concern for the habitat, and as Director Woozley explained in 1955, "The management of wildlife [was] strictly on a basis of cooperation between the BLM as the administrator of vast public land acreages, supporting large wildlife populations, and the respective states recognized as the owners of the wildlife."

Wildlife Policy

BLM gave wildlife interests more influence. In 1955, the number of wildlife representatives on National Advisory Board Council was increased from one to three members. Five years later, nonprofit wildlife groups and organizations were allowed to nominate and influence selection of candidates for wildlife positions on each of the grazing district advisory boards. The nominees were referred to state fish and game officials and then appropriate BLM State Offices for consideration and approval.

Wildlife Representation on National Advisory Board Council

The range and forestry staffs became more involved in wildlife management. Many BLM employees participated in wildlife census work, game range studies, and other related work.

BLM Wildlife Work

Of the many wildlife issues that BLM managers faced, the migration of antelope proved the most controversial. National and local wildlife organizations expressed concern over how sheep-tight fencing in Montana and Wyoming was preventing free movement of antelope. BLM had to find a compromise that would protect the needs of ranchers, yet address the

Antelope Problems

antelope migration problem. Several years later, it adopted a policy that would allow for fence construction in important wildlife habitat areas only after proper safeguards for wildlife had been made.

Wild Horse Issue

Wild horses also became an issue. When the Taylor Grazing Act began operation, free-roaming horses were seen as a nuisance. Horses are hard on rangeland, so large herds quickly overgrazed areas. The Grazing Service and ranchers wanted to eliminate the horses from grazing districts. During World War II, Secretary of the Interior Harold Ickes had more than 77,000 of the animals removed from the public lands to control their numbers but did not have the herds totally removed.

In the late 1950s, free-roaming horses again became a problem. The public had become increasingly aware of the horses and believed they were wild descendents of the animals brought into the Southwest by the first Spanish explorers. The linage of these horses, however, only went back to animals abandoned earlier in the century when horse prices declined and their use on farms and in the military faded because of mechanization.

Wild horse groups wanted a national wild horse refuge, but BLM officials called the idea unrealistic because of the large areas the horses roamed. The Bureau did, however, support protection if the horses became faced with extinction and backed a law that prohibited roundups of abandoned horses and burros by airplanes and motor vehicles in an effort to prevent the cruel treatment of these animals.

RECREATION

Recreation Use

As in the Clawson years, recreation continued to be an important facet of the range and forest land use. During Woozley's tenure, use of the public lands for hiking, camping, and other forms of recreation increased. Most of the recreational use was associated with hunting and fishing.

Recreation Inventory Efforts

The Bureau recognized that "the need for additional lands for public recreation purposes [was] a critical national problem." So, in cooperation with the National Park Service, BLM began inventorying and identifying public lands to determine which should be set aside for recreational purposes.

Although the public lands had recreational potential, the Bureau had little authority to develop and manage recreation areas. With the few recreational responsibilities BLM was given by Congress, the Bureau sought to protect, improve, and facilitate recreational use.

Recreation in Alaska

In Alaska, the Public Works Act of 1949 allowed for development of recreational sites on public lands. This effort was furthered by a 1956 law permitting BLM to undertake direct development of recreational sites in the territory. By 1958, BLM had improved 47 sites and had identified 69 more projects. BLM, however, encouraged the transfer of these sites to territorial and later to state agencies. In 1960, Secretary of the Interior Fred Seaton proposed that BLM be given authority to improve sites on other parts of the public domain.

R&PP Act of 1954

The basic Bureau recreational authority remained the Recreation Act of 1926. In 1954, the law was amended to provide for the lease and sale of public lands determined valuable for public purposes such as waste disposal sites, cemeteries, and municipal water storage to state and local governments and nonprofit associations and corporations. Applications for sites under the new Recreation and Public Purposes Act flooded BLM. The Bureau sold sites if the land had no multiple resource values and leased the sites if the land had such values.

Protection of Cultural Resources

The Bureau was able through the Recreation and Public Purposes Act to protect not only areas having recreation potential but also areas having historic values. BLM as early as 1953 became aware of increased vandalism to cultural resource sites. District managers did their best to police sites and investigate incidents, but to little avail. BLM even tried to develop a management and protection program with the help of the National Park Service, but the effort did little to halt the destruction. The Recreation and Public Purposes Act, however, specifically provided for the transfer of cultural resource sites, thus allowing BLM to better protect these sites through transfers to the states.

THE LANDS PROGRAM

Land Boom

The land hunger that followed World War II continued with new fervor after the election of President Eisenhower. In fiscal year 1953, more than 40,000 applications were filed and, the following year, entries increased by more than 50 percent.

Edward Woozley called the crush of applications "unprecedented", though this boom paled when compared to past land rushes. He attributed the marked increase to the nation's "high level of economic activity...particularly...those sections of the country where public lands make up a large part of the total land area." BLM also pointed out that higher land values, increased risk capital, and advances in technology made previously marginal and submarginal lands attractive for development.

The new Republican Administration also spurred activity. Republicans in Congress had long argued that the Department of the Interior under Presidents Franklin D. Roosevelt and Harry S. Truman had locked up the public lands. Eisenhower's first Secretary of the Interior, Douglas McKay, agreed and felt many public lands could be "more economically and satisfactorily administered" if transferred to state or private ownership. Such talk undoubtedly fueled the land rush, as speculators and others anticipated a great giveaway.

BLM Land Policy

Giving away public lands, however, was not the intent of the new administration. Public lands with important multiple resource values were to be retained. Interior Department officials, however, felt that land case processing could be simplified and modified regulations to allow BLM to be more responsive and flexible when processing entries.

BLM continued the records improvement project initiated by Clawson.

New Records System

In 1955, the Bureau introduced the Master Title Plat and Historical Index system that remains the basis of the Bureau's land and mineral status records system today.

Making Land Available

The Bureau also strove to make more public lands and resources available for development and entry by revoking withdrawals. Withdrawals were reviewed to determine if they still fulfilled the purpose for which they were established and if the resource values could be protected by other management methods. BLM also got Congress to enact legislation prohibiting the military from securing public land withdrawals of more than 5,000 acres without Congressional authorization and permitting the Bureau to manage the resources within the military reserves. BLM was thus able to open up millions of acres of public land to entry and to prevent millions more from being withheld.

Survey Program

Surveys were also important to the Interior Department's efforts to make lands available for use and development. Resurveys were vital in properly marking public land boundaries for lease or disposal. In addition, a significant amount of acreage in the "Lower 48" was unsurveyed. Fifteen percent of the western United States, excluding Alaska, had not been traversed by survey crews. These unsurveyed lands, often rugged, mountainous, or desert in character, were wanted by states to satisfy land grant selections. These lands, however, had timber and mineral values that could not be sold or leased until surveys were completed.

Since survey appropriations were inadequate to meet the demand, surveys had to be completed where demand was most urgent. BLM looked

BLM

BLM surveying crews adopted use of electronic measuring devices in the late 1950s.

RECORDS IMPROVEMENT PROJECT

by Tom Adler
Management Analyst, BLM Service Center

The Records Improvement Project (RIP) was a special program approved for the enhancement of the Land Office Records. In the process of doing a "Land Office Business," the land records kept by the Federal Government grew by leaps and bounds.

The process for tracking ownership of a piece of land soon became a monumental task. As the volume of information expanded, so did the space requirements to store these odd-shaped books and plats. The land office records were very cumbersome to handle, difficult to read, and only available at selected locations.

To research a case, a person would have to find the proper books, and/or plats, remove them from the storage shelves and find a vacant table to open them on. The documents for one case often required the entire table top. The researchers soon found themselves with over 10 million records to sift through in order to find their required information.

In the mid-1950s, the Bureau issued several contracts to correct the records problems: storage, readability, and retrieval of information. The first State to receive the "New Records System" was Utah, followed by New Mexico and Arizona.

The New Records System consisted of Master Title Plats (MTPs), Use Plats, and Historical Indexes (HIs). The MTP, a composite of approved Survey Plats for a Township replaced the GLO Plats. Use Plats, copies of the MTP showing specific use activity, replaced freehand mineral plats such as oil and gas leasing activity. The HI, a chronological list of all land transactions in a given Township, replaced the Tract Books. With this new system, users could find title and use data at a glance, that previously would have required hours of research.

This system has a master set of records (the working copy) which is updated daily by the Records section at each State Office and copies that are in the public room, District and Resource Area offices. Many other agencies also have a copy of these new records.

The process to create the new records required that each document be reviewed and abstracted to a standard form. The forms were then sorted into files by township and the information hand drafted to the new plats or typed on the HIs using special long carriage typewriters. The material used for the new records was reproducable and updatable.

Although this system is widely accepted and used today, in the late 50s times were tough. The existing contractor went broke and no one was willing to take over the task at hand. At this time, BLM established an in-house Records Improvement Project. The project goal was to continue to build the "New Records System" for other western states and Alaska.

The RIP Project Office varied from 50 to 150 employees, each with specialized title records skills, who moved from state to state, constructing the new records which were subsequently reviewed and accepted by the State Office. This was a 2- to 3- year process for each State.

California was the last state to receive the New Records System and in 1984, the RIP Project Office was closed.

for ways to speed the process. The efficiency of crews improved with the use of helicopters to move surveyors and equipment. Electronic measuring devices were introduced and so was the use of photogrammetry, a method of employing photographs to determine height and distance.

BLM also began using protracted survey sheets. Not intended to replace on-the-ground surveys, protraction diagrams showed section corners and lines of a township, as determined from aerial photographs and other information sources. With these diagrams, BLM could describe lease and disposal actions in unsurveyed areas by township subdivision rather than by complicated metes-and-bounds descriptions. The method was employed in Alaska with much success and, by 1960, more than 284 million acres had been placed on protracted diagrams. New Mexico, Arizona (of which 32 percent of the state was unsurveyed), and Montana also began using the sheets.

Land Case Backlog

The demand for land after 1953 seemed insatiable. No matter how hard Bureau adjudicators worked, the backlog of cases grew each year. Between 1953 and 1960, the number of unclosed case increased from 25,000 to more than 45,000.

Small Tract Act

One cause of the land boom was Small Tract Act applications. In 1954, the law was amended to include the sale or lease of parcels to corporations, associations, and state and local governments, as well as individuals. BLM praised the amendment for the flexibility it provided in disposing of areas for residential, business, recreation, and community purposes.

Land promoters were also responsible for the increase in applications. They appealed to Americans' desire to acquire land through newspaper and magazine advertisements across the nation. "Most people [who make filings]," Director Woozley pointed out, "imagine they'll get a cold stream, green grass, and all that. They are more likely to end up with plain desert."

BLM

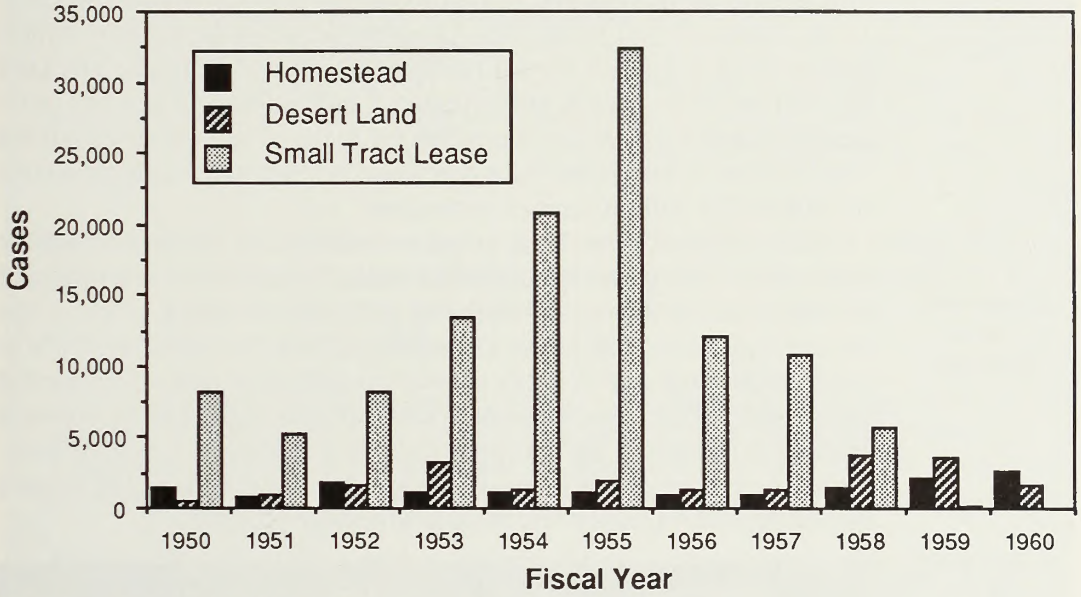
The reality of Small Tract Act

But the applications came in and jumped from 13,000 in 1953 to 43,000 two years later.

Desert Land Law

The Desert Land Law was also troublesome. New technological innovations like the electric pump permitted more effective development of underground water sources. Low agricultural commodity prices had kept interest in the law down, but, with improving prices in the late 1950s, entries rose sharply. Desert Land Law cases went from 1,300 in 1957 to nearly 4,000 the following year.

The heightened demand for public lands intensified competition between applicants. Several applications were often filed for the same parcel of public land. Resolving these controversies, especially when tracts were wanted for different purposes, placed heavy demands on BLM.



New land case action 1950-1960

Land Classification Efforts

Land classification helped resolve many of the conflicts, especially where demand was high. BLM used it as a means of controlling the growth and development of communities being created as a result of Small Tract Act activity. With the Desert Land Law, classification allowed BLM to determine whether the lands had good agricultural soils and sufficient water supplies. If they did not, applications could be rejected. BLM's land classification process resulted in the rejection of two-thirds of the Desert Land Law entries filed. The Bureau also imposed more stringent regulations and had land locators prosecuted for fraudulent and misleading advertising.

Land Exchange Problem

Land exchanges provided additional headaches. Woozley felt that land exchanges with states and individuals allowed public lands and resources to be more effectively utilized and managed. Exchanges benefited the Bureau by allowing it to put together more manageable land patterns. The Bureau, however, found that its exchange procedures failed to adequately

protect public interests. Land speculators and others were able to acquire public lands through exchange at less than fair market value. To protect against this, in 1960 the Department instituted an antispeculation policy that ensured all land exchanges had a "clear and positive benefit" to the federal government and that the lands traded were of equal or near-equal value.

Eastern Public Lands

A less troublesome situation was the Bureau's disposal of public lands in the East. These lands were difficult to manage. Most were isolated tracts with little public value. BLM wanted to rid itself of the lands. The Bureau's Eastern States Office did so through state indemnity selections, color-of-title claims, and public sales.

In Alaska, the lands program emphasis shifted from the Small Tract Act and Homestead Law, which remained popular, to territorial and then state selections of public land. The first of the extensive land grants came in 1956. In the Alaska Mental Health Act, Congress provided the territory with a million acres to support mental health programs and facilities. The land selected had to be vacant, unappropriated, and unreserved and had to be used to support a mental health program for Alaska. Two years later, Alaska was admitted to the Union and a generous Congress granted the new state more than 103 million acres of public land.

Alaska State Land Selection

The statehood grant lands posed a challenge for BLM. The agency knew that Alaska would select the best public lands from the standpoint of resources and economic development potential, curtailing many of the Bureau's plans for these lands. The situation, therefore, called for BLM to work closely with state officials to ensure orderly state land selections and public land resource development. Alaska officials began their selection of lands in 1959 and, by the next year, had selected nearly 6.5 million acres. In the years to follow, the State of Alaska's land selections would become one of the Bureau largest and more troublesome programs.

MINERALS

Mineral Revenues

Developments in the minerals program mirrored those occurring in other resource areas. Under Woozley, BLM encouraged the exploration and development of both public domain and acquired mineral estates through private sector efforts. Minerals were an important source of revenue for the federal government. In 1953, of the $66.8 million BLM took in, $49.2 million came from royalties, rentals, and bonuses paid under the Mineral Leasing Act of 1920.

Oil & Gas Activity

Most mineral revenues received in 1953 came from oil and gas leasing. Oil and natural gas had replaced coal as the nation's main energy fuel, and the increased consumption pushed petroleum companies to expand their exploration efforts. In 1953, Woozley reported 78,000 oil and gas leases covering 60 million acres of public domain and 2,000 leases covering 1.8 million acres of acquired lands. The figures rose by 1960 to more than 140,000 oil and gas leases on nearly 116 million acres of public domain and nearly 6,800 leases on close to 5 million acres of acquired lands.

EASTERN STATES OFFICE

by Curt Jones
State Director

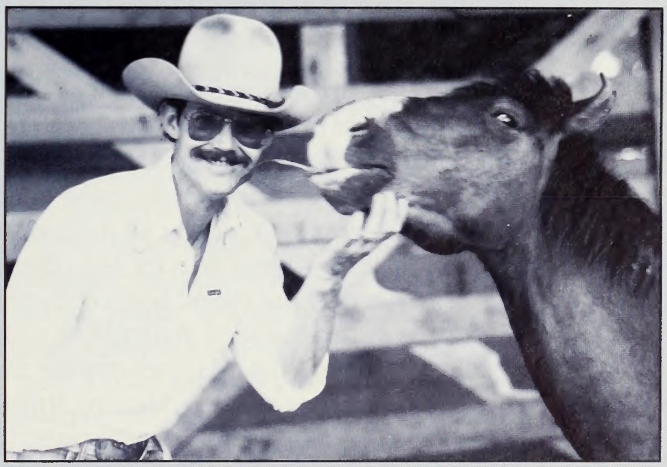
Since the bulk of the BLM-administered public lands are located in the West, the Bureau's role in the 31 eastern states is hardly traditional. But, in addition to operating the largest land title business in the country through the General Land Office records, the Eastern States Office also deals with a broader variety of minerals and a more complex mix of mineral ownerships than any other office in the Bureau.

When BLM received operational responsibilities for Federal onshore minerals, the Eastern States Office (ESO), established in 1954, took on a presence in the field far beyond any previous one. Our mineral operations inspectors use boats and helicopters to reach oil and gas leases in the Louisiana bayous, check phosphate operations in the piney woods of Florida, travel miles through deep lead and zinc mines in the Missouri Ozarks, and monitor the enviromental aspects of quartz mining in Arkansas. These field operations are managed out of our two District Offices established in 1983 in Jackson, Mississippi and Milwaukee, Wisconsin.

And since 1976, when Congress amended the Mineral Leasing Act to allow leasing within military installations, ESO issued oil and gas leases on nearly a dozen military areas and is exploring leasing potential on a number of others. Since these are all acquired lands, the leasing complexities are magnified.

The Eastern United States has become the primary marketing area for wild horse and burro adoptions. To support this effort, we have established distribution centers at Lewisberry, Pennsylvania, Cross Plains, Tennessee, and at London, Ohio. We hold around 30 adoption events annually, and it is not unusual for 150 or more animals to be adopted at a single event.

ESO maintains close ties with state land and resource agencies, and with their umbrella organization, the Eastern Lands and Resources Council, which we helped establish in 1984. Through cases that require resurveys and/or site-specific legislation to clear up ownership issues of long standing, we are providing vital services to many Americans in the largest and most populous region of the United States.



Denise Meridith

Wild horse adopter at BLM Distribution Center, Lewisberry, PA.

Petroleum companies were particularly interested in Alaska's oil and gas potential. Much of this interest was prompted by BLM reports in 1953 indicating oil and gas on the Kenai Peninsula near Anchorage and at other locations.

Alaska Oil Boom

Alaska's first discovery, however, did not come until 1957 at Swanson River on the Kenai Peninsula. Oil and gas leases in Alaska then jumped from 3,385 to more than 9,000. To handle the crush of lease applications, the BLM in Alaska had to temporarily assign people from other mineral programs, as well as from fire and forestry staffs, to help process the workload.

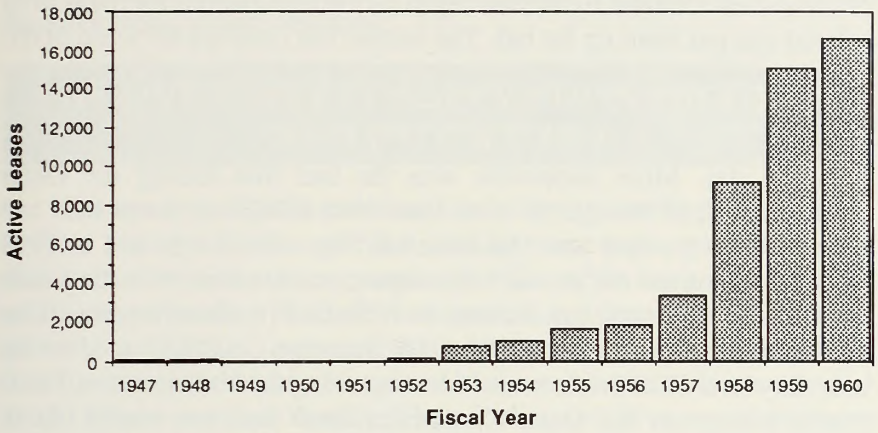
BLM

Alaska'a first successful oil well—1957

Secretary of the Interior Fred Seaton further spurred activity by opening 20 million acres in northern Alaska previously closed to leasing. After this was done, leasing was resumed. In 1959, 16,000 acres of land adjacent to a known natural gas field were leased at competitive sale for more than $200,000. A year later, nearly 34 million acres of public lands in Alaska were under lease—more than for any other public land state.

Speculation

BLM not only had the oil boom to contend with, but also the problems associated with speculation that had first surfaced during Clawson's tenure. By eliminating of 40-acre leases outside of producing areas, some of the problems had been solved, but leasing firms then turned to selling 40-acre assignments—subleases—of existing leases. More than 28,000 assignments were filed in 1958, causing the processing of new lease offers to slow down dramatically. BLM attempted to stop the practice, which was legal, with legislation prohibiting assignments of less than 160 acres. Since Congress took no action, the problem persisted for the remainder of Woozley's tenure.



Active oil & gas leases in Alaska 1947-1960

BLM under Woozley did resolve one problem associated with oil and gas leasing. As interest in obtaining oil and gas leases intensified, the public was competing more and more for leases that were cancelled, relinquished, or terminated. To ensure everyone would get a fair and equal chance to know about and obtain these leases, BLM in 1960 instituted a simultaneous filing system. The new procedure required all oil and gas leases that had been cancelled, relinquished, and terminated during one month to be publicly listed for 5 days the following month. Prospective lessees could then file applications for those tracts that interested them. Leases were then awarded by public drawing. This process became popularly known as the oil and gas lottery system.

Simultaneous Filing System

The real oil boom, however, was not on the public lands; it occurred off the nation's coastline. As early as 1865, the Surveyor General of California reported a petroleum spring on the ocean floor near San Luis Obispo. However, these petroleum reserves were not seriously developed until the 1930s. In that same decade, oil was discovered in the Gulf of Mexico near the Louisiana and Texas coasts.

Outer Continental Shelf

The federal government and states argued over the ownership of the valuable offshore lands. The U.S. Supreme Court in 1947 sided with the federal government against California and, 3 years later, against Texas and Louisiana. States' rights advocates were incensed and sought support from the Republican Party in their bid to "return" the submerged lands to the states. With Eisenhower's election, Congress quit-claimed all the federal interest in tideland and seabed areas 3 miles from the coastline to the states.

The federal government, however, retained title to the area beyond the 3-mile limit. Known as the Outer Continental Shelf, this area was thought to have much of the 12.5-billion barrel oil potential attributed to offshore lands. BLM was assigned the responsibility for leasing this area through competitive sales, while the Geological Survey was to oversee prospecting and development.

Texas and Louisiana were considered to have the best oil and gas

potential, so in 1954 BLM's Eastern States Office was directed to open an office in New Orleans. BLM then began taking nominations for tracts to be offered and put them up for bid. The bonus bids received for lease of the parcels exceeded $150 million—twice that of BLM's best expectations.

The Outer Continental Shelf quickly established itself as a moneymaker. In 1955 the first discovery off Louisiana produced 595 barrels a day. More impressive was the fact that leasing the Outer Continental Shelf brought in more than $252 million in bonus bids and rentals within the first year. All lease offerings were suspended in 1956 when Louisiana and the United States went to court to determine the 3-mile boundary between their jurisdictions. In 1959, BLM resumed leasing off the Florida coast. A year later, after the U.S. Supreme Court had ruled on the boundary issue, BLM also resumed leasing along the Louisiana and Texas coasts. Interest in the Outer Continental Shelf had not waned; BLM received more than $370 million for 1.2 million acres offered.

Multiple Mineral Development Act of 1954

Enactment of new minerals legislation also occurred during the Woozley era. Multiple Mineral Development Act of 1954 provided for the location of mining claims under the General Mining Law and leasing under the Mineral Leasing Act on the same tract. Before the law was enacted, mining claims could not be staked on lands leased for oil and gas or other minerals, nor could mineral leases be issued for lands covered by valid mining claims. The new law permitted multiple development of minerals on the public lands.

Multiple Surface Use Act of 1955

The Multiple Surface Use Act of 1955 restricted surface use rights on unpatented mining claims. The federal government could, after following detailed procedures intended to protect the interests of miners, classify and open surface resources on mining claims to Federally supervised grazing, timber cutting, and other uses. The 1955 law also provided for the disposal of sand, gravel, stone, and other common variety minerals through sale under the Materials Act of 1947. This removed these minerals from location under the General Mining Law of 1872 and made administration easier for the Bureau.

INTERNATIONAL ASSISTANCE PROGRAM

Third World Program

As an outgrowth of its increasing resource management responsibilities and professionalism, the Bureau of Land Management began sharing its knowledge and expertise with other nations. The social and economic problems facing many countries, particularly those now known as the Third World, often resulted from the improper and unbalanced use, management, and distribution of land. BLM worked with many nations to alleviate these problems as part of the United States' foreign assistance program after World War II.

BLM Outreach

Beginning with Clawson during the Truman Administration, the Bureau began sending various technical experts to foreign lands and hosting their professionals in the United States. Director Woozley continued the program. By 1960, BLM had assisted Egypt, Paraguay, West Germany, the

Philippines, and many other countries with cadastral survey, land classification, range and forestry administration, and many other land and resource management activities.

THE FIVE-POINT CONSERVATION PROGRAM AND PROJECT 2012

Near the close of the Eisenhower Administration, the Department of the Interior and the Bureau of Land Management began to work on an ambitious new conservation program for the public lands. The program called for intensified resource management to respond to the nation's growing population and increasing demands on natural resources. Resources would have to be conserved through more efficient use that would reduce waste and damage. The recycling and salvaging of resources would become more important.

In line with this thinking, the Interior Department sponsored a five-point program aimed at accomplishing better conservation of the public lands and resources. Enacted by Congress in 1960, the Public Lands Administration Act called for (1) using forfeited timber deposits to rehabilitate lands ruined by defaulting timber contractors, (2) receiving sufficient deposits from users of BLM roads and trails to ensure proper maintenance, (3) charging more realistic fees for services rendered by BLM, (4) accepting donations for the improvement or management of public lands and resources, and (5) entering into cooperative agreements with others in order to carry out proper management of public lands and resources.

Five-point Program

BLM at the same time proposed its own ambitious conservation program. The plan was called Project 2012. In sending the prospectus to the President, Secretary of the Interior Fred Seaton emphasized that the plan sought to meet the nation's "accepted goals of conservation, improvement, wise use and development of our public lands," while at the same time, contributing "toward meeting the challenge of our growing population and expanding economy."

Project 2012

Project 2012 was the Bureau's first attempt at a comprehensive, long-range program for the public lands. It addressed the "orderly, efficient, and sound development and use of resources...through balanced, coordinated, and sustained effort" over a 50-year timeframe. The program was ambitious but unrealistic. As Bob Jones, a BLM employee who worked on the plan, recalls, "The primary legacy of [Project] 2012 was to create an internal awareness of possible long-range resource management program needs and dimensions along with a healthy skepticism of the value of 50-year detailed program projections." More important, as professor of natural resources Sally Fairfax points out, the Project 2012 report, though "unexceptional" in her opinion, reflected "the maturation of an increasingly professional BLM staff."

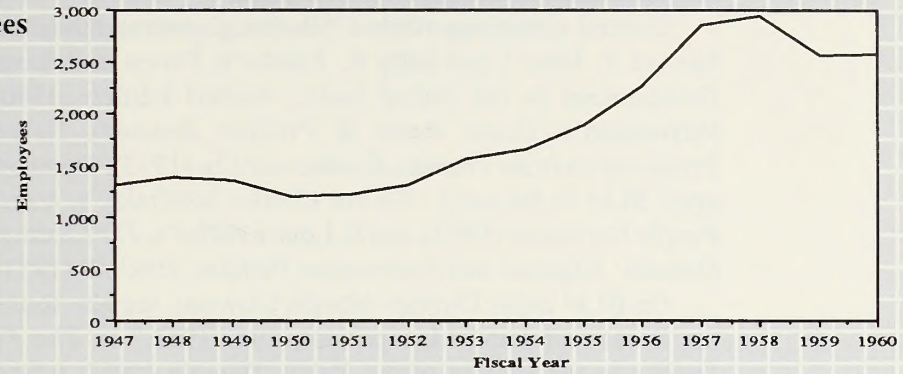
Professionalism Established

Project 2012 was quickly forgotten by BLM and the public. The

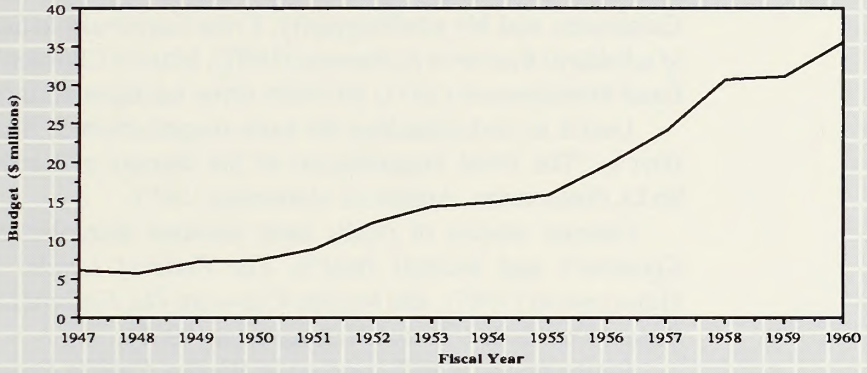
agency's professionalism, however, did not disappear. The talent and skills developed during the 1950s continued on and were to be put to good use by a new administration with a "New Conservation" agenda.

Bureau of Land Management 1946-1960

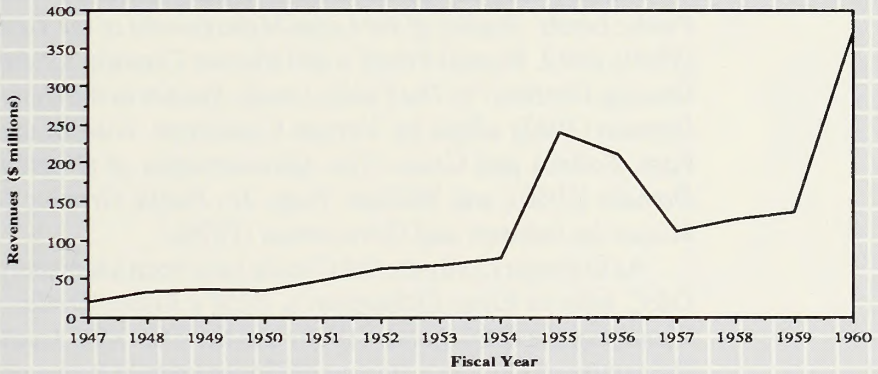
Employees



Budget



Revenues



Directors

Fred Johnson	1946-1948
Marion Clawson	1948-1953
Edward Woozley	1953-1961

Major Legislation

Materials Act	1947
Outer Continental Shelf Act	1953
Multiple Minerals Development Act	1954
Multiple Surface Use Act	1955

FURTHER READINGS

Historians have largely ignored the Bureau of Land Management. What little has been written has been by political scientists, economists, and natural resource management specialists.

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On BLM's development of a firefighting organization, see Stephen J. Pyne's comprehensive fire history, *Fire in America: A Cultural History of Wildland and Rural Fire* (1982).

Mineral policy and development is discussed in Robert Swenson's "Legal Aspects of Mineral Resources Exploitation" in Paul Wallace Gates' *History of Public Land Law Development* (1968), and Carl Mayer's and George Riley's, *Public Domain—Private Dominion: A History of Public Mineral Policy in America* (1985). On the issue of offshore oil and gas, refer

to Ernest Bartley's, *The Tidelands Controversy* (1953) and Chapter 9 of William K. Wyant's *Westward in Eden: The Public Lands and the Conservation Movement* (1982).

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CHAPTER 3

A MULTIPLE USE MANDATE: The 1960s

Transition from custodianship to action programs is part of the new dimension by which BLM is putting the public lands to work in the public interest.

—Stewart Udall
The Third Wave, 1966

A MULTIPLE USE MANDATE
The 1960s

Overview

The 1960s brought rapid growth and fundamental change to BLM—tumultuous change that permanently altered the Bureau's course. President Kennedy took notice of the public lands, saying they were vital to the nation's economic well-being but suffered from "uncontrolled use and a lack of proper management." The White House asked BLM to accelerate its inventory of the public lands and develop a program of balanced use to reconcile resource conflicts.

A fledgling multiple use philosophy within the Bureau was legally endorsed for the public lands in the Classification and Multiple Use Act (CMU Act) of 1964. BLM was reorganized to reflect new programs and authorities under this mandate: concerns for wildlife, recreation, soil, and water resources were integrated into traditional programs (range, forestry, lands, and minerals) through a land use planning process.

The Third Conservation Wave

Inspired by the conservation accomplishments of Theodore and Franklin Roosevelt, Secretary Udall launched the nation's "Third Conservation Wave" by requesting a new legislative mandate for the public lands from Congress. Part of this agenda included formal recognition of multiple use management on BLM lands, patterned after the Forest Service's Multiple Use Sustained Yield Act of 1960. Other components centered on getting BLM a more flexible land sale authority and repealing outdated settlement acts.

But more than a push for legislation, the Third Conservation Wave was a philosophy—one that viewed natural resources as finite, interrelated, and vulnerable components of larger systems. According to Udall, the Interior Department had "the prime function of planning for the future of America and working to conserve the natural resources which sustain its life." The Department's 1961 Annual Report spoke of a "quiet crisis" facing America's citizens, the result of unplanned progress and explosive growth—something that threatened the nation's natural resources and its citizens' quality of life. Careful management of America's public lands could turn the tide, and this could only be done with extensive planning and involvement from the public.

Udall's program was only part of a growing national conservation movement. With more leisure time on their hands, urban Americans began to take notice of the public lands. Recreation groups and conservation organizations gained many new members in the 1960s and began to petition Congress for new parks, wilderness areas, and outdoor recreation facilities. While BLM was not as well known by the general public as were the National Park Service and the Forest Service (as evidenced by the omission of BLM lands from the Wilderness Act of 1964), the Bureau saw its local and regional constituents grow.

Citizen lobbies soon began to voice concern on protecting endangered wildlife and combating pollution. By the end of the decade, overall environmental quality emerged as a national issue. The Third Conservation Wave grew into a demand for action from Congress, the Interior Department, and BLM. According to natural resources professor Sally K. Fairfax, "resource issues have never been discussed with such emotional intensity as they were in the late 1960s and early 1970s."

New Leadership

Three Directors oversaw BLM's growth into a multiple use agency during the 1960s: Karl S. Landstrom (February 1961 - June 1963), Charles H. Stoddard (June 1963 - June 1966) and Boyd L. Rasmussen (June 1966 - June 1971). Landstrom supervised the drafting of Secretary Udall's legislative agenda and worked to reduce the Bureau's growing backlog of pending land applications. Stoddard began to implement the new legislation and reorganized the Bureau to more effectively manage its workload. To integrate all this activity on the ground, Stoddard started the development of a multiple use planning system on the public lands.

Boyd Rasmussen completed these tasks and introduced initiatives of his own. Land use classifications under the CMU Act were completed and a planning system was implemented in the field. Rasmussen worked to "depoliticize" BLM's decisionmaking process, giving the Department and Congress the task of deciding sensitive political issues, such as grazing fee formulas. In addition, Rasmussen directed BLM's early efforts toward obtaining a comprehensive management statute for the public lands—a goal eventually attained through passage of the Federal Land Policy and Management Act of 1976.

The National Land Reserve

Reflecting their increasing visibility, 167 million acres of BLM lands in the 11 western states were renamed the National Land Reserve, and after implementation of the CMU Act, National Resource Lands. At the end of the decade, BLM and Congress began to recognize unique values on the public lands and designate special management areas—natural areas, recreation lands, primitive areas, and national conservation areas—to protect areas identified in the classification process.

Resource Conservation Areas

In 1963 Secretary Udall designated Resource Conservation Areas on BLM lands in each of the western states to demonstrate how active management of the public lands would provide benefits to all resources, including soil and water, forage (both wildlife and livestock), and forests. Director Stoddard said "we hope to acquaint every American with the thought that he is part owner of a great national treasure—which is becoming ever more valuable as our population grows." Secretary Udall urged conservationists to visit these areas and follow their progress through on-the-ground inspections and discussions at club meetings.

This explosion of activity in the 1960s led to a new land ethic, but it was not achieved without cost: controversies erupted and debates intensified as BLM advanced its multiple use mission. Reflecting America's growing concern for its public lands (and the Bureau's new mandates), BLM's workforce grew from about 2,600 in 1960 to 4,300 in 1970, with its budget growing from $36 million to $118 million. Revenues also grew—to over a

billion dollars in 1969—thanks in large measure to increasing Outer Continental Shelf revenues.

Many of BLM's 300-plus million acres of public domain holdings in Alaska were destined for transfer to other federal agencies and the state, once Native claims to the land were settled. Controversy also broke out over allowable cuts for O&C forests, which wasn't resolved until the end of the decade. In the minerals arena, Outer Continental Shelf (OCS) lands, totalling 2 billion acres, witnessed great growth in drilling activity.

A NEW CONSERVATION PHILOSOPHY

Under Karl Landstrom, BLM began to transform itself from an agency primarily processing land and mineral applications into an agency actively planning for the nation's future needs. The Bureau stepped up inventories of public land resources and invited the public to help decide how they should be managed.

The Bureau's state advisory boards and National Advisory Board Council (NABC) were reorganized in 1961 to broaden their representation by public land users. NABC's membership was increased from 30 to 42, with representatives added from conservation groups, county governments, forestry and mining interests, and the oil and gas industry.

BLM was reorganized the same year; service centers in Denver and Portland took over the functions of the Field Administrative Offices and provided scarce skills (e.g., botany, hydrology, cultural resource management) to the field. State Offices were strengthened, bringing BLM's work closer to interested land users and groups, plus state and local agencies. An Engineering Division was established in Washington to assist in road building and other field office construction activities.

Traditional programs continued to broaden their focus to a multiple use framework. Range activities, for example, moved from adjudication of grazing privileges to inventories of forage, soil, and watershed conditions. BLM State Offices began to hire wildlife biologists and outdoor recreation planners to implement new programs.

Employees: A New Breed

During the 1950s and 1960s, a new breed of employee entered BLM. He—or she—had college training in natural resource management, usually a degree, plus membership in a professional society (the Society for Range Management was founded in 1948; the Society of American Foresters was founded in 1900). They brought with them new educational backgrounds, new attitudes, and stronger multiple use philosophies—and soon clashed with old-timers from the GLO and the Grazing Service. George Turcott started his career with BLM as a range conservationist in 1950 and rose through the ranks to become Associate Director in the 1970s. According to Turcott, there was a strong "don't-rock-the-boat" philosophy in the Bureau in the '50s and early '60s. "We had all this [range] adjudication work to do and everybody was trying to find ways to do it without making anybody mad....We thought that there just had to be more to our jobs than this."

SERVICE CENTER ROLE IN BLM

by Ed Dettman
Chief, Division of Administrative Services, BLM Service Center

Two service centers, one in Portland, Oregon and one in Denver, Colorado, were established in 1963. They replaced Field Administrative Offices (FAOs) in Salt Lake City, San Francisco, and Portland. The service centers were premised on two fundamental principles to achieve economies of scale through centralization of administrative and technical equipment and personnel, and to provide an effective setting for scarce skills which could be utilized jointly by field offices and BLM's Washington Office.

The fundamental structure for both centers was the same, but external factors resulted in significant differences in staff sizes and assigned functions. For example, all financial processing functions (voucher audit, payroll, and payments) were centralized in Denver due to the Treasury Department's major disbursing office there. Likewise, the initial start-up costs for mainframe computing equipment and staffing dictated the formation of an Automated Data Processing organization in Denver without a full counterpart in Portland.

In 1973, the Portland Service Center functions were consolidated into the Denver Service Center. Based on cost efficiencies and other factors, the Records Improvement Project and the Western Field Office for reimbursable cadastral surveys for other agencies were left duty-stationed in Portland with management oversight and direction from Denver.

Throughout the 25 years of its existence, the role of the Service Center has been constantly changing and always controversial. Its sincerest critics highlight instances in which Service Center initiatives have lacked either the field offices' pragmatic sensitivity to political realities or the Washington Office's sense of policy integration and timing. Its sincerest advocates point to the unwavering connection between new skills, systems and technologies which have come into the Bureau at all levels and their genesis and support by Service Center personnel and initiatives. The Service Center concept, constantly adjusted to meet changing needs and priorities, has proven to be an enduring and essential element in the development of improved technical, administrative, and scientific support for public land management.

Like Turcott, many employees moved throughout the West and to Washington to build their careers. And like their predecessors, they recognized that the public lands had many values and uses. They saw the Forest Service attain multiple use management authority in the Multiple Use Sustained Yield Act of 1960, which recognized wood, water, forage, wildlife, and recreation as resource programs. At all levels of the organization, they wondered why BLM didn't have the same mandate.

A LAND OFFICE BUSINESS

Much of the pressure to review and modernize the nation's land laws came from a backlog of applications for agricultural entry that developed in the 1950s. In 1961, BLM implemented an 18-month moratorium on accepting any further applications so that it could reduce a backlog of more

A DIRECTOR'S PERSPECTIVE: 1961-1963

by Karl S. Landstrom

Editor's Note: *Karl S. Landstrom entered government as a farm economist with the Department of Agriculture in 1937 and joined BLM in 1949. He has degrees in economics from the University of Oregon and in law from George Washington University. Landstrom was named BLM Director in 1961. In 1963 he became Secretary Udall's assistant for land utilization and later served as his representative to the Public Land Law Review Commission's Advisory Council.*

Karl S. Landstrom

I joined BLM's Portland regional office in 1949 as a land economist. In 1953 I was transferred to Washington because I had declined to classify certain public lands in Idaho as proper for entry under the Desert Land Act—lands that were unsuitable agriculturally or that had questionable water supplies. I learned of my impending transfer two weeks before official notice from a commercial land locator operating in Idaho.

While I was in Washington I served as Chief of the Bureau's Branch of Land Classification in the Division of Land Planning. I drafted regulations and manuals, wrote case decisions, and testified on the Hill on pending lands legislation. I also developed a training program on land appraisal standards.

I left BLM in 1959 to become a legislative consultant to the House Committee on Interior and Insular Affairs, where I worked until 1961. While there, I worked with Stewart Udall, who was a member of the Committee. During the change in administrations I applied to be Director of BLM through Mr. Udall. I understand that my appointment had been endorsed by Wayne Aspinall, Chairman of the Committee.

By January of 1961 BLM was beset with an intolerable backlog of land disposal applications. The backlog was an embarrassment to BLM employees who worked with the public and were criticized as though they, and not the land laws themselves, were the cause of the situation.

Under a general land reform program instituted under President Kennedy and Secretary Udall, the Bureau moved ahead with deliberate speed. Associate Director Harold Hochmuth and I took aggressive steps to remedy the situation, beginning with an 18-month moratorium in 1961-62 and continuing into a legislative campaign, later culminating in far-reaching reforms. Numerous drafts of proposed land law legislation were submitted by BLM through the Department to the Congress. The process had been set in motion leading to the establishment of the Public Land Law Review Commission in 1964.

Something also had to be done to curb widespread loss of public confidence in BLM, from both commercial and conservation interests. BLM was sharply criticized by both grazing users, who resented proposed cuts in grazing allotments, and wildlife interests, who demanded that overgrazing be eliminated. The morale of employees in the Bureau had suffered on account of these problems and an influx of top personnel from outside the agency during the preceding eight years.

As Director I took care to assure that most top-level personnel were selected from within BLM ranks. In addition, I worked to establish multiple use advisory boards that were more representative of our many constituents. After my first meeting with BLM's National Advisory Board Council, I recommended it be reorganized to reflect a more balanced viewpoint toward public land administration. Reorganization of the Council and the state-level boards was approved by the Department.

The Vale project in Oregon gave new life to rangeland rehabilitation. It marked the beginning of a movement that proved highly beneficial in improving rangelands—and general relations between ranchers and BLM.

The project gained impetus in remarks I made at the end of a meeting BLM personnel had with people in Vale County, Oregon, including Congressman Al Ullman and Senator Wayne Morse. I said how much I would like to see efforts toward range rehabilitation expanded, such as increasing sagebrush removal and the planting of crested wheatgress. Senator Morse asked how much money it would take. I made a quick mental guess and said something like $15 million and three years. The formal estimate was not much different. The upshot was we got immediate funding for a pilot project in the Vale District. Other Senators soon got wind of this work and obtained funding for their own projects.

The 1961 reorganization eliminating regional offices established State Offices as the major second level of administration, supported by service centers in Portland and Denver. Another accomplishment was the decentralization of plat and tract book records from Washington, DC to the land offices, further saving costs and expediting service to the public. But to be very frank, this move was stimulated by Secretary Udall, who learned there used to be a gymnasium in the Interior building, which was now occupied by these voluminous records. He asked me to clear them out, which I did; thereafter BLM employees and others shot baskets and played volleyball as well as enjoying the gym's new sauna!

I found it relatively easy to reinstate a conservation-minded administration under Secretary Udall's "Third Conservation Wave," although there were a number of difficulties along the way. I found at times that members of the Secretariat were acutely sensitive to pressures from commercial groups, especially when voiced through members of Congress or their staffs.

After leaving the Bureau I worked as Assistant to the Secretary for Land Utilization and served as the Department's member of the Public Land Law Review Commission's Advisory Council. My greatest achievement, in cooperation with friends from the Forest Service, was preventing the substitution of 'dominant use' for 'multiple use' management on the public lands. In the 1960s there were members of Congress who felt that multiple use was merely a "meaningless jumble of words."

Ed Cliff of the Forest Service joined with me in defending multiple use, a professional concept going back to the first conservation wave under President Theodore Roosevelt. This effort culminated the work I began as Director to seek formal recognition of multiple use management for BLM lands.

than 60,000 applications—some pending for more than four years. BLM needed to review its overall lands program and devise a better system for handling applications. To back this up, BLM documented what happened with applications under the Homestead and Desert Land Acts.

> The 'Land Office business' has been very glamorous at times; sort of romantic at times; but hectic most of the time.
>
> — Karl S. Landstrom

Farming on arid western lands was a formidable challenge if one lacked a dependable water source. Only 14 percent of Homestead applications were being allowed by BLM and, of these, only about 50 percent went to patent and were transferred into private ownership after residency and land development requirements had been met. Only 17 percent of Desert Land Act applications were approved by BLM, and only 1 percent ever went to patent.

About 120 patents were issued annually during the 1950s for public lands in the lower 48 states. In Alaska, 150 patents were granted annually; in 65 years, only 3,200 patents were issued (totaling 400,000 acres, or 0.1 percent of Alaska's total land area) out of more than 10,000 claims.

BLM

A successful desert land entry depended on a reliable water supply.

When BLM's moratorium was lifted, BLM implemented what Landstrom termed a "petition-classification system" that cut by more than half the time to process applications. Demands for public lands by communities and industries, however, continued to grow. The Recreation and Public Purposes Act limited most sales of lands to 640 acres. BLM needed more flexibility, plus a mandate to classify and manage its holdings.

In 1962 Assistant Secretary John Carver notified Congress that the nation's nonmineral public land laws were in need of modernization. BLM had shown that lands suitable for agriculture had already passed out of federal ownership. The Bureau also needed formal recognition of what it was beginning in earnest under Secretary Udall: multiple use management of the nation's public lands.

Three acts passed in 1964 as part of a legislative package arranged by Wayne Aspinall, Chairman of the House Interior and Insular Affairs Committee. The Department got the Classification and Multiple Use Act plus the Public Land Sale Act, while Aspinall got approval for what he wanted, the Public Land Law Review Commission (PLLRC). As part of this deal, the Wilderness Act, which did not include BLM lands, was released from Aspinall's committee and passed both Houses.

Aspinall had become increasingly wary of the initiatives proposed by the Executive Branch—and disagreed with their direction. Wanting Congress to reassert what he felt was its traditional role in establishing land policy and supervising agency activities, Aspinall was successful in insisting that the CMU and Public Sale Acts be made temporary pending Congress' study of the public land laws.

CLASSIFICATION AND MULTIPLE USE ACT

The CMU Act became BLM's biggest challenge—and opportunity—of the decade. People in BLM, the Department, and Congress differed greatly over the act's interpretation and implementation. Central to this story were BLM's people: employees determined how BLM got its job done and how it emerged as a land management agency.

Though only a temporary authority, the CMU Act provided a definition of multiple use as the "combination of surface and subsurface resources of the public lands that will best meet the present and future needs of the American people." The act listed ten elements of multiple use, including wildlife, recreation, watershed, and range, and directed BLM to classify its lands for retention in federal ownership or disposal. But it did not specify how much land should be classified.

At the time it passed, no one in Congress (or BLM) thought the Bureau could inventory and classify the majority of its holdings in the 11 western states by the time the act was set to expire in 1968. But it did, classifying more than 175 million acres for retention in federal ownership under multiple use management (including 32 million acres in Alaska) and 3.4 million acres for disposal.

The CMU Act changed BLM forever: it would no longer classify lands on a case-by-case basis, evaluating petitions from land users. BLM now planned how all its lands and resources would be managed. The Bureau no longer managed its holdings along individual program lines; it integrated each activity into land use plans that would "best meet the present and future needs of the American people." To do this required involving the public in BLM's decisionmaking process.

CMU Regulations

Under Charles Stoddard, regulations for the CMU act were developed with public input and comment. Draft regulations were sent to interested individuals, organizations, state and local governments, and other federal agencies for review, and they were discussed at 65 public meetings throughout the country.

The final regulations, adopted in October 1965, incorporated many changes suggested by people outside BLM. As future events would confirm, this was only the beginning of public involvement for the Bureau.

The CMU Act required that BLM's classification activities be consistent with state and local government programs, plans, and zoning regulations. Proposed classifications were sent to state and local governments and planning commissions. Proposals for retention were sent to these entities as well as to public land users and BLM's multiple use advisory boards.

BLM classified lands by collecting and analyzing information on areas and their uses, and then contacted individuals, groups, and agencies for further information. Meetings were held to assess public attitudes and sentiments about retention or disposal actions. BLM then drafted a proposed classification, published it in the *Federal Register,* and held a public hearing. Only then were classifications made final, through publication in the *Federal Register.*

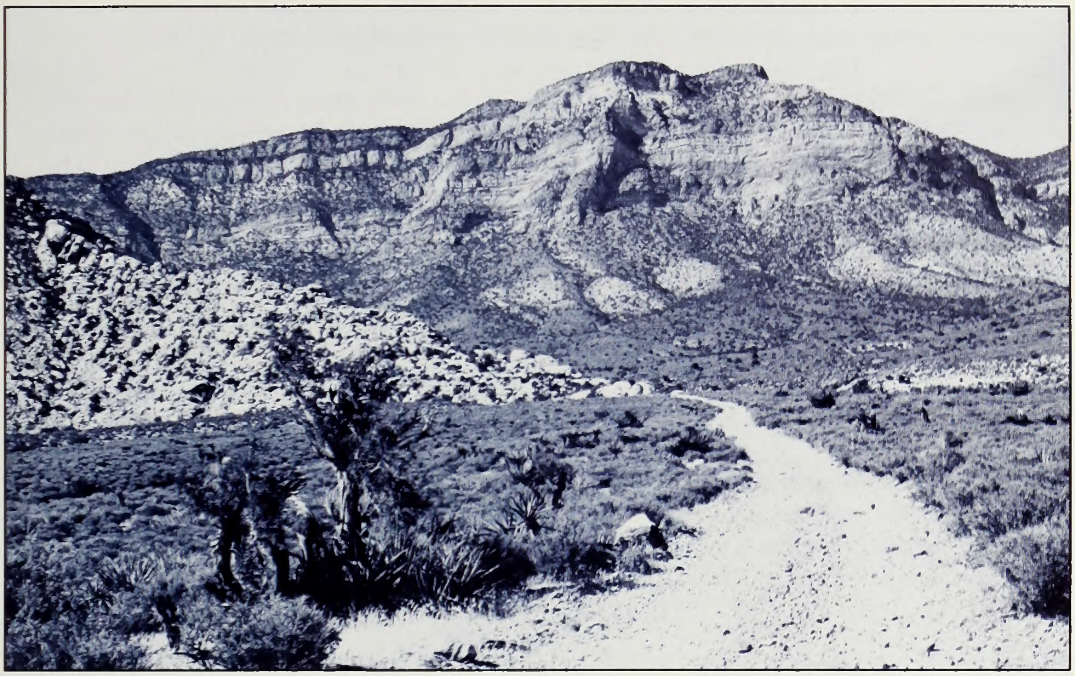
BLM met with the National Association of Counties, the U.S. Conference of Mayors, the National League of Cities, and the Council of State Governments to explain and implement the CMU program. As a result of these discussions, BLM decided to work with pilot counties in each western state to test the classification process. County governments developed planning and zoning regulations and the Bureau held an Urban and Rural Land Planning Conference in Reno, Nevada, to explain the act and to develop classification procedures.

Valley County, Montana, was the first successful test of the process. BLM's initial assumption that scattered lands would be classified for disposal was opposed by the public—many of these lands had scenic or recreational values or provided access to larger public land areas. Local groups urged BLM to focus its efforts on larger blocked areas under the CMU act, which BLM did. In 1966 BLM classified its first lands under the act: 614,000 acres for retention in multiple use management.

Another pilot project proved a formidable challenge: Clark County, Nevada had several jurisdictions with competing annexation programs. The CMU Act required that a single comprehensive plan be developed for the area. To reconcile their differences, groups within the county formed the

Las Vegas Valley Planning Council, which eventually devised a plan for the county's 7 million acres.

During this process, a recreation committee, with involvement of local citizens, developed a plan for the Spring Mountain area, which was classified for retention and then designated by Secretary Udall in 1967 as the Red Rocks Recreation Lands—the first such designation made under the CMU Act.



BLM

White Rock Spring in Red Rocks Recreation Area

Other classification efforts confirmed that the public favored retention of almost all the public lands in federal ownership—and this from almost all BLM user groups. Livestock operators, wildlife groups, and recreationists wanted continued use of the public lands, and only retention could provide this.

Because the CMU act was a temporary measure, BLM's first regulations provided that its classifications would expire at the time the act did. But in 1967 BLM convinced the Department that CMU classifications had long-term values and should be continued indefinitely.

In implementing BLM's large-scale classifications, Director Rasmussen convinced Secretary Udall to back the field's broad-brush approach, with the idea that classifying public lands in large areas decide their fate once and for all. Once this was done, it would be difficult to undo—and only Congress or the Secretary could do it—freeing BLM to manage its holdings under a multiple use mandate. In this way, BLM's National Resource Lands were established, in a manner somewhat analogous to the creation of a system of national forests.

Proof of the public's support for retention of BLM lands in public

THE CLASSIFICATION AND MULTIPLE USE ACT

by Irving Senzel

Editor's Note: *Irving Senzel began his career with the General Land Office in 1939. In his more than 30-year career, Mr. Senzel held many positions, including Chief of the Division of Lands and Minerals Standards and Technology under Director Stoddard and Assistant Director for Lands and Minerals under Director Rasmussen. In these jobs he was responsible for overseeing implementation of the Classification and Multiple Use Act of 1964.*

What role did I play in the CMU Act program? Well, I had nothing to do with drafting the law. That was done in the House Interior Committee. However, because of the Lands and Minerals positions I held (Division Chief and later Assistant Director), I became involved in its interpretation and implementation.

After the House enacted the bill, I was told not to propose any amendments; I initiated two letters to the Senate Interior Committee interpreting provisions of the bill that I thought were ambiguous. These letters later proved important to our defense of our program, particularly since they dealt in part with the question of segregating lands from locations under the mining laws. Our remarks were significant since the Senate passed the House bill without amendment.

In the implementation of the CMU Act, I had primary responsibility for the preparation of classification regulations, drafting of manual sections on public-participation procedures, and monitoring progress of the program. In this work, we were plowing new ground in active give-and-take with the public in the public lands areas. We were anxious to make sure that our field efforts were conducted in a fully professional, objective manner.

The field undertook program operations with enthusiasm. BLMers spent long hours, including evenings and weekends, in preparation, public meetings, discussions with State and local officials, show-me tours, and what not. All this soon resulted in a flow of classification orders for publication in the *Federal Register*. Our progress apparently took some people by surprise, for from the Hill and a couple of other places came demands that BLM stop its work under the Act.

In a Director's staff meeting called to discuss this development, I argued against acceding to this demand chiefly because (1) what we were doing was consistent with the directives of the law, (2) our interpretations, proposed regulations and criteria, and proposed field procedures were all exposed to detailed public and Congressional scrutiny before adoption, (3) the general public in the public-lands areas responded well to our operations, and (4) surrender without a fight would be a serious blow to field morale, which was then very high. Field personnel were doing a job they thought needed to be done.

We took the matter up with Secretary Udall, who then gave us the green light to continue with our work. The Hill was informed of this decision.

When the statutory period terminated, the field had completed classifications for more than 150 million acres, a remarkable achievement especially since the Bureau received no additional funding from the Act to do this pioneering work.

ownership came in July 1968, when BLM proposed to classify 119,000 acres of lands in Pima and Pinal counties, Arizona, for disposal (along with 354,000 acres for retention). Objections from the public and user groups caused BLM to abandon the proposal; the acreage to be disposed eventually dropped to 6,600 acres.

Some in Congress—Wayne Aspinall in particular—strongly disagreed with BLM's approach, asserting that the agency was stretching its authority. A critical test of BLM's strategy came when Aspinall wanted to extend the Public Land Law Review Commission Act without the CMU Act. The Senate (Senator Jackson in particular) would not agree to this request and extended both acts until 1970.

While lands classified for retention were segregated from settlement laws, they were not precluded from mineral leasing or most mining activity. Less than 1 percent of the lands classified for retention were segregated from mining, and these were generally areas under 1,000 acres identified as valuable recreation areas, wildlife habitats, or cultural resource sites.

Once the public land tenure issue was decided, BLM was ready to recognize special values on the public lands and designate special management areas. According to Assistant Director Jerry O'Callaghan, "the classification [process] identified public values which could have been lost in a case-by-case classification." BLM's first primitive areas, Paria Canyon and Aravaipa Canyon, were created through BLM land classification actions in 1969, along with the Vermillion Cliffs Natural Area.

According to former Director Marion Clawson, the Classification and Multiple Use Act "gave the Bureau a psychological lift that has led to its taking the initiative more and more often." The act made public involvement and interagency cooperation a permanent part of public land management. By July 1968, 188 local government boards and commissions had reviewed proposed classifications. More than 15,000 local officials participated in CMU public meetings and hearings.

THE PUBLIC LAND SALE ACT

The Public Land Sale Act allowed BLM to sell tracts of land up to 5,120 acres "for the orderly growth and development of communities" after local zoning and planning had taken place. To implement the act, BLM District Managers met with local governments and planning commissions in ten test counties to develop cooperative procedures.

The Act required that lands be classified under the CMU Act before they could be sold. Lands were then appraised and sold at fair market value to state or local governments or high bids were taken at auction from private individuals, organizations, or corporations meeting the act's criteria.

REORGANIZATION

Using the CMU Act as his authority, Charles Stoddard reorganized BLM in 1965 to integrate new programs. New divisions (wildlife, recreation, and watershed) were created in the Washington Office and the Bureau's line managers—State Directors and District Managers—were strengthened with new responsibilities to coordinate on-the-ground activities. Budget work and program evaluation were moved from BLM's program staffs and consolidated under the Assistant Director for Administration and the Division of Program Evaluation to further integrate and organize the Bureau's activities.

Detached Resource Area Offices

By this time, added workloads and management responsibilities in the field were making BLM District Offices too large for managers to have a working knowledge of everything that occurred in their districts. An organizational study of BLM in 1964 by Dr. George Shipman of the University of Washington recommended that BLM change its organizational structure and management systems to provide better service to public land users. Another major conclusion, according to former Colorado State Director Dale Andrus, was that "coordinated land use decisions had to be made at the grass-roots level."

Serving as a Management Analyst and Assistant Director in Washington in the 1960s, Andrus was responsible for much of the organizational work in creating BLM Resource Area Offices. According to Andrus, it was critical that the Bureau designate a single official to manage and be responsible for all BLM activities in a specific geographic area. These activities included land use planning, managing minerals and natural

A NEW EMBLEM FOR BLM
by Charles H. Stoddard

The tired old emblem of user groups—the logger, cowboy, oil driller, and surveyor—produced a poor image, never had Bureau acceptance, and was too busy for reproduction. Accordingly, we held a contest in 1965 to develop a new emblem. The winning emblem features today's winding river, grassland, a conifer tree, and a mountain, snow-capped as a result of mountain climber Udall's suggestion.

resources, processing lands cases, and providing information to the public. A general rule of thumb of three to four areas per district was set forth in the implementing instructions, according to Andrus. "Criteria used to identify Resource Area boundaries were kind and amount of workload, geographic barriers, political subdivisions, and watershed basins."

By 1965, several Bureau field offices had already followed Idaho's lead in establishing "Division Managers" within Districts, making them responsible for management of specific geographic areas—with the District Offices providing planning and program coordination, plus technical and administrative assistance. Resource Area Offices were officially recognized in July 1966 in BLM Manual Section 1213.37. Special project offices or unit offices in O&C Districts (e.g., Tillamook, Oregon) were already performing this function; in other locations (e.g., Durango and Meeker, Colorado) former District Offices were converted into detached Resource Area Offices during statewide reorganizations.

PLLRC: A CLOSER LOOK AT PUBLIC LAND MANAGEMENT

At the same time BLM was classifying its lands for retention in multiple use management or disposal to the private sector, the Public Land Law Review Commission was studying the nation's 3,000 land laws and federal management of the public domain to identify problems and recommend new policy, programs, and legislation. Its Chairman, Wayne Aspinall, had strong disagreements with BLM and the Department over how the Bureau was carrying out its responsibilities.

The Public Land Law Review Commission (PLLRC) was established mainly through the efforts of Wayne Aspinall. While Presidents Kennedy and Johnson and the Interior Department were introducing conservation-related legislation to the Congress, Aspinall was trying to get Congress to rebuff these initiatives and establish federal land policy by itself. At the commission's first meeting, Aspinall was named chairman. Other members included six senators, six representatives, and six presidential appointees. An Advisory Council was formed with liaison officers from each of the land-managing agencies plus 25 members appointed by PLLRC to represent land users.

PLLRC commissioned studies on commodities and land uses, intergovernmental relations, regional and local land use patterns, government management of public lands, and historical development of public land laws. Its reports included studies of fish, wildlife, forage, and mineral resources; OCS lands; future demands for commodities; withdrawals and reservations; and virtually every other land management policy or activity BLM was involved in. Conservation groups and most of the public, however, were not involved in this process and ignored it, focusing their attention on wilderness debates, oil spills, and Alaska policies, plus passage of the National Environmental Policy Act (NEPA) and other conservation legislation.

A DIRECTOR'S PERSPECTIVE: 1963-1966

by Charles H. Stoddard

Editor's Note: Charles Stoddard worked for the U.S. Forest Service, the Bureau of Agricultural Economics and private research foundations, including Resources for the Future, and was director of Secretary Udall's Program Staff before serving as Director of BLM. He holds degrees in forestry and forest economics from the Universities of Wisconsin and Michigan.

Charles Stoddard

During three years as Director, I oversaw major changes in organization structure, program direction, and land-use planning—changes that were designed to help BLM clarify its goals and evolve into today's multiple-use organization.

Prior to my arrival, BLM had Professor George Shipman of the University of Washington study the Bureau's organization structure and recommend improvements. He saw the BLM as divided, uncoordinated, and unilateral in structure, citing its case-by-case orientation, its custodial (as opposed to managerial) approach, and its lack of a mission or goal. He went on to say, "Unless you can spell out a goal, a set of objectives, I can't be of much value to you nor can I come up with any organizational recommendations. Organization must be tailored to mission."

I feel my major contribution as Director was to help define our problems so that we could set forth clear objectives, and tailor BLM's organization structure to carry out programs that would meet these objectives.

Following the analysis made by Professor Shipman, BLM went through a major Washington Office reorganization, going from a five-functional group structure (survey, minerals, lands, forestry, and range) to a basic staff and line structure. The line established was from Assistant Directors through the State Offices to the Districts. In addition, we replaced single purpose, case-by-case directives with coordinated instructions to field offices, amidst cries of protest from guardians of the status quo.

In lieu of a regional office set up, Service Centers were established in Denver and Portland to provide technical support to State and District offices. The Boise Interagency Fire Center was established in 1965.

Legislative Developments—Except for the Taylor Grazing Act of 1934 and the O&C Forestry Act of 1937, BLM was hemmed in by old disposal laws and special bills for relief of individual situations. This deadlock was broken by providing classification criteria in the new Classification and Multiple Use Act, which were applied to the lands prior to their retention or disposal. Because there would be impacts arising from changes in land use, we made certain that regulations provided a system of public meetings at the grass roots to institutionalize local participation in the land management decisionmaking process. This began a process for stabilizing the tenure of retained lands by the Public Land Law Review Commission and, ultimately, FLPMA.

Resource Management Programs—Resource project work varied considerably in the

field. It was carried on without effective technical guidelines from Washington or State Offices and was carried out by user request rather than program need. For example, when BLM field staffs initiated soil and water conservation projects, many were installed off the contour—thus increasing erosion.

BLM's grazing management lacked modern range management techniques such as rotation grazing. I asked Dr. Glen Fulcher from the University of Nevada to head up our Range Staff. Fulcher brought in Gus Hormay, a Forest Service researcher who had developed a "rest-rotation" grazing system designed to bring about range reestablishment in over-grazed areas without reseeding. Enthusiasm for this new approach grew: when I left BLM an average of one rancher per District had a rotation plan under practice.

Management of the Bureau's forest land was subject to considerable pressure from user groups seeking regular increases in allowable cut limits. We curtailed excessive expansion of these sustained yield limits in several confrontations where the public interest was able to override local pressures.

Much of the Bureau's Soil and Moisture funds were allocated to range improvements — not to eroding lands nor to efforts to restore overgrazed lands. A special Frail Lands Study, undertaken in 1964 by Cyril Jensen and Clarence Forsling, identified about 45 million acres of public land on which accelerated erosion was taking place. Senator Hayden was instrumental in obtaining appropriations for BLM to begin genuine erosion control efforts.

Although the Bureau had authority for managing wildlife habitat under the Taylor Grazing Act, no active program was in operation nor were funds directed to this purpose. In 1964, Bob Smith (former Arizona Game and Fish Director) put wildlife on an equal footing with forestry and recreation. Al Day, former Director of the Fish and Wildlife Service, examined the wildlife program and laid out plans for habitat improvement, location of wildlife managers in Districts with heaviest wildlife resources, and a variety of special projects.

Land Use Planning—Multiple use management plans had never been instituted in the Bureau because of its single-purpose approach (range, forestry, etc.). A workable planning system, the Unit Resource Analysis, was implemented after considerable testing in the field. URAs provided the Bureau's first means of integrating all project work and land use for a District into a management system.

Personnel Matters—Modern resource management requires not only technical expertise from many disciplines but also knowledge of social sciences and administrators who can blend all disciplines into a unified program. I sought to encourage "generalists" in the Bureau and to give them a separate ladder for advancement. Lacking any trained land use planners in BLM, I instituted a special program at the University of Wisconsin in regional planning.

Minority group employment in BLM lagged. This was partly because of inertia and a lack of people trained in the fields needed by BLM. I initiated efforts to recruit Native Americans in areas near BLM operations plus blacks from southern agricultural schools.

In my opinion the Bureau of Land Management has some of the best trained personnel available in government. I'm proud to have been associated with these fine employees and look back with pride on my years with the BLM. To assure a solid future, BLM must remain a land management agency—in place of its real estate disposal past.

In 1970 PLLRC released its report, "One Third of the Nation's Land." Reflecting Aspinall's sentiments, it asked Congress to establish policy on a variety of public land matters. The report recommended that all federal lands not specifically set aside by Congress, such as national forests and monuments, be made eligible for disposal—but in another section stated that the nation's policy of disposing the unappropriated public domain be reversed.

PLLRC also proposed merging the Forest Service and BLM into a Department of Natural Resources (a proposal soon taken up by Presidents Nixon and Carter). The commission recommended that Congress limit the exercise of Executive authority, especially on withdrawals, and called for Congress to determine revenues for consumptive uses of federal lands. PLLRC further recommended grants of federal funds to states and counties in lieu of taxes.

In these proposals, PLLRC proved prophetic: Congress soon began prescribing specific management techniques and standards to be followed by federal agencies, thus limiting their traditional discretion in management actions and policy implementation. But PLLRC's report, though voluminous, was often contradictory. Its recommendation to classify public lands for their "highest and best use" was seen as an endorsement of dominant use over multiple use on the public lands.

Life Magazine reported that the PLLRC report was written by people "who believe in the commodity approach ... and consequently it gallops headlong in the wrong direction." *Sports Illustrated* said that Aspinall's commission recommended "accelerated exploitation and disposal of the lands" and that its recommendations were made "on the basis of little publicized hearings and highly secretive deliberations." Professor Paul Culhane reflected that "many of the commission's recommendations appeared to have little impact on federal policy, perhaps because they seemed too pro-industry and out of step with the times when released during the fervent early years of environmentalist activism. However, the PLLRC firmly asserted that the era of disposal of public lands was over."

Thus, while President Nixon proclaimed NEPA as heralding the start of an environmental decade in 1970, PLLRC "played to an empty theater" according to Dr. Sally Fairfax. But few others in Congress or elsewhere had examined public land issues. PLLRC's studies and recommendations were available when the public and Congress were ready to address public lands issues—which would be soon. PLLRC compiled a great deal of information and opened a discussion that continued through passage of the Federal Land Policy and Management Act.

PLANNING: THE DEVELOPMENT OF MANAGEMENT FRAMEWORK PLANS

"If we are to maintain man's proper relationship with nature...we must broaden the role of resource planning

in the management of our national affairs."
[DOI Annual Report - 1961]

Implementing multiple use management on the public lands required planning. And effective planning required that the public be involved in BLM's decisionmaking process. Once this was begun, there would be no turning back; the public took an increasing interest in BLM and increasingly did not agree with the agency's management.

The story of planning in the 1960s is the eventual development of Management Framework Plans (MFPs), integrating all of the Bureau's on-the-ground activities into a single effort. As a first step, the Bureau needed a way to develop land use plans independently of the applications it received. The Master Unit system was created in 1961 for BLM to decide on land tenure before reacting to specific land-use applications. Units of study (Master Units) were defined, information gathered, and the data analyzed to determine potential land uses. The Bureau then categorized its lands into title transfer projects, land management projects, and residual management areas where detailed land-use plans would not be appropriate.

In 1963, working with state agencies and county commissions, BLM developed a plan to coordinate Recreation and Public Purposes Act (R&PP) land transfers in the Las Vegas area and manage the remaining public lands. Citizen groups were involved on a recreation subcommittee while county commissions developed overall plans.

Once the CMU act passed, BLM Director Charles Stoddard created the Office of Program Evaluation in Washington to develop a multiple use planning process for the field. BLM's challenge was to devise a planning system that would incorporate individual activity plans (master unit, allotment management, and watershed plans) into more general area plans. The system had to be clearly understood by employees, constituents, and the public, and be standardized enough to ensure consistent results across the Bureau. It also needed to integrate the resource allocation techniques used by different programs.

Stoddard, originally from Wisconsin, knew of a successful land use planning system used in his state during the 1920s and 1930s. The system featured land classification and zoning procedures—plus participation and approval from the public before final decisions were reached—and served as a model for BLM's system. Nevertheless, implementation of a comprehensive planning system represented a major organizational change for the Bureau. Field managers needed to be convinced that a uniform, Bureauwide land use planning system was needed when they were used to doing these jobs in their own ways. Several attempts and many years were necessary to implement a workable system. To encourage the process, Stoddard began sending BLM managers to the University of Wisconsin for training in regional land use planning.

BLM's first step was to identify planning units and collect resource data. Unit Resource Analyses (URAs) were prepared to summarize resource inventory data collected in planning units. Social and economic

data were also collected so that they could be considered when it came time to develop management alternatives.

But then what? More than a few field managers were apprehensive about a system that would require public involvement and identify management alternatives before BLM arrived at decisions. Why should BLM tip its hand to users and the public in the early stages of its decisionmaking process? In many districts, BLM would have enough controversy to handle once a final decision was made.

Finding a way for each program and the public to identify and advocate resource uses—and follow them through the process so that no potential was overlooked—was tricky. How would disagreements be resolved? How much would the public be involved in decisionmaking? BLM planners had a long way to go to convince BLM field offices that planning was a good and necessary thing—and that using the system to address and resolve differences among land users would save the Bureau from repeated headaches in the future.

An important step in getting MFPs off the ground was testing the process in the field and showing it would work. In 1968, Art Zimmerman, District Manager of the Montrose District in Colorado, asked to test the process to see if it could help resolve strong disagreements on resource allocations among the district's user groups. After this and further tests in Oregon and California proved successful, MFPs were ready to be implemented in the field.

MINERALS

According to Director Stoddard, "BLM's minerals activity could hardly be called a program" in the early 1960s. The Geological Survey classified minerals, approved exploration and mining plans, and monitored this activity, which "prevented BLM from giving effective direction to location, rate, and timing of mineral exploration and development."

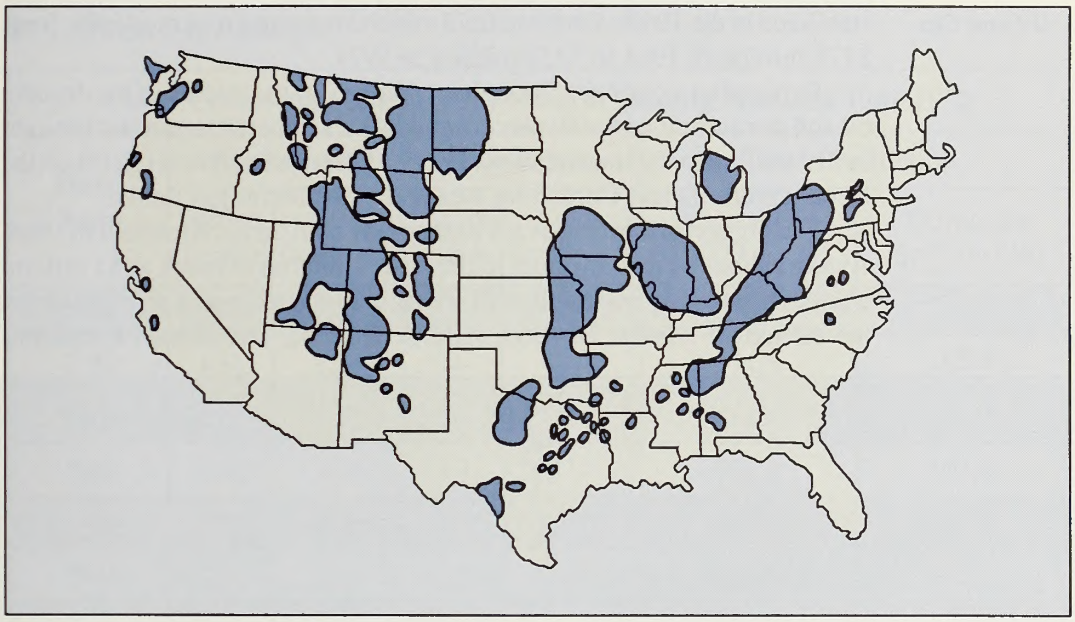
Secretary Udall and BLM worked throughout the decade to develop a minerals policy, one that ensured optimum returns of revenue to the Treasury, resolved land use conflicts, and planned for adequate mineral reserves in the future. The Interior Department's Annual Report for 1962 had this to say about minerals: "In the past 30 years, this Nation has consumed more minerals than all the peoples of the world had previously used....That current demands are being met without difficulty is primarily due to the immense technical and exploratory efforts of the 1940s and early 1950s. But with national requirements constantly increasing, the present availability of raw materials will not continue unless prompt action is taken to look to the years ahead."

Coal

Before the mid-1940s, coal provided over half of America's energy needs. Oil and gas rapidly supplanted it as the nation's preferred fuel after World War II. However, interest in public coal reserves revived in the 1960s due to advances in coal utilization, processing, and transportation. Coal in the West was viewed as an important future energy source because of its low

sulfur content—an important asset in reducing air pollution.

Half of the country's coal reserves occur west of the Mississippi River and the government owns 60 percent of it, or about a third of the nation's total. BLM was sitting on 75 million acres of federally owned coal. Major hydroelectric facilities had already been built and few new sites were available. Early warnings about declining oil and gas supplies were largely unheeded by the public. The Interior Department, however, readied itself for future demands for coal. Secretary Udall created the Office of Coal Research to complement the Bureau of Mines' research efforts.



Major U.S. coal fields

During the 40 years following passage of the General Mineral Leasing Act of 1920, GLO and BLM issued an average of only four coal leases a year. From 1960-69, that average increased to 31 per year. By 1971, 17 billion tons of federal coal were under lease, enough to satisfy America's coal needs for 25 years. Most of these leases, however, were speculative: 70 percent were not producing. Major development of coal came soon after, though, following the energy crisis of 1973.

Oil Shale

Oil shale reserves were estimated to amount to 2 *trillion* barrels of petroleum, compared to onshore and offshore oil reserves of 300 to 500 billion barrels. The problem with developing oil shale, however, was the extreme heat (and expense) needed to process the shale.

Secretary Udall appointed an Oil Shale Advisory Board to study the situation and recommend policy. Because the group had diverse points of view, an interim (but never final) report was released in 1965. The board agreed that knowledge of oil shale needed to be enhanced and that "the national interest is best served by the immediate commencement of oil shale development."

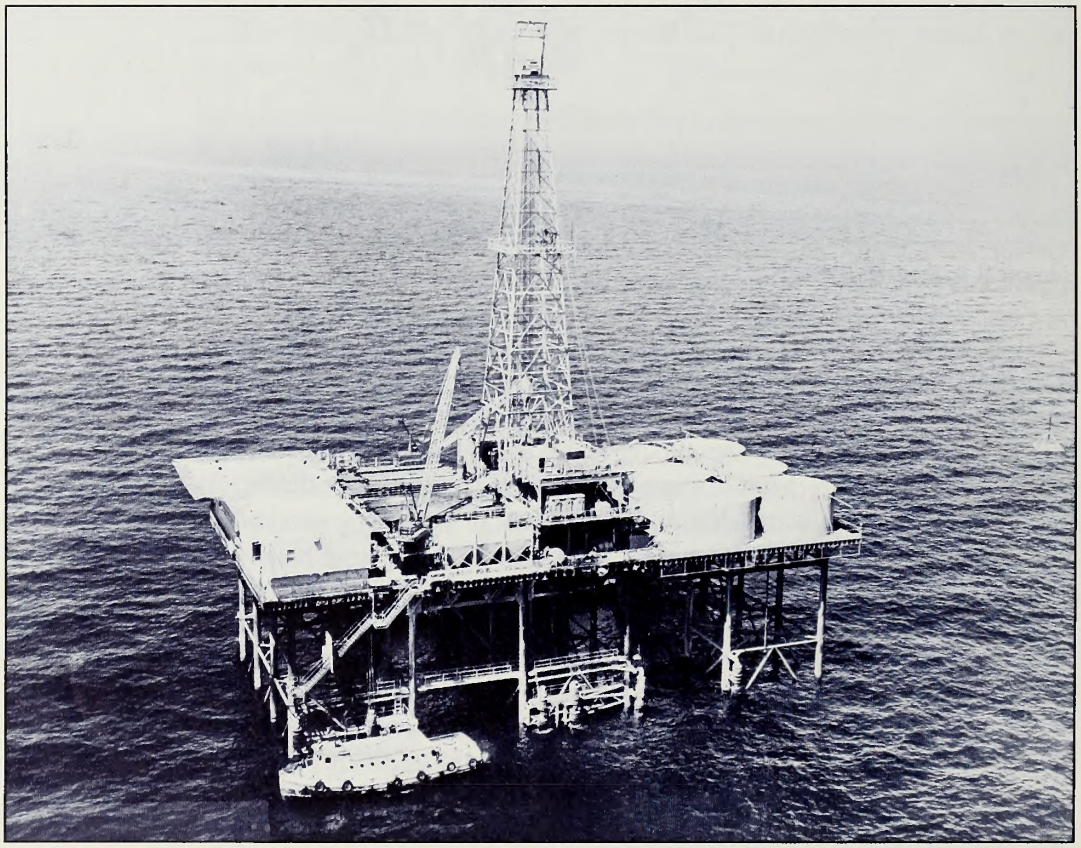
In 1967, Udall announced a tentative oil shale program to clear title to oil shale lands by withdrawing them from other forms of mineral entry, blocking up oil shale ownerships through an exchange program, issuing provisional development leases, and cooperating with industry to develop better processing methods. The program sought to encourage oil shale development, prevent speculation, promote good conservation, and bring money into the Treasury. In late 1968 a number of oil shale leases were opened to competitive bidding, but the offers were rejected by BLM as being too low.

Oil and Gas

The oil and gas leasing frenzy that characterized the late 1950s stabilized in the 1960s. Onshore fluid mineral revenues rose modestly, from $178 million in 1961 to $233 million in 1971.

Exploration continued throughout Alaska. By the middle of the decade, oil and gas accounted for 60 percent of Alaska's mineral output and brought in $19 million to the state treasury. By 1970, there were five oil fields on the Kenai Peninsula and Cook Inlet area and nine natural gas fields.

The biggest oil strike was at Prudhoe Bay by Atlantic Richfield in 1968. Alaska estimated that revenues to the state could run as much as $1 million a day—which they eventually did. What was needed was a pipeline to get the oil out of Alaska. In 1969, ARCO, Humble, and British Petroleum



BLM

Offshore oil drilling rig in the Gulf of Mexico

announced plans to build a pipeline from the North Slope to Valdez, stretching 800 miles across the state and costing $900 million. In June the Trans-Alaska Pipeline System—later the Alyeska Pipeline Company—filed a right-of-way application with BLM, with plans to start construction in the spring of 1970. These plans were contingent on settling Native claims and were ultimately affected by the passage of the National Environmental Policy Act.

OCS Lands

Revenues from the Outer Continental Shelf lands grew dramatically in the 60s, from $442 million in 1961 to $1.1 billion in 1971. Development of this resource occurred from the humblest of beginnings in 1959, when only $3.4 million was collected.

Outer Continental Shelf (OCS) Mineral Leasing Statistics 1961-1970

Fiscal Year	Gulf Coast		West Coast		Total Production	
	Active Leases	Acres (millions)	Active Leases	Acres (millions)	Natural Gas (1,000 cu. ft.)	Petroleum (million bbl)
1961	458	1.93	—	—	298.1	48.5
1962	851	3.74	—	—	354.5	65.5
1963	826	3.59	57	.31	473.6	87.7
1964	824	3.50	57	.31	526.2	107.4
1965	797	3.40	135	.76	621.7	122.5
1966	792	3.29	116	.65	645.6	145.0
1967	870	3.67	84	.47	1,007.4	188.7
1968	815	3.41	85	.44	1,187.2	221.9
1969	939	3.94	77	.40	1,524.2	269.0
1970	931	3.93	70	.36	1,954.5	312.9

In 1963 BLM opened an OCS leasing office in Los Angeles and held its first lease sale on the West Coast, bringing in $12.8 million for 58 tracts. But most offshore action remained on the Gulf Coast. In 1963, OCS oil production off the Louisiana coast represented 27 percent of total federal oil production, while gas represented 37 percent. By 1967 more than 4 million acres of OCS lands were leased by BLM, but this total represented less than 1 percent of OCS lands with ocean depths of less than 600 feet.

ALASKA

The two biggest issues for Alaska in the 60s were the selection of statehood grant lands and settlement of land claims made by Alaska Natives. Alaska handled its state selections through its Division of Lands.

The Division's first chief was ex-BLM employee Roscoe Bell, who had been Associate Director and then Regional Administrator in Portland under Marion Clawson.

Bell's plan was to select lands that would further the economic development of the state. Four million acres were selected a year, or as he put it, "an area the size of Rhode Island every two months," so that all 103 million acres due the state would be selected in the 25 years allowed by Congress.

Alaska's selections during this period were characterized by state officials as "small but carefully calculated." In 1964, the state selected lands at Prudhoe Bay that it thought had oil and gas potential. How right they were!

To help the state select land, BLM received additional funding for its surveys. Only 1 percent of the state was surveyed under the Public Land Survey System by the time Alaska was granted statehood. The Bureau therefore concentrated its efforts on surveying state selections, planning to survey 4 million acres a year to match Bell's selection schedule.

Alaska's sheer size required that new survey techniques be developed. Electronic distance measuring devices were used in the field; helicopters marked section corners and transported survey crews throughout the state.

Problems immediately arose with the program, however. The state refused BLM's request to select large areas forming "logical topographic-geographic-economic units." Alaska interpreted its right to select "reasonably compact tracts" in its statehood act as being 5,760 acres—a quarter township. With involvement of Alaska's congressional delegation and Assistant Secretary John Carver, the issue was resolved in the state's favor.

Alaska's biggest problem proved to be the claims of its Natives. The U.S. had not recognized aboriginal title for Alaska Natives, who consist of Eskimos, Aleuts, and Indians, as it did for Indians in the lower 48 states. Instead, in 1906 Congress passed the Native Allotment Act, which allotted each Indian and Eskimo 160 acres of nonmineral public land but made no reference to Aleuts. Because the law had no provision for passing title, the "allotments" were nothing more than perpetual reservations. Provisions for patent weren't made until 1956; by 1962, only 101 allotments had been made under the act.

Beginning as early as 1950, Alaska Natives petitioned to have lands restored to them. In June 1963, BLM stopped processing state selections in areas specifically protested by Natives until Congress could act on their claims. By 1966, Alaska Natives claimed some 230 million acres of land.

Secretary Udall initiated an informal freeze that stopped approvals on all state selections. Alaska then took Udall to court. Facing an adverse ruling in December 1968, Udall formally withdrew 260 million acres of public land from appropriation, asking Congress to resolve the situation. Because Native claims were also delaying selection of a route for the Alaska pipeline, Congress enacted the the Alaska Native Claims Settlement Act in 1971.

THE ALASKA STATE LAND SELECTION PROGRAM A STATE PERSPECTIVE

by Roscoe E. Bell
Former Director of Alaska Division of State Lands

I had worked for BLM in Alaska in the mid-1950s. When I returned to Alaska as State Director of Lands, my acquaintance with Alaska and with BLM personnel was very helpful, and very important, and I just wanted to compliment the BLM personnel in Alaska. They leaned over backwards to help us get started in the State selection process. Of course, they trained some of the people that we hired away from them, but it was a tremendous help to have a cooperative government agency to work with.

BLM personnel had been very influential in the draft of the Alaska Land Act of 1959. Through them we got a really effective land act for Alaska. They recognized the problems with the grants made to early states and wanted to avoid the same happening to Alaska.

When it came to processing land selections, BLM was very cooperative. When the State wanted lands in areas withdrawn from selection, BLM did everything they could to jar loose revocation orders to lift withdrawals so we could select the land and proceed with leasing.

We set up our land records system along BLM lines so we could coordinate land records, surveys, land selections, timber management, and fire protection with the Bureau.

We had very good cooperation from BLM for protection of the lands during the transition stage. At times, we'd make a selection and get tentative approval of the selection. This gave the State management authority of the land but we wouldn't get patent until the survey was made and finally filed, which took 3 years or more. BLM gave us free forest protection for the period between selection and patent so we could go ahead and manage. Alaska had very little money at that time and we needed fire protection of our future lands.

In the details of the land survey program, we had quite a knock-down, drag-out argument with BLM Director Karl Landstrom, but we had BLM support in Alaska.Under the Statehood Act, Alaska could make selections of a certain minimum size and BLM would survey the exterior boundaries of those selections. Well, Landstrom wanted us to make larger selections, to minimize BLM's surveying job. Now, the State of Alaska did not have any money to pay for the survey of smaller selections. I wanted to get the maximum amount of surveys from BLM, so we made our selections in a pattern of half-townships, which were twice as large as the minimum size required. By this method, we would get a pattern of survey corner monumentations that would give us a basic survey net over land we'd selected. We went to the mat with Karl. But with prodding from our Congressional delegation and others, we got Assistant Secretary John Carver to go long with our idea.

There were many other places where we could have gotten bound up forever in trying to work out problems. But as one BLM man in Anchorage said, "why quibble over details, after all, we're Alaskans too, and we are as anxious as you to see Alaska statehood work." It was a good relationship, and I was real proud of the relationship and spirit of cooperation we had with BLM.

Under State Director Burt Silcock, BLM Alaska classified over 32 million acres of land in the state for retention under the Classification and Multiple Use Act. An additional 38 million acres of lands were proposed for classification at the time the act expired, but most of the areas were included in Secretary Udall's Public Land Orders withdrawing them from appropriation.

RECREATION: A GROWING USE OF THE PUBLIC LANDS

Continuing a post-World War II trend, more and more Americans had more leisure time. They were better educated and more aware of the nation's public land resources. In hearings throughout the nation, the Outdoor Recreation Resources Review Commission (ORRRC) identified recreational opportunities on federal lands, including BLM holdings. The public was beginning to see that BLM lands offered long seasons of use and considerable variety.

In 1961, BLM's Oregon State Office issued a recreation handbook containing policy, planning, site design, development, and maintenance criteria. The Bureau hired its first landscape architects in the field that year and gave them recreation assignments. State Offices began to hire full-time recreation specialists.

The Public Works Acceleration Act of 1962 provided federal assistance to areas hard hit by recession and provided the Bureau its first major funding for recreation site development ($1.9 million), mainly for campgrounds and picnic sites. In New Mexico, picnic sites, trails, and campgrounds were built at the Rio Grande Gorge in the Taos Resource Area.

When the ORRRC's final report was issued in 1962, a logjam of pending legislation was introduced in Congress, including the Outdoor Recreation Cooperation Act, the National Wilderness Act, and the Land and Water Conservation Fund Act. Secretary Udall created the Bureau of Outdoor Recreation that year to coordinate federal, state, and local recreation planning and to provide grants to states that drew up outdoor recreation plans.

In 1963 a Bureauwide recreation inventory was begun to identify recreation sites, areas, and complexes, with this information being passed along to the Bureau of Outdoor Recreation. While most of this work was site-oriented, several trails were identified. In its 1965 report, "Trails for America," the Bureau of Outdoor Recreation identified over 3,600 miles of trails on public lands and noted BLM's proposal to add 5,000 miles of new or rebuilt trails.

In 1964 the Land and Water Conservation Fund (LWCF) Act authorized funds for the development of state and local parks and expanded federal land acquisition programs for recreation—including acquisitions for BLM recreation areas. Funds were raised from taxes on recreational equipment, user fees in recreation areas, and general appropriations.

OFF-ROAD VEHICLE MANAGEMENT

by Ralph M. Conrad
Natural Resource Specialist, Division of Lands

Large and frequently successful programs often have small innocent beginnings. BLM's beginning in off-road vehicle management, as I recall, is a case in point. Some of the dates are fuzzy with the passage of time, but the players and circumstances are well remembered.

It all started in 1967 in a remote desert canyon in Arizona. The initial players, a group of Girl Scouts and their leader, a Phoenix newspaper man (Don Dedera), were still in their sleeping bags in the early light of dawn. As later reported by Mr. Dedera in the *Arizona Republic*, an annoying mosquito buzz steadily grew into a roar as two motorcycles bore down on the sleeping-bag-encumbered Girl Scout troop. Mr. Dedera successfully removed himself from his sleeping bag and flagged down the second biker. Upon being asked what was going on, the biker reportedly said, "If you think this is something, wait until this afternoon—we have a race coming through here." When asked who authorized the race the reply was, "No one—these are public lands." Orren Beaty, then Four Corners Commissioner, clipped the Dedera column and forwarded it to Secretary Udall with a short note asking if something could be done about uncontrolled motor vehicle use in the desert. The Secretary bucked the Dedera column and Beaty note to Director Rasmussen with the added instructions: "Do something."

The Secretary's instructions filtered down through the BLM Directorate to the Chief of the Recreation Staff (Eldon Holmes). The Bureau's outdoor recreation program was in its infancy; most of its funding was derived from BLM's lands program. There was no policy or regulatory base upon which to justify a program. Draft regulations to establish the outdoor recreation program had been developed by the time the Secretary's instructions arrived but were having little success getting through the surname process. Therefore, since ORV regulation had the support of the Secretary, it was decided to interweave the ORV regulations into the draft outdoor recreation regulations and kill two regulatory birds with one stone. This would respond to the Secretary's specific instructions while establishing the needed regulatory base for the Bureau's outdoor recreation program.

Even with Secretarial backing, the regulatory package had limited success. The Democratic Administration lost the election in November 1968. A new administration would take its place on January 20, 1969. By mid-January, last minute programs of the outgoing administration were being finalized. At about that time, word was received that the Secretary was still interested in ORV regulations. Over the next several evenings Assistant Director Eugene Zumwalt, Eleanor Schwartz, Eldon Holmes and I burned the midnight oil finalizing the regulation package. In the late evening of January 16, 1969, Assistant Director Zumwalt handcarried the regulatory package to Secretary Udall for signature. The regulations were effective upon publication in the *Federal Register* on January 18, 1969.

Shortly after publication of the regulations, Bill Leavell (Program Staff) requested a briefing on the intent of the ORV portion. When asked why, he explained that he was being reassigned to California and that State Director Russ Penny wanted to get on top of ORV management in the California desert. The result of their work was the establishment of the Off-Road Vehicle Advisory Council in 1969 and the initiation of management of ORV use on the public lands.

CALIFORNIA DESERT PROGRAM 1966-1974

by J. Russell Penny
California State Director—Retired

I became California State Director in May 1966. Shortly thereafter I toured its five districts to become informed of their major problems. The Riverside District Manager informed me of an upcoming motorcycle race. Although he had never seen one, he understood it would involve several hundred motorcycles (there turned out to be 600) racing over many miles of federal and private lands without any authorization. I requested that he have the race observed and pictures taken.

The pictures proved to be a shocking portrayal of soil and vegetative destruction. Moreover, many of these races were occurring along with individual use of all kinds of recreational vehicles. I suddenly realized that heavily populated California presented a new dimension in public land management: "people management."

I presented the motorcycle pictures to Director Boyd Rassmussen at a State Directors meeting with a request for the National Park Service to assist BLM in conducting a study of the recreational uses and resources in what became known as the Southern California Desert.

The Park Service's participation was especially significant to provide credibility to the study. *The California Desert,* released in November 1968, primarily identified recreational resources and uses of the desert (e.g., over 2 million visitor-use days annually) and made some conceptual management suggestions. An important one was the identification of 19 areas having significant recreational values that were proposed to be classified for retention in public ownership and comprehensive management plans developed. It was further recommended that departmental policies be strengthened to recognize recreational values. A BLM Ranger Force and a system of way stations were proposed to assist in the recreational program. The report also recommended a program be developed ensuring full public participation in planning for the future of the area and that a comprehensive plan covering all aspects of the California Desert be developed.

Phase II of the study, *The California Desert—a Critical Environmental Challenge*, was completed in January 1970. It expanded the study to include all uses and resources, and envisioned taking 5 years to complete a long-range management plan. To protect and maintain important resources during this critical period, the immediate implementation of an "Interim Management Program" was recommended. This was to be implemented in part by the establishment of a uniformed ranger protection and maintenance operation.

I was struck with the similarity of the situation that existed in the California Desert and that of the public domain when I came to work for the Division of Grazing in 1937. The users were antagonistic. There was little pertinent knowledge of the recreational resources, uses, or management needs of the public lands, nor were there pertinent rules, regulations and laws for administration. Borrowing from the highly successful advisory board system of BLM's past I organized and appointed the "Off-Road Vehicle Advisory Council (ORVAC)" in June 1969. It consisted of 15 members made up of representatives of user groups and of city, county, state, and federal agencies. An early principle developed was that "off-road vehicle use of BLM lands was a legitimate use but it must be a managed use."

The California Desert embraced over 16 million acres then administered out of the Riverside and Bakersfield District Offices. We concluded that while the Interim Management Programs should be the responsibilities of the District Offices, the planning program was to be for the California Desert as a whole under the direction of a Planning Director stationed at Riverside and reporting directly to the California State Director. In 1971 funds and personnel were provided for the California Desert Planning Program.

The Interim Management Program consisted primarily of confining ORV use to designated areas. A policy was formulated to confine ORV use to areas of past heavy use and to prevent encroachment on other areas until after the comprehensive plan was developed.

Motorcycle races were originally authorized by letters of authorization with little opposition. This procedure was soon declared unlawful, however, and special land use permits were thereafter required. This included restricting the course so as to best protect the resources, monitoring the races, and charging fees. Rules and regulations had to be developed from scratch. The ORV groups, especially the motorcycle groups, were defiant. Soon five lawsuits were filed in the federal courts by the motorcycle groups contesting the BLM's legal authority. The BLM actions were upheld in every instance.

At this time there was very little interest in the California Desert by environmental groups. At my request, the local representative of the Sierra Club was solicited by the Riverside District Manager to intervene in the BLM's behalf in the pending lawsuits. They did. Thereafter the environmental groups became increasingly active.

The BLM was performing these activities without additional funding or staffing. As a result District personnel were contributing many hours of their own time to get the job done, especially in monitoring motorcycle races on weekends. In 1972 Environmental Impact Statements or Assessments were required for all Special Use Permits. This resulted in the denial of some ORV events with much negative reaction.

Several supportive articles appeared nationally, however, in *Reader's Digest, Time,* and *National Wildlife Magazine*. Extensive tours and meetings were held. In 1972 Secretary Morton, at a ceremony in the Imperial Sand Dunes, dedicated the 19 areas (totalling 2.7 million acres) identified in Phase I of the study as National Recreation Lands. Later in the day Secretary Morton led a "Town Hall" meeting regarding the California Desert before a packed house at El Centro, California. There was a spirited exchange of ideas. Morton expressed his support of the California Desert. Some of his statements set forth important policy.

In 1972 a contractual study was made setting forth the funding and manpower needs required to administer the California Desert. In 1973 limited funding and manpower was earmarked for the California Desert Program, including the hiring of six Desert Rangers and construction of the Barstow way station, which was dedicated in 1974.

During this time BLM was without legal authority to enforce federal regulations. Action had to be requested of the local law enforcement agencies. Congress became aware of the importance and needs of the California Desert and incorporated its concerns into the Federal Land Policy and Management Act. A full-blown management and planning program for the California Desert was now required by law, with funding and manpower assured.

Amendments to the act in 1968 provided a broader financial base and direct appropriations from OCS revenues to aehieve an annual minimum of $200 million. In 10 years this base was inereased to $900 million.

But it was the Classification and Multiple Use Act that gave recreation its offieial status as a Bureau program; recreation was identified as a value public lands would be managed for, thus providing a basis for congressional appropriations.

Reereational visits to publie lands more than tripled from 1963-68, increasing to 30 million. BLM's first regular funding for recreation ($700,000) was appropriated in 1965. Nine of ten reereation facilities on the public lands in 1968 were built after 1963. Reeognizing recreation's significanee, Direetor Boyd Rasmussen said that BLM lands "are now being used more for reereation than for any other purpose."

The Wild and Scenic Rivers Act of 1968 established a national system of wild, scenic, and recreational rivers which were to be authorized by Congress or designated by the states. The Rogue River in Oregon and the Rio Grande in New Mexico (ineluding quarter-mile-wide strips of land on each side) were two of eight rivers passing through BLM lands to receive this designation. The aet established a river study process, identified 27 rivers for further study, and outlined requirements for their management and proteetion. Land and Water Conservation Fund monies were used to purchase scenie easements on more than 2,000 acres of private lands along the Rogue River.

The National Trails System Act of 1968, as amended, authorized the designation of seenie trails by Congress and recreational trails by the Secretaries of Agriculture and Interior. Two seenie trails, the Appalachian and Paeific Crest, were designated in the act, which also plaeed 14 trails in a study category and prohibited motorized vehicles on National Scenic Trails. The aet was amended by the National Parks and Recreation Act of 1978, whieh added a National Historie Trail eategory and designated five historic trails, all of which involved BLM—the Mormon Pioneer, Continental Divide, Lewis and Clark, Pacifie Crest, and Iditarod trails.

CULTURAL RESOURCES

Passage of the National Historie Preservation Aet (NHPA) in 1966 did not immediately influenee BLM until regulations for the aet were finally adopted in 1974. The Denver Serviee Center, however, added an archaeologist to its staff. The act created the National Register of Historic Plaees to list signifieant historie and archaeological properties, defined as "any prehistoric or historic district, site, building, structure, or object," and established an Advisory Council on Historic Preservation to advise agencies on preservation matters.

Section 106 of the aet required ageneies to aeeount for the effeets of their undertakings on National Register properties and directed the Advisory Council to supervise a consultation process dealing with impacts

of federal activities on National Register properties or potential properties. These provisions served as a model for NEPA—the ideas of an independent advisory council, a consultation process, and a review of federal actions would be seen again, and though discounted at first, would have major impacts on federal agencies.

While no specific policy or guidance existed on paleontological resources, BLM's interest in them was growing. The Act of September 28, 1962, which addressed the disposal of a variety of mineral and vegetative materials, contained provisions for the management, sale, and use of petrified wood. Regulations for the free use of these materials, including petrified wood, on the public lands were issued by BLM in 1964.

In 1965, the Cleveland-Lloyd Dinosaur Quarry was designated a National Natural Landmark. BLM began to manage the quarry as a recreational site in 1966 and opened a visitor center there in 1968. Como Bluff, Wyoming, the site of a world-famous late Jurassic dinosaur quarry, was designated a National Natural Landmark in 1966. In addition to these formal actions, individual employees conducted paleontological surveys and mitigation projects as time and other duties allowed.

RANGE

BLM's range program mirrored the Bureau's rapid evolution and change. Adjudication of grazing privileges and production of forage were no longer primary goals, only components of multiple use management. In the mid-60s, Allotment Management Plans (AMPs) were developed, in which BLM and livestock operators jointly set goals for forage (both livestock and wildlife), soil stabilization, and recreation use by the public. The range resource would be managed intensively, with rest-rotation grazing systems, deferred grazing, and/or full-year grazing, with adjustments in livestock numbers (expressed in animal unit months) to bring about improvements in range condition.

AMPs were developed for single allotments as specific plans to be implemented under more general land use plans. Initially criticized by the livestock industry, the Bureau met with operators and groups to explain the program and incorporate their concerns in the process. But, reflecting the rise in interest from new groups (and their different perspectives), BLM next found its plans criticized by conservationists. Finding a middle ground that included good resource management techniques was to become the Bureau's challenge of the future.

AMPs were prepared jointly by permittees and BLM range conservationists, who toured the rancher's allotment to set goals for improving forage. Data on soil, forage, and economic conditions were used by the Bureau in writing a proposed AMP. The range employee then discussed the plan with the rancher, making changes both felt advisable. The AMP was then implemented and reviewed annually to monitor progress in meeting allotment objectives.

BLM

Bureau employees have worked with generations of public land users to develop land use plans that ensure the sustained productivity of BLM rangelands.

Vale Project

The Vale Project marked a significant departure for BLM's range program—a shift away from mostly managing livestock numbers to managing the range itself. In addition to implementing new grazing systems, brush control, and water developments, BLM experimented with the introduction of nonnative grasses and the use of herbicides to improve rangeland forage. Lands were also exchanged to create better management units.

BLM initiated programs to combat soil erosion, protect watersheds, and improve forage for both livestock and wildlife. Ranchers in the Vale District contributed labor to help build many of the range improvements (including 72,000 miles of fence, 1,600 water developments and 460 miles of water pipelines) and agreed to use new grazing systems on their allotments.

Congress provided $10 million over 11 years for the project, beginning in 1963. Brush was controlled on 506,000 acres, and 267,000 acres were reseeded (including 58,000 acres of winter habitat for mule deer). AUMs in the District increased from 285,000 in 1962 to 438,000 in 1975.

Because brush control and reseeding covered only 8 percent of the total land area, most of the increases resulted from use of rest-rotation and deferred grazing systems. Projects patterned after the Vale Project spread to Beowawe (Nevada), Big Horn (Wyoming), Owyhee (Idaho), and Rio Puerco (New Mexico) but were not funded to the extent the Vale Project was.

Grazing Fees

In 1962, Secretary Udall informed BLM's National Advisory Board Council and permittees that grazing fees were under review and that

THE VALE PROJECT

by Max Lieurance
District Manager, Vale, Oregon: Wyoming State Office–Retired

The Vale Project came about in 1962 after years of controversy and frustration over the dilemma of depleted rangelands. Then a political "window" opened, resulting in unprecedented support for necessary appropriations by two influential members of the Oregon Congressional Delegation, Senator Wayne Morse and Congressman Al Ullman. Authorization for the project offered the first real opportunity for the Bureau of Land Management to break through into full management of the rangeland ecosystem. It was also an opportunity to gain needed public confidence and the attention and respect of peer resource management agencies and institutions.

Max Lieurance (left), pilot, and Congressman Al Ullman prepare to tour rehabilitation project.

Prior to 1962, the Vale District was working through the so-called "adjudication of grazing privileges" which in nearly every situation produced inventory data indicating insufficient available livestock forage for existing licensed use. The inventories were extensive and the funding capability of BLM was such that it was virtually impossible to explore improved management alternatives which would deal with improving the rangeland ecosystem to any practical degree. The result was years of litigation over grazing reductions which, by themselves, would solve few problems; the waste of resources in endless legal controversy; the inability of BLM managers to apply their technical skills because of limited personnel and funding for support projects; and, most important, the rangeland resource continued to deteriorate while political battles raged.

The Vale project, then, was offered as a solution. A plan was prepared by the Vale district staff which basically said "give me the resources to work with and I can turn the program around in short order (originally seven years). The potential is there, the technical knowledge is there, the competent people are available in BLM, the livestock users and other interest groups such as wildlife and conservation organizations are more than willing to cooperate." The support in Congress by the Oregon delegation was the key to funding and the project was launched in 1962.

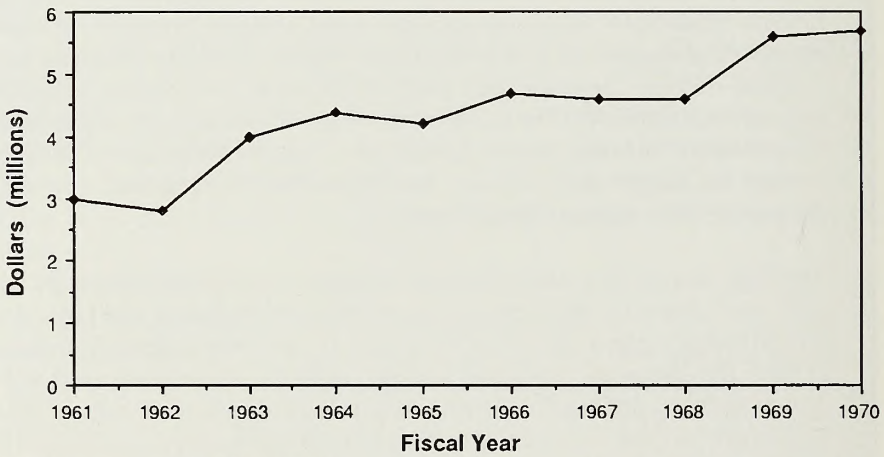
The project effort concentrated on management of the vegetation resource for both its consumptive use by livestock and wildlife and its non-consumptive needs for cover for a myriad of wildlife species, soil stability, and water quality enhancement. The project was watched closely (even nervously by some) over a period of years and to everyone's relief (even surprise) has been judged a resounding success. Independent technical evaluations in 1975 and again in 1985 have confirmed its success.

The project has received international recognition as a model of large-scale rangeland rehabilitation through intensive management coupled with facilitating improvement. Its continuing value for demonstration and education remains virtually untapped.

pressure from Congress and the Executive Branch was mounting to increase fees. The Department proposed to change the factor used in the 1958 livestock price formula from 100 percent to 150 percent.

Hearings were held throughout the West by the Senate Public Land Subcommittee under Senator Alan Bible of Nevada. Karl Landstrom overheard a person testify that "nothing delights the heart of a Nevada cowpoke more than to smell the hide of a BLM director roasting over a sagebrush fire." Despite strong opposition from ranchers, the Secretary adopted the 150 percent factor in 1963, which continued until a new grazing fee formula was developed in 1968. During this period grazing fees on BLM lands increased from 19 cents to 33 cents per AUM.

BLM Grazing Fees 1961-1970	
Years	Animal Unit Month Fee
1961-1962	.19
1963-1965	.30
1966-1968	.33
1969-1970	.44



Grazing revenues 1961-1970

Critics of BLM and Forest Service range programs continued to assert that the government was not receiving fair market value for grazing on the public lands. In 1966, the BLM and Forest Service contracted with the Department of Agriculture's Statistical Reporting Service to collect and study data on all aspects of the livestock industry to estimate fair market grazing values on public lands. The "Western Livestock Grazing Survey" included the mailing of 14,000 questionnaires, plus 10,000 personal interviews, to gather its data.

In 1968 an interagency grazing fee technical committee met to analyze the information. The committee needed to determine if there was any

statistical difference between grazing costs on Forest Service and BLM lands and if there was any basis for a variable fee. The differences, adjusted for seasons of use and other uses made of the lands, proved insignificant. The committee set an average fair market value of grazing at $1.23 per AUM for both agencies and recommended that this amount be adopted as a fee for both cattle and sheep.

Lawsuits against the proposed increases failed, but Congress decided against implementing such large increases in one fell swoop. Because grazing fees were then 33 cents per AUM for BLM lands and 72 cents for Forest Service lands, Congress authorized the increased fees to be phased in over a 10-year period (9 cents a year for BLM and 7.2 cents for the Forest Service).

FIRE

BLM continued to look at fire as one of the principal enemies of the nation's range, forest, and watershed resources. Under Karl Landstrom, fire training for BLM employees increased. BLM recognized that it had insufficient ground detection facilities; construction of fire lookouts became a priority in some parts of the West. In others, BLM began assigning "per diem fire guards" in advance of the fire season. Fire detection flights were made after lightning storms or during fire danger periods in many BLM districts.

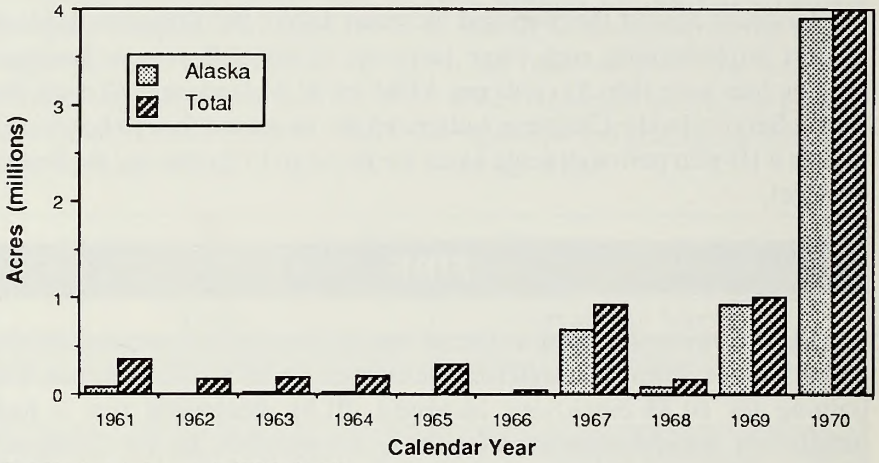
As for its firefighters, BLM liked small mobile crews. BLM relied more and more on helicopters to transport crews and drop borate/water mixtures on fires. A Bureauwide firefighting build-up was prompted by the 1961 fire season. Oregon, Idaho, Nevada, and Montana all faced serious fires in July and August. A shortage of crews caused intense competition for fire personnel; the National Guard was called to assist with transportation and other nonfire duties.

In 1964 lightning near Elko, Nevada started several fires: soon 300,000 acres were aflame. BLM resources were inadequate, so the District Manager asked for help through cooperative firefighting agreements with the Forest Service and the state. More than 2,500 firefighters, 64 aircraft, and 280 vehicles poured in from other states. A temporary coordinating and dispatch center, the Western Fire Coordinating Center, was established in Salt Lake City on August 18.

After the 1964 fire season, BLM strengthened its firefighting capabilities by establishing the Great Basin Fire Center in Boise, Idaho, on April 1, 1965—a permanent version of the earlier coordination center. Roger Robinson, former chief of the Alaska fire organization, was put in charge.

Robinson wanted to integrate BLM's firefighting efforts on a national level by making the Great Basin Fire Center a national communications, dispatch, and support center. The center's value to the Bureau was soon demonstrated. In 1967 more than 5,000 fires broke out in the Pacific

Northwest and northern Rockies. BLM coordinated deployments of as many as 7,000 firefighters on the line, prompting Secretary Udall to praise the advantages of interagency cooperation in controlling forest and range fires. The Forest Service joined BLM at the center in 1969 when it moved into new facilities and was renamed the Boise Interagency Fire Center.



Public lands burned 1961-1970

BLM

BLM firefighters on break from West Fork fire, Taylor Highway, Alaska 1966

THE BOISE INTERAGENCY FIRE CENTER

by Jack Wilson
Director, Boise Interagency Fire Center

The basic idea for a centralized fire support center came from several sources. Probably the first was in a Boise National Forest study by Deputy Regional Forester William D. Hurst in early 1961. The Honeywell task force in April 1964 proposed a fire center similar to Alaska's: a single fire program and center for the West. What really forced the issue were two events. First the Forest Service and BLM in Boise each established retardant plant operations on the same airfield; second, large fires were occurring in BLM's Elko (Nevada) District. The need for coordination and cooperation became painfully apparent.

On April 1, 1965, the Great Basin Fire Center was authorized by BLM at Boise, Idaho, and Roger R. Robinson, State Director of Alaska was sworn in as its first Director.

Initially the Boise National Forest attached their Fire Control Officer to the center along with their fire warehouse personnel. Subsequently the Fire Weather Forecaster of the National Weather Bureau joined the group. These original players drafted the first agreement for operating the center in 1969 when the first buildings were dedicated. There was understandably a lot of controversy and turf fighting, but in 1972 the first overall agreement was signed, assigning responsibility to the fire center. The Boise National Forest moved their smokejumpers there, and BLM began building its staff. At this time, the name was changed to the Boise Interagency Fire Center (BIFC).

In 1973, the Forest Service elevated its posture to the national level with the assignment of their Assistant Director for Suppression, Bob Bjornsen, to BIFC. Bob Robinson had retired, and the new BLM Director, Jack Wilson, was assigned. An era of cooperation was ushered in. In 1974 the National Park Service assigned John Bowdler to Boise as a partner at BIFC. In late 1975, with the passage of legislation that updated the old Clark-McNary Fire protection laws, the mission of the center became nationwide. The so-called State and Private Forestry Law authorized states to request fire support from federal sources.

The Bureau of Indian Affairs was added to the agencies who are BIFC partners in June of 1977. The Fish and Wildlife Service joined the center in October 1979.

The Office of Aircraft Services (OAS), an organization of the Department of the Interior, was created in 1973, and their first Director, James W. Thurston, wanted to establish his headquarters at Boise because of the closeness of fire/aviation relationships. So, as of 1974, OAS has resided at BIFC and shared the costs. The Forest Service moved their aviation coordination and support unit to Boise in 1975.

The first experience with International Fire support came in the summer of 1976 when the provinces of Ontario and Quebec had extreme fire seasons. This led to a joint Diplomatic Exchange Agreement that authorized mutual fire support, and the agreement has been used by both countries many times since it was signed in 1982.

FORESTRY

BLM stepped up its hiring of foresters in the early 1960s to manage public domain forests and woodlands outside Oregon and Alaska, including 5 million acres capable of producing timber in commercial quantities. Ponderosa and lodgepole pine forests in Colorado and Wyoming were made available to lumber companies when they shut down operations on Forest Service lands in the winter.

O&C Lands: In Search of Stability

BLM's management of the O&C lands was sorely tested in the 1960s. Cataclysmic storms, fires, and floods challenged the Bureau's ability to respond. Allowable cut limits were manipulated to respond to these situations and to the region's economic conditions, but were finally stabilized in 1970.

BLM sold over a billion board feet of timber from the O&C lands for the first time in 1960, taking in $34 million. Under Secretary Udall, BLM began a study of its forest holdings and their management. The review was interrupted by a recession that dropped timber prices from $32 to $25 per thousand board feet; in 1962 BLM raised the allowable cut for O&C lands to 1,127 million board feet.

But then came the Columbus Day storm: in one day 5 billion board feet of prime timber was blown down in Washington and Oregon; 1.5 billion board feet of timber on the O&C lands was killed or damaged. Congress authorized emergency road construction while BLM and the Forest Service developed a plan to salvage the timber by May 1964. BLM conferred with federal, state, and local governments and timber companies to adjust the terms and tenures of previously issued contracts to facilitate the process.

This massive, historic effort was completed on schedule, but in December 1964, BLM had to deal with floods that damaged access to $20 million of O&C timber. Congress responded with $14.8 million for emergency road repairs.

In August 1966, BLM had to cope with the Oxbow fire in the Coos Bay District. The fire burned over 43,000 acres of Douglas fir forest and cost BLM $900,000 (75,000 work hours) to put out. BLM offered 180 million board feet of timber for salvage by July 1967; the increase in sales for the Smith River Management Unit amounted to 330 percent, but all timber was harvested by the end of 1969.

Sweet Swap

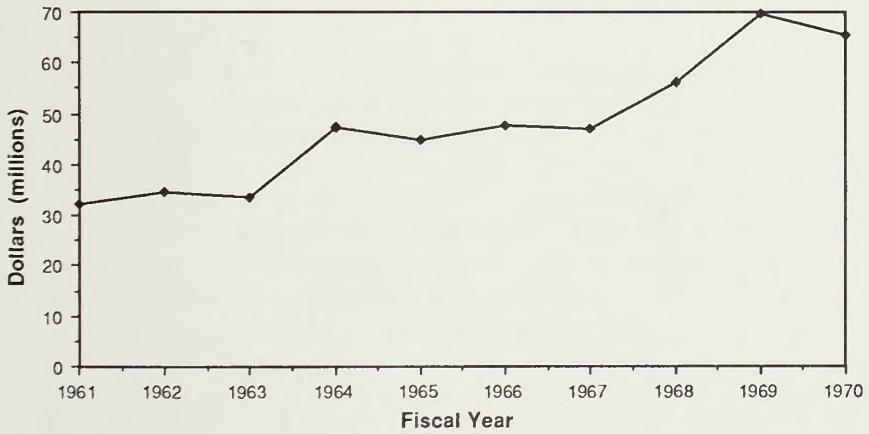
Once Secretary Udall approved BLM's increase in allowable cuts, he asked Assistant Secretary John Carver to continue BLM's review of O&C policies. While this took place, Congress passed the Point Reyes National Seashore Act in 1962, which authorized exchanges of private lands inside the park boundary for BLM lands in adjacent states to consolidate National Park Service holdings. Alfred Sweet owned land inside Point Reyes and was willing to trade it for 2,360 acres of BLM forest lands in Curry County, Oregon. A similar swap in California fell through in 1961, because of disagreements among BLM and Park Service land appraisers on the values of lands to be exchanged.

In 1964 Charles Stoddard asked Oregon State Director Russ Getty to compile a list of non-O&C public domain lands in western Oregon (totaling 240,000 acres in small tracts) that could be used for exchange. Getty responded by listing almost all public domain lands in western Oregon for retention because, starting in 1961, they were included in BLM's calculations of allowable cut. BLM's Washington Office then identified several tracts for potential exchange with Mr. Sweet.

When word of this proposal became known, a nationwide controversy erupted which forced its cancellation. Legislators, the timber industry, and the Sierra Club objected to the "Sweet Swap" as a raid on O&C lands, while other groups supported the exchange as a good example of blocking up federal holdings. The upshot of this episode, however, is that both Stoddard and Getty lost their jobs (they declined to accept new positions), and Secretary Udall suspended all other Park Service-BLM exchanges.

Despite this incident, BLM continued its review of O&C forest management and concluded that its productivity must be balanced with environmental quality. Of BLM's total O&C holdings, 108,000 acres were found to have unstable soils and another 100,000 acres comprised valuable watersheds with soils that could be damaged by timber harvesting. BLM therefore proposed to separate these lands, plus 72 recreation sites and 172 potential sites from the O&C allowable cut base, along with 50,000 acres comprising valuable natural areas or wildlife habitats.

BLM also wanted to modify harvest techniques on 150,000 acres, create 380 miles of roadside corridors, and protect 3,000 acres in scenic areas. Under Boyd L. Rasmussen, BLM proposed new timber management techniques that included genetic improvement and reforestation for problem areas. BLM implemented this plan in 1970, after President Nixon directed both Interior and Agriculture to incorporate productivity and environmental quality in new timber plans. The new O&C management plan reduced allowable cuts from 1,323 to 1,172 million board feet and stabilized them at that level. Oregon State Director Archie Craft and his Chief of Resources, Murl Storms, met with the public and industry groups to explain the program and assure them of the its long-term benefits.



Timber revenues 1961-1970

WILD HORSES AND BURROS

The treatment of wild horses and burros on the public lands emerged as a major national issue in the 1960s. By the end of the decade, BLM received more mail about horses than all other topics combined. Accurate or not, wild

THE BIG BLOW

by Larry L. Woodard
New Mexico State Director

Coastal winds in the timber-growing country of western Oregon are regular occurrences. O&C foresters tend to ignore such happenings until limbs start falling (time to pack up and leave) or when your tin hat blows off (run like hell!). However, winds of typhoon or cyclone level are very rare and until October 12, 1962, the patchwork clearcuts of the Oregon coastal areas and Cascades had not experienced such winds for over 100 years. Instead of the winds blowing fiercely over the tops of unbroken verdant forests, the clearcutting of western Oregon offered a thousand unprotected flanks of shallow-rooted conifers to the "Big Blow" of 1962.

Meteorologists later described the sudden low pressure trough which moved ashore on Columbus Day as one of the most dramatic barometric changes in Oregon history. In our Harvard Avenue office in Roseburg, most of my staff was in the field when the winds began to pick up. By midafternoon the wind was pounding the old storefront windows and after a few false starts, the lights went out for good. Debris was blowing down the street and power lines began to break as limbs and trees started falling.

The office closed early. I drove through the Veterans Hospital grounds, around fallen trees, and found my family gazing out the front room window watching the neighbor's carport cartwheel down the street. Composition shingles were flying around the neighborhood and it was not until the next morning that I was able to account for all my employees. One of my foresters, John Rice, reported later that they had left surveying equipment in the field when the wind hit and had barely made it out to the highway. A flight the next day showed over 100 trees across their escape route. By early evening the storm had passed and the neighborhood gathered in the streets to look at the damage.

The entire District assembled the next morning because Rod Fety, Timber Management Branch Chief in the Oregon State Office, and his staff were already asking for early damage estimates. Foresters fanned out over the District with maps to plot the blowdown areas. By the end of the first day, my staff reported that the blowdown was so extensive that ground surveys were impractical. The next morning Sam Heaney, Drain Area Manager, and I took a helicopter flight from Roseburg to Drain and then back to Glide, Oregon. Sam quickly gave up trying to map the blowdown on an ungainly map that covered the whole cockpit, so I mapped while Sam estimated volumes. As we approached the NE corner of each clearcut, 10-40 acres of prime old growth timber could be seen laying on the ground in a jack-straw pattern.

That afternoon, we reassembled in District Manager Archie Craft's office to report our damage estimates. My counterpart was Jim Richardson (South Umpqua Area Manager); I

horses and burros came to be seen as a national legacy, running wild and free in the West since the Spanish first visited the area. The fact that most animals were released from failed homesteads in the 1920s and 1930s didn't matter. BLM employees arguing this point or stressing the need to manage horse

noticed that when he gave his estimate he had substantially increased his figures. Suspecting that he was trying to position himself for expected additional funding, I doubled my estimate. Sam glared at me with his one good eye; as it turned out even our inflated estimates were both 50 percent too low.

An immediate request for additional funds went forward and the Secretarial Regulations were waived to allow for contract extensions, scale sales, and adjustment of existing timber sales. Everybody began a 6-day-a-week work schedule and within 8 months much of the timber was placed on the market. Every forester became a timber cruiser and truckloads of marking paint made the Nelson Paint Company a household word in the Northwest. We let the timber industry know we had added tracer elements to the BLM paint to minimize timber theft.

My recollection of the entire blow down salvage operations was one of tremendous individual and agency pride in our accomplishments. New road construction was dramatically accelerated, and by the end of the effort, access to almost all of the O&C timberlands was complete.

Estimates of the timber loss in western Oregon were 2.5 billion board feet, of which half was on the O&C lands. By the end of FY 1963, the O&C staff had offered 926 million board feet of the estimated 1.25 billion board feet of wind blown salvage. Typical of the western Oregon situation in 1963, the Roseburg allowable cut was 187 MMBF, but we had offered 256 MMBF. A remarkable accomplishment!

BLM

BLM'S FIRST "LADY" FORESTER

by Edwin Zaidlicz
Former Montana State Director

Editor's Note: *BLM's resource programs were male-dominated domains until the 1960s. In only two decades, however, women became an integral part of the Bureau's resource management programs. Women professionals are now found in all programs and a number have moved into decision making positions. In hiring women professionals, the forestry program led the way. The first women forester in BLM was Elaine (Mosher) Pearsons. In the two accompanying stories we have the reaction of a long-time BLM forester to the hiring of Elaine Pearson and then her own reminscence of being a trail "blazer."*

Forestry in BLM was considered a domain peopled by virile, macho-type males not gifted with attributes of gentility, subtlety or other finer sensibilities. The few women in our ranks were saints—highly competent, intensely dedicated and courageously loyal to the cause of the "strange breed of cats." But none were foresters!

In 1961 several of our top headquarters' foresters were sent to our leading forestry schools to recruit. We only had a few vacancies and great concern was shared by all—to snare the best young grads.

Fran Jacquemin returned to report glowingly of the "prize" he had committed from Michigan. While he ticked off this young forester's abilities, I shared his self-serving delight until he used the singular pronoun "she." I must admit to a feeling of shock, consternation, and disbelief. Our proud male domain was breached, we had our first "lady forester."

Elaine (Mosher) Pearsons

My worst fears were confirmed when Elaine Mosher nervously reported to my office for work. I had secretly hoped that she would be about 6 feet tall, gap-toothed, with a broken nose and wearing well worn "corks" [cleated boots]. Instead, I faced a petite, pretty, soft-spoken little lady. She was unlike any forester I had ever met. Over time, my parochial mindset like so many of my other firm convictions suffered a reversal. Elaine turned out to be a jewel and a great credit to her profession and organization. What she lacked in size and conventional stereotyping, she more than made up for with tenacity, awesome drive, courage and infectious adaptability.

Years after, Elaine was subjected to the acid test for any forester by being assigned to timber sale contract administration in the Salem O&C District Office. I can only imagine the scene as a group of hard-bitten loggers gathered around the warm-up fire for lunch when the government jeep pulled up and tiny Elaine stepped out to confront them. From all reports she more than met the test. I was convinced—ladies can't chew tobacco but they can wear "corks."

TRAIL BLAZER: BLM'S FIRST WOMAN FORESTER

by Elaine (Mosher) Pearsons
BLM Forester—Retired

My BLM career began in 1961 when I was recruited from Michigan Technological University to work in Washington, DC. With no other professional-level job offers, I was grateful the BLM was willing to take a chance on me although a bit disappointed it wasn't a field job. In retrospect, my 2 years there training under Eugene Zumwalt, Ed "Moose" Zaidlicz and many other top foresters, better prepared me for my following field job. In DC, we were faced with organizing the harvest of the 1962 blowdown timber on the O&C lands.

Otto Krueger, District Manager at Salem, accepted me as the first woman field forester. I worked under Dick Renfeldt, Resource Manager for the East Side of the District. Dick's fine sense of humor took this new situation in stride and he made me feel a welcome part of the team as did most of the other foresters in the district. He placed me with Bill Taylor who was heading the reforestation program.

My first job with Bill was helicopter seeding. I was to take an outdated map and an old International Carryall heavily loaded with seed to meet Bill and the helicopter at loading points. I had never driven a truck before, let alone a badly swaying one, nor had I been around on any mountain logging roads. Somehow, in spite of the fear I'd mess up, the seed got delivered and I even had a turn seeding in the helicopter.

Messing up was always a concern as I felt I had to do everything right being the first woman field forester. My first day in the field with Dick, I ran a tree branch into my ear. Following that incident, though, I had a good safety record throughout my employment working in the field alone and traveling some scary logging roads to old plantings and seedings.

One time I was delayed by the State Police near Molalla. Wearing a stocking cap and work clothes, the trooper thought a 5' 2" teenage boy was stealing a government truck.

For about 2 years I continued doing reforestation survival surveys and when the new push for BLM recreation sites arose, I began evaluating sites for possible development.

During the next 2 years, I was transferred to the West Side of the District under Guy Higginson and Paul Kuhns doing much of the same type of work and was promoted to a GS-9 as I took on more responsibilities. Because of my knack for writing, I got in on some analysis studies and reports. Now I was working in the Coast Range in some of the best O&C timberlands.

By 1968, an obsession for training horses overwhelmed good sense and ended my forestry career prematurely. Since then I've married twice, once raising four stepchildren with a BLM timber cruiser, Dallas Chalfant (deceased), and now freelance writing, land surveying and owning a pack outfit with my husband, Don, for the past 11 years. We live in North-Central Idaho where we enjoy wilderness hunting and fishing.

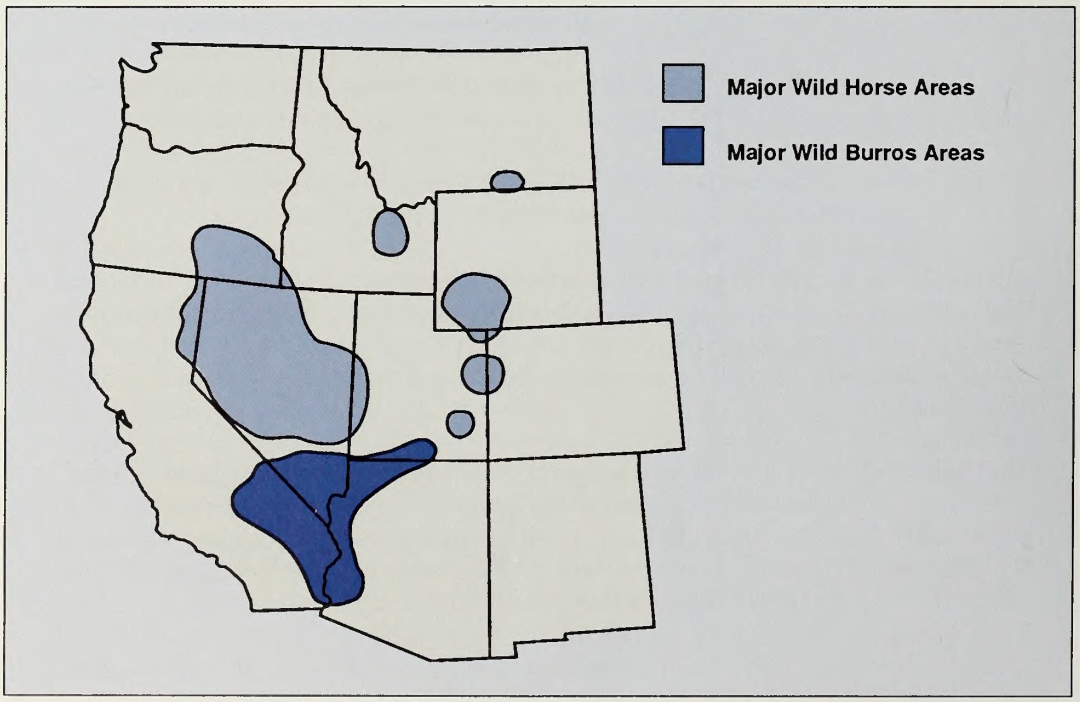
and burro populations against the needs of wildlife and cattle on the range were seen as proof of BLM's bias in favor of livestock grazing.

Under the law, wild horses and burros were viewed as feral animals, not qualifying for protection under any wildlife legislation. BLM routinely issued permits in the 1950s and 1960s to companies gathering horses and burros off the public lands. More than 100,000 wild horses had been captured in Nevada alone during the 1950s, with most destined for rendering plants. In 1964 more than 1,200 animals gathered in a single roundup in Montana were sold as bucking horses.

In the late 1950s, BLM estimated that there were around 20,000 wild horses remaining in nine western states. By the late '60s this estimate dropped to 17,000. Much of the public became concerned that horse and burro numbers were dwindling and suggested the government set up refuges for them.

In 1962, the Nevada Wild Horse Range was created within the 394,000-acre Nellis Air Force Base. BLM built watering holes throughout the area, and, because livestock were not permitted on the base, wild horse numbers grew from about 200 in 1962 to more than 1,000 by 1976. Once protected, horses proved they could multiply rapidly.

The story of wild horse protection in America goes back to 1950, to a woman named Velma Johnston. Johnston made the 20-mile trip from her ranch outside Reno to her office for years, but one day found herself behind a cattle truck loaded with horses. Noticing blood dripping out of the back, she decided to follow the truck. What she found was a load of wild horses being delivered to a rendering plant. Most were injured, some badly, from



Wild horse and burro areas on the public lands

the capture. On that day she resolved to publicize the plight of wild horses and prevent the kind of treatment she saw.

In 1952, Johnston and her supporters convinced Storey County, Nevada, to ban the use of aircraft in gathering horses. When Congress passed the Wild Horse Protection Act of 1959, much of the credit belonged to Johnston, who proudly took the name "Wild Horse Annie" from her detractors. In 1965, she founded the International Society for the Protection of Mustangs and Burros, and soon after, the Wild Horse Organizational Assistance (WHOA). These groups and others then began a concerted effort to convince Congress to establish a national policy for protection of wild horses and burros, which came to fruition in 1971.

In 1968 BLM established the Pryor Mountains Wild Horse Range on 32,000 acres of land on the Montana-Wyoming border. The area was created after a local dispute erupted into a national controversy covered by the national news media.

Range conditions in the Pryor Mountains had deteriorated to the point where most lands were in poor condition and continuing to decline. At the same time, horse numbers had risen to about 125. The Montana Game and Fish Department asked BLM to remove most of the horses because they were using browse needed by deer. Several ranchers voiced concern about declining livestock forage. BLM worked out plans to remove all but 20 horses from the area.

Ranchers Lloyd and Royce Tillet, however, wanted to preserve the herd. So did the Lovell, Wyoming Chamber of Commerce. Wild horses had lived on the Tillets' lands since their parents settled there in 1894. A nationwide letter-writing campaign in 1966-67 convinced BLM to hold off on removing any horses pending further study of the situation. Director Rasmussen appointed a national wild horse advisory committee, which included Wild Horse Annie and the mayor of Lovell among its members.

Fearing a roundup was still imminent, the Humane Society of the

BLM

Wild horse roundup,Wyoming

A DIRECTOR'S PERSPECTIVE: 1966-1971

by Boyd L. Rasmussen

Editor's Note: *Boyd L. Rasmussen spent 31 years with the Forest Service before becoming Director of BLM. After receiving a degree in forestry from Oregon State University, Rasmussen served as a district ranger, forest supervisor and Regional Forester in the Northwest. In Washington, he worked in the Division of Fire Control and became deputy chief of the Forest Service in 1964.*

Boyd L. Rasmussen

On a busy Washington day in 1966 my secretary came rushing into my Forest Service Office saying, "There's a guy on the phone who says he is the Secretary of Interior Stewart Udall and he wants to talk to you." It was Secretary Udall and he wanted to know if I was interested in becoming the Director of BLM. Thus my BLM career began.

Without a BLM background it was necessary for me to quickly understand its missions, objectives, legal responsibilities, and organization. Understanding relationships with the Secretary's staff and congressional committees was a must. At the same time it was imperative that my leadership be established to secure the support of the BLM staff as well as the Secretary's staff.

Foremost there was a need to secure recognition of BLM as a professional organization both within and outside the Bureau. It was mandatory to spearhead a PR program to secure favorable recognition of BLM's many outstanding accomplishments. Most of my efforts were directed with these in mind. It wasn't easy but BLM was ready.

My first project was to bring stability, poise, peace and quiet to a Bureau which had more than its share of unfavorable publicity, poor judgment, secret feuds, antagonism between the Washington and field offices, and a buddy system. I started by getting acquainted with the Washington and field staff and determining their capabilities. After all, they had a new Director they had never seen before, who had never worked for BLM, and came from a rival agency. I found the staff to be capable, professional, and eager to move. Now for some of the Bureau's accomplishments. Grazing fees had long been a problem for the BLM both with the permittees and the Congress. The recently completed Grazing Fee study by FS and BLM indicated that an increase was justified. The study did not recognize permit value as a part of the range fee calculation and gave an opportunity to effectively oppose any recognition of permit value.

Permit value was a rallying point for the permittees to fight the fee increase. Political support was on both sides. After much discussion a compromise was adopted. Grazing fees would be increased by increments over a 10-year period. To keep the study fee current, an inflation index factor was to be calculated annually. Thus the grazing fee would be in two parts—the annual increment and the inflation factor. The Secretary signed off at this point and BLM no longer had an annual grazing fee fight.

Sustained yield figures for the O&C and Coos Bay Wagon Grant lands had been controversial. Increased timber harvests were under suspicion from environmental interests. Overcutting charges were made. New studies indicated that under non-declining even flow the sustained yield figures should be reduced. Industry opposed any reduction in cut. Through a successful information program, BLM was able to secure support for a reduction. However, the Governor of Oregon entered into the discussions. Again it was necessary to reach an agreement both sides could live with. The final result was to reduce the allowable cut over a 4-year period. It was further agreed that the annual cut would include salvage material. This agreement stood and one more controversy was behind us.

The Classification and Multiple Use Act directed BLM to classify public lands for retention and management or for disposal. It presented an opportunity to look at all the public domain land in a different light—multiple use and ultimate retention and management. The decision was made to classify large areas on a broad basis. It gave us an orderly process of presenting our findings to the public and local officials for their approval. Consulting with local officials took away much of the political heat. In fact some counties conducted the hearings for BLM. Hearings allowed the public to be heard—and public approval went a long way. BLM classification work had a profound effect on the PLLRC recommendations.

State in lieu land grants had long been a headache and, while a part of normal activities, were subject to available appropriations. Our biggest problems were in Arizona where the state land department demanded immediate action on transfer of 600,000 acres of public domain for land inside national forest boundaries. Congress agreed to finance a program to transfer 200,000 acres a year.

The Boise Interagency Fire Center was made operational through continuous annual appropriation requests by BLM. Although the Forest Service shared in the center's operation, all development appropriations were secured through the BLM budget.

Thousands of unresolved land entry cases were on the books. Progress in resolving them was at a standstill. New cases came faster than decisions were made on old cases. We took our problem to the Congress and were able to start an orderly process to reduce the backlog.

We also launched a very successful PR program to gain public support and understanding of BLM multiple use programs stressing wildlife and recreation. Johnny Horizon was a first-rate PR effort to create a better awareness of the values of the public lands and the role of conservation.

When I left BLM it was a stable, professional outfit working together on common goals accepted by the field and Washington office. It was perceived by other professional groups as an equal. It had experienced many successes and was ready for more. Its fiscal programs were in order and its budget progress focused on performance. Problems were faced squarely and resolved in an expeditious manner. Personnel changes were based on merit.

BLM had public and Congressional approval. It was a responsible, dedicated public bureau staffed by many capable men and women who were proud of their work. I too was proud of being a part of a great bureau.

United States sued BLM to prevent it. Although a preliminary injunction against a roundup was denied, the case could have been reopened whenever BLM announced plans to gather horses from the area.

Thousands of letters deluged the Department, from elementary school students and their parents to concerned citizens all over the country, asking that BLM create a refuge for the horses. Director Rasmussen personally visited the Pryor Mountains in 1968 and concluded that the area should be established as the Bureau's first wild horse range. On September 12, Secretary Udall signed a Public Land Order establishing the refuge; BLM dropped its plans to remove horses from the area, but set a limit of 125 to 145 horses for the range to protect its forage.

WILDLIFE

Inventories of wildlife habitat on the public lands began in earnest after the CMU Act was passed. Public lands were found to provide important habitats for wildlife, including an estimated 3 million big game animals. Half the salmon and steelhead trout harvested along the Pacific Coast spawned on public lands. Eighty-five percent of the desert bighorn sheep's habitat existed on BLM lands.

In 1961, Secretary Udall designated 60,000 acres of BLM lands in California as the Caliente National Land and Wildlife Management Area to develop wildlife and recreation potentials under the authority of the Public Land Administration Act of 1960. By 1963, 14 areas in California totalling 810,000 acres were being managed on a cooperative basis with the state.

Also in 1961, BLM hired its first wildlife biologist. In addition, the Bureau signed a cooperative agreement for wildlife habitat management with the Arizona Game and Fish Department, and proceeded to reintroduce wild turkey and antelope on public lands in the Arizona Strip District.

After passage of the CMU Act, Bob Smith, former Chief of the Arizona Game and Fish Department, was brought into the Washington Office to head up BLM's newly created Wildlife Division. BLM hired biologists in District Offices starting in 1965 and began to enter into wildlife research projects with other agencies. BLM's first fisheries biologists were hired in Oregon and California (in both State and District Offices) in 1968 to work on valuable anadromous fishery streams along the Pacific Coast.

WATERSHED

While much of Congress' legislative efforts in the 1960s focused on recreation issues and preserving special areas (e.g., parks and wilderness areas), it also passed three acts dealing with water in 1965. The Water Resources Research Act allowed BLM to increase its watershed research activities, while the Water Resources Planning Act authorized BLM to enter into comprehensive water resource planning with other federal and state agencies. Under the Water Quality Act, BLM assisted western states

in setting clean water standards.

A frail-lands study begun in 1965 identified 6.5 million acres of lands in the critical stages of erosion and over 38 million acres as being highly vulnerable. BLM took part in the Department of Agriculture's National Inventory of Soil and Watershed Conservation Needs and increased its cooperation with the Soil Conservation Service (SCS); 168 agreements were signed with SCS districts under Director Stoddard.

AID TO OTHER NATIONS

BLM provided assistance to 70 other nations during the '60s. In 1964 it entered into Participating Agency Service Agreements with the Agency for International Development, where BLM recruited employees for overseas assignments.

BLM's biggest effort occurred in northern Nigeria, where employees set up five range demonstration projects. Year-round water sources were developed and the range was managed for multiple use to improve forage and allow the nomadic Fulani Tribe to settle on the land. BLM also worked with Brazil, Iraq, and Saudi Arabia to design land survey systems and train them in record keeping.

VOLUNTEERS

Involving the public in BLM's classification process did more than just increase people's understanding of the public lands. America's rising interest in public lands translated into volunteers for a variety of projects. Foremost were litter campaigns—Boy Scout troops and citizens groups cleaned up recreation sites and trails—while spelunkers helped outdoor recreation planners locate and protect cave resources. Ranchers continued to build range improvements and wildlife groups built watering holes for game animals.

Johnny Horizon was created as part of a BLM nationwide antilitter campaign in 1968, but came to symbolize a new public land ethic in the West—one of people caring enough for their lands to take care of them. Actor/singer Burl Ives hosted a series of nationwide public service announcements to spread the word and did several Earth Day/Johnny Horizon concerts. The Department soon latched on to the campaign but disagreed as to how it should be funded; this and the program's wider coverage caused it to lose focus, resulting in its cancellation only 4 years after its inception.

NIGERIAN EXPERIENCE

by Jack McIntosh
Former Butte District Manager

My Nigeria, Africa assignment was unquestionably the highlight of my career, for which I returned a better employee than when I left. The experience also had a positive impact on my family. I can recall many small day-to-day actions in the workplace and in the home setting where we really had a positive impact on the Nigerians. I will also state up front the program was successful and a credit to BLM. For our work, the team received a Departmental Unit Award which I display with pride. In spite of this, I take greater pride in my family's performance, which served to improve Nigerian lifestyles.

During the 1960s, the Nigerian government was structured as it was when the British granted independence from colonial rule. The national government was structured after the English. Under this provincial form of government, the native government remained intact and divided into Emirates as it had been for many years. The tax to support the Native Government was not based on land but on livestock as it had been in pre-colonial days.

Historically, the Fulani tribesmen, the cowboys of Nigeria, were nomadic, moving their herds north and south with seasonal rains, roaming from one Emirate to another as they saw fit. Consequently, it was difficult, often impossible to inventory the herds and harder yet to collect taxes. As a result, the Native Government had a huge interest in "settling the Fulani." They had no dynamic force like the IRS to collect taxes.

Since water and forage were key to the nomadic behavior of the Fulani, it seemed simple to apply American techniques of range management by developing water and grazing systems. The Fulani would then be tempted to stay in one place, making it easier for the Nigerian "IRS" to find and tax them.

So our team's objectives were two-fold: improve the range and settle the Fulani. The government's objective was simple: collect taxes.

Without going into great detail, our team applied systems, methods, and studies that had been successful on American ranges. We did these things with state-of-the-art techniques and in the end were only moderately successful. However, our plan to formally educate selected Nigerians in the U.S. proved of long-term benefit and was very successful.

Based on my experiences, I believe we should continue and expand the formal education programs for key Nigerians in the U.S. This interchange of ideas and exposure to different cultures was highly beneficial. Furthermore, I believe that Marshall Plan techniques cannot be duplicated in Third World nations and should not be tried. There simply is no quick cure for elevating these nations into American standards socially, politically, and educationally. Our effort to do so was like turning kids loose in a candy store. In our case, we gave the Nigerians techniques and equipment they were not capable of managing or implementing.

We can all criticize the mistakes Americans sometimes make when in foreign countries. Perhaps some things have changed, yet today I see the same flaws in policy that have contributed to the U.S. falling from grace in the international community. We have seen embassies overrun, American officials kidnapped and misuse of foreign aid. All are commonplace. Maybe we all need to try a little harder?

FROM LEGISLATION TO LITIGATION

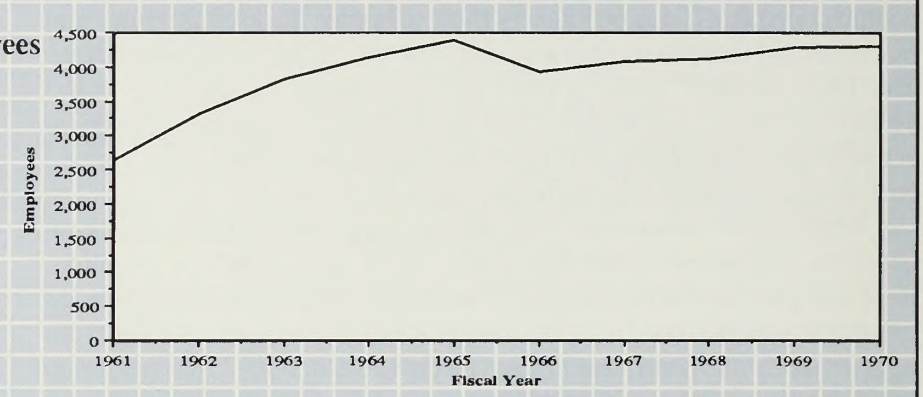
By the end of the 1960s, public land management was becoming a hotly debated topic. The public became a permanent player in the game and demonstrated that it was no longer willing to entrust the job entirely to land managers, to House committees, or to anyone else to the exclusion of others. The 1960s became "years of profound questioning and resisting of the established order," according to Dr. Sally Fairfax. "Techniques of political activism developed in the civil rights movement and refined in the antiwar movement were employed in the environmental cause."

While most conservation and user groups focused their efforts on obtaining legislation to meet their goals, others began to look at litigation. Here, too, the times were changing—environmental groups gained the right to sue the government. In 1965, an organization's "standing to sue" (the right to be heard in court) was granted by the U.S. Supreme Court to a group suing the Federal Power Commission. In this and other cases, the court broadened its interpretation of standing to sue from individuals suffering economic or physical harm to groups threatened with loss of a resource their members used. The court also found government actions to be within its scope of review, no longer refusing to hear cases by deferring to agency expertise.

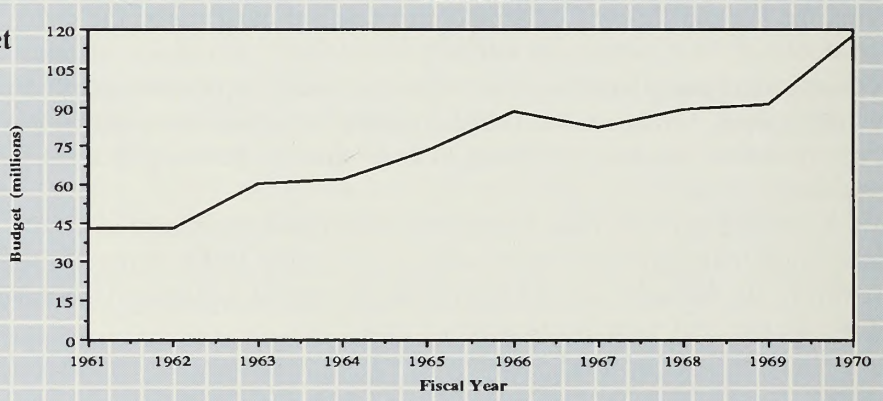
According to Dr. Fairfax, America's conservation movement had been defined and led by government idealists since the early 1900s. In the 1960s, however, "the agencies were not leading the movement; and toward the end of the decade, they were being attacked by it."

Bureau of Land Management 1961-1970

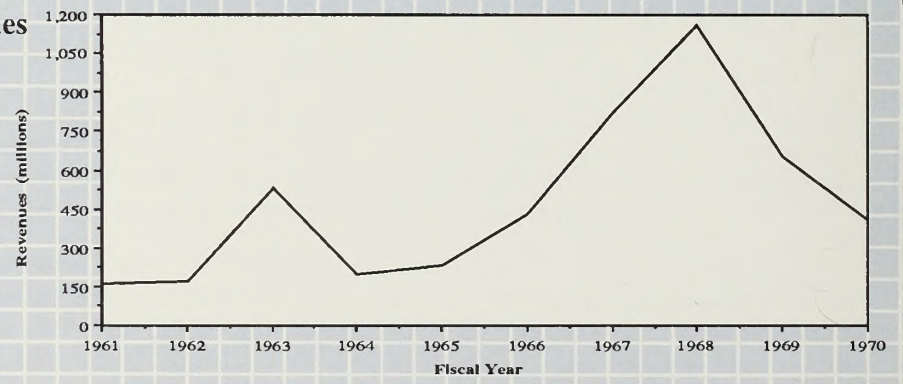
Employees



Budget



Revenues



Directors	Karl Landstrom	1961-1963
	Charles Stoddard	1963-1966
	Boyd Rasmussen	1966-1971
Major Legislation	Classification and Multiple Use Act	1964
	Public Land Law Review Commission Act	1964
	National Environmental Policy Act	1970

FURTHER READINGS

As in the 1950s, historians have given little attention to the Bureau of Land Management. The material that is available is the work of political scientists, economists, and natural resource management specialists.

Samuel T. Dana and Sally K. Fairfax provide an overview of federal land policy in the 1960s in *Forest and Range Policy: Its Development in the United States,* Second Edition (1980), that includes some discussion of BLM. Marion Clawson has some brief, but good, discussion on BLM during these years in his *The Federal Lands Revisited* (1983). The internal workings of BLM are addressed by Marion Clawson in *The Bureau of Land Management* (1971) and David Paulsen's "An Approach to Organization Analysis: A Case Study of the Bureau of Land Management," Ph.D. dissertation, University of Washington, 1966.

Secretary of the Interior Stewart Udall's Third Conservation Wave is discussed by Barbara Leunes in her "The Conservation Philosophy of Stewart L. Udall, 1961-1968," Ph.D. dissertation, Texas A&M University, 1977. Also see Stewart Udall's *The Quiet Crisis* (1963).

A good compilation of articles on various aspects of public land management is found in *Public Land Policy: Proceedings of the Western Resources Conference, Fort Collins, Colorado* (1968). Range policy for the period is lightly touched upon by William Voigt, Jr., *Public Grazing Lands: Use and Misuse by Industry and Government* (1976). On the wild horse and burro debate in the 1960s, see Heather Smith Thomas' *The Wild Horse Controversy* (1979) and *Wild Horses and Sacred Cows* (1985) by Richard Symanski.

The O&C lands are discussed in Elmo Richardson's *BLM's Billion-Dollar Checkerboard: Managing the O&C Lands* (1980) and *The O&C Lands* (1981) by the University of Oregon's Bureau of Governmental Research and Service. The Bureau's firefighting program is discussed by Stephen J. Pyne in *Fire in America: A Cultural History of Wildland and Rural Fire* (1982).

Mineral policy and development is discussed in Robert Swenson's "Legal Aspects of Mineral Resources Exploitation," in Paul Wallace Gates' *History of Public Land Law Development* (1968), and by Carl Mayer and George Riley in *Public Domain—Private Dominion: A History of Public Mineral Policy in America* (1985). Oil shale is handled by Chris Welles in *The Elusive Bonanza: The Story of Oil Shale, America's Richest and Most Neglected Natural Resource* (1970). Robert Nelson's *The Making of Federal Coal Policy* (1983) is a very good study of the Interior Department's management of this mineral resource.

The State of Alaska's land program is expertly detailed by Gary Stein in *"Promised Land": A History of Alaska's Selection of Its Congressional Land Grants* (1987) and state conservation initiatives in *Alaska: A Challenge in Conservation* (1967) by Richard Cooley. The Alaska Native lands dispute is discussed by David S. Case, *Alaska Natives and American*

Laws (1984); Mary Clay Berry, *The Alaska Pipeline: The Politics of Oil and Native Land Claims* (1975); and Robert Arnold, et al., *Alaska Native Land Claims* (1978).

On the Public Land Law Review Commission and its recommendations, see the Commission's report *One-Third of the Nation's Lands* (1970) and the Natural Resources Council of America's *What's Ahead for Our Public Lands? A Summary Review of the Activities and Final Report of the Public Land Law Review Commission* (1970).

CHAPTER 4

AN AGENCY WITH A MISSION: The 1970s

In light of its multiple responsibilities and the complexities of its programs, the Bureau has long needed a Congressional statement of policy and a modern legislative mandate.

—Eleanor Schwartz

AN AGENCY WITH A MISSION
The 1970s

Overview

Thirty years after its formation, the Bureau of Land Management was finally granted a mission. The Federal Land Policy and Management Act of 1976 (FLPMA) formally recognized what BLM had been doing on an interim basis for many years: managing the public lands under the principles of multiple use and sustained yield. FLPMA did much more, though—it granted BLM new authorities and responsibilities, amended or repealed previous legislation, prescribed specific management techniques, and established BLM's California Desert Conservation Area. The Bureau was now in the big leagues.

The road to FLPMA proved to be dramatic. Public land issues were discussed in three Congresses, with both old and new constituents involved in the debate. The bill was approved at virtually the last minute in a closed-door session of a House-Senate conference committee. It is a complex bill that reflects the nation's priorities in the 1970s. Public participation and planning were the tools provided to make management decisions.

The first day of 1970, however, opened with President Nixon signing the National Environmental Policy Act (NEPA). NEPA recognized that federal actions had impacts on the environment and required that they be analyzed before management decisions were made. The act established protection of the environment as a national goal and encouraged federal agencies to set up environmental education programs.

BLM and other federal land managers at first thought NEPA was nothing new—after all, resource specialists considered impacts of their work as a part of their jobs. But they were wrong. NEPA brought profound changes to BLM. Its provision for environmental impact statements changed the way the Bureau did business.

In addition to NEPA, Congress addressed specific environmental concerns. Legislation was passed to protect air quality and endangered species, and was amended to strengthen protection of cultural resources and water quality. The Wild and Free Roaming Horse and Burro Act of 1971 radically realigned BLM's management of these animals, requiring protection and enforcement programs.

Increased public involvement showed BLM that land management was becoming every bit as much a social and political activity as a scientific endeavor. Advisory boards were increasingly used at national, state, and local levels. Public meetings and hearings became everyday components of field operations.

Congress was asked to settle disputes among land users by specifying land uses but, more often than not, left the decisions to land managing agencies (or the courts). Environmental litigation seemed to become a way

of life for BLM in the 1970s, as various interest groups filed suit under the new acts.

Under Presidents Nixon and Carter, Congress was also asked to reorganize the Interior Department—creating a Department of the Environment and Natural Resources. In each proposal, the Forest Service and other Agriculture Department agencies (e.g., the Soil Conservation Service) would have been moved into the new Department; under Carter's proposal BLM would have been remade in the Forest Service's image. Neither effort was successful, but President Nixon was successful in getting his fallback position accepted—the Environmental Protection Agency was created in 1972.

The number and type of employees in BLM increased as the Bureau's environmental responsibilities increased. BLM's cultural resources staff grew from one specialist at the Denver Service Center in 1970 to more than 120 (one in almost every field office) only 5 years later. Total employees in the Bureau rose from 4,300 in 1970 to 9,600 in 1980, while its budget increased from $118 million to $588 million.

In 1973, the nation was jolted by a major energy crisis. While waiting in mile-long gas lines, millions of Americans began to consider the nation's long-term energy needs. Although the environmental movement never diminished in the public's consciousness, its prominence soon gave way to concern over America's energy future.

Despite passage of the Public Rangelands Improvement Act in 1978, many of the Bureau's traditional constituents felt BLM had bypassed them in a rush to embrace new public land users. The Sagebrush Rebellion grew out of opposition to the federal government's enlarged role in public land management. In 1979, the Nevada legislature passed a resolution calling for state ownership of BLM public lands. Four other western states soon passed similar legislation, but the movement quickly dissipated with the election of Ronald Reagan to the presidency in 1980.

New Leadership

The 1970s were every bit as tumultuous—and exciting—as the previous decade. Three new Directors served BLM after Boyd Rasmussen: Burt Silcock (1971-73), Curt Berklund (1973-77), and Frank Gregg (1978-81). Silcock, a career Bureau employee and Alaska State Director from 1965 to 1971, was called upon by Secretary Walter Hickel to handle critical Alaska issues in the early 1970s and to continue Rasmussen's work in obtaining an "organic act" for the Bureau.

Final passage of FLPMA was attained under Berklund, who presided over a significant growth in BLM's management responsibilities. BLM implemented a cultural resources program, developed wilderness review procedures, and established new minerals policies—all priority items during Berklund's tenure—reflecting BLM's growth into a true multiple use agency.

Frank Gregg began the Bureau's implementation of FLPMA, finalized new mineral leasing policies, and oversaw the Bureau's efforts in securing passage of the Alaska National Interest Lands Conservation Act of 1980.

A DIRECTOR'S PERSPECTIVE: 1971-1973

by Burt Silcock

Editor's Note: Burt Silcock rose through the ranks in BLM as a range conservationist in Billings, Montana in 1948, to Alaska State Director in 1965, and Director in 1971. In 1973 he was appointed Federal Co-Chairman of the Joint Federal-State Land Use Planning Commission for Alaska.

Burt Silcock

As I reflect back on my career, I don't believe there has ever been such a "window of opportunity" as existed during the 50s-60s and early 70s. The atmosphere was ripe for growth, both for the Bureau and its employees. Finally, America was beginning to recognize and acknowledge the value of our public lands. I am extremely proud to have been involved in this period of history, and cherish all the acquaintances of the dedicated men and women I worked with who laid the groundwork for today's true multiple use management.

Little did I realize, when I started with the Bureau in 1948, where my career would lead me. I felt I had a solid grasp of resource problems, and the BLM employees were a real asset. However, with all the experience I brought with me, we still had a tremendous challenge of continuing the course of good public land management.

When I became Director, the search for a national land use policy concerning public lands was in full swing. The Public Land Law Review Commission had completed its study and the Classification and Multiple Use Act and the Public Sale Act had expired. The President had submitted a reorganization plan to Congress to establish a Department of Natural Resources and an Organic Act for the Bureau. The BLM had developed a long-range land use planning system for multiple use management of the public lands.

The challenges that we faced while I was Director were signs of a changing nation. America's demand for use and enjoyment of public land for recreation had reached an all-time high. Off-road vehicles (ORVs) made it possible for users to reach heretofore inaccessible areas. Cultural, archaeological and physical features of the landscape were being destroyed by uncontrolled use. Facilities to provide the basic need of sanitation were rarely available and our enforcement capabilities for desert areas did not exist. We developed regulations for the management and control of ORV use in accordance with the Presidential Executive Order of 1972. This finally gave BLM the tools to control and direct this growing program.

The need for clean sources of energy to meet the nation's demands for growth and development focused on coal, oil shale, and geothermal steam. This had a major impact on the Bureau's energy and minerals programs and really tested our young planning system.

The Native Claims Settlement Act for Alaska, passed by Congress in 1971, required the most massive redistribution of land ownership in the history of the nation. The Act provided for a transfer of approximately 44 million acres of land to private ownership and the withdrawal of 80 million acres of federal land for parks, refuges and national forests. The values of these

lands were previously recognized by the Bureau of Land Management's classification process in the late 1960s, when I was the State Director in Alaska.

The uncontrolled use of the public lands by wild horses and burros was in direct competition with domestic livestock and wildlife. Attempts to control this use resulted in a controversy with the wild horse sympathizers. The Wild Horse and Burro Act of 1971 was passed by Congress to establish a policy for management of these animals while providing them a legitimate place on the range. We developed procedures to provide a program for management of these animals under the Act and set up the Adoption Program. A National Wild Horse Advisory Council was appointed to provide federal land managers with advice based on their knowledge and experience on this highly visible public land use.

Under our newly formed planning system, the Bureau's Western Oregon Management Plan was implemented July 1, 1971. This plan met the requirements of modern legislation dealing with air and water quality, improving the environment, protection and enhancement of other resources located on the timber sale contract areas, construction of roads to higher standards, protection of scenic corridors along roads, and limiting logging adjacent to recreational sites. This new plan resulted in an annual sale reduction of 150 million board feet. This was due in part to environmental considerations, the destructive 1962 windstorm and the Oxbow fire of 1966.

The Environmental Impact Statement process was refined to meet the requirements of the National Environmental Policy Act. We initiated programmatic environmental statements on broad program areas of coal, oil shale, upland oil and gas leasing, timber harvest, and management of domestic livestock.

The proposed construction of the Alaska Pipeline was a major project requiring the Bureau's workforce to develop environmental and technical guidelines and monitoring for a safe construction of the project. The Final EIS on the pipeline was completed in March 1972. Environmental stipulations to manage construction of the pipeline were far more stringent than any previously established. This required extensive cooperation and coordination with industry, the State of Alaska, and the federal agencies involved.

During this period of time we expanded the role of Eastern States Office. It had been serving as a land office for many years and the need for a full service office in that region of the country was rapidly growing. This required a new State Director and supporting staff.

I can't stress enough the admiration I had for the BLM workforce then and now. Also, the relationship that existed between my office and the Secretary of the Interior made for extremely pleasant working conditions. I always felt that Secretary Rogers C.B. Morton and Assistant Secretary Harrison Loesch would back us on tough decisions and I have many examples where they stood right with us.

I'm still interested in public land management and try to stay involved by volunteering for projects which I enjoy. It was an interesting and sometimes hard ride from my early years in Billings, Montana, but I feel fortunate to have had the opportunity to complete the trip without getting bucked off.

NEPA: A NEW CONSCIOUSNESS

The same year Americans landed on the moon, Congress passed the National Environmental Policy Act of 1969 (NEPA). Senator Henry Jackson was instrumental in getting the act through Congress. In the late 1960s, a symposium he organized recommended that Congress establish a national policy on environmental quality. There was even discussion on the Hill on whether Americans should have a constitutional right to a clean environment.

Attesting to the strength of the environmental movement, NEPA passed the Senate unanimously. President Nixon waited a few days so he could sign the bill into law on January 1, 1970. Other than placing environmental protection on a par with motherhood and apple pie, few knew what the act would bring.

Council on Environmental Quality

NEPA required federal agencies to consider the potential impacts from proposed major actions and created the Council on Environmental Quality (CEQ) to implement its provisions. According to Ron Hofman, then acting Chief of the Division of Planning and Environmental Coordination, the idea of environmental impact statements (EISs) was added to the act at the last minute to provide an "action-forcing mechanism" for agencies to (1) discuss their actions with the public and with state and local governments, and (2) to formulate management alternatives after extensive on-the-ground evaluation.

Once draft statements were presented to the public for review and comment, final statements were filed with CEQ. The Interior Department established the Office of Environmental Project Review to direct and approve EIS activities in the various bureaus.

Implementation of NEPA in BLM was assigned to Irving Senzel, Assistant Director for Lands and Minerals. To handle this new and rapidly growing workload, the Division of Program Development was renamed the Division of Planning and Environmental Coordination (P&EC). Under Hofman, the Division hired several new employees, including a sociologist, an economist, and an environmental education specialist, to review impacts on the "human" as well as the physical environment. P&EC staffs were also established in State and District Offices. For major projects, interdisciplinary EIS teams were set up.

Lacking guidelines from CEQ and the Office of Environmental Project Review, BLM first had to clarify what a "major federal action" requiring an EIS was. The Bureau also needed to decide when other kinds of environmental analyses would be appropriate. The idea of doing environmental assessments (EAs) originated in BLM and was later picked up by the Department and incorporated into CEQ guidelines. P&EC issued a BLM Manual on NEPA requirements in 1971 that was used as a model by other agencies.

BLM also had to decide at what level of a program it needed to do an EIS. Allotments, resource areas, districts, states, regions, and nationwide

IMPLEMENTING NEPA IN BLM

by Ron Hofman
Associate State Director, California State Office

Editor's Note: *Ron Hofman was in charge of the Division of Planning and Environmental Coordination in Washington when NEPA passed, and continued in that post until 1976.*

I guess it was a case of being in the right place at the right time. In 1970, I was given the job of implementing NEPA, which came to have a dramatic impact on the entire organization.

It seems like I had been preparing for NEPA during my entire career in BLM. When I began as a forester in Colorado in 1958, we didn't have a specialist for every program—so I had to learn about the range program, wildlife issues, recreation, fire, soil and watershed. BLM was really in the job of managing all these resources together as systems. So when NEPA required us to look at the effects our actions were having across the board, I and other managers could relate to that concept. The main issue was to fit this ecosystem approach into the Bureau's customary narrow way of doing business, in the program-by-program channels of BLM's policy, procedure, budget.

The answer to the program "blinders" problem was to initiate an interdisciplinary approach to analysis and problem solving, while preparing environmental impact statements or environmental analysis documents. Here again the tendency was for specialists to individually start these documents. We had to put together some fairly specific training sessions, so after issuing BLM manuals on NEPA, my staff and I visited each state to conduct this training. Its basic premise was to assemble specialists on an interdisciplinary team, all working together to conduct the analyses. The Bureau's policies and procedures for conducting analysis of environmental impacts were among the first to be formalized by federal agencies.

Another aspect of NEPA which I think the Bureau responded very well to, was the requirement for looking at impacts on the "human" environment. The Bureau understood that a lot of what we did, especially in grazing, logging, and mineral development, would continue to have a large impact on small western communities and their cultures. It was with some pride that I hired the first sociologist in the Bureau in 1972. It was also nice that she was a woman and that she was black. Many more people from the social sciences were hired throughout the Bureau to respond to NEPA, and these folks contributed to the learning and capability of the organization. It was a major growth step for us in understanding ourselves as a multiple-use agency.

There was a down side to implementing NEPA, though. The legal challenges to projects forced agencies, including the Bureau, to think in the defensive terms of legal adequacy of documents. This took away from the initiative and motivation of the Bureau and weakened our opportunity to build on our ecological skills. On balance, however, NEPA was great for BLM. It started us thinking in ecosystem terms, using interdisciplinary teams, adding social science skills, and enhancing peoples' knowledge of the environment.

ENVIRONMENTAL EDUCATION

by Ron Hofman
Associate State Director, California State Office

Earth Day Number One, April 22, 1970, was an exciting time. Elementary schools, high schools, junior colleges, and universities were calling us asking for speakers to talk about the environment. How was it being threatened? What could the public do about it?

Secretary Hickel established a Youth Task Force to respond to questions and issues that young people were raising about the quality of the environment. Linda Bemis in the Division of Planning and Environmental Coordination was BLM's representative on the Task Force.

The National Environmental Policy Act (NEPA) passed in response to an overwhelming national concern about the environment. It had provisions for providing citizens with a better understanding of the environment and how to protect it. This authority, together with the demand from the public, gave BLM the opportunity to respond and serve the public in a positive way.

Working with the Oregon State Office, we lined up two college biology majors to draft a teachers guide which could be used at the elementary school level. The idea was to provide teachers with lesson plans which would get students to observe and learn about the environment in the classroom and in the school yard. This draft, finalized by Linda Bemis, was tested in the Charlottesville, Virginia, school system with much success. Later, it was adopted as required teaching material in the entire elementary school system in the State of Pennsylvania. The final teachers guide was called "All Around You."

We also came up with the idea of using public lands as "Environmental Study Areas." This was accomplished by getting some district managers excited about the idea and then directing them to do it in annual work plan directives. A DM would typically hire a local 6th-grade science teacher to work as a summer temporary, and using a good BLM site near town, the teacher would develop a week-long environmental science curriculum. Once the school year started, the teacher would schedule sessions on the BLM site and use BLM specialists to help teach.

Students learned a great deal about biology, about the Bureau, and especially about the importance to their local community of maintaining a healthy environment on the public lands. Among others we established highly successful environmental study areas at Casper, Boise, and Billings and were gratified at the recognition and positive support BLM received from local communities.

The idea of an environmental education program continued through the mid-1970s in BLM and the Forest Service. It was a major advance for BLM because it caused the public to realize the importance of the public lands and resources in the lives of people and in western communities, and the importance of maintaining the health of public land ecosystems. I am very proud of the Bureau's work in environmental education. Perhaps in a different form and context, the idea and the work remains out there in BLM today.

programs were all considered. When BLM needed to establish national policy, it wrote a programmatic EIS. For important on-the-ground activities, field offices wrote EISs. BLM soon realized it would need to prepare a "hierarchy of EISs," according to Hofman, at different levels of the organization.

Heirarchy of EISs

Oil and gas leasing statements were prepared at the state level when decisions were reached to offer a certain number of acres for lease. BLM, however, never knew how many wells would actually be developed; it therefore prepared environmental assessments for each site developed and imposed protective stipulations for sensitive areas. For geothermal steam resources, BLM estimated field sizes, came up with development scenarios, prepared an EIS, and then did EAs on actual development.

The range program started preparing a programmatic EIS in 1972 to address Bureauwide range concerns and to establish national policy for the program. BLM's coal program staff analyzed impacts at a regional level when regional leasing decisions were reached but wrote programmatic EISs to examine potential impacts of new federal leasing policies (see Minerals).

Many in the environmental community found NEPA a convenient tool for asserting their criticisms of BLM and used it in attempts to modify BLM's management of the public lands. When BLM completed its programmatic EIS on the range program, it was sued by the Natural Resources Defense Council (NRDC) for not considering the impacts of local actions by preparing local-level statements (see Range). If the Bureau prepared local statements that were not grouped into a programmatic EIS, it was also criticized.

BLM also reviewed EISs prepared by other agencies. Its workload was often quite heavy because the Bureau had assembled a wide variety of expertise to handle NEPA requirements. BLM learned a painful lesson reviewing the Alaska Pipeline EIS. Several BLM reviewers were critical of the statement, and word of the criticism was picked up by columnist Jack Anderson. The Bureau soon learned if it could criticize other agency EISs, it could expect the same in return! An era of "politeness" soon developed in which BLM restricted EIS reviews to areas it was directly responsible for.

Environmental education was one of the most positive outgrowths of NEPA. The net result of NEPA on BLM, however, was to cause it to consider its actions in a new light. Examining the cumulative impacts of its actions fostered an ecosystem approach to land management—and strengthened BLM's multiple use philosophy. While other legislation focused on specific resources, NEPA asked land managers to look at all of them together. Out of this developed an interdisciplinary approach to solving problems. According to Ron Hofman, NEPA put BLM's decisionmaking process into a "holistic context" by having the Bureau consider all resources equally.

Multiple Use Concept Strengthened

In the early 1970s, funding to prepare EISs was only slightly increased; BLM had to divert time and effort from other activities to handle the increased EIS workload and to stipulate mitigation of adverse impacts for actions that were approved. However, it soon became clear that NEPA

requirements had to be met. Thousands of day-to-day actions—permits, leases, and licenses—depended on the completion of environmental assessments and statements. BLM's program work would have come to a stop if funding for NEPA work wasn't increased. In the end it was, with Bureau appropriations almost doubling (accounting for inflation) by 1980.

Diversity of BLM Employees

NEPA also had much to do with the increasing diversity of BLM employees. Retired State Director Clair Whitlock recalls that BLM's first "Cauldron"—a Bureauwide employee orientation program held in Reno, Nevada—was attended by 60 to 70 people almost evenly split between range conservationists and foresters, with only a few wildlife biologists and women represented. In 1976, two sessions of the Cauldron were held; 56 occupational skills were represented, including marine biologists and cultural resource specialists, plus many more women and minorities.

For the public, NEPA served to heighten awareness of resource interrelationships in natural systems. According to natural resources professor Sally K. Fairfax, NEPA became the "cornerstone" for the environmental movement's participation in government decisionmaking. But this participation was to be increasingly—and unexpectedly—expressed through litigation. While NEPA had a decidedly positive influence on BLM, according to Ron Hofman, "its use as a legal playground took an edge off its grand vision."

THE FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976

FLPMA is a complex, detailed act that incorporated provisions recommended by the Public Land Law Review Commission (PLLRC), the Interior Department, and individual members of Congress. Getting both houses of Congress to consider and pass an "organic act" establishing policy for the management of BLM lands after PLLRC issued its report in 1970 was a monumental undertaking. Bills were introduced by the administration, the House, and the Senate in the 92nd, 93rd, and 94th Congresses. BLM employees had much to do with the eventual passage of FLPMA, thanks to the continuing support of Directors Rasmussen, Silcock, and Berklund, and of the Department under Secretaries Walter Hickel and Rogers C.B. Morton.

BLM Employees Play Key Roles

Bureau employees played key roles in writing the administration bill: Mike Harvey, Chief, Division of Legislation and Regulation, and Eleanor Schwartz, who later took the job, drafted the legislation and, with Associate Director George Turcott, "sold" it to the Department and the Congress. Irving Senzel (Assistant Director, Legislation and Plans) was the "brains" and editor-in-chief of the bill, according to Harvey, while Bob Wolf (Assistant to Director Rasmussen) analyzed the PLLRC report.

"My first job was to get and keep strong support from the Department, the Office of Management and Budget, and the Council on Environmental Quality, which in those days was a key player in the administration. My

BLM's RESPONSE TO THE PUBLIC LAND LAW REVIEW COMMISSION'S REPORT

by Mike Harvey

Editor's Note: *Mike Harvey began his career with BLM in 1960. After receiving a law degree from Georgetown University, he became a staffer for the Public Land Law Review Commission. Harvey returned to BLM in 1968 as Chief, Division of Legislation and Regulation, and in 1973 became Chief Counsel for the Senate's Committee on Energy and Natural Resources.*

On June 20, 1970 the Public Land Law Review Commission (PLLRC) presented its long-awaited report to President Nixon. This event triggered a response by BLM that led directly to another long-awaited event: enactment of an "Organic Act" for the public lands administered by BLM, the Federal Land Policy and Management Act of 1976 (FLPMA).

All of us in BLM knew the PLLRC study (originally due in 1968) had been used as an excuse to delay much needed modernization of the public land management mission and authority of BLM. While the Report, containing over 300 recommendations, covered all federal lands, its greatest significance was for BLM. Other agencies had clear statutory mandates. BLM was the primary target of the Report and everyone knew it.

We wanted a rapid and reasonable response so no one could speculate about or misunderstand BLM's views on the issues. Our response also had to be factual and analytical so BLM could establish the basic legislative parameters that would gain secretarial and presidential approval and significant public and congressional support.

By July 8 we had critiqued the Report and by July 17 we submitted our initial analysis to the Secretary. Within the next 5 months the Bureau prepared a 250-page detailed analysis, but our initial analysis identified the major themes and principles we thought should be adopted. At the same time, BLM was implementing the decision by Secretary Hickel and Assistant Secretary Loesch to begin modernizing public land laws and regulations.

On July 2, 1970 the Director stated, "This work is obviously of utmost importance to the future management of the public lands and resources administered by BLM. It must be given a very high priority...." On July 20, 1971, the National Resource Lands Management Act was submitted to Congress. Secretary Morton did not exaggerate when he told Congress, "This bill represents an historic proposal. The Department is proposing legislation which, for the first time, would state the national policies governing the use and management of 450 million acres of the public domain...."

Three of us put both efforts together: Irving Senzel, Assistant Director Legislation and Plans; Bob Wolf, Assistant to the Director; and me. First we needed strong support from the Department, OMB, and the Council on Environmental Quality, a key player in the Administration. Second, we needed strong support from Congress. With extraordinary support from Secretaries Hickel and Morton and Assistant Secretary Loesch, the first task was relatively easy. The administration's 1971 proposal was the product. The second task took 5 more years and I had to leave BLM and go to the "Hill" to get it done. The final congressional action approving FLPMA—Senate passage of the Senate-House Conference Report—came on my 42nd birthday: October 1, 1976. What a birthday present!

second job was to get and keep strong support from Congress," said Harvey, who left BLM in 1973 to take a job with Senator Jackson, Chairman of the Interior Affairs Committee.

Administration Bill

The administration's bill, the "National Resource Lands Management Act," was introduced in the Senate in 1971. This bill focused exclusively on BLM, requiring it to inventory public land resources, giving priority to areas of critical environmental concern (ACECs). The bill was not considered by the full Senate and was reintroduced in the 93rd Congress. The Senate declined to consider it, instead passing a bill introduced by Senator Henry Jackson. The House took no action on either bill.

Jackson's bill was reintroduced in the Senate in the 94th Congress. It differed from the administration's bill "sometimes with only subtle changes or differences in emphasis," according to Schwartz. Like the administration bill, it authorized management of BLM's national resource lands under the principles of multiple use and sustained yield, and called for a return of fair market value to the government for the use and sale of its lands.

Senator Jackson's Bill

Jackson's bill contained provisions on inventory, planning, public participation and advisory boards; authorities for law enforcement; and provisions for sales, exchanges, and acquisitions of land. The bill called for a working capital fund to be established in BLM and for a land use plan to be completed on the California Desert. It also contained amendments to the Mineral Leasing Act of 1920 to increase the percentage of revenues paid to the states, provisions for mineral impact relief loans and oil shale revenues, and requirements for the recordation of mining claims. This bill finally passed the Senate on February 25, 1976.

House Bills

The House of Representatives took a different approach. In 1972 the House Interior and Insular Affairs Committee drafted a bill, the "National Land Policy, Planning, and Management Act," incorporating many of PLLRC's recommendations. The bill proposed uniform land use planning and management activities for all federal land managing agencies but was not reported out of committee in time to be considered by the full House.

In its next session, Congressman Wayne Aspinall was absent, having lost a primary election. Under Representative John Melcher of Montana, the Subcommittee on Public Lands rewrote the House's legislation, following a lengthy series of meetings (about 68 in all) to discuss public land issues. A bill was not completed in time to be considered by the full House in the 93rd Congress, but was introduced in its next session.

The "Federal Land Policy and Management Act" was similar to Senator Jackson's bill but had provisions relating to both BLM and Forest Service lands regarding grazing fee formulas, leases and permits, advisory boards, and wild horses and burros. The bill also created the California Desert Conservation Area and granted the Bureau law enforcement authority.

By this time, Tim Monroe succeeded Irving Senzel as Assistant Director for Legislation and Plans and, under Director Curt Berklund, continued the Bureau's work with the Hill to clarify questions on BLM's management activities and legislative needs for the public lands.

The House and Senate reconciled their bills only at the last minute in

HOW FLPMA PASSED

by Eleanor R. Schwartz
Division of Legislation and Regulatory Management

By August 1976, a comprehensive act relating to the management of public lands had been passed by each house of Congress. The Senate disagreed to amendments made by the House and requested a conference. Conferees were appointed and Congressman Melcher was elected chairman. Because many primaries had been scheduled for early September, the first meeting of the conferees could not be held until September 15.

The first difference addressed by the conferees was the title of the Act. The House called it the Federal Land Policy and Management Act of 1976, while the Senate called it the National Resource Lands Management Act. The Senate conferees deferred to the House on the title and on the term to be used for BLM lands—public lands—although they felt it was a confusing term.

And so it went. The conferees met four times between September 15 and 22. Most issues were resolved rather easily but four issues proved so difficult that they almost killed the bill. The Senate conferees objected to the House provisions on grazing fee formulas, 10-year grazing permits, advisory boards and permits, and wanted a requirement that mining claimants apply for patent within 10 years of recording claims. The House conferees objected to that.

Before the end of a 5-hour session on September 22, Senator Metcalf of Montana offered a compromise package in which grazing fee provisions were deleted, all grazing leases would be for 10 years, grazing advisory board functions would be limited to recommendations for expenditure of range improvement funds, and the Senate language on mining claims would be applicable only to claims filed after enactment of the Act, not to pre-existing claims.

The conferees could not agree on the package that day but agreed to meet again on September 23rd, just in advance of the conference on the National Forest Management Act of 1976. Substitute compromises were offered by a House and Senate conferee but both were rejected. Chairman Melcher adjourned the conference saying he saw no point in prolonging the meeting. At that time, hopes for the enactment of a land management act for BLM were dim.

The 94th Congress was in its last-minute rush before adjournment. But as with many pieces of landmark legislation, a compromise was reached at the eleventh hour. On September 28th Congressman Melcher made a final effort to reach a compromise. He called a meeting for 5:30 p.m. that evening. Very few persons, other than conferees and staff, were permitted in the conference room. Within a few minutes of coming together, the conferees took a break. Word spread among the many persons filling the corridors that the meeting was going badly. However, when the conferees reassembled at 7:00 p.m., those present voted almost immediately for the compromise suggested earlier.

In keeping with its somewhat stormy and cliff-hanger history, the conference report was passed by the House on September 30th and by the Senate on October 1st, just hours before the 94th session ended. The Act was signed by the President on October 21, 1976.

THE FLPMA TIGHTROPE

by George Turcott

Editor's Note: BLM put a great deal of effort into getting an "organic act." Former Associate Director George Turcott has another perspective to tell in getting FLPMA passed. Mr. Turcott began working for BLM as a range conservationist in Elko, Nevada, in 1950. He served as a district manager in Canon City, Colorado, and Chief, Resource Management in Montana before moving to Washington in 1964. Mr. Turcott was Associate Director from 1972 to 1979.

During the waning weeks of the 94th Congress, senators, representatives, and committee staffs worked to fashion a compromise acceptable to both Houses. The final hurdle, a point on grazing fees, came late one afternoon. The conferees couldn't rewrite the language or make compromises, even though some of the other compromises in the bill were contradictory. The final vote called by the joint chairman of the conference came out a tie, which in the legislative process is non-passage—you have to have a majority of both the Senate and House conferees voting in favor of the compromise.

Irving Senzel, Eleanor Schwartz, and I had been working on the Hill with Mike Harvey trying to work out language with these people and explain the effects of different languages they substituted in committee. I think the lowest point in my life—or my whole career—was the day FLPMA hadn't passed.

BLM put everything it had into getting this act. Many of us oldtimers in the Bureau said that before we retired we wanted a basic organic act—and not all this crossword puzzle kind of stuff we'd had to work with for 30 years.

So here we were with six years' effort apparently down the drain. I waited until early evening and called up Senator Metcalf, the co-chairman of the conference for the Senate, and asked if there was anything we could do on the grazing fee issue, where he could call everybody back together again to make one more effort. He said no: "all the procedures are past, George, we lost."

Senator Metcalf was very much in favor of passage, so I tried one more angle with him. I said, "well can we work some language in there about some studies and a report back again?" Doing studies was, and is, a common legitimizing technique—it affirmed we'd still consider certain things, such as fair market value and the points stockman were making as to cost of production and so forth. I finally pleaded "just do it for me. Make one more try." He did. And, lo and behold, that night we got one more vote—the one vote we needed—and that's how we got FLPMA and the study on grazing fees.

FLPMA was expanded tremendously from the original draft as it developed to the final. Section after section of it is as detailed as a regulation or a Bureau manual procedure—and that's detailed. I think it's a natural result of the pulling and tugging that occurred in the Public Land Law Review Commission, of saying something about one resource and at the same time providing counterbalances in other areas of the act. It's a very detailed, difficult act and had to undergo clarification by later Congresses.

1976, as described by Eleanor Schwartz and Associate Director George Turcott. FLPMA's major provisions are as follows:

Major Provisions of FLPMA

Congressional Review of Land Withdrawals—While FLPMA provided for the continuation of all classifications and withdrawals made under the Classification and Multiple Use Act, Section 202 also required BLM to review these actions when preparing new land use plans. Congress was empowered to review sales of land in excess of 2,500 acres or withdrawals of tracts over 5,000 acres, as well as decisions on principal uses of lands in areas greater than 100,000 acres.

By the end of the decade, BLM had taken little action on reviewing existing withdrawals or classifications; it was preparing an inventory of these actions and implementing new land use plans (Resource Management Plans) in the field. Prior to FLPMA, 67 million acres of the public lands had been formally withdrawn from the public domain, including land for BLM and Forest Service recreation sites, land adjacent to National Parks, land to protect watersheds, and land for Forest Service roadside zones. Under the CMU Act, BLM had also classified more than 150 million acres of its own lands in the lower 48 states for retention, plus an additional 32 million acres in Alaska.

Recreation and Public Purposes Act Amendments—FLPMA amended the R&PP Act to increase the land BLM could sell or lease to state and local governments, and it required public participation in all decisions to dispose of lands under the act.

Law Enforcement—FLPMA authorized BLM to hire a force of uniformed rangers in the California Desert, but required the Bureau to rely on local officials as much as possible through cooperative agreements with local enforcement agencies.

Finance and Budget—FLPMA provided BLM with long-needed authorities that made its work more efficient. FLPMA established BLM's Working Capital Fund. It also allowed BLM to accept contributions and donations for specific activities on BLM lands (e.g., wildlife habitat improvements or recreation developments) and allowed BLM to establish service charges for applications and documents.

Land Exchanges and Acquisitions—FLPMA provided for cash payments from the government to equalize values of exchanged lands. It also gave BLM authority for acquisition under its land use plans but limited the government's power of eminent domain. BLM was allowed to use Land and Water Conservation funds to acquire public recreation lands.

Special Management Areas—Section 202 of FLPMA authorized BLM to identify areas of critical environmental concern (ACECs) through its planning process. ACECs were defined as areas "within the public lands where special management attention is required" to protect "historic, cultural or scenic areas, fish and wildlife resources, or other natural systems or processes...."

Livestock Grazing—FLPMA authorized a study of grazing fees but prohibited any increase in the fee in 1977. To assure long-term stability and use of BLM lands by the livestock industry, it also authorized 10-year

A DIRECTOR'S PERSPECTIVE: 1973-1977

by Curt Berklund

Editor's Note: Dr. Curt Berklund was retired when he came to Washington early in 1970. He is again retired, living in Spokane, Washington, working the financial markets and managing a private foundation he set up to fund, among other things, scholarships in resource management at the University of Idaho. And he still uses a sharp eye and quick reflexes to participate in trap shooting competitions.

Curt Berklund

The year 1973 was a threshold year for the Bureau. Many changes were in the wind as the nation grappled with the conflicts of Watergate and a mid-East oil embargo. As a staff assistant and Deputy Assistant Secretary in the office of Assistant Secretary Harrison Loesch, I had been involved with Bureau policy development and observed the need for administrative change. When I assumed the Director's job in July 1973, one of my first actions was to leave Washington and meet with the State Directors. I had the highest confidence in the State Directors and the field structure. They needed leadership from Washington and the opportunity to carry out the programs and be supported, not second-guessed or "rolled." The State Directors needed someone who treated them candidly and with respect.

The Bureau had few trusted constituencies. Strong political support was needed to build a record as a professional natural resource agency that would manage the programs on-the-ground in the full multiple-use context. One of my desires was to establish a way of building our credibility outside the government and have groups and key individuals we could count on. We went to work with state and county governments through the Western Governors and the National Association of Counties to help build a constituency among those who were closest to the everyday decisions BLM managers were making. Over the years, this effort really paid dividends. We also worked on improving our relationships with the news media.

One of the more important tasks was to begin building credibility with Congress. We organized the Bureau's first formal, well-staffed, Congressional liaison organization; trained the people; and gave them the support and information necessary to deal effectively with Congress. I also spent countless hours working with key members of the Senate and House of Representatives to assure that BLM's message was presented from a foundation of professionalism in natural resource management. Former Members such as Julia Butler Hansen, Alan Bible, and Wayne Aspinall, already supportive of the Bureau's mission, needed a source of credible information. During my tenure as Director, we effectively tripled the Bureau's budget and added skills to district and resource area offices that were unheard of in the 1960s. I was adamant during this period of growth that the Washington Office would not siphon off the increased positions and budget dollars. We stayed lean and efficient. I split energy mineral programs from the renewable resource programs in order to give better leadership to both. This resulted in giving our offshore and onshore leasing programs more visibility and effectiveness. We leased more acreage (OCS and public domain) for oil and gas exploration than had been leased previously. We cleared lots of hurdles in setting up a geothermal leasing program, and today a considerable amount of electricity is generated in

the West from that source.

Delegating the authority and responsibility to the field comes to mind as one of my most notable achievements. I felt that if the field organization had leadership, authority, and support from Washington it would give confidence to the field managers that they were in charge and were accountable for their program assignments. Then, they would make their decisions with knowledge that Washington wouldn't cave in to some real or perceived political challenge and "roll" the decisions. This also helped the Washington staff realize their role was to develop policies and procedures and evaluate the field manager's performance, not dictate how the field should operate.

We won control over our NEPA implementation processes in the Bureau previously centralized in the Secretary's office. We accomplished it only because the professionals in the Bureau were given the responsibility to show we could write, edit, and review our own environmental documents. That road was rocky at times but the superb help from countless individuals allowed us to internalize the program and make it work as part of the overall decision process.

We worked very hard to secure approval of an "organic act" for the Bureau. Trying to administer programs governed by over 3,000 land laws was virtually impossible. The task divided us and did not generate the constituent support we needed. We received special dispensation from the Department and the administration to work out the legislation, because I had chaired the Department's committee to review the Public Land Law Review Commission's report and make recommendations for implementation. Former Secretary Tom Kleppe was instrumental in providing BLM the support we needed to cut the deals and work out the language we felt was required to formulate the legislation. We fought hard on key issues such as wilderness review, law enforcement authority, the California Desert National Conservation Area and administrative provisions needed to streamline our approach to multiple-use management. I personally opposed making the Director a presidential appointee; however, we were able to legislate some level of protection for the career ranks. I established the organization to implement FLPMA and implementation began while I was still Director. We set up a multi-disciplinary committee of Washington managers and staff and made considerable progress in setting out basic guidelines.

One of our additional achievements was securing congressional approval of the Payments In Lieu of Taxes legislation. Recognized as truly "good neighbor" legislation, this helped to reduce much of the friction with local governments in the West. We modified the Alaska pipeline environmental statement and secured approval for the construction permits.

We started a record search through the Eastern States Office to identify federal coal resources in the Appalachian Region. We were losing federal coal simply because the records were inaccurate. This program prevented more serious criticism of the Bureau by Congress and others because we identified the problem and sought solutions.

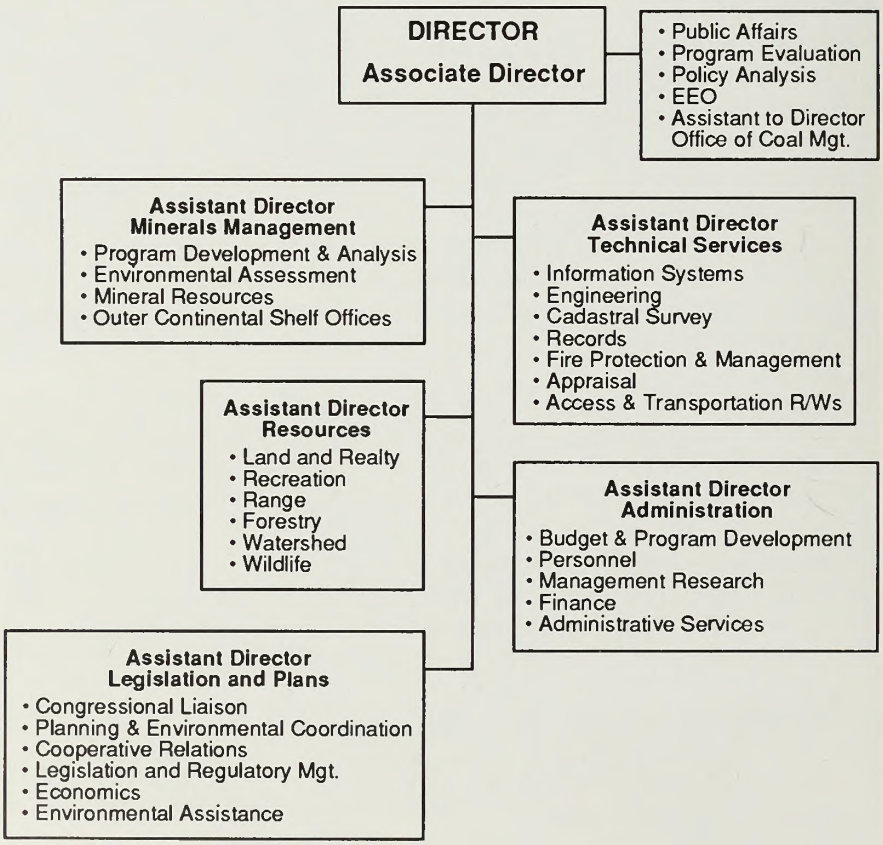
As I look back beyond the dozen years or so since I had close association with the Bureau, I appreciated the opportunity to have served. I made some close friends and learned much. While my association with BLM is fairly limited, I still keep in touch with a few friends and welcome calls at any time.

grazing permits and required 2-year notices of cancellation. BLM grazing advisory boards were directed to advise BLM on the development of Allotment Management Plans and the allocation of range improvement funds.

Wilderness—Section 602 of FLPMA directed BLM to review the public lands for wilderness potential as set forth in the 1964 Wilderness Act. The act also directed BLM to conduct early wilderness reviews on all lands designated as primitive or natural areas before November 1, 1975.

Wild Horses and Burros—FLPMA amended the Wild and Free Roaming Horse and Burro Act to authorize the use of helicopters in horse and burro roundups. Wild horse and burro populations had more than tripled since passage of the Wild and Free Roaming Horse and Burro Act in 1971—horse numbers on BLM lands in the West were estimated at more than 60,000, compared to 17,000 in the late 1960s.

Minerals Management—FLPMA modified the formulas for distribution of funds collected under the Mineral Leasing Act of 1920 and the Geothermal Steam Act of 1970. It also required persons holding claims under the General Mining Law of 1872 to record their claims with BLM within three years. FLPMA authorized loans to state and local governments to relieve social and economic impacts of mineral development and directed the Secretary to develop stipulations that would prevent unnecessary or



BLM organizational structure in 1977

undue degradation of the land.

Other Provisions—FLPMA established the California Desert Conservation Area and directed BLM to develop a land allocation plan for the area by 1980. FLPMA also repealed the Homestead Act (except in Alaska where it was given a 10-year life) and other settlement acts. The act also decided how future directors of BLM would be selected—by the president, with approval from the Senate.

PLANNING

In the 1970s, systematic land use planning was implemented in the field. Management Framework Plans (MFPs) were prepared for 80 to 85 percent of BLM lands in the lower 48 states by 1976. Data from resource inventories was considered with economic and social information to develop and compare management alternatives. After holding a series of public meetings, BLM Resource Areas revised and finalized the MFPs, and implemented them as management tools.

Ironically, NEPA had much to do with the demise of BLM's first successful, Bureauwide planning system. Court decisions had made EISs the Bureau's primary tool for analyzing resources, impacts, and management alternatives on the ground—especially for BLM's range activities. MFPs were becoming duplicative. Also, Section 202 of FLPMA required BLM to develop a more comprehensive land use planning system for "developing, displaying, and assessing" management alternatives; it also directed the Bureau to strengthen its coordination with state and local governments.

Therefore, starting in 1977, BLM began developing Resource Management Plans (RMPs), which were to be prepared in the field in conjunction with Environmental Impact Statements. In 1979, BLM phased in a transition from MFPs to RMPs, whereby scheduled updates of MFPs would be replaced by RMPs. By 1988, 61 RMPs were completed Bureauwide—about half of the RMPs that will eventually be prepared. The Bureau has scheduled replacement of all its MFPs by 1994.

The basic steps in completing an Resource Management Plan are:

1. Develop public participation plan.
2. Identify issues.
3. Develop planning criteria (set standards for data collection and formulation of management alternatives).
4. Gather information, inventory resources.
5. Analyze management situation.
6. Formulate management alternatives.
7. Estimate effects of alternatives.
8. Select preferred alternative.
9. Publish draft RMP/EIS (90-day comment period).

FROM MFPs TO RMPs

by Robert A. Jones

Editor's Note: Bob Jones began his career with BLM in 1953. After holding lands and realty positions in Montana and the Washington Office, he became Chief, Office of Program Development—later the Division of Planning and Environmental Coordination. Bob Jones and his staff developed and implemented BLM's land use planning system in the 1960s and 1970s. Indeed, Bob Jones was *the Bureau's planning system until his retirement in 1981.*

One of the most interesting periods in the history of BLM's planning program was the change from Management Framework Plans (MFPs) to Resource Management Plans (RMPs). This is how it happened. The Federal Land Policy and Management Act (FLPMA) requires land use plans as a basis for public land decisions. It also requires the Department to publish regulations specifying how these plans are to be prepared. BLM initially felt that MFPs would meet requirements of FLPMA.

The National Environmental Policy Act (NEPA) requires federal agencies to analyze and consider environmental impacts of all major federal actions, and to prepare and publish Environmental Impact Statements (EISs) when these actions significantly affect the environment. These EISs are then filed with the Council on Environmental Quality (CEQ). The Departmental Office of Environmental Project Review (OEPR) directed NEPA implementation in Interior. OEPR exercised the Secretary's authority to approve and file EISs, and was heavily involved in the EIS process. They often specified alternatives to be analyzed and the level of analysis. The bureaus could not approve and file EISs even when they had authority and responsibility for the decisions involved. These overlapping responsibilities created much tension between OEPR and BLM.

While there was much pressure on BLM to file EISs for proposed MFP approvals, no BLM director wanted to invite the OEPR involvement that would follow. Instead, BLM held that where implementation of features of many MFPs constituted a major federal action, one EIS would be prepared to analyze the cumulative environmental impact. We used this approach for the grazing EISs required by a court judgment, and it worked, as far as NEPA compliance was concerned. However, livestock grazing is widespread and influences most public land decisions. As a result, since the grazing EIS process was so much better publicized and drew so much wider public attention than MFP preparation, it was, by default, assuming a major portion of the multiple use planning role.

In mid-1977, Director Frank Gregg decided that compliance with FLPMA required substantially upgrading the MFP process, and that BLM should coordinate with the Forest Service, which at that time, was revising its multiple-use planning process. We hoped to reestablish the resource allocation decision process in the multiple-use plan as required by FLPMA, break OEPR's hold on EIS filing authority, and substantially upgrade the planning system to meet the needs of the 1980s, all at one time by using the same basic planning components being developed by the Forest Service. The details would, of course, differ to accommodate BLM needs. BLM called its product the Resource Management Plan (RMP). The big gamble was whether RMP/EIS filing authority would be delegated to BLM. OEPR was strongly opposed. We won! In 1979 filing authority was delegated by Secretary Andrus thru regulations he approved which launched the Resource Management Planning process.

10. Publish final RMP/EIS (30-day protest period).
11. Monitor and evaluate overall plan.
12. Prepare activity plans.

Public meetings conducted by the employees developing the plan are required during issue identification, development of planning criteria, and publication of both the draft and final RMP/EIS. Once the RMP is approved, BLM prepares more specific activity plans for specific programs (e.g., Allotment Management Plans, Habitat Management Plans, or others); the activities proposed in these plans must conform to the RMP. For actions that don't, the District Manager prepares a plan amendment, again with participation from the public.

MINERALS

Mineral policy in the 1970s was largely influenced by the Arab oil embargo. In 1973, the Organization of Petroleum Exporting Countries (OPEC) imposed a four-fold increase in the price of oil, and in response to the Yom Kippur War, several countries placed an embargo on oil exports to the United States. This action, combined with an increased reliance on automobiles for personal transportation by the public, created the infamous gas lines of 1973. The nation's dependency on foreign oil had risen to 36 percent, with 10 percent coming from Arab countries.

Outer Continental Shelf (OCS) Mineral Leasing Statistics 1971-1981

Fiscal Year	Gulf Coast		West Coast		Atlantic Coast		Alaska	
	Active Leases	Acres (millions)	Active Leases	Acres (millions)	Active Leases	Acres (millions)	Active Leases	Acres (millions)
1971	1010	4.27	70	.36	—	—	—	—
1972	965	4.01	70	.36	—	—	—	—
1973	1027	4.33	69	..35	—	—	—	—
1974	1258	5.59	69	.35	—	—	—	—
1975	1607	7.41	68	.35	—	—	—	—
1976	1678	7.75	124	.66	93	.53	76	.41
1977	1794	8.67	121	.64	93	.53	76	.41
1978	1703	7.81	108	.58	136	.77	163	.90
1979	1757	8.09	148	.79	175	1.00	131	.73
1980	1688	7.70	142	.76	232	1.32	113	.57
1981	1941	8.84	150	.79	273	1.55	128	.68

ALASKA'S OUTER CONTINENTAL SHELF OFFICE

by Edward J. Hoffmann
Manager, Alaska Outer Continental Shelf Office (1973-1978) - Retired

On a hot summer day in 1973 a cryptic message reached me in the Arizona State Office from Ed Hastey approving my reassignment to Anchorage as head of a newly established Alaska Outer Continental Shelf Office. After spending a decade in Alaska in the '50s and early '60s, the opportunity was most welcome.

The initial charge was to assemble a small multi-disciplinary team to begin assessing the probable environmental impacts of exploratory oil and gas drilling in federal waters off Alaska. The Arab oil embargo and the administration's ensuing Project Independence quickly changed the mission to a full-blown effort with responsibilities ranging from environmental assessment to actual leasing of offshore tracts for exploratory drilling.

This unique program required specialists with unique disciplines— oceanographers (chemical, physical, geologic, biologic), paralegals, petroleum engineers, economists, computer types, geographers. There were also some garden-variety skills—administrative types, natural resource specialists and the all important clerical positions.

The first Alaska Outer Continental Shelf (OCS) sale was conducted for tracts in the Northern Gulf of Alaska on April 13, 1976. Preparations for the sale surfaced major objections from state government and Native (Indian) groups. There was a good bit of give-and-take before the sale came to being — accommodations were made on both sides. About $1.75 billion was offered in bids, with accepted bids netting $571,900,000 to the Treasury. Disappointingly, no discoveries were made during exploratory drilling. The staff received a unit citation from the Secretary of the Interior for the excellent work done in bringing to reality the first sale in a frontier area.

The second and final sale of my tenure was in Lower Cook Inlet. It netted over $211 million in bonus bids to the Treasury. Again, no commercial discoveries resulted from exploratory drilling.

As my tenure began winding down, we were negotiating with the State of Alaska to hold a joint state-federal sale in the Beaufort Sea off Prudhoe Bay. These negotiations were complex, involving disputed ownership of the seabed. The Eskimos were greatly concerned that any further industrialization of their areas would adversely affect their subsistence way of life. Finally, an agreement was reached and the sale consummated well after my retirement in August 1978.

The OCS offices, while within BLM, were unique in that they were responsible to the director rather than a state director. Since the programs were highly visible, politically sensitive, and controversial, the Office of the Secretary took a more than casual interest. The OCS offices eventually were transferred to Minerals Management Service.

In retrospect, the 5 years I spent as Manager of the Alaska OCS office were the highlight of a varied career spanning over three decades. It was especially gratifying to have had the opportunity to gather a highly motivated crew from a wide variety of disciplines in an interesting and controversial program.

President Nixon reacted to the situation by announcing Project Independence on November 7, 1973. The project called for making the U.S. self-sufficient in energy by 1980. Development of federal mineral reserves were an important part of this equation. Nixon's policy was followed by succeeding presidents.

Increase in Mineral Leasing

Mineral leasing increased dramatically in response to the embargo. Drilling and production were up all over the nation, in the East as well as the West. Mineral development was further spurred by Congressional tax cuts for the domestic petroleum industry. BLM began leasing Outer Continental Shelf lands off Alaska and the mid-Atlantic states in 1976. By 1980, the Bureau administered 113 leases for 570,000 offshore acres in Alaska and 232 leases covering 1.3 million acres off the Atlantic Coast.

Outer Continental Shelf (OCS) Mineral Leasing Statistics 1971-1981

Fiscal Year	Total Production	
	Natural Gas (1,000 cu. ft.)	Petroleum (million bbl)
1971	2,620.2	403.4
1972	2,893.3	419.6
1973	3,042.4	394.9
1974	3,548.1	391.9
1975	3,382.6	339.3
1976	3,492.6	322.8
1977	3,652.7	301.6
1978	4,251.7	291.6
1979	4,628.3	290.1
1980	4,707.3	284.6
1981	4,879.2	283.9

The problem of speculation in oil and gas leasing soon reappeared. Private filing companies told the public they could strike it rich in the federal oil and gas "lottery" (the simultaneous oil and gas noncompetitive leasing program, or SIMO) for a small fee. While BLM was charging $10 for SIMO applications, filing companies charged up to $100, and, for the vast majority of noncompetitive lease holders, chances were quite good that they would not realize any profits from their risks.

Coal

A 1970 Bureau study found that federal coal was being leased at a fast pace, but that little production was occurring. Coal reserves were being tied

up with few royalties coming into the U.S. Treasury. In response, Secretary Rogers C.B. Morton stopped BLM from issuing coal leases and prospecting permits in May 1971.

New Coal Policy

In February 1973, the Department announced BLM was developing a new coal policy for the nation. A year later, the Energy Mineral Allocation Recommendation System (EMARS) was announced. The policy called for BLM to determine the rate at which federal coal should enter the market, select sites where good quality coal (and good land rehabilitation) could be had, and only then determine a leasing schedule.

EMARS was spelled out in BLM's draft programmatic EIS for coal. Both the EIS and EMARS were criticized in 1974 as being too general, and Interior withdrew the proposed policy. By 1975, the Department drafted and released the Energy Minerals Activity Recommendation System (EMARS II).

EMARS II emphasized market planning; it was designed to set up regulations and incentives that would, according to William Moffat of the Department's Office of Policy Analysis, "lead industry, acting in its own interest, to do what we think the nation needs." This plan called for leasing coal by competitive bid at no less than fair market value. The intent of the policy was to lease only those lands that needed to be leased; it was supposed to halt speculation by enforcing the diligent development provision of the Mineral Leasing Act of 1920.

The programmatic EIS issued with the release of EMARS II, however, was attacked by environmental groups as being of poor quality—so poor as to "preclude meaningful comments" according to the Natural Resources Defense Council (NRDC). NRDC subsequently threatened to sue. It had recently won its challenge to BLM's grazing EIS, but Interior decided to proceed with EMARS II. NRDC sued the Department and won in 1977. The District of Columbia District Court ruled that BLM's EIS was inadequate and stipulated how this was to be corrected—largely through a new EIS that would incorporate additional comments from the public.

Coal Leasing Amendment Act of 1976

By this time several other things had happened. The Coal Leasing Amendment Act of 1976 set a federal royalty rate for coal at 12-1/2 percent on leases issued after mid-1976 (prior to this, rates were inconsistently set). It also abolished preference right leasing, which had been authorized under the Mineral Leasing Act of 1920 in cases "where prospecting or exploratory work is necessary to determine the existence or workability of coal deposits in any unclaimed, undeveloped area...."

The Surface Mining and Reclamation Control Act of 1977 was passed to ensure rehabilitation of surface-mined lands—most federal coal lands were to be mined in this manner—and created the Office of Surface Mining. The National Energy Act of 1977 called for increased coal development, energy conservation, decontrol of natural gas pricing by 1985, and development of alternate energy sources, such as solar, geothermal, wind, and "mini-hydro" sources.

And finally, FLPMA had been enacted and President Carter was in the

White House. Before the court's decision on the NRDC suit, Carter called for reform of the Federal coal leasing program, wanting coal mining to be compatible with other uses of the land. He also called for an investigation of current leases to determine if they were being diligently developed in an environmentally sound manner.

After the Department reviewed BLM's coal program, another policy review was mandated by the NRDC decision. In 1979, Interior issued a final environmental impact statement on BLM's coal program. As described by Frank Gregg, BLM's policy was to resume coal leasing by "limiting sales to foreseeable needs, providing strong voices for state and local interests, and enforcing stringent environmental protection." The policy also sought to keep consumer prices down. With this policy in mind, Interior projected a coal production shortfall starting in 1985. Plans were made for coal lease sales to be held in 1981 and 1982, but a new administration would handle the sales.

Oil Shale

In 1970, President Nixon reopened the idea of leasing oil shale. A presidential task force recommended the government offer 20-year leases by competitive sealed bid at fixed royalty rates. Secretary Hickel backed off the idea, saying that it was premature to lease shale without more fully assessing the environmental consequences. The discovery of oil on Alaska's North Slope may have influenced him too.

Western Senators were up in arms about this perceived about-face. In 1971, a prototype oil shale leasing program to develop extraction technology was announced, provided that environmental concerns could be resolved. BLM first asked the minerals industry to nominate tracts. In 1973, it issued a six-volume EIS on the program. By early 1974, four of the six tracts offered were leased by competitive bid; the "C-a" tract in Colorado provided the largest bonus bid yet received for a federal lease—$210 million—but it was never fully developed. Although oil prices were up at the time, the cost of oil shale retorting was still too high to make it economically feasible.

Mining

The General Mining Law of 1872 came under increasing criticism after the 1960s, but had not been repealed. In a letter to Wayne Aspinall in 1969, Stewart Udall said, "This outmoded law has become the major obstacle to the wise conservation and effective management of the natural resources of our public lands."

The Public Land Law Review Commission (PLLRC) took a middle road on this issue. It recognized the law had problems—like permitting people not really interested in developing minerals to obtain mining claims for other purposes—but they also knew the mining industry favored obtaining title to public lands.

PLLRC called for a new mining policy that incorporated features of the 1872 act and the current mineral leasing scheme. PLLRC suggested that only minerals be patented under the law. Surface use would be allowed only as needed for mining operations—but it could be disposed of at fair market value. A royalty system was advocated that would provide monies to the

BLM

This open pit copper mine originated with mining claims on federal land near Ajo, Arizona.

United States both before and after patenting.

The mining industry resisted any proposed changes to the 1872 act. FLPMA made the first changes to the act, providing for the recordation of mining claims on the public lands—allowing BLM managers to account for claims when making land use decisions. Proof of assessment work had to be filed with BLM annually to hold claims. FLPMA also allowed BLM to play a more active role in managing surface lands of claims by monitoring operations to prevent unnecessary environmental damage, and it required reclamation of mining sites.

Alternative Energy Sources

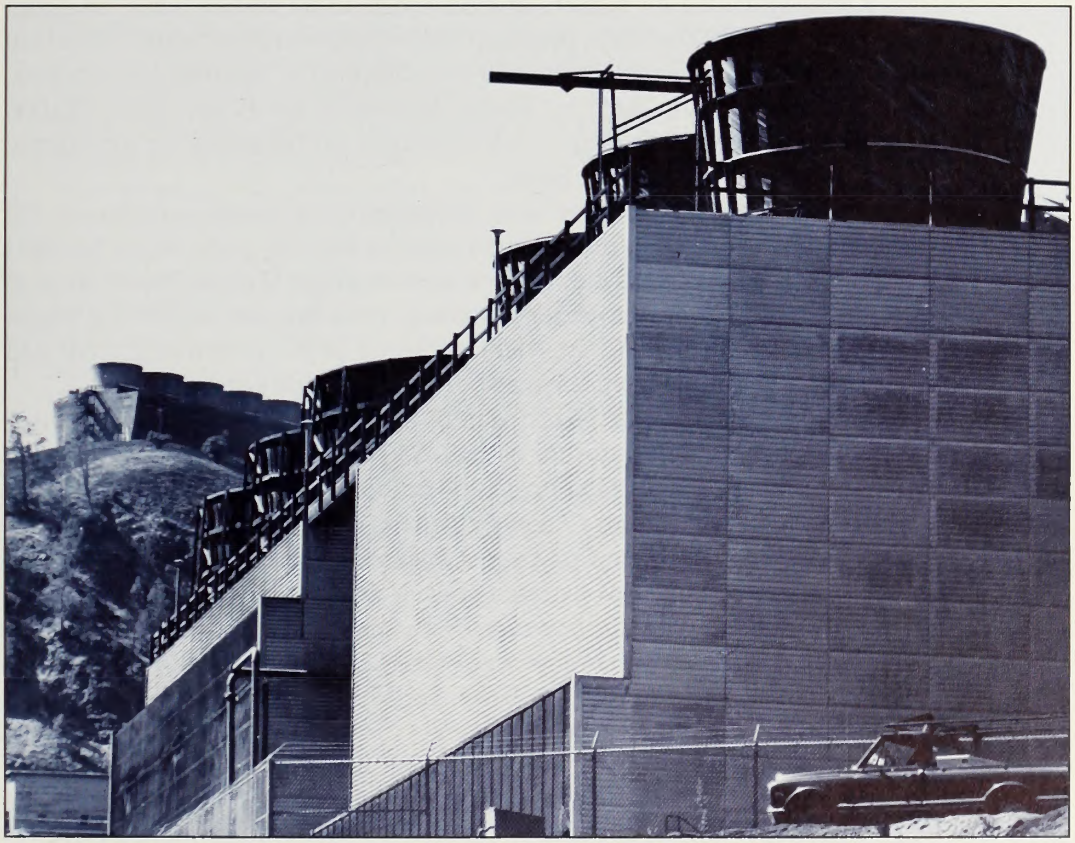
In California, BLM devised a leasing scheme for a unique energy resource—wind. Ron Hofman, Associate State Director, arguing that wind was a resource when it blew across public lands, was successful in establishing a leasing program with royalties based on production. Eleven of 13 big leases still operate in the California Desert, bringing in about $2 million annually in revenues to the U.S. Treasury.

The Geothermal Steam Act of 1970 authorized BLM to issue leases for development and use of geothermal resources (primarily for the production of electricity) on federal lands. Final regulations and a final EIS for the leasing program were published in 1973. On January 22, 1974, BLM held its first competitive geothermal lease sale, offering 33 tracts in California; high bids totaling $6.3 million were received for 18 tracts.

By 1986, more than 300 leases had been issued on federal lands in California. An area known as the Geysers in northern California became the most productive geothermal field in the world, with about 40 percent of its total production coming from BLM public lands.

John Skibinski

Wind energy turbines on public land at Tehachapi Pass, California Desert District



BLM

Geothermal steam is used in these Pacific Gas & Electric plants to produce electricity in the Geysers area of BLM's Ukiah, California District.

ALASKA

Alaska Native claims continued to dominate debate in Alaska in the early 1970s. Oil companies were eager to build the Alaska Pipeline, and the state pressed to continue its land selections. But before any of this could happen, Congress had to act on settling Native claims.

Congress held hearings on the issue starting in 1969 but no bills emerged. In 1970, Senator Henry Jackson submitted a bill that called for giving Alaska Natives some 10 million acres of land, $1 billion, and a share of oil revenues for a limited period of years. Senator Ted Stevens said "I think it is a fair bill. It gives you [the Natives] more control and self-determination than any such bill in history." The Senate passed the bill, apparently without amendment, by a vote of 76 to 8.

Late in 1970, the U.S. Supreme Court upheld former Secretary Udall's "land freeze." In the House of Representatives, the Subcommittee on Indian Affairs informally agreed to give Natives title to 40 million acres, but no report on that matter was provided.

In the next session of Congress—1971—three bills were introduced. One was the previous Jackson measure. Another, supported by Senator Ted Kennedy, called for Natives to receive title to 60 million acres, an initial payment of $500 million, perpetual sharing of minerals in lands claimed but to which title was not given, and establishment of regional corporations. The last bill, introduced by Wayne Aspinall in the House, gave 100,000 acres to Alaska Natives and made additional land available for subsistence use, but only on a permit basis.

The issue was hotly debated, but the pipeline forced compromise. Oil companies wanted to recover their costs by moving crude—they had paid $900 million in bonus bids to the state to lease lands on the North Slope in 1969 alone. As law professor Monroe E. Price pointed out, "There would have been no Native Claims Settlement Act of the present magnitude had it not been for the intense interest of the oil companies in its passage."

In April 1971, the Nixon administration put forth a proposal which included 40 million acres for natives, $500 million in compensation from the Treasury, and an additional $500 million from mineral royalties. This bill, "the Alaska Native Claims Settlement Act," was presented by Nixon in a special message to Congress. After considerable debate, a conference committee measure was accepted by the House and Senate on December 14. Before signing the bill, however, Nixon asked the Alaska Federation of Natives to tell him if they approved of the act. By a vote of 511-56, they put their blessings on the bill. On December 18, the day the Natives approved, President Nixon signed the legislation.

The Alaska Native Claims Settlement Act of 1971 (ANCSA) gave 40 million acres of land to natives and extinguished claims based on aboriginal rights to any other lands. ANCSA provided $962.5 million in compensation for claims not recognized ($462.5 million paid up front, the rest to be paid over time to Native corporations) and repealed the Native Allotment Act of

UPHEAVAL IN ALASKA LAND STATUS

by Curtis V. McVee
Alaska State Director-Retired

When I came to Alaska in 1967, I was told by somebody in D.C. that Alaska was not a good place for your career because the land was all tied up. The land protest by the Native groups in 1965 and the resulting Public Land Order (4582) in 1968 had frozen the land status.

For a number of years not much was happening. People in Alaska wanted to do things. Some could not acquire land for homesteads; public projects like highways and airports were at a standstill; and pressure was building from private corporations to lease lands for oil exploration and development.

Recognizing the problem, Congress passed the Alaska Native Claims Settlement Act (ANCSA) in 1971. While the intent of the law was valid—to convey lands to the Natives as quickly as possible—the law itself contained built-in controversy. Section 17(d)(2) of the act allowed for the withdrawal of 80 million acres for possible additions to national park, forest, wildlife refuge, and wild and scenic river systems. Native leaders objected to various easements being considered for reservation, due to the cultural significance of the lands for their people. Recreationists insisted more easements be reserved.

Needless to say, we were ill-equipped to handle the pending tasks. We were very poorly staffed and we were doing things manually—at what I call "one stage past the crowquill pen." Guidelines needed to be established to improve and speed up the conveyance process, yet protect the rights of all concerned. Studies were needed of Native populations and entitlements. New fact-finding processes, once developed, would require a great amount of field examination and time. Fortunately, the Bureau soon set up a coordination office, and we started to get more staff and budget.

I remember once during this period, Assistant Secretary Harrison Loesch came here for a couple of meetings with Native groups. We hadn't yet decided how the act should be implemented, but we had drafted some proposed regulations. We are not prepared for the reaction we got. At our first meeting, about 150 to 200 people attended. When the proposal was presented, the Natives became angry because they had not been involved. They even threatened to leave the meeting!

When the meeting adjourned, we went upstairs with the Departmental representatives. At that point, I think they began to finally understand some of the problems involved with the act. We set up a task group to go to D.C. and work on the regulations as a team. That really helped get the Department's attention. They had thought of it as just another land law that had been developed by Congress. They soon became aware it was not just a question of economics and politics, but had roots back into the aboriginal cultures of these various Native groups. Once we got that understanding, things went better.


Carolyn Roth

Now, 20 years later, we're still working on some of this in Alaska.

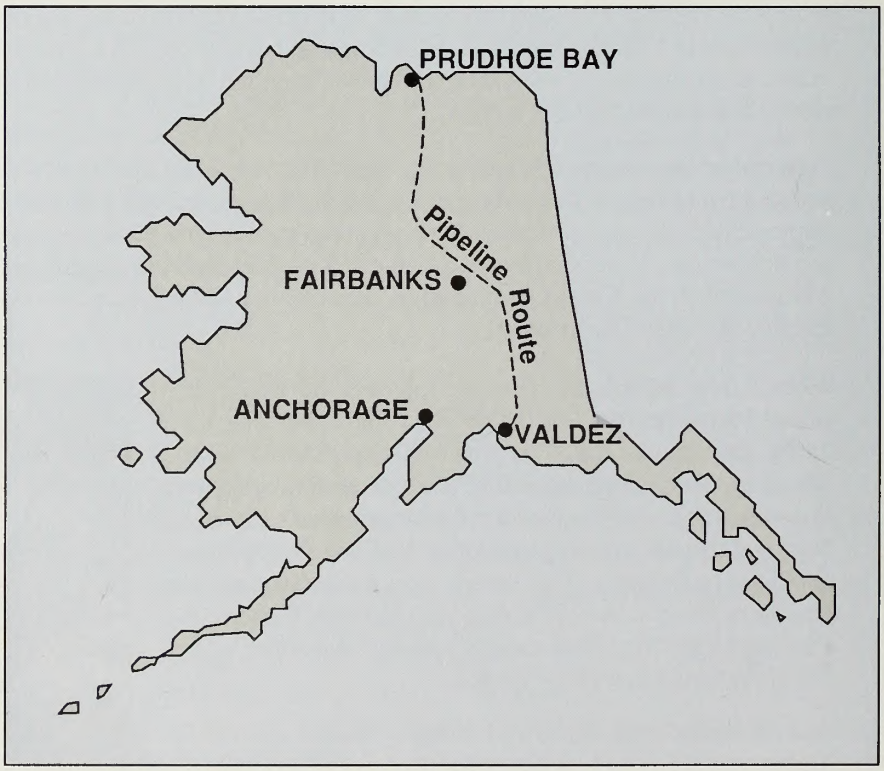
1906. ANCSA also established Native Villages to control surface resources and Regional Corporations to control the subsurface resources. Each Native was given 100 shares in Regional Corporations, which could not be sold until 1991. The first conveyance of land to a Native Corporation occurred on March 27, 1974.

Thus, according to professor Price, "By legislative stroke, the Congress converted all Alaska Natives into members of the corporate world, receivers of annual reports, proxy statements, solicitations and balance sheets." With this act, work on the pipeline could begin.

Alaska Pipeline

BLM began withdrawing a corridor across public lands for the pipeline in 1971. An EIS was prepared and released in 1972, but was immediately contested by environmentalists. In 1973, the federal courts ruled that Interior could not grant the right-of-way width given by BLM. Congress, concerned with the energy crisis, overruled the court's ruling in November 1973 and declared the EIS sufficient—ending further debate. The vote was close, however: Vice President Spiro Agnew had to break a tie in the Senate.

Interior issued a permit to build the pipeline on January 23, 1974. Work began in late April that year. As many as 21,600 employees worked around the clock to build the pipeline, which consists of a 4-foot diameter pipe that is 800 miles long (422 miles above ground, the rest below). The pipeline was completed in 1977. Oil first entered the line on June 20, 1977, and reached Valdez on the southern Alaska coast on July 28, 1977.



Route of the Alaska Pipeline

A WORLD CLASS PROJECT: THE TRANS-ALASKA PIPELINE

by Arlan Kohl
Trans-Alaska Pipeline System Project Manager—Retired

Editor's Note: *Arlan Kohl had a long association with the Trans-Alaska pipeline. In 1971 he joined the Washington Office's Alaska Pipeline staff to coordinate intra-agency and congressional activities. In 1973 he moved to Alaska and held various technical and professional positions related to pipeline construction and operation. When he retired from BLM in 1987 Arlan was the Trans-Alaska Pipeline System project manager, responsible for monitoring pipeline companies for compliance with Interior right-of-way stipulations.*

The Trans-Alaska Pipeline System is a project of superlatives. It transports crude oil from the largest oil field in North America to the ice-free port of Valdez on the Gulf of Alaska. It was the first hot crude oil pipeline, pumping oil at a temperature of 145°F , built through areas containing permafrost. The first bridge across the Yukon River and the first road to the Arctic Ocean in the United States were constructed in support of the pipeline project. It was and still is the most expensive privately financed project in the world, costing $8 billion.

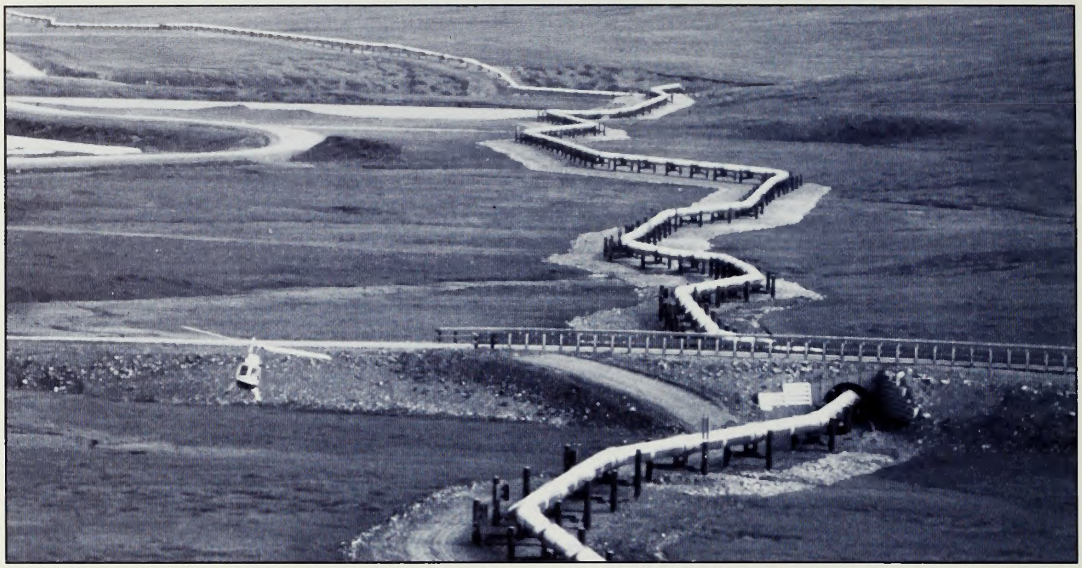
If not the first, the Trans-Alaska Pipeline System was one of the first major projects constructed after passage of the National Environmental Policy Act of 1970. The nine-volume Environmental Impact Statement primarily dealt with problems associated with a major oil spill and how the elevated sections of the pipeline would affect wildlife migration routes, particularly those of caribou herds. A challenge of the report's adequacy was filed in federal court, but congressional passage of the Trans-Alaskan Pipeline Authorization Act laid the issue to rest by directing the Secretary of the Interior to issue the permits necessary for construction.

Heading the pipeline effort was the Alaska Pipeline Office. The office monitored the construction activity of the pipeline to ensure minimal environmental disruption and to assure the construction quality of the pipeline. At the height of the project the Alaska Pipeline Office had 50 permanent employees.

Because of the world class nature of the project, it received national and international attention. The Alaska Pipeline Office, organized to monitor construction of the pipeline, played host to many delegations from around the world who came to observe construction. There were representatives from Canada, Germany, Norway, Great Britain, Japan, and the Soviet Union. As a result of the experience gained from the project, three BLM employees made a trip to the Soviet Union on technical exchange programs.

The pipeline project also received the attention of prominent political personalities and celebrities. During construction, President Gerald Ford visited Alaska and toured the project. There were many visits by members of Congress and every Secretary of the Interior since the project was proposed has visited the pipeline. Astronaut Wally Schirra was given a special briefing on the project in connection with a documentary film he was to narrate. Gladys Knight and the Pips spent a night at Tonsina Camp when their group got caught in a snowstorm along the pipeline route.

The Trans-Alaska Pipeline Project was an exciting project to work on. I will forever be grateful for the opportunity to have been associated with the project.



BLM

Alaska Pipeline

The pipeline's cost has been placed at anywhere from $7.7 billion to $10 billion. The pipeline chalked up firsts in several areas—it is the first American line to be built across unstable permafrost and the nation's first hot oil pipeline (oil comes out of the ground at 145° F.). The US-USSR Environmental Agreement of 1972 allowed several BLM employees to learn first-hand about permafrost construction techniques from the Russians—which allowed the Department to develop environmental stipulations and quite probably saved the oil companies several billion dollars. Its 10 pumping stations deliver 2 million barrels of oil per day, which in 1982 supplied 10 percent of the nation's energy needs. At Valdez, there are 18 oil storage tanks that hold 500,000 barrels each.

BLM's Office of Special Projects in Alaska monitored the activities within the pipeline corridor, which crosses some 500 miles of BLM-administered lands. BLM was reimbursed for this work by pipeline owners.

d(2) Lands

Environmentalists realized early that efforts to block the pipeline would not meet with success. However, when ANCSA was being debated, they successfully negotiated Section 17 (d)(2), which directed the Secretary of Interior to withdraw up to 80 million acres of public land for study as new national parks, wildlife refuges, forests, and wild and scenic river systems. The Secretary was given 2 years to formulate the Department's recommendations; Congress was given 5 years to act on them. When withdrawn, the "d(2)" lands were protected from all forms of appropriation, including mining claims and mineral leasing (most withdrawals are usually open to the latter two actions).

On March 15, 1972, Interior Secretary Morton made preliminary set-asides, consisting of 83 million acres. Alaska quickly sued because some 40 million acres conflicted with lands they wanted and were entitled to under the Statehood Act. (When ANCSA passed, the state prepared a selection list

RALPH, RITA, AND GENA

by Tom Noble
Cadastral Surveyor, Alaska State Office

BLM in Alaska has been a proving ground for new technology, mostly out of necessity. The state is just too large and diverse for land management and survey problems to be handled with traditional methods.

In the early 1970s, a new technology was being developed by Litton Industries. An Inertial Guidance System was being tested for aircraft navigation, and I think to the surprise of everyone, including Litton, was showing much higher accuracy than anticipated. BLM and Litton agreed to test and refine the inertial system to see if survey accuracy could be achieved. It could; the system was ideally suited for the type of surveying to be done in Alaska at that time—the skeletonized township boundaries of the tremendously large tracts of land needing to be transferred to state and Native ownership. During that first year, the advantages of the system over traditional methods were immediately apparent, and the techniques and procedures have been continually tested, developed, and refined.

My first experience with the Auto-Surveyor™ was in 1976, as a co-op student with the Oregon Institute of Technology on a summer adventure to Alaska. That first Auto-Surveyor™ cost over $750,000, including spare parts, training, and some computer software. It was nicknamed "Ralph," which was much easier to say than Litton Auto-Surveyor™ System. That summer Ralph helped us establish over 1,000 protracted survey monuments in approximately 150 townships. Ralph was doing so well, in fact, providing accurate geographic coordinates quickly and efficiently, that by 1977, BLM decided to purchase another Auto-Surveyor™. "Rita" was purchased, at a cost of about $500,000. Combined, Ralph and Rita surveyed hundreds of thousands of acres and positioned thousands of survey monuments. On several occasions during the winter, when surveying in the field in Alaska is impractical, they were used in "Lower 48" resurveys. With still a tremendous amount of land yet to be surveyed, "Gena" was purchased in 1981 for about the same price as "Rita."

The immense number of lakes and other water bodies in Alaska led to the development of an additional Auto-Surveyor™ capability, known as meander mode. This capability was developed because of the growing problems concerning the segregation of the bodies of water from the land areas to be patented. Meander mode enables Ralph to collect data, latitude and longitude, from a moving vehicle. A helicopter is flown along the shoreline of a lake or river, and at the punch of a button, Ralph records the data. This data is later read by other computers, and then used to create survey plats and field notes.

The Auto-Surveyor™ is truly remarkable and it amazes me that it is nearly 15 years old. There is still a lot of life left in Ralph, Rita, and Gena, and there is still not a survey instrument that can do as much, as easily, as the Auto-Surveyor™. There have been quite a few technological advancements in the last 10 to 15 years however, and the era of Ralph, sad to say, is probably nearing its end.

of some 77 million acres and filed it with BLM on January 22, 1972.)

Interior and Alaska negotiated until September 1972, when a deal was reached that gave the State of Alaska prior right to some 1.9 million acres of d(2) lands. The state then withdrew selection of some 36 million acres of land, while another 41 million acres were validated.

Secretary Morton's Proposal

Morton came up with a concrete proposal in December 1973 for the d(2) lands. He proposed 83 million acres under the "four systems," noting that the area within the national park system would be doubled by his plan. Morton's plan doubled the size of Mt. McKinley National Park and added three new parks in Alaska. It also added three national forests and numerous wildlife refuges, plus wild and scenic river areas.

By law, Congress had to respond to Morton's proposal by December 1978. President Ford backed the "park expansion plan" for Alaska but his effort came too late in his administration to accomplish it. President Carter and Secretary Andrus gave the proposal top priority on their agenda. In September 1977, they came up with a plan more ambitious than Morton's, calling for 91.8 million acres to be included as "National Interest" lands—41.7 million acres for 10 new parks, 45.1 million acres for wildlife refuges, and 2.5 million acres for wild and scenic rivers. New National Forests were eliminated from the proposal, but 2.5 million acres were added to existing forests.

Congress failed to act on Morton's proposals within ANCSA's deadline. With the lands scheduled to revert back to multiple use status, President Carter created 17 new monuments encompassing about 56 million acres on December 1, 1978. Defending the Executive Order, Secretary Cecil Andrus said "through the enactment of our proposals, we can be certain that the crown jewels of Alaska—its most spectacular natural environments, recreation areas, and wildlife habitats—will remain intact for the benefit of our nation's citizens." President Carter felt no other action would have more "lasting value."

Alaska National Interest Lands Conservation Act

Conservationists and land users debated this issue for the rest of the decade. When Carter lost his bid for reelection in 1980, conservationists compromised. The Alaska National Interest Lands Conservation Act (ANILCA) passed on December 2, 1980. The act extended the time for Alaska to select state lands from 25 years to 35 years; lands previously selected by the state and tentatively approved by the Department were confirmed.

For the nation as a whole, ANILCA revoked the 1978 executive withdrawals and set aside 104.1 million acres for national parks, wildlife refuges, recreation areas, and national conservation areas. The act also set aside the 1 million-acre White Mountain National Recreation Area (including two recreation trails and the Beaver Creek Wild River) and the 1.2 million-acre Steese National Conservation Area, which includes caribou habitat, the Birch Creek Wild River, and 125 miles of recreational trails.

SPECIAL MANAGEMENT AREAS ON THE PUBLIC LANDS

From modest beginnings in the 1960s, BLM identified and designated millions of acres of the public lands in the lower 48 states as special management areas to recognize unique or threatened resources on the public lands. In 1965, Secretary Udall and Director Stoddard proposed that BLM designate 130 natural areas on BLM lands, totaling about 500,000 acres. These lands, categorized as ecological or geological areas, were set aside for research and educational use through BLM's classification process. Under Boyd Rasmussen, BLM began to designate recreation lands and other areas, such as National Natural Landmarks.

Special management areas were designated in two ways: by congressional or administrative action. Congress established national trails, wild and scenic rivers, and national conservation areas. BLM and the Department designated recreation areas, primitive areas, and natural areas (including outstanding natural areas and research natural areas), resource conservation areas, and other areas, such as the Little Book Cliffs Wild Horse Range. After FLPMA passed, BLM also designated areas of critical environmental concern (ACECs).

Under Director Burt Silcock, BLM began to set aside major acreages of public lands. About 27,000 acres of land in the Organ Mountains in southern New Mexico were dedicated in 1971 as a recreation area. New Mexico State University had previously been granted the use of 2,000 acres in the area for educational purposes. In Montana, Humbug Spires, Bear Trap Canyon, and the Centennial Mountains were designated as primitive areas. Bear Trap Canyon was subsequently designated as BLM's first wilderness area in 1983 as part of the Lee Metcalf wilderness.

Snake River Birds of Prey Natural Area

For many years, BLM's Boise District recognized that the canyon country along the Snake River provided a unique and valuable nesting area for birds of prey. District Manager Ed Booker "charted a course through the Bureau's planning process to preserve the area," according to Silcock. In 1971, Secretary Rogers C.B. Morton withdrew 26,000 acres of land along the river for management as a natural area. The area was renamed the Snake River Birds of Prey Area by Secretary Cecil Andrus, who enlarged the total area to 482,640 acres in 1980.

King Range National Conservation Area

The King Range National Conservation Area, containing 54,000 acres of public lands along California's northern coast, was established by Congress in 1970 as the nation's first conservation area. Congress required BLM to develop a management plan for the area before it was officially designated. BLM completed an EIS and adopted regulations for the area in 1974, when it was officially set aside.

The King Range Act of 1970 contained provisions for land acquisition and cash payments to equalize values of lands exchanged with private owners and the State of California. It established a program of multiple use

PHOENIX TRAINING CENTER

by Vi Dille and Ken McGinty
Phoenix Training Center

As the Bureau of Land Management's technical training facility, the Phoenix Training Center had its origin in 1969 as the Lands and Minerals (L&M) Training School, under the administration of the Phoenix District. The first Manager was Tom Owen. The L & M School offered two 6-week courses each year for beginning lands and minerals specialists. Training in lands and minerals was especially needed because no training existed for realty specialists, and training in the private sector did not prepare minerals specialists for Bureau work. The school was located in the Phoenix District because it had abundant lands cases to be worked and Arizona's mild year-round climate would allow trainees to conduct field work during the spring and fall semesters.

By 1972 the L & M School had a new Manager, Paul Rigtrup. During his tenure, several lands and minerals short courses were added to the curriculum; an administrative law course was offered along with the Bureau's first training for area managers. In addition, the Pipelines and Electric Systems short courses were developed and conducted every 2 years in cooperation with the industries' respective institutes. By October 1979, the L & M School was separated from the Phoenix District, placed under the leadership of the BLM Arizona State Director, and became the Phoenix Training Center. At that time, the Training Center had a permanent staff of 10 and a 14-course curriculum and had already conducted 2 semesters of the new long-term beginning professional course in range management. In 1981, long-term training in wildlife habitat management was added to the curriculum, and in 1983 training for planners was introduced. Several other forces shaped the Training Center's evolution. The merger of BLM and the Minerals Management Service produced a need for specialized minerals training. The minerals curriculum increased from 4 courses in 1982 to 22 classroom courses and 4 self-study courses in 1988. Other major changes resulted from an evaluation of the Training Center and a decision to reorganize it.

With the trend of budget reductions and less travel, the Phoenix Training Center re-examined formal classroom training and began to seek alternative training methods. In 1984, Dr. Larry Hamilton became the Manager, responsibile for implementing the Training Center's reorganization. A division was created to design and deliver training materials, including decentralized training packages and video programs. Education, computer, audiovisual, and visual information specialists were added to the staff. New program areas and responsibilities were added: career development; soil, water, and air; and hazardous materials management.

Two of the Training Center's attributes make it especially effective in serving the Bureau. First is the use of visiting instructors instead of a permanent teaching staff. Such instructors combine subject matter expertise with field experience to best meet the training needs of field employees. Second is that the Training Center was designed to meet the needs of line management and is responsible to the Arizona State Director as the representative of the Bureau Management Team. The Training Center model, proven effective over the years, will carry the Training Center into the 21st century, ensuring the best multiple resource management training for Bureau employees.

and sustained yield management for the area—provisions that would be seen again in FLPMA. Because private and state lands were intermixed with public lands, BLM set up seven management zones in the area to designate primary uses (three were for recreational uses, two for residential purposes, one for forest management, and one for wildlife habitat).

California Desert National Conservation Area

California Desert

The Classification and Multiple Use Act of 1964 called for an inventory of BLM lands in the California Desert to determine what areas should be retained in federal ownership. BLM's challenge on the California Desert was to identify land uses and types of management required in an area receiving increasing use by the public. Almost all of BLM's 12.5 million acres (half of the desert's total area) were classified for retention and multiple use management.

In 1971, Secretary Morton dedicated 19 areas comprising 2.7 million acres in the California Desert as "National Recreation Lands." BLM identified these areas through the CMU Act, its own planning system, and extensive public involvement. BLM estimated that public lands in the California Desert supported more than 7 million visitor-use days annually; after the recreation areas were formally designated, this figure doubled.

The California Desert Conservation Area was established by FLPMA in 1976, with a draft management plan and final EIS issued for comment and review by the public in September 1980. Twelve public meetings were held in the area, and BLM received more than 40,000 written comments from across the country (with its analysis audited by the California League of Women Voters to assure impartiality and fairness to all users). The plan allocated desert land into geographic areas according to their primary uses. Class "C" (Controlled Use) areas totalled 2.1 million acres, or 17.3 percent of the total area. Most of these lands (45 sites totaling 2 million acres) were designated areas of critical environmental concern and proposed for inclusion to the national wilderness system. Class "L" lands (Limited Use) totaled 5.9 million acres (48.5 percent of the total); only low-intensity multiple land uses would be allowed, in order to protect resource values.

Class "M" lands (Moderate Use) struck a balance between use and preservation, allowing a variety of uses on 3.3 million acres. Class "I" (Intensive Use) lands allowed concentrated uses on 500,000 acres of lands by interests as diverse as off-road vehicle (ORV) enthusiasts or hardrock

BLM

Secretary Rogers C. B. Morton rode to the dedication of California Desert National Recreation Lands with dune buggy driver Jerry Van Warmer.

miners. The plan designated most of this acreage as ORV areas, including dry lake beds and sand dune systems.

The final plan was approved in December 1980. Public involvement helped BLM resolve a number of thorny issues; with the public's approval, BLM expedited the removal of 10,000 burros from critical desert bighorn sheep habitats and desert tortoise areas. In addition, BLM exchanged 5,600 acres of lands west of Blythe, California, for 480 acres of redwood forests owned by the San Diego Gas and Electric Company in the northern part of the state, plus 1,580 acres of land for addition to the Desert Tortoise Natural Area.

LAW ENFORCEMENT

Desert Rangers

As early as 1968, California State Director J. Russell Penny proposed that a ranger force be established on the California Desert to supervise and control the desert's fast-growing recreational uses. About 95 percent of the desert is within 3 miles of a road, and more than 12 million potential visitors live within 100 miles of the desert.

BLM hired its first desert ranger in the Riverside District in June 1972. During the next year, Riverside District Manager Del Vail hired six additional rangers, and in 1974, 21 more. Because rangers didn't have law

enforcement authorities, their duties were originally to oversee off-road vehicle use and report any violations of the law to state or local law enforcement officials. Rangers also gathered data on wildlife populations and habitats, archaeological sites, and other resources, and provided interpretive information to the public.

BLM

Providing information and helping visitors understand the desert's fragile resources takes up much of a BLM ranger's time.

In November 1973, President Nixon issued an Executive Order calling on BLM to develop an "Interim Critical Management Program" for recreational vehicle use on BLM desert lands, which BLM completed in 1974. However, desert rangers were not granted their own enforcement authority until FLPMA was passed in 1976. By this time, their numbers had doubled and they were being hired outside California. But after receiving law enforcement authority, Steve Smith of the California State Office said that "in most cases, the rangers were able to substitute persuasion and diplomacy to avoid using their powers of arrest."

Law Enforcement Authority

BLM's first authority for law enforcement was provided by the Wild and Free Roaming Horse and Burro Act in 1971; the Bureau hired its first special agent under the act in 1974. FLPMA gave BLM its first general authority covering all public lands. The Bureau signed contracts and entered into cooperative agreements with state and local agencies to enforce state and local ordinances. Special agents (also known as criminal investigators) probed violations of the Wild Horse and Burro Act, the Archaeological Resources Protection Act, and the Public Rangelands Improvement Act.

BLM estimated that 85 percent of its law enforcement work consisted of crimes against property or wild horses and burros. In 1979, the Federal Magistrate Act gave desert rangers authority to issue violation notices for misdemeanors.

A DIRECTOR'S PERSPECTIVE: 1978-1981

by Frank Gregg

Editor's Note: *Frank Gregg, a native of Colorado, began a long career in natural resources in 1951 with the State's Game and Fish Department. He served as executive director of the Izaak Walton League, staff assistant to Secretary Udall, and vice president of the Conservation Foundation, and was chairman of the New England River Basins Commission before becoming Director of BLM in February 1978. He is now a professor at the University of Arizona. This sidebar and his article on FLPMA were excerpted from a longer paper,* Implementing FLPMA: Fashioning Management Systems in an Era of Political Volatility, *in press.*

Frank Gregg

I have followed BLM since the 1950s, first stimulated by livestock-wildlife conflicts and proposals for federal land disposal, and continued as a Secretarial staff assistant and conservation lobbyist in Washington through Chuck Stoddard's and Boyd Rasmussen's tenure. I was determined to help the Bureau build on FLPMA to establish a stable, professional public land management program genuinely responsive to the diverse range of demands on public land resources. I saw the land use planning process mandated by FLPMA as a way of assuring that all points of view were brought to bear on land use decisions in the field, and to enhance the capacity of the Washington Office to influence policy decisions of the Department, OMB, and the Congress affecting public lands.

The delay in my installation as Director was particularly frustrating because Secretary Andrus and Assistant Secretary Martin moved quickly with policy and program changes. The Bureau's career leaders had looked forward to having a strong hand in early implementation of FLPMA; instead it often found itself responding to individual initiatives from Secretarial offices, formulated outside the multiple-use context the Bureau preferred. As a signal to public land user groups, I held a series of well-publicized meetings in several western states in which local, regional, and national issues were discussed with audiences representing the full range of interest groups. The objective was simple: to let all hands know they could expect even-handed responses on wilderness, grazing administration, coal leasing, and other controversies. The strategy worked: even at the height of Sagebrush Rebellion oratory, communications with public land users and their political allies were easy and open.

At headquarters, BLM was reorganized and partially restaffed to provide a focal point for both renewable and nonrenewable resources, and to sharpen policy analysis and advocacy skills essential in a Washington office. Winning a few early battles (notably delegating approval of land use plans and related EISs to State Directors) helped restore the Bureau's role in Departmental policy councils. State Directors were made key players in Bureau policy deliberations through carefully planned and staffed meetings on program policy issues.

Progress in major programs was substantial. A new coal leasing program and EIS were formulated; leasing was resumed in 1980 without legal challenge. A "principled" (my word) approach to the westwide wilderness review specified in FLPMA was scrupulously objective

in initial stages, to avoid demand for repeated reviews. Wildlife programs were sharply strengthened, a priority dating back to my early years in Colorado.

A coalition of user groups helped enact the Public Rangelands Improvement Act of 1978 around a common interest in increased funding for improving rangeland condition, and came close to agreement on processes for making decisions about livestock grazing use in response to court-ordered grazing EISs. A Special Projects Office helped meet urgent schedules for siting energy facilities. OCS leasing was expanded in new frontier areas with careful concern for environmental and social impacts. The California Desert Plan was completed with the help of a strong citizens' advisory committee, and withstood early challenges from a new administration. A network of regulations for implementing FLPMA emerged. The first-ever regulations on surface effects of hardrock mining took effect.

BLM's progress toward establishing itself as a strong, stable institution of career natural resource professionals was mixed. While the policy and budget priorities of the Carter Administration were supportive and congressional leadership was exemplary, images and perceptions of the Bureau were as often diminished as enhanced by the administration and diminished further by the vehemence of attacks in the 1980 campaign and immediately thereafter by supporters and officials of the new administration.

President Carter's zeal to reorganize, including a proposal to convert Interior into a Department of Natural Resources incorporating the Forest Service, was the root of serious damage to BLM. White House reorganization strategists sought to win FS support by downgrading BLM's competence and integrity, and promising to consolidate the two land systems under FS leadership. Even the Secretary occasionally joined in this forlorn tactic.

BLM and other federal land agencies were also pawns in a federal-state water controversy. Field offices were accused (inaccurately) by some western water leaders of planning to claim vast quantities in the process of filing under state law for water rights for land management. Casual examination would have shown the amounts claimed to be modest indeed. But the administration's public response took the form of promising to protect western water interests from the agencies, instead of pointing to the record.

The Carter/Andrus record shows increasing support for BLM as time went on. When it became obvious that the reorganization would fail, Andrus helped secure support for a strengthened BLM in budget and manpower allocations. Andrus came, in his last months, to assert a commitment to BLM as the "Best Land Manager" among federal agencies. In controversial program areas, such as coal leasing, wilderness review, and livestock grazing, his support was unwavering. In his last appearance before Department employees, Andrus was moved to tears when he came to comment on his administration's work with BLM. But the opportunity to fully capitalize on his support was lost in the change of administration in 1981.

BLM entered the second post-FLPMA administration with modest increases in staff and appropriations, stronger support among western governors, the environmental community and key leaders in the House, a solid start toward consolidation of basic management systems, remarkable progress in specific program areas—and the dubious distinction of serving again as a symbol of need for dramatic policy change by a new administration.

RENEWABLE RESOURCE PROGRAMS: SOIL, AIR AND WATER

BLM's watershed program grew to include additional areas of responsibility, including air resource management, in the 1970s. Several acts affected the program, but their effects on land management activities were not immediately apparent until litigation and court decisions forced the Environmental Protection Agency (EPA) to expand the acts' authorities to all areas of the United States.

Clean Air Act of 1970

The Clean Air Act of 1970 required EPA to establish national primary and secondary air quality standards, including standards for new pollution and hazardous substance sources. While the initial focus of this act centered on automobiles and point-source pollution, many states adopted regulations controlling open burning on federal public lands.

Prevention of Significant Deterioration (PSD) regulations were developed under the act following litigation from the Sierra Club in 1975. Under these regulations, EPA established three classes of clean air regions for the nation:

PSD Regulations

Class I - pristine areas where no deterioration was allowed;
Class II - areas permitted to undergo moderate changes; and
Class III - areas where development was allowed, up to the secondary national standards given in the act.

The Secretary of the Interior was given the responsibility to designate areas for management as Class I areas. Amendments to the act in 1977 reaffirmed the PSD concept and strengthened its provisions. All national parks, monuments, and wilderness areas were designated Class I areas, with other public land areas designated Class II; states or the Department, however, could reclassify any Class II areas as Class I areas.

Federal Water Pollution Control Act

The Federal Water Pollution Control Act (FWPCA) focused on industrial pollution in urban areas and on oil spills. Section 208 of the act, however, covered nonpoint pollution sources and required states to develop areawide waste management plans. The act also created the Colorado River Basin Salinity Control Forum, representing seven basin states, to develop numeric criteria for salinity allowed in the Colorado River—much of which originated on public lands. In 1974, the Colorado River Basin Salinity Control Act authorized construction of four salinity control units in the basin and required planning reports be completed in 12 other units.

Under FWPCA, EPA proposed that forestry and agricultural activities be designated as point sources, but withdrew the idea in 1972. NRDC successfully sued EPA on this issue in 1975, forcing EPA to develop new regulations. Published in 1976, the regulations addressed water pollution from forest and range management activities.

Clean Water Act

The Clean Water Act of 1977 amended Section 208 of FWPCA to mandate statewide planning and authorized cost-sharing programs with

rural landowners to control nonpoint sources through their Soil Conservation Districts. The act also exempted road building activities in forests from its provisions only if "best management practices" developed by BLM and the Forest Service were followed.

Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act of 1976 provided funds to state and local governments to "provide the demonstration, construction, and application of solid waste management and resource recovery systems which preserve and enhance the quality of air, water and land resources." One of the act's provisions called for establishing a national system of disposal sites for hazardous wastes, some of which occurred on BLM lands (e.g., the Waste Isolation Pilot Project in southeast New Mexico, which stores government-produced radioactive wastes).

WILDLIFE

BLM's wildlife program continued to grow in the 1970s, reflecting the rise in public concern for endangered species and habitat issues for all species. The number of wildlife biologists in the Bureau grew to 360 by 1980, with a program budget of $16 million. In addition to NEPA and FLPMA, three acts affected the Bureau's wildlife program.

Sikes Act of 1974

The Sikes Act of 1974 promoted federal/state cooperation in managing wildlife habitats on both BLM and Forest Service lands. It required BLM to work with state wildlife agencies to plan the development and maintenance of wildlife habitats, the act's primary tool being the Habitat Management Plan (HMP).

BLM completed its first HMP in 1976 in the Arizona Strip District. By 1980, BLM signed cooperative agreements with 15 state governments and developed 180 HMPs covering 26 million acres of public lands and 1,000 miles of streams crossing BLM lands. Priority was given to species requiring special attention, such as the desert bighorn sheep (whose numbers have not recovered in its original range, unlike those of elk, deer, and antelope) and endangered species.

Endangered Species Act of 1973

The Endangered Species Act of 1973 provided for the federal listing of wildlife threatened with extinction and for the designation of critical habitat by the U.S. Fish and Wildlife Service (FWS). The act required BLM to protect endangered species and their habitats, and to consult with FWS on activities planned for critical habitats. In addition, the act provided for closer working relationships between the agencies in developing recovery plans for threatened or endangered species.

The Bald Eagle Protection Act of 1972 prohibited the poisoning of bald or golden eagles, whether intentional or unintentional—causing significant changes in the FWS Animal Damage Control program (now in the Department of Agriculture) and in the activities of livestock operators on public lands. In January 1977, the FWS published guidelines forbidding activities resulting in disturbance to the birds.

WILD HORSES AND BURROS

The Wild Free Roaming Horse and Burro Act of 1971 gave legal status to horses and burros on the public lands and required BLM to institute programs to protect and manage them. This act was one of the first pieces of legislation dealing with particular species and their habitats, specifying techniques that could—and couldn't—be used their management. The act brought wild horses and burros into BLM's multiple use planning process: the Bureau began to allot forage to horses and burros in addition to livestock and wildlife. If too many horses or burros occurred in an area, plans were written to address how and when they would be removed. Environmental assessments were prepared for public review and comment—a far cry from the discretion allowed managers in the 1950s and early 1960s.

BLM

Burros in California desert

The act prohibited all sales or commercial trade in the animals and made BLM responsible for its enforcement. The Bureau hired its first special agents under the act in 1974. Horses and burro numbers could be controlled, however, by moving excess animals to other areas (where they existed prior to the act), by humane destruction, or by "adoption" to private citizens. The first option was untenable because horse and burro numbers were increasing throughout their range. The second, BLM correctly surmised, would never be approved on a large scale by the public.

BLM's only viable alternative was adoption; its first wild horse adoption took place in Montana in 1973. Because early efforts proved successful and were received with widespread public support, the Bureau implemented a nationwide Adopt-A-Horse program in 1976. By 1980, the public had adopted more than 20,000 horses and 2,000 burros through the program.

BLM

Wild horses in Sand Springs roundup, Vale, Oregon

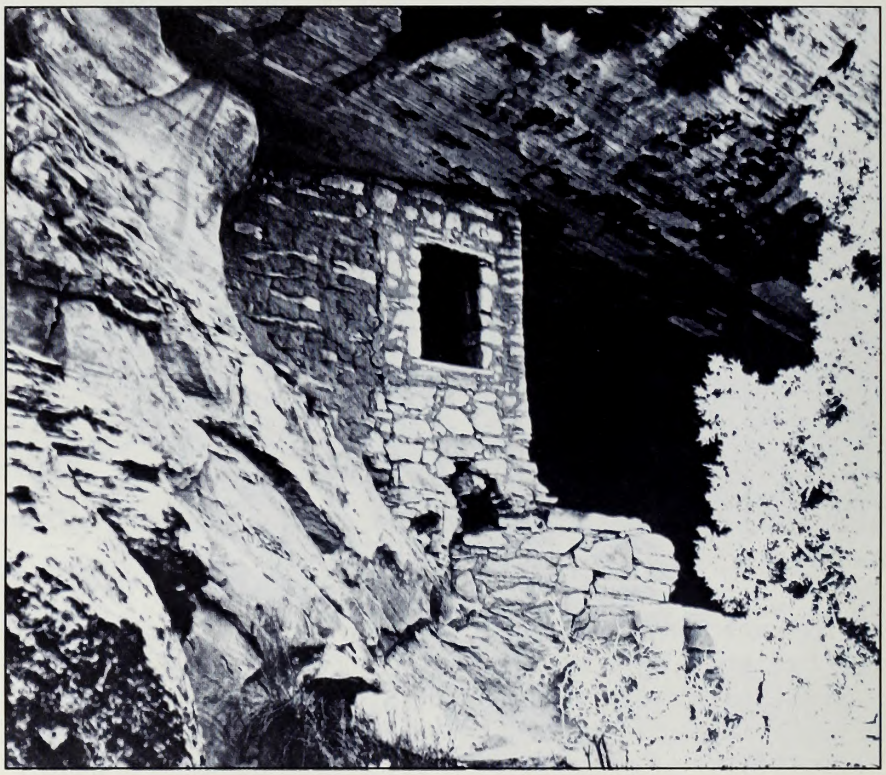
The protection afforded horses and burros under the act allowed for rapid increases in their population throughout the West. By 1980, BLM estimated that wild horse numbers exceeded 52,000, and burros 12,000, on the public lands, with some herds growing by 15 to 20 percent each year.

BLM found itself facing a whole new array of problems. In January 1976, animal unit months for livestock grazing were reduced in the Burns District (Oregon) in response to reductions in forage caused by wild horses in the area. A cattleman affected by this reduction filed a claim for damages with the Interior Department but was not successful. New Mexico challenged the act's constitutionality, claiming it violated the state's right to manage wildlife within its borders. Initially found unconstitutional, the act was later upheld by the Supreme Court, which decided the federal government had authority to manage horses—and other wildlife species—on the public lands.

CULTURAL RESOURCES

Until 1971, most land-managing agencies thought that the National Historic Preservation Act of 1966 (NHPA) applied only to nonfederal cultural resources affected by federally aided construction such as

highways, dams, and urban renewal projects. By issuing Executive Order 11593, President Nixon informed federal land-managing agencies that they too were obliged to protect cultural resources. Executive Order 11593 required agencies to inventory and evaluate all significant cultural resources under their jurisdiction within 2 years—an impossible task for an agency managing 500 million acres of land—and to protect them from inadvertent harm. Expanding its ability to assist State Offices, the BLM Service Center added a historian and a second archaeologist to its staff.



William T. Rolen, Jr.

Archaeological site, Granary with two types periods of construction in Moab District, Utah

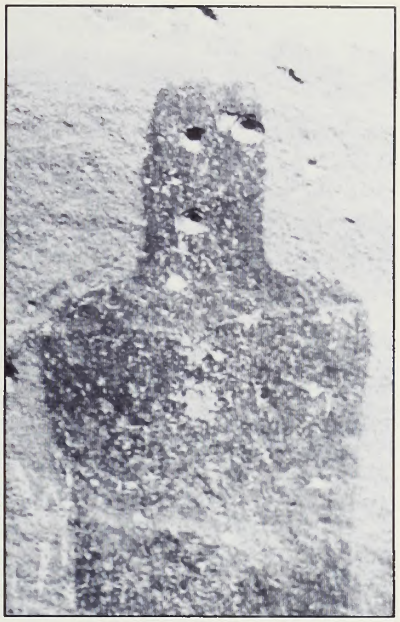
Detailed NHPA regulations were published by the Advisory Council on Historic Preservation in 1974. In response, BLM State Offices and a few Districts were staffed with cultural resource specialists by the end of fiscal year 1974; most other Districts were staffed in 1975, and most Resource Areas by 1977. Alden Sievers of the Washington Office's recreation staff began laying the foundations for a cultural resources program in 1974. Rick Hanks, archaeologist for the California Desert planning staff, served as program leader from 1976 to 1980, establishing the planning-based structure that continues to shape the program.

Cultural specialists in the field were primarily responsible for inventories needed for land use plans or for proposed projects such as right-of-way applications, range improvements, mineral development, and other actions. Because locations were chosen for resource or engineering reasons,

these new specialists visited places where archaeologists had never thought about going, "finding an unanticipated wealth of archaeological and historic resources of kinds never before described or interpreted," according to John Douglas, current program leader in the Washington Office.

It soon became evident that BLM lands held an abundance of cultural resources, estimated in 1977 at 500,000 properties. Rapidly accumulating survey data bumped that estimate upward—to as many as 3 to 5 million—according to Douglas, who stated that "acre for acre, no other agency approaches the number, variety, and importance of BLM's cultural resources."

FLPMA reemphasized Executive Order 11593's message, naming cultural resources among the Bureau's multiple use responsibilities and focusing on the role of inventory in planning and management. The 1970s closed with the passage of another important statute, the Archaeological Resources Protection Act of 1979 (ARPA). Its predecessor, the Antiquities Act of 1906, had been disabled as a criminal statute in most of the West by a 1974 ruling in the Ninth Circuit Court of Appeals. ARPA resolved the Court issue, boosting the Antiquities Act's misdemeanor offenses to felonies; it also prohibited trafficking and possession in addition to unauthorized excavation and removal, to address dealers and collectors as well as diggers.



William T. Rolen, Jr.

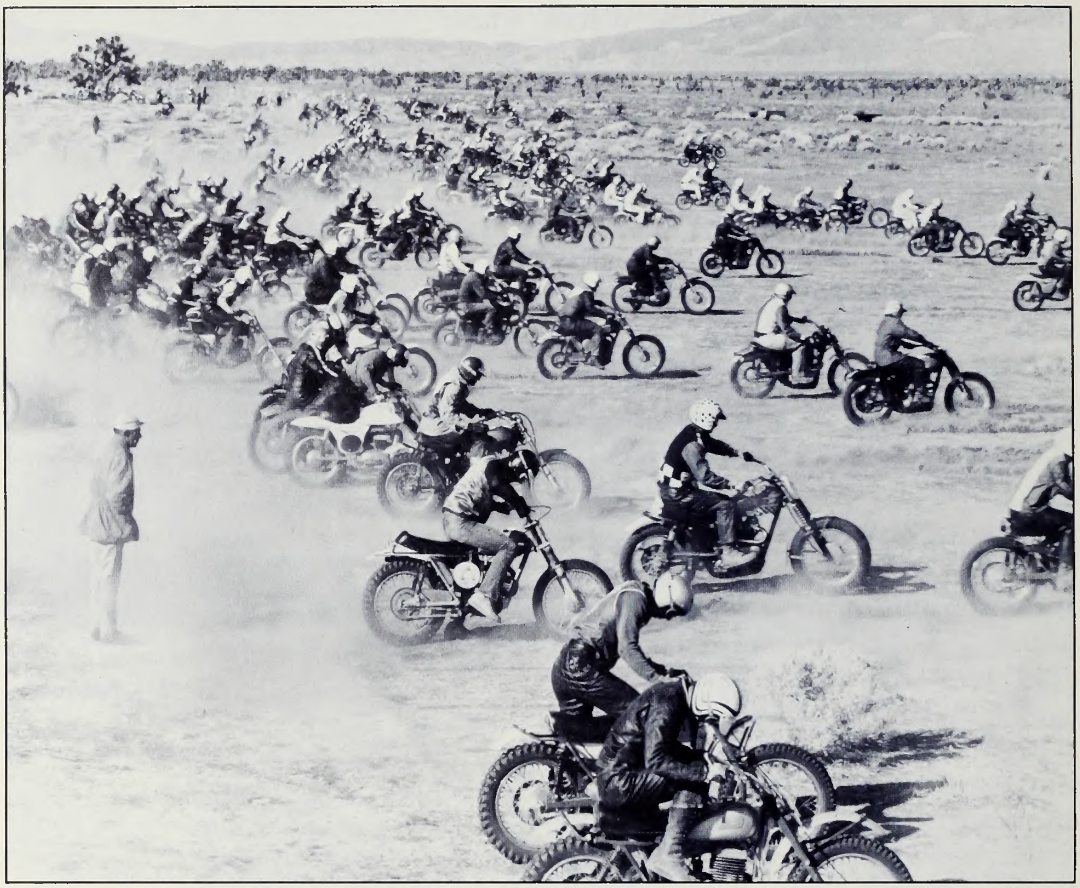
Pictograph used as a target by irresponsible public, Moab, Utah

By the end of the decade, BLM had the authority and much of the capability needed to protect its huge reserve of cultural resources from conflicts generated by legitimate land use activities on the one hand, and from illegal depredation on the other. Both of those concerns, however, were almost purely reactive. What was lacking, according to Douglas, was the ability to get out ahead of Section 106 compliance—and artifact hunters—to determine, for the resources' own sake, how they should be managed over the long term. This became the program's main task in the 1980s.

RECREATION

Recreation on the public lands rose steadily during the 1970s, approaching 50 million visitor-use days each year. By 1972, the Bureau hired an additional 30 outdoor recreation planners on the ground so that virtually all District Offices were staffed with these positions.

By the mid-1970s, BLM was maintaining more than 400 developed recreation sites on the public lands, with an annual budget averaging $5 million for recreation management, $3 million for site maintenance, and $1 million for recreation construction. For America's Bicentennial in 1976,



BLM

The start of a hare and hound race over approximately a 150 mile course, Little Rock Area, California

BLM built interpretive facilities along the Oregon, Pony Express, and Dominquez-Escalante Trails. In 1978, the Land and Water Conservation Fund Act was amended by Congress to authorize an increase in its base funds to $900 million annually.

WILDERNESS

Section 603 of FLPMA set up BLM's wilderness review process. Within 15 years the Secretary was to review roadless areas or "islands" of 5,000 acres or more on the public lands identified during a prescribed inventory process (Section 201) as having wilderness characteristics described in the Wilderness Act of 1964 and to "report to the President his recommendation as to the suitability or nonsuitability of each such area or island for preservation as wilderness."

BLM established a review process consisting of three phases: inventory, study, and reporting to Congress. During the inventory phase, BLM identified wilderness study areas (WSAs) after asking for public participation and review of its work. The inventory, completed in

November 1980 in the lower 48 states, identified more than 24 million acres of public lands as WSAs and eliminated approximately 150 million acres from further consideration.

Outdoor recreation planners were given the primary task of inventorying and identifying wilderness study areas on the public lands. Each WSA was then studied—or is now being studied—by all Bureau programs and the public, through BLM's planning system, to consider all values, resources, and uses within the area. The findings of these studies have determined or will determine whether the areas should be recommended for designation as wilderness. Reports on all WSAs must reach the President no later than October 1991 and Congress by October 1993. Mineral surveys will be conducted by the U.S. Geological Survey and Bureau of Mines for areas recommended as suitable.

RANGE

The Federal Advisory Committee Act of 1972 directed the Executive Branch to make more effective use of its boards, setting up criteria for the creation, supervision, and operation of advisory boards. Section 14 of the act required that BLM's boards be specifically renewed by the Secretary of the Interior.

In response to this act, BLM realigned membership on the National Advisory Board Council; livestock members were reduced from 20 to 10 and wildlife interests from 10 to 6. Representatives of other groups increased—three for outdoor recreation, and one each for forestry, environmental quality, mining, county and state governments, leasable minerals, and public utilities.

BLM retained its tri-level advisory board system (national, state and district). State and O&C multiple use advisory boards were continued, while District grazing advisory boards were supplemented with multiple use advisory boards at the field level. Grazing advisory boards were extended by FLPMA for 10 years to advise Districts on AMPs and range improvement funds.

Anyone who doubts the significance of NEPA's impacts on BLM should examine the Bureau's range program in the 1970s. Range conditions on public land were attracting criticism from environmental groups and national attention from the news media. *Readers Digest* published an article on overgrazing, "Nibbling Away at the West," in 1971 and *National Geographic* carried a story on the plight of bighorn sheep in Challis, Idaho in 1973.

BLM was well aware of its requirements under NEPA to examine the impacts of significant actions on the environment, including those of its range program. By 1972, the Bureau decided to examine national impacts and policies in a programmatic statement. Probably another reason for choosing this approach was that BLM simply didn't have enough range employees or forage inventory data collected to prepare site-specific EISs.

IMPLEMENTING FLPMA

by Frank Gregg

With the passage of FLPMA in 1976, BLM had reason to hope for a period of stability, a window of opportunity to concentrate on refinement of multiple use management systems for the public lands. It didn't work out that way. On the contrary, the years immediately after FLPMA were arguably among the most politically volatile in public land history.

FLPMA itself precipitated controversy. The Act gave environmental and recreation interests a position of legal equality with the historically dominant commodity uses of mining, grazing, oil and gas, timber. Decisions about the use of specific public land areas were to be based on land use plans and environmental impact statements prepared with public participation. All roadless areas were to be reviewed for potential designation and protection as wilderness. Concerns of resource development interests were heightened by the candid commitment of the Carter Administration to environmental goals, and by the public environmental records of Secretary of the Interior Cecil Andrus, Assistant Secretary Guy Martin, and me.

Beyond these changes, commodity programs Bureauwide were being examined under the glare of EISs in response to NEPA lawsuits brought by environmental organizations. Livestock grazers were faced with examination of grazing effects on public lands through a series of 144 site-specific EISs. Coal leasing had been enjoined under a NEPA suit in the early seventies. The Carter Administration rejected a proposed Nixon/Ford leasing program and set out to develop its own, with enthusiastic commitments to use of the new Surface Mining Control and Reclamation Act as well as the land use planning and public participation requirements of FLPMA. Outer Continental Shelf oil and gas development was facing new rules under the Outer Continental Shelf Lands Act Amendments of 1977, inspired largely by environmental concerns. Timber harvest in the "O&C" lands was being addressed in yet another series of EISs.

The stage was set for a concerted reaction by resource development interests and their political supporters. Controversies escalated in specific programs. Eventually, three Nevada BLM livestock permittees who were also state legislators developed a legal and political argument that the federal lands properly belong to the western states as a matter of constitutional law. While originally launched to stimulate political opposition to livestock grazing reductions, the proposal struck a responsive chord among sectors of western society who opposed the environmental laws and policies of the era (and the intrusive presence of the federal government generally). The proposal became a movement, and soon attracted national attention as the Sagebrush Rebellion.

The immediate post-FLPMA years were therefore anything but a period of steady movement toward a stable system for managing the public lands. Instead, BLM faced the combined challenges of formal implementation of FLPMA, meeting the deadlines for preparation of EISs covering major programs such as coal leasing and livestock grazing, and carrying on the day-to-day tasks of working with public land users and resources.

NRDC Suit

The Natural Resource Defense Council (NRDC) sued BLM over its choice in 1973, asserting that the act of issuing grazing permits and licenses locally constituted significant federal actions and therefore required locally prepared EISs to determine potential impacts. The courts agreed in October 1973 and directed the Interior Department and NRDC to reach agreement on what level EISs would be produced in the field.

Interior Department solicitors reached an agreement with NRDC whereby BLM would prepare 212 statements in the field, covering 150 million acres of public lands over the following 15 years (by 1988). Challis, Idaho was selected as BLM's first site-specific EIS, because of its complex mix of resources and land uses. A final EIS was completed for the area and filed with the Council on Environmental Quality in 1976.

Allotment Management Plans

Along with its environmental impact statements, BLM prepared Allotment Management Plans (AMPs) in cooperation with individual ranchers. AMPs proposed plans of action for specific areas and specified seasons of use, livestock numbers, and range improvements. The EISs and AMPs considered the needs of wildlife, wild horses and burros, plus the impacts of other land uses (e.g., ORV and mining uses), furthering the Bureau's examination of resources in a multiple-use context. Management alternatives in the statements consisted of anything from implementing AMPs (which often required overall reductions in livestock numbers or grazing deferments), to maintaining status quo, to eliminating grazing. Most EISs, however, adopted the AMP alternatives proposed.

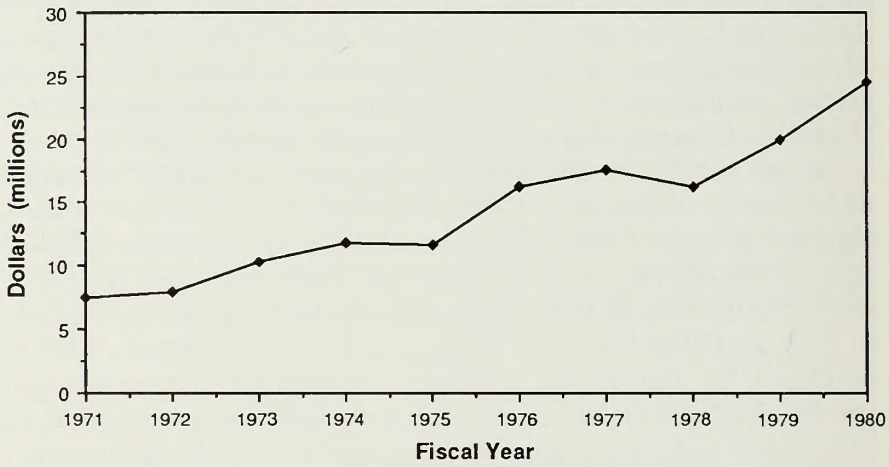
In the late 1970s, this arrangement broke down. NRDC criticized BLM's policy of preparing AMPs at the same time EISs were written, arguing that current forage resources needed to be inventoried beforehand. Many livestock operators complained that AMPs were being developed without considering the needs of operators to effectively manage livestock. In 1978, the Public Rangeland Improvement Act specified that AMPs be developed "in careful and considered consultation, cooperation and coordination" with the lessees, permittees, and landowners involved, along with district and state grazing advisory boards. BLM began to collect extensive forage inventories before writing grazing EISs, with AMPs and other activity plans being written after the overall plan was adopted.

Grazing Fees

In the 1970s, increases in grazing fees were phased in to meet the base fee of $1.23 per AUM established by the BLM and Forest Service interagency study of 1968. Grazing fees on BLM lands in 1971 were 64 cents per AUM. In 1972 increases in the fee were limited to 3 percent in response to President Nixon's Economic Stabilization Program. This fee rose to $1.00 in 1974 and $1.51 in 1976, the result of delayed annual increments plus inflation.

FLPMA also readjusted the distribution of grazing fee funds, with 50 percent going towards range improvements (at least half of which had to be spent in the district where it was collected). Congress showed an interesting reaction to NRDC's suit on BLM's grazing EIS by exempting range improvement funds from NEPA requirements.

BLM Grazing Fees 1971-1980	
Years	Animal Unit Month Fee
1971	.64
1972	.66
1973	.78
1974	1.00
1975	1.00
1976	1.51
1977	1.51
1978	1.51
1979	1.89
1980	2.36



Grazing revenues 1971-1980

One of the last-minute compromises made to get FLPMA passed was a requirement for BLM and the Forest Service to undertake another study of grazing fees. In 1978, Congress legislatively set a new grazing fee formula in the Public Rangelands Improvement Act (PRIA), basing it on a combination of fair market value, beef prices, and production costs. Under this formula, grazing fees rose to $2.36 per AUM by 1980. PRIA authorized the expenditure of $365 million on rangeland improvements over a 20-year period (in addition to the 50 percent of grazing fee funds targeted for range improvements), but funds were never appropriated.

FORESTRY

Timber Management EISs

BLM prepared a programmatic environmental impact statement for its forestry program in 1975. Within a year, NRDC challenged the adequacy of BLM's statement. Settlement of the lawsuit required the Bureau to prepare environmental impact statements on each of 13 Sustained Yield Units in western Oregon, plus one each in northern California and northern Idaho. Timber management plans were updated simultaneously with the EISs starting in 1978, with the process completed in 1983.

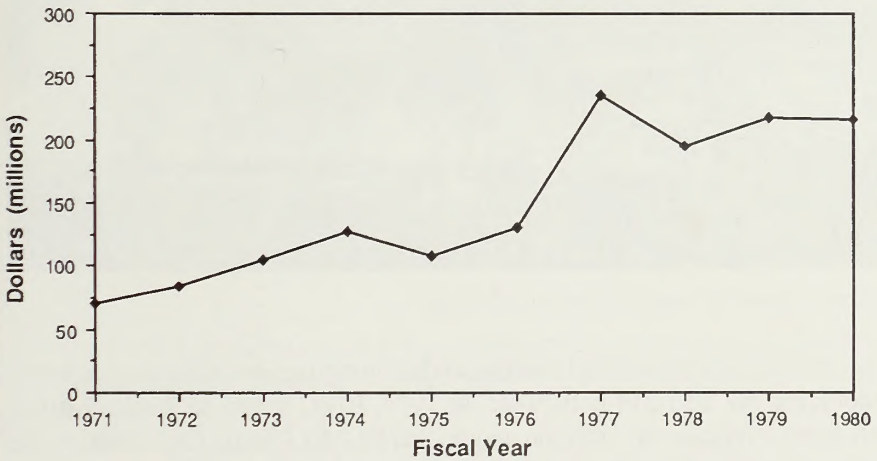
Herbicides and Pesticides

The use of pesticides and herbicides on forested lands became a major issue for BLM in the 1970s. In June 1970, Secretary Hickel established a policy permanently banning the use of 16 pesticides (including DDT and 2,4,5-T) on any lands managed by the Department. Another group of pesticides were placed on a "Restricted List," to be used "only when nonchemical techniques have been considered and found inadequate, and when use can be limited to small-scale applications."

In 1976, a federal court in Oregon ruled that the Forest Service must prepare an EIS analyzing its vegetation management practices with herbicides. Because the Bureau's program was similar, BLM also stopped using herbicides in western Oregon until it completed an EIS in 1979. On March 15, 1979, Secretary Andrus decided to continue the use of herbicides in Oregon. In a memo implementing BLM's herbicide program, however, Director Frank Gregg stated "ongoing efforts to learn more about nonchemical methods of vegetation management...should be continued and, I believe, stepped up so that we will become increasingly confident and knowledgeable in their usefulness."

Public Domain Forestry

Both O&C and public domain forest management emerged in the 1970s as multidisciplinary programs involving coordination with recreation, wildlife, grazing, watershed, and cultural resource programs. BLM received additional funding for inventories of commercial forest resources outside the O&C lands. The BLM Service Center in Denver developed a



Timber revenues 1971-1980

computer model for calculating allowable cuts within sustainable harvest levels in all public domain forestry districts with commercial timber, and each district was staffed with at least one forester.

Woodlands

While recognizing that 20 million acres of forested lands were incapable of producing commercial sawtimber, BLM estimated that they contained 200 million cords of wood, or the energy equivalent of 32 billion gallons of fuel oil. Demand for fuelwood from BLM lands for both individual consumption and commercial resale paralleled rising energy prices. In fiscal year 1972, BLM granted about 3,500 free use permits for fuelwood, totaling about 5 million board feet. By 1980, BLM issued 10 times as many permits for more than 50 million board feet of wood.

FIRE PROGRAM

During the 1970s, the National Park Service, Bureau of Indian Affairs, and U.S. Fish and Wildlife Service joined BLM, the Forest Service, and National Weather Service in supporting the Boise Interagency Fire Center (BIFC). In 1973 the National Wildfire Coordinating Group (NWCG) was created to develop standards for training, equipment, and aircraft, as well as a system for determining fire priorities. BIFC's mission evolved to provide logistical support to ongoing fires, while NWCG worked on overall fire planning and training. In 1974, the Forest Service's fire training center at Marana, Arizona became interagency and national in scope.

BLM

Snake River Valley crews training east of John Day, Oregon.

BIFC had a major role in testing and developing firefighting equipment, including the Bell 214 helicopter. In 1974, BIFC tested an 8-wheel-drive all-terrain vehicle, the "dragon wagon," at BLM's Carson City District; the experimental vehicle logged 7,000 miles at 25 fires but proved expensive

A WOMAN IN FIREFIGHTING

by Louise Power
Oregon State Office

"Are you here to cook?"

"Not that I know of."

"Then what are you here for?"

"To fight fire!"

This conversation was not uncommon in the mid-70s when women first began fighting wildland fires. Prior to that time, few if any women had been seen on the fireline.

Because few women were in the field then, separate accommodations could not be made for such amenities as bathing. Sometimes, to avoid putting on a show for the whole camp, many women would bathe at mealtime–foregoing eating for bathing.

Melody Asher updates ADM Hal Bybee on status of fire.

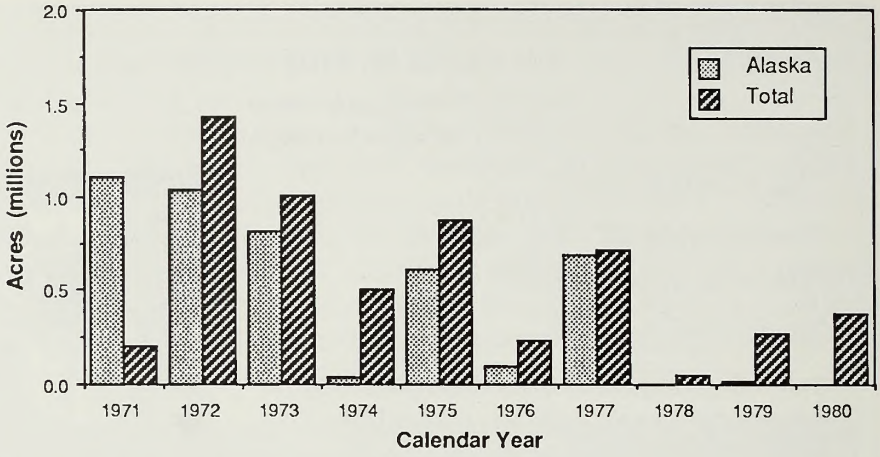
Melody Asher, a former fine arts major, is beginning her 12th season as a firefighter, her 8th as an engine foreman. "I had never heard of firefighting until I met Michael and that's what he did." Michael McBride, her husband, is helitack foreman for the Ely District, and one of Asher's staunchest supporters.

Asher is no stranger to the rigors of firefighting. She began as the only woman on a 20-man crew with the Colorado State Forest Service. Her first fire was, at the time, one of the largest in the history of Colorado–more than 4,000 acres. For 9 days, the crew dug line only to watch as the fire jumped it with whorls up to 300 feet high. "It's really hard if you're building line 16 hours a day. At the end of the day, your hands are just curled–they don't unbend. You have to take one hand and unfold the other hand. And then the fire just roars in and you have to run and sit on a knoll and watch it jump your line." On this fire Asher learned to respect fire and the fire organization at work.

Asher is now the ICMR (Incident Commander, Multi-Resource) on the Ely District. She is basically the field commander for major fires. She sizes up fires; determines what personnel, equipment and support will be needed; directs the firefighting operation; keeps dispatch informed of progress; and, in the end, does the paperwork.

She has not achieved this unique position without years of hard work and study. In addition, Asher has taken supervisory courses culminating this past year in a situation unit leader course which will allow her to perform on larger project fires the work she already does on district fires.

When asked about her proudest accomplishment, she is quick to say that it is attaining her current position. When asked why, she answers: "I enjoy having the big fires on my shoulders."



Public lands burned 1971-1980

to operate and maintain. BIFC eventually acquired the smaller and more maneuverable "Unimog" for use in fire suppression.

The year 1977 was a big fire year. More than 10,000 fires burned over 2 million acres in the West. California's fire season lasted from January to September, costing $400 million. BLM continued to rely on helicopters for most of its suppression activities.

In the mid-1970s BIFC, the BLM Service Center, and the University of Arizona developed the Automatic Lightning Detection System (ALDS). Tested in Alaska, it was up and working in the 11 western states by 1978. The system recorded nearly every lightning bolt striking the ground, giving fire managers an early warning system in areas with high fire danger.

But BLM soon found itself flooded with more data than it could handle. The Bureau then began working on a system that would translate lightning strike information into probabilities for starting fires and combine this with climatological information to predict which fires were most likely to spread. BIFC and BLM field offices began using remote automated weather stations (RAWS) to obtain meteorological information. A new system, the Initial Attack Management System (IAMS), integrated ALDS and RAWS data and was ready for field use by 1981.

By the late 1970s, federal land managing agencies began to recognize the values of fire in natural ecosystems. Fire policies began to shift from control to management: prescribed burning came to be recognized as a management tool. In 1977, BLM's Diablo Resource Area in California recommended the use of a controlled burn in its Management Framework Plan to improve wildlife habitat and livestock forage, and to reduce fire fuel accumulations adjacent to Pinnacles National Monument. In 1979, 3,000 acres were burned in a successful test of this management technique.

AUTOMATION

Automation has been used in the Bureau since the mid-1950s, when the Oregon State Office leased IBM computers to develop timber appraisals for its O&C Districts. By the mid-1970s, automated data processing systems and equipment were in use throughout the Bureau, making much of its work more efficient. However, few standards or guidelines governed the use of information systems or computer equipment; the growth of automated data processing (ADP) in BLM was at first haphazard and unplanned. Data was rarely shared or exchanged among systems, but BLM was beginning to recognize the need for managing its information on a Bureauwide basis—a process begun in the 1970s at the BLM Service Center and implemented in the field in the 1980s.

Early Uses of Automation

In 1960, automation in the Nevada State Office consisted of a Burrough's bookkeeping machine. However, BLM soon began to use Forest Service and Bureau of Public Roads computers to help design roads and bridges. Most early efforts in automation involved borrowed equipment and focused on administrative systems, but they served to build an understanding of automation that served the Bureau well as time went on.

Computers soon came to be used for cadastral survey computations in Alaska, which led to the purchase of BLM's first computer in 1966—one that could be hauled in a plane and used in field camps. In 1968, a larger computer was installed in Anchorage to support cadastral surveys and help design the Alaska pipeline. At about the same time, BLM consolidated financial accounting in Denver, requiring the acquisition of a mainframe computer at the Service Center.

Information Systems Management

In 1976, the Service Center's Division of Standards and Technology developed a "Strategic Plan for Information Systems," to plan for data automation in a systematic manner. The Division started developing a Data Element Dictionary to establish common terminology among Bureau offices and began to look into the possibility of sharing inventory information among natural resource programs. The strategic plan guided the development of most automated systems in place in the Bureau today, building a foundation for standardization and data exchange between systems.

In 1978 a Honeywell mainframe computer was installed at the BLM Service Center, giving the Bureau the capabilities it needed for agencywide communications and data base management. By July 1978, BLM's centrally stored and processed mining claim recordation system was operating in all BLM states except Alaska. Because of an increased demand for automated systems by field offices, BLM installed Honeywell minicomputers in 1979 in all of its State Offices.

Resource Information Systems

BLM was also busy developing prototype land and resource information systems in the 1970s. The Bureau's first automated land records system appeared in Alaska in 1975, which served as a precursor to today's Bureauwide Land Information System. A graphics system for

resource information analysis and display, the Map Overlay and Statistical System (MOSS), was put together at the BLM Service Center in 1977 for use on new Data General equipment. The graphics system was used to help prepare the California Desert Plan, and later to prepare a study of birds of prey in Idaho and oil shale in Colorado. The system could create and overlay any number of resource data themes (e.g., wildlife habitats, rivers, roads, and forested areas) to identify potential uses and conflicts during the planning process. Also in 1977, the Service Center added remote sensing and high-altitude photography to the skills it provided the field.

CONCLUSION

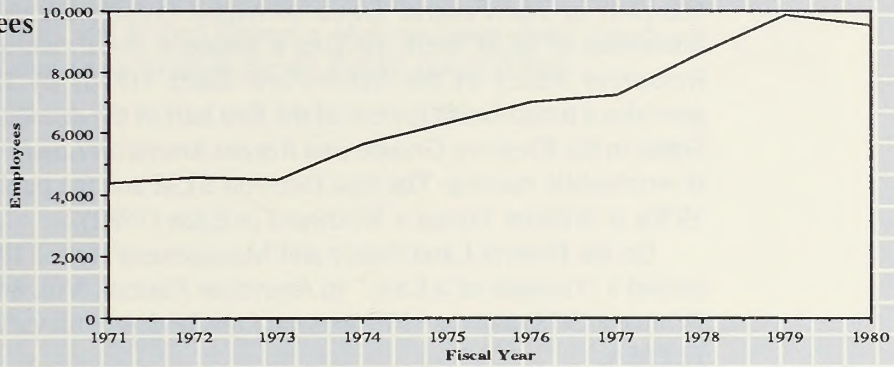
BLM experienced its greatest growth during the 1970s. The National Environmental Policy Act ushered in an entirely new way of evaluating major federal actions; environmental statements and assessments greatly increased the Bureau's workload. Wild horses and burros on the public lands were afforded new protection, with specific management techniques prescribed by Congress. A host of new studies and legislation on mineral leasing; regulations on soil, air, and water resources; and final decisions on Alaska lands significantly expanded the Bureau's work.

New programs and employees appeared as BLM's management responsibilities grew. Multiple use management of the public lands was formally recognized by Congress in 1976 through passage of the Federal Land Policy and Management Act. FLPMA repealed outdated settlement acts and provided for the retention of most BLM lands in federal ownership; public lands were to be managed for a variety of uses as determined through a comprehensive land use planning system. FLPMA also recognized areas of critical environmental concern and other lands requiring special management and directed BLM to review its holdings for wilderness characteristics.

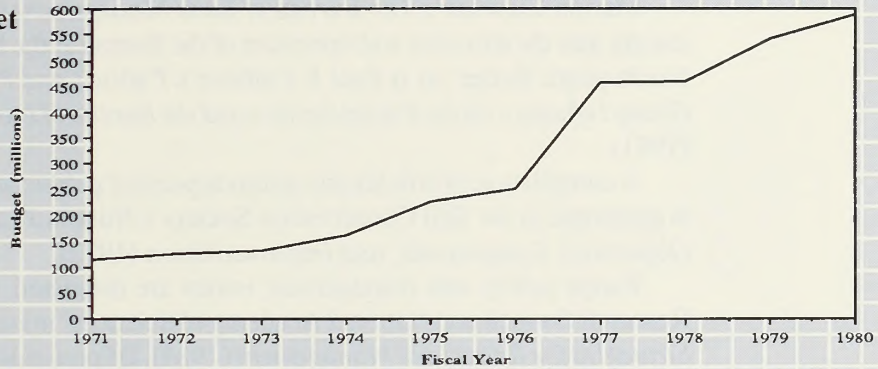
BLM was now positioned to look at more efficient management of the public lands. In the 1980s, BLM would begin to integrate its land and mineral records with information it maintained on natural resources, tying all this to specific locations through survey coordinates generated from the Public Land Survey System. According to Service Center Director Bob Moore, the development of the Bureau's Land Information System in the 1980s would come to have the same far-reaching effects on BLM that implementation of the Bureau's land use planning system did in the 1970s.

Bureau of Land Management 1971-1980

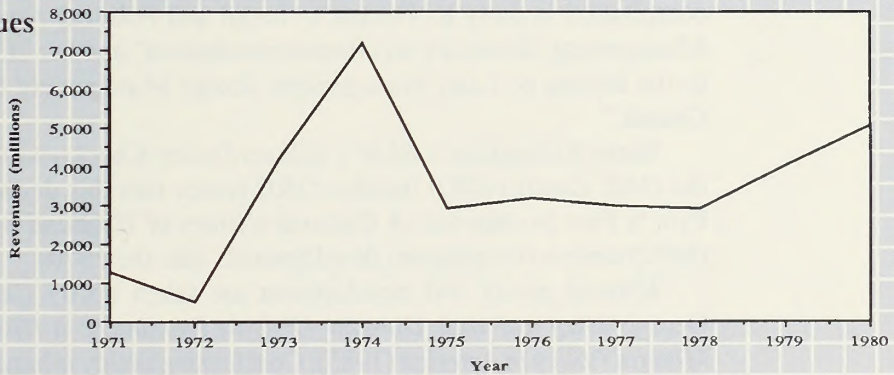
Employees



Budget



Revenues



Directors

Burton Silcock	1971-1973
Curt Berklund	1973-1977
Frank Gregg	1978-1981

Major Legislation

Alaska Native Claims Settlement Act	1971
Wild and Free Roaming Horse and Burro Act	1971
Federal Land Policy and Management Act	1976
Alaska National Interest Lands Conservation Act	1980

FURTHER READINGS

Samuel T. Dana and Sally K. Fairfax look at BLM administration of the public lands into the late 1970s in *Forest and Range Policy: Its Development in the United States,* Second Edition (1980), as does Marion Clawson in *The Federal Lands Revisited* (1983). Though it has little discussion of BLM itself, *Striking A Balance: Environment and Natural Resources Policy in the Nixon-Ford Years* (1976) by John Whitaker provides a broad-brush review of the first half of the decade. Paul Wallace Gates in his *Pressure Groups and Recent American Land Policies* (1980) is worthwhile reading. The best focus on BLM and the public lands in the 1970s is William Wyant's *Westward in Eden* (1982).

On the Federal Land Policy and Management Act of 1976, see Irving Senzel's "Genesis of a Law," in *American Forests,* Vol. 84 (January and February 1978) and the 1979 *Arizona Law Review* with various articles on FLPMA.

Marion Clawson's *The Bureau of Land Management* (1971) provides insight into the structure and operation of the Bureau at the beginning of the Nixon years. Better yet is Paul J. Culhane's *Public Land Politics: Interest Group Influence on the Forest Service and the Bureau of Land Management* (1981).

A compilation of articles on various aspects of public land management is presented in the Soil Conservation Society's *National Land Use Policy: Objectives, Components, and Implementation* (1972).

Range policy and management issues are discussed in the National Research Council and National Academy of Sciences' massive *Developing Strategies for Rangeland Management* (1984). Of particular interest in this compilation is Sally K. Fairfax's "Legal and Political Aspects of Range Management: Summary and Recommendations" and her "Coming of Age in the Bureau of Land Management: Range Management in Search of a Gospel."

Elmo Richardson's *BLM's Billion-Dollar Checkerboard: Managing the O&C Lands* (1980) handles O&C issues into this decade. Stephen J. Pyne's *Fire in America: A Cultural History of Wildland and Rural Fire* (1982) covers fire program developments into the 1970s.

Mineral policy and development are taken up by Carl Mayer and George Riley in *Public Domain—Private Dominion: A History of Public Mineral Policy in America* (1985). Coal leasing policy is handled by Robert Nelson in his *The Making of Federal Coal Policy* (1983). On the problems of the 1970s energy boom, see *The Angry West: A Vulnerable Land and Its Future* (1982) by Richard Lamb and Michael McCarthy.

On the wilderness issue, Roderick Nash's *Wilderness and the American Mind* (1982) is mandatory reading. The wild horse issue is handled by Heather Smith Thomas, *The Wild Horse Controversy* (1979) and Richard Symanski, *Wild Horses and Sacred Cows* (1985).

Gary Stein discusses the Alaska state land selection program in *"Promised Land": A History of Alaska's Selection of Its Congressional Land Grants* (1987). See the *Alaska Native Land Claims* (1978) by Robert Arnold et al. for information on the Alaska Native Claims Settlement Act.

On the Sagebrush Rebellion, see appropriate portions of *The Angry West: A Vulnerable Land and Its Future* (1982) by Richard Lamm and Michael McCarthy and Robert Nelson's *Making Sense of the Sagebrush Rebellion: A Long Term Strategy for the Public Lands* (1981).

CHAPTER 5

BLM CONSOLIDATES ITS GAINS: The 1980s

There's no pressure like multiple use pressure.

—George Turcott

BLM CONSOLIDATES ITS GAINS
The 1980s

Overview

In the 1980s, the Bureau of Land Management consolidated the legislative gains it had made in previous decades and implemented cooperative resource management programs with land users in the field. A legislative mandate for multiple use management of the public lands was in place. Now the Bureau's challenge was to apply its authorities wisely and appropriately. According to former Assistant Director Irving Senzel, "Adequate law facilitates effective management, but does not guarantee it." How BLM implemented its mandates in the field was crucial to its goal of effective land management.

Director Robert F. Burford continued to decentralize Bureau operations to the field and implemented a "good neighbor" program intended to improve relations with local land users and state governments. BLM streamlined its regulations, inviting land users to increase their participation in managing the public lands. The use of cooperative agreements was expanded to get land users actively involved in solving resource management problems. In addition, the Bureau expanded its use of volunteers, whose contributions in funds and labor totalled $7.5 million in 1987. With these efforts, attempts to privatize the public lands in the Sagebrush Rebellion came to a close.

Although BLM transferred its responsibilities for managing offshore minerals to the Minerals Management Service in 1982, onshore functions were consolidated with the Bureau a year later. Federal responsibilities for classifying onshore mineral lands, overseeing exploration and development activities, and inspecting field operations were consolidated for the first time. BLM began to manage mineral resources on an equal footing with renewable resources.

The Bureau's planning system became a reliable tool for examining land uses and resource issues together, allowing both managers and users to participate in the decisionmaking process. While the participants in BLM's planning process—both inside and outside the Bureau—did not always agree on the Bureau's management priorities, at least they came to understand the system and their roles in it. BLM encouraged participants in the process to develop resource partnerships in a multiple use context rather than advocating preservation or development of separate resources.

The nation's change to an information society, together with increasing demands on public lands and resources, provided BLM a new challenge in the 1980s. The Bureau's rapid growth over the last four decades included massive increases in the information it maintained. Just managing this data and creating meaningful summaries—for both land managers and the public—proved to be difficult. In the 1980s, BLM recognized its data was a significant national asset and began to develop an automated Land Information System. The Bureau began to modernize its ADP equipment,

standardize its data, and integrate its information systems to more efficiently process its workload and to make its information on federal land and mineral resources more readily available to the public.

Except for the transfer of 800 employees from the Minerals Management Service in early 1983, the number of Bureau employees remained fairly constant in the 1980s, as did its budgets. But in some programs, budgets actually declined for the first time in 40 years. To ensure that BLM accomplished its management objectives and fairly allocated its budgets, Director Burford strengthened the role of BLM's Management Team in overseeing Bureauwide program development and implementation. The "BMT," consisting of Associate Directors in Washington, State Directors, and the Directors of the Boise Interagency Fire Center (BIFC) and the BLM Service Center, has since played a major role in identifying present needs and future priorities.

Bureau Management Team

Burford also asked several veteran State Directors to serve as Associate Directors in Washington "because people with recent field experience are often the best advisors, especially in top management." According to Burford, it was critical that the Bureau have State Directors rotate to headquarters "to help whoever sits in the Director's chair and the Assistant Secretary's office understand how their decisions affect day-to-day management of the public lands."

THE SAGEBRUSH REBELLION AND REAGAN ADMINISTRATION INITIATIVES

In 1979, the Nevada Assembly passed a bill that called for state control of BLM lands. Arizona, New Mexico, Utah, and Wyoming passed similar legislation within a year. Six other western states (California, Colorado, Idaho, Montana, Oregon, and South Dakota), however, defeated or vetoed "Sagebrush" bills. During the 1980 Presidential campaign, Ronald Reagan said "Count me in as a Sagebrush Rebel," but by 1981 the issue had almost disappeared.

Sagebrush Rebellion

According to historian Phillip Foss, the "good neighbor" policy of Secretary James Watt helped defuse the rebellion. Traditional public land users—ranchers and mineral interests—were assured they would have a continued presence on the public lands and be included with other interests in cooperative efforts to develop land use plans. But the idea of privatization of federal assets remained. In 1981, Senator Charles Percy of Illinois introduced S.R. 231 asking the federal government to sell off excess lands and properties to reduce the national debt. On February 25, 1982, President Reagan issued Executive Order 12348 establishing a property review board to identify federal assets no longer needed by the government. Included were buildings and other "real property," plus isolated, scattered tracts of the public lands.

A governmentwide "Asset Management" program was established to dispose of these holdings. Although it was not a new idea (disposal of

Asset Management

scattered, isolated tracts of public land was common in the 1950s and 1960s), the program generated a great deal of controversy. Many agencies argued that excess properties identified under the program might be needed under federal ownership in the future. Conservation groups distrusted the Interior Department's motives in disposing of federal lands and criticized what they perceived as the program's broad scope. Most BLM land users, when confronted with the prospect of purchasing land at fair market value, found they preferred that the lands remain in public ownership.

Since the Asset Management program never generated broad support from the public and was not tied to ongoing Bureau initiatives—such as BLM land exchange programs—the effort was abandoned during President Reagan's first term in office. The idea of forming more logical management units on the ground, however, found widespread support; BLM's land exchanges grew in importance.

A STATE DIRECTOR'S PERSPECTIVE

by Clair M. Whitlock
Former State Director, Arizona and Idaho

Looking back at my 32 years with the Bureau of Land Management, I am impressed with the ever-changing patterns or mosaics of activities which make BLM a unique organization. These mosaics are really problems and opportunities bound together by a rich history, politics, the law, and the traditional can-do attitude of BLM's people.


Jennifer Reese

Clair M. Whitlock

The Bureau's problems and opportunities consist of its basic mission as prescribed by law and regulation, overlaid by initiatives of the current administration or some outside entity. Perhaps State Directors' most significant role is to provide an interface between field workers and the politicos, inside Interior as well as user groups or the public at large.

The first half of the 1980s had a pattern that was different but typical in complexity of most any 5-year period in BLM's history. Traditional work levels and complexities were affected by administration initiatives such as Asset Management (sale of public land to reduce the national debt), the BLM/FS Interchange, and searches for ways to increase ranchers' active participation in managing the range resource. Conveyance of in-lieu selections to the states was pushed to high visibility by state governments and concurred in by both the Carter and Reagan Administrations.

Occupancy trespass abatement on the Lower Colorado River was a priority job dating from the 1960s. It was just wrapping up during the transition from Carter to Reagan. Wilderness study was a new program mandated by FLPMA which had drastically different directions under the two administrations. My role as State Director in this political interface was two-fold: First, legitimize administration initiatives and policies with the field personnel who

BLM-Forest Service Interchange

Consolidating federal land ownership and management among agencies has been a recurring theme on the public lands. When President Carter's proposal for creating a Department of Natural Resources was abandoned, the BLM and Forest Service in May 1980 proposed a "Jurisdictional Transfer Program" to consolidate their lands into larger blocks, with the goal of reducing management costs, increasing management efficiency, and improving service to the public. The program continued through the change in administration, and in 1982 preliminary estimates indicated that the program would save the government about $30 million a year.

BLM and the Forest Service could not agree on the size or scope of the program, however, and in January 1983 suspended work on the program. The General Accounting Office studied the program and recommended that the Secretaries of Agriculture and the Interior "resolve the disagreement so

already had more work than time; second, to report problems and suggestions to the policy makers to help smooth the process.

For example, the Asset Management program seemed to fly in the face of FLPMA, which in general prescribed long-term federal ownership of the land. I helped employees understand why the program was being advanced—that it was a White House initiative and that we would proceed per instructions. I also provided feedback to the administration on the lack of local interest (and dollars) to buy the lands, and other impacts. In Idaho this was so volatile an issue that several state and county officials used it as an election issue. Asset Management ran its course, but not without diverting much time and money from traditional realty programs.

The Lower Colorado occupancy abatement program was given high priority through several administrations. My involvement with the program came when the last trespasses were to be settled and the land vacated. The event came at the transition into a new administration whose policies shifted to selling some tracts or legitimizing occupancy. I needed to sell field managers on establishing a few lifetime estates for hardship cases and convince the administration to return the balance of the tracts to public use.

Keeping BLM's priority work on schedule is a balancing act between traditional and legislatively-mandated work, interfaced with politically-motivated programs. Helping field workers understand that both are legitimate—and politicos to understand local impacts and situations—gave me a lot of satisfaction.

As members of the Bureau Management Team, State Directors can influence a wide range of policy and operational issues. I had the opportunity to present my own ideas and suggestions on developing employees to help them reach their potential as either managers or technical specialists. With the help of many people, I was able to give new direction to the Bureau training program by developing the Careers Program.

It has been gratifying to work with the motivated and dedicated career workers of BLM—to see them produce in the face of great odds and in a small way help them develop into BLM's leaders of tomorrow.

HISTORY OF BLM LAND EXCHANGES IN ARIZONA

by D. Dean Bibles
Arizona State Director

In 1982, BLM was confronted with a need to satisfy the land claims of several parties.Under the Navajo-Hopi Relocation Act of 1980, BLM lands were to be exchanged for private lands on behalf of the Indians. The state of Arizona had 194,000 acres in statehood land grants still outstanding. BLM was responsible for reimbursing the State of Arizona for lands taken by the Bureau of Reclamation to construct the Central Arizona Project—a canal to transport water from the Colorado River to the cities of Phoenix and Tucson.

On top of all this, the hodgepodge of land patterns that had developed over the years with federal, state and private lands intermixed, had created a land manager's nightmare, making the lands difficult to manage for their wildlife, recreation, wilderness, cultural, economic and other values.

BLM Arizona's solution to these problems was an aggressive land tenure adjustment program. This allowed federal and state agencies and private landowners to block up parcels of land, obtain other parcels for special purposes and switch administration of still other parcels for logical management patterns.

Between 1984 and mid-1988 more than 1,700,000 acres had been exchanged, transferred, or undergone changes of administration, and more changes of tenure were in the works. One example of the value of these exchanges was the acquisition by BLM in 1986 of the San Pedro River corridor in Southeastern Arizona. The San Pedro area is one of the most significant remaining large broadleaf riparian areas left in Arizona. It contains hundreds of wildlife species and more than 120 known archaeological sites. Also located in the area is a 200-year-old Spanish presidio or military fort—the only one of its kind still in a natural setting.

Most of the San Pedro River area acquired by BLM was comprised of two Spanish land grants dating from 1827. Tenneco West bought the lands in 1971, and by the early 1980s wanted to dispose of them. There were strong feelings among environmental groups and others, however, about protecting the area from housing developments. And we in BLM saw an opportunity to acquire and preserve this prime resource for the American public. White Tanks Associates, a Phoenix private land developer, purchased the lands from Tenneco. Then, in exchange for the 43,000-acre San Pedro River properties, White Tanks Associates received 40,947 acres of undeveloped public land west of Phoenix.

Advantages of the Bureau's land exchange program include more efficient land management— wildlife values were enhanced, cultural resources protected, recreational opportunities increased, and educational and research opportunities were furthered. At the same time, land was provided for the state's economic growth without compromising other land management goals. With more and more demands on our public lands, Arizona's land exchange program has proved to be an effective tool in managing for the future and allowing all agencies involved to accomplish their goals.

that the program can be resumed." In addition, the General Accounting Office found that the agencies' efforts to comply with the Asset Management program also hindered the transfer program by "diverting many needed field resources" from its implementation.

In February 1986, BLM and the Forest Service issued a "BLM/FS Interchange" proposal that would have transferred more than 24 million acres of land between the agencies and given minerals management authority to the Forest Service for its area of jurisdiction. The Reagan administration submitted a bill to Congress, the Federal Lands Administration Act of 1986. In their legislative proposal, BLM and the Forest Service reported that there were 71 towns throughout the West in which both maintained offices. After the Interchange, that figure would have dropped to 36 towns—each of the 71 towns would have retained at least one of the two offices. Concern and some distrust from user groups and the public, however—all of whom were at least comfortable with the status quo—combined to prevent the bill's passage as of September 1988.

BLM/Forest Service Interchange Summary

(Areas in millions of acres)	Surface Management		Subsurface Management	
	BLM	Forest Service	BLM	Forest Service
Before Interchange	177.1	168.7	420	0
After Interchange	171.7	174.1	216	204
Net Change	- 5.4	+ 5.4	—	—

Note: Acres that would transfer from BLM to FS - 14.8 million
Acres that would transfer from FS to BLM - 9.4 million

MINERALS

BLM-MMS Merger

On December 3, 1982, Interior Secretary James Watt transferred onshore minerals responsibilities of the Minerals Management Service (MMS) to BLM. Earlier that year (in February 1982), BLM's offshore mineral operations were moved to MMS when Watt moved the Conservation Division out of the U.S. Geological Survey. Consolidation of minerals functions in the Department had been discussed for many years—going back to the early 1960s—with support steadily growing for such a proposal.

The Conservation Division was formed in the U.S. Geological Survey (USGS) in 1925 to lease minerals, inspect field operations, and collect royalties on federal lands. BLM managed surface resources on the public lands and could veto USGS leasing actions if it felt sensitive resources were endangered by exploration or development. A major reason for changing

this arrangement was that when BLM and the Conservation Division didn't agree on mineral leasing, the issues were taken up by different Assistant Secretaries in the Department, who raised problem cases to the Secretary for final decisions. In addition, the minerals industry had to deal with two agencies during leasing and development. As a result, it was not an established client of either agency, the way renewable resource interests were in BLM.

Specific proposals to merge the Conservation Division with BLM were made under President Nixon (in the Department of the Environment and Natural Resources) and again under President Carter. A major reason for the failure of these proposals was their scope: inclusion of a BLM-Forest

THE DIFFERENCES BETWEEN BLM AND THE FOREST SERVICE

by Dr. Sally K. Fairfax
University of California - Berkeley

Editor's Note: *We have asked a well-known and highly respected "outsider" to provide her perspective of BLM. Dr. Fairfax has authored several articles and books dealing with public land policy including* Forest and Range Policy *with Samuel Trask Dana.*

The similarities between the BLM and the Forest Service are obvious and important. Both agencies are planning-oriented, multiple use talking government land managers that are responsible for enormous amounts of federally owned land, most significantly in the western United States. That, plus the fact that both are part of the federal bureaucracy suggests that these two are, if not Tweedle Dee and Tweedle Dum, at least basically alike. Nevertheless, overstating the similarities conceals much that is important about the land, the managers, and the legal/institutional context that is critical.

The BLM is frequently lampooned as the Bureau of Livestock and Mining while the Forest Service, for all its recent embattlement continues to enjoy public esteem symbolized by Smokey Bear's avuncular embrace. This is simply the downside of the fact that the BLM has, for diverse reasons, always been more responsive to its local, commodity oriented constituents. In part this reflects reality; until recently it had no other constituents and no authority to meet others' demands.

But the familiar tale that the Forest Service manages the trees and the BLM manages the grass is not only not true, it obscures the fundamental difference in the resources managed by the two agencies. The National Forests generally came to the agency unencumbered, reserved from the public domain prior to occupancy. The BLM, on the other hand, manages land which had a long history of private use prior to the belated assertion of federal authority in the 1930s. Further, the Taylor Grazing Act dedicated the lands to a single, specific use—grazing. Note the difference—the National Forests are not called National Timber Lands. And the courts did not help—it was not until the 1960s that grazing permits were consistently recognized as a privilege which the BLM could modify, rather than a right. The result of this distinction in the origin of the lands is that the Forest Service has been able to manage "its" lands and resources while the BLM has been obliged to conserve what the livestock operators consider

Service merger in each proposal brought up numerous other issues. In addition, Congress didn't like the idea of being reorganized by the Executive Branch—these proposals would have required Congress to rearrange its committees on Interior and Agriculture.

When the Reagan administration's transition team studied the merger issue, it was well aware of the potential benefits—and fate—of previous proposals. Under Secretary Watt, the Interior Department decided to limit any merger proposals to "in-house" measures. Discussion first centered on whether BLM should gain minerals duties from USGS or whether the Conservation Division should be elevated to an independent agency.

their lands by trying to regulate the private ranching practices of the permittees.

That necessity, and provisions specifically added to the Taylor Grazing Act, resulted in a significantly different labor force in the BLM and the Forest Service. While the Forest Service was drawing its employees from forestry schools newly developed to imbue their graduates with the zeal of Pinchot's professionalism and several hundred years of European experience and study in forest management, the BLM was required to hire ranchers from the state in which they were to be working. The orientation toward local operators was intensified by the "McCarran leaves" in the early 1950s. Congress cut the Bureau's budget to near zero and most BLM employees either lost their jobs or were paid by the local Grazing Advisory Boards who, as a matter of law, were consulted on policy. The intellectual and professional cachet of forestry have yet to be experienced in the scholarship and practice of range science.

This responsiveness to local political forces has also been potentiated by the structure of the BLM, which is basically a western operation organized on a state-by-state basis to maximize the influence of the state congressional delegation in BLM matters. This compares with the Forest Service's early and successful efforts to obtain sufficient eastern land to become a truly "national" organization, thus minimizing western domination, and its regional organization, which puts mid-level management beyond direct reach of the states' congressional delegation.

In spite of these severe handicaps, the BLM has long yearned to be as respected and powerful as Smokey's boys across town. It was, indeed, BLM advocacy and aspirations which led in 1976 to the passage of FLPMA. Although FLPMA specifically did not repeal the Taylor Grazing Act (a much ignored fact which speaks political volumes even if its legal import is as yet ill-defined), it finally gave the Bureau a firm and continuing basis for existing, comprehensive real estate management authority , and the go-ahead for diverse multiple use management programs which it had been fabricating for nearly two decades.

The Reagan years were not conducive to rapid expansion in public appreciation of the Bureau. Nevertheless, underneath the continuing problems due to inadequate resources (one wag observed in the early 1980s that the BLM has four times the land to manage with one seventh the personnel and one third the money) there have been solid gains which bode well for the future flowering of the promise of FLPMA. For all of the reasons discussed above, the Bureau is way out front in the current trend to involve private enterprise in public resource management. It remains to be seen whether they can turn that necessity into a virtue.

Minerals Management Service

In February 1982, Secretary Watt removed the Conservation Division from USGS, establishing the Minerals Management Service. On December 3, 1982, onshore minerals functions (managed by 800 MMS employees) were transferred to BLM under Secretarial Order No. 3087—leaving MMS responsible for royalty management and offshore mineral leasing. Section 5 of the order states that "all functions related to royalty and mineral revenue management, including collection and distribution, within the Bureau of Land Management (BLM) are the responsibility of the MMS. All MMS onshore minerals management functions on non-Indian lands, including resource evaluation, approval of drilling permits and mining or production plans, inspection and enforcement, are transferred to the BLM." The order was amended on February 7, 1983, to add onshore Indian lands to the Bureau's responsibilities.

Secretary Watt intended his action to ensure "full consideration" of mineral resources in accordance with BLM's multiple use mandate, adding that "BLM has long-established expertise in resolving potential conflicts among legitimate but competing interests in onshore resource management." With the merger, minerals were placed on an equal footing with other public land resources.

Mining Law

Since 1981, BLM State Offices signed cooperative agreements with seven western states (Washington, Oregon, Idaho, California, Colorado, Wyoming, and Montana) to create a single point of contact for approving mining operations and to create joint inspection and compliance programs. BLM also issued regulations requiring miners to submit mining notices and develop plans of operation to protect other resources. From 1981 to 1987, BLM patented 497 mining claims and completed more than 8,500 mineral materials contract sales.

Section 314 of FLPMA required that all mining claims on federal lands be recorded within 3 years of passage of the Act—by October 1979. As of July 1988 over 1.2 million claims remained active, but an equal number were abandoned by failure to file or failure to complete necessary assessment work, thereby clearing the lands and mineral estate for other purposes, including conveyance or exchange. According to Andy Senti, Realty Specialist in the Colorado State Office, "FLPMA's recordation requirement was a big plus for BLM as it provided immediate information about a resource use on the public lands that previously was very difficult to search from county records."

Coal

Under Director Burford, BLM reaffirmed the need for a coal leasing program but changed its emphasis from meeting production goals to leasing the amount of coal necessary to create a competitive market. From 1981 to 1987, BLM issued 101 competitive coal leases on federal lands.

But coal development remained as controversial as ever in the 1980s. In January 1981, 11,282 acres of coal lands were put up for competitive bid in Colorado and Wyoming; other sales followed in April and October. In a lease sale held in the Powder River area of Montana and Wyoming in April 1982, charges were made that BLM's minimum acceptable bids for leases had been leaked to some of the participating coal companies. A coalition of

THE LEAD MINES OF MISSOURI

by Charlie Most, Public Affairs Officer
Eastern States Office

If the battery starts your car on a frosty morning, or if you score a double in your next round of skeet, or just use a lead sinker to get some bait down to where the fish are, maybe you should thank BLM. That's because 90 percent of the nation's lead supply comes from a few deep mines in the Mark Twain National Forest in southeastern Missouri. And since this is acquired land with federal minerals, the Bureau's Eastern States Office handles the leasing and operational aspects for this unique mining effort.

Lead is vital to our quality of life. Besides batteries, shotshells, and fishing sinkers, lead is used for radiation shields on atomic-powered submarines and energy facilities; electrical, optical and telephone cables; plumbing; and many other items. Lead even serves as a "cushion" around foundation pillars on skyscrapers to protect them from tremors or shocks.

Lead has been a valued mineral throughout much of history. In 1701 the French, during their early explorations of the Mississippi Valley, found lead ore in southeast Missouri. By 1720 the LaMotte mine, in what is now Madison County, was in operation. During the late 1700s, shallow lead deposits were also being worked near Potosi, and in the early 1800s, additional nearby lead deposits were developed. This area, centered about 80 miles south of St. Louis, became known as the "Old Lead Belt" and production continued there until 1972.

But with signs that the old lead belt was being depleted, St. Joseph Lead began extensive exploration farther west. In 1955, it discovered a rich lead-zinc ore body, 40 miles long, near Viburnum, Missouri. This "New Lead Belt" or Viburnum Trend accounts for nearly all of America's lead production, and is the largest lead mining area in the world. But, the Viburnum Trend is expected to produce at present levels only until the year 2000 and then rapidly decline. However, another promising area lies directly south of the Viburnum Trend on another part of the Mark Twain National Forest.

Monitoring these activities plus any subsequent leasing or mineral development requires on-the-ground expertise. For the Missouri lead mining activity, this comes from BLM's Rolla, Missouri, Project Office under the Milwaukee District's Division of Solid Minerals. This office came under Eastern State's jurisdiction in 1983 when upland minerals responsibilities were assigned to BLM following the MMS-BLM merger. BLM's team of experts works directly with Mark Twain National Forest employees. Following stipulations jointly developed by BLM and the Forest Service, these mineral specialists are often a thousand feet underground and several miles from a mine's entrance shaft to assure safety and to check mine advance (how fast and in what direction the tunnels are being opened). They check the condition of the tailings ponds where finely ground dolomite limestone is deposited after the minerals have been separated during the smelting process and they monitor the mineral production on which royalties are paid the federal government.

The lead mines of southeastern Missouri produce a vital mineral and provide employment in an area that otherwise offers few work opportunities. BLM is known for its traditional land management role, but it also oversees a unique mining operation—of a metal that is common, but a lot more important than we might realize.

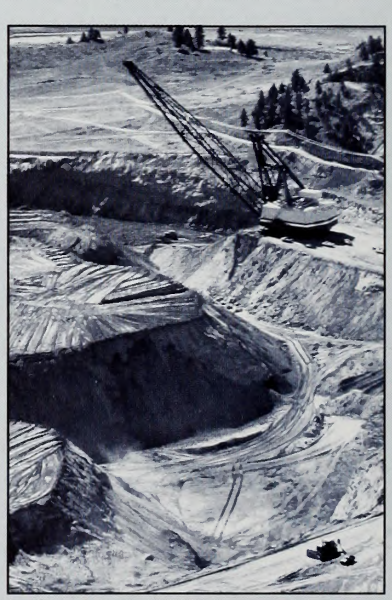
THE MISSILES OF GARRISON

by William Frey
Montana State Office

In the fall of 1982, the Fort Union Coal EIS project manager and I were completing an on-the-ground review of two federal coal tracts north of Lake Sakakawea, in west-central North Dakota. Both tracts were being considered for possible lease offer in the Fort Union Coal Region Round I Lease Sale scheduled for September 1983. The Garrison tract had been delineated to supply coal to a possible power plant, and the smaller Sakakawea tract had been designed as a Small Business Set Aside Tract.

As we were looking at the Garrison tract, we noticed what appeared to be small dish antennas at ground level about a hundred yards off to the west. Except for fences and a county road, there were no other observable man-made structures in the area. The topography was essentially flat, and a person could see for several miles in any direction. What were two small dish antennas doing in the middle of a North Dakota field? I remembered that we were not very far from the Minot Air Force Base that maintained and operated Minuteman Inter-Continental Ballistic Missile (ICBM) sites. It was later learned that North Dakota is the fourth largest nuclear power in the world. We began to wonder if the Garrison and Sakakawea tracts had been delineated in the middle of an ICBM missile field.

The Air Force was immediately contacted. They were mailed copies of the BLM planning documents and the tract profile reports. Very shortly thereafter, the Air Force told us that two underground missile silos and several miles of underground communication cables were within the boundaries of the two tracts. Needless to say, the Air Force was concerned about the possibility of large scale surface mining in or near the missile sites. After a number of meetings between BLM, the Air Force, and the company interested in leasing federal coal in the Garrison tract, it was decided to delete the two tracts from the September 1983 federal coal lease sale. During the next year, the Air Force completed studies that identified buffer zones needed to protect missile sites and the underground cables during surface mining.



Coal Mining in Colstrip, Montana

It had not occurred to anyone that there could be problems in leasing federal coal in the vicinity of underground missile sites. There was no mention of missile sites in the BLM planning documents, the Sakakawea and the Garrison Tract Profile Reports, and the draft Fort Union EIS. A momentous effort had been made to keep the public, local, state, and federal agencies involved and informed while preparing for the coal lease sale. Yet something significant almost slipped by. Some of the staff lost a little of their confidence that all the bases had been covered. From that time on, the Air Force and BLM had paid better attention to each other's activities. Even today, when I hear of a proposed BLM surface disturbance project in Montana or North Dakota, I ask if there are any missile sites in the area.

environmental groups brought suit against the Department charging that inadequate activity planning had taken place and that fair market value was not attained in the lease sale. In addition, prior to the sale the Northern Cheyenne Tribe in Montana sued the Department, alleging BLM's environmental impact statement did not address the impacts of coal development on its reservation.

Coal Studies

Investigations by the Department's Office of the Inspector General and Congress' Office of Technology Assessment (OTA) could not substantiate the charges brought by environmental groups, but prompted two further studies of coal. The Linowes Report, *Fair Market Value Policy for Coal Leasing,* issued in February 1984, reported that the United States received fair market value in its coal lease sales but recommended minor changes in the program. An OTA report, *Environmental Protection and the Federal Coal Leasing Program,* recommended that BLM better document the environmental impacts of coal development and strengthen public and state participation in the leasing process.

In the fall of 1987, the U.S. District Court in Montana ruled that the Powder River coal lease sale was conducted in accordance with the law and that fair market value was attained. However, in the suit brought by the Cheyennes, the court directed BLM to prepare a supplemental EIS on impacts to tribal lands.

After the OTA report was issued, Secretary William Clark instituted a moratorium on BLM's coal leasing activities to reevaluate the program. BLM completed a final EIS in late 1985, strengthening its documentation requirements. Another policy change was a return to leasing coal on an application basis—the pre-Morton policy. Consequently, by 1988, all coal regions (except Powder River) were "decertified," meaning BLM no longer determined where leasing would occur.

Oil Shale

The Energy Security Act of 1980 renewed national interest in oil shale by creating an independent, government-sponsored Synthetic Fuels Corporation. Its mission was to stimulate production of 2 million barrels of oil a day by 1992 through the retorting of shale oil and liquification of coal. The sharp drop in oil prices during the 1980s, however, made oil shale an unattractive investment. Exxon pulled out of its Colorado operation in 1982, while other companies also quit or cut back their work, producing an economic bust for Colorado's Western Slope.

A major issue in the 1980s concerned the validity of oil shale claims made on 82,000 acres in Colorado prior to 1920 (oil shale was a locatable mineral until passage of the Mineral Leasing Act of 1920). In administrative proceedings in the late 1970s and early 1980s, the Interior Department ruled that almost all the claims were invalid, but these findings were overturned in federal district court in *Tosco vs. Hodel.* BLM was directed to transfer all title to the claimants, including the entire subsurface mineral estate. Existing uses, including grazing and hunting, could have been eliminated. The Interior Department appealed the case but also followed the court's recommendation to "explore settlement without further appeal in this litigation."

In 1986, Secretary Donald Hodel approved a settlement with the claimants whereby the federal government retained rights to all oil, gas, and coal deposits on the lands and preserved Colorado's 50 percent share of mineral leasing royalties. Existing rights-of-way were also retained, along with grazing and recreational uses of the land. Nevertheless, environmentalists and others criticized this action as a giveaway. The State of Colorado and ranchers whose grazing leases were affected also protested, prompting Congress to begin a study of possible actions with regard to the remaining unpatented claims.

Oil and Gas

The Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) strengthened BLM's inspection and enforcement programs for onshore oil and gas production. Lease operators were required to document production from wells and comply with site security measures

ON BEING A NAVAJO COORDINATOR

by Danny S. Charlie
Navajo Coordinator, Farmington Resource Area

I have been the Navajo Affairs Coordinator for the Bureau's Farmington Resource Area for the past 14 years. I am also a proud member of the Navajo Tribe, the largest Indian Tribe in the United States. I began my career with the Bureau because I saw an opportunity to help my people and work with natural resources. As Navajo Coordinator I help BLM make sure that the concerns of Navajos are taken into account before any resource decisions are made. I assist in land pattern adjustments, helping both the Tribe and the Bureau manage their lands better. I also serve as the Navajo interpreter. (The Navajo language is perhaps the most complicated language in the world. A code in the Navajo language was used during World War II to convey secret information to the Allied Forces. I understand the code was never broken!)

There are several thousand Navajos living off the reservation in northwestern New Mexico, in a region known as the "Checkerboard Area." The land pattern was created by a railroad land grant but further complicated by lands taken up by Anglo and Hispanic homesteaders, individual Navajos, and the Navajo Tribe.

Perhaps my single most important contribution has been my work with the Bureau of Indian Affairs on the Navajo Tribe-BLM Land Exchange. The exchange sought to secure the homes of Navajos who had settled on the public lands but had not filed entries. It has taken 12 years so far and many public meetings and conferences with BIA and the Navajo Tribe to work out solutions. I am still working on Navajo occupancy problems. Two are of particular interest to me now.

One involves an 80-year old Navajo named George Simpson. His home is on public land just inside a wilderness area. Mr. Simpson has always lived on this spot and wanted to fix his corral and add electricity. Since improvements of any type are not allowed in a wilderness area, BLM is working with him and the Navajo Tribe for a solution to the problem. The Tribe supports the idea of having the wilderness area's boundary changed (which would require congressional action), or resettling him to a nearby area they hope to purchase.

established by the Secretary. Penalties were set for operators who failed to protect against theft or tampering with meters recording production. BLM completed all inspections required on high-production leases and launched a comprehensive training program on inspection, drainage analysis, and unit agreements.

Procedures for determining known geologic structures (KGSs) on federal lands erupted into a major national controversy in the 1980s. How BLM classified and leased federal minerals could mean millions of dollars in revenue gained or lost by state governments. Oil and gas companies disagreed among themselves about the way lands should be leased, with larger companies generally favoring competitive leasing. Because competitive leasing included bonus bids (50 percent of which were shared by the states), most states also favored the process.

Mrs. Bessie Woody is an elderly sheepherder who speaks only Navajo. She has lived on the same mesa all her life. Some time ago she had a new home built a little west of her old location. It was a logical choice since the new site gave her a beautiful view of Ojo Alamo Spring, one of the (now) De Na Zin Wilderness Area's more scenic sites. Her home unfortunately, was not on her allotment as she had thought, but on public land. Because she believes the mistake is hers, she is willing to move back onto her allotment but needs assistance.

Another problem in the Checkerboard Area is coal. Many Navajos are living over federal coal, in areas set aside for preference right leasing or open to competitive coal leasing. Most Navajos oppose coal development because they feel their traditional homes and grazing areas will be destroyed, along with many important religious sites. They want to retain their way of life and their bond with the land.


Alan Hoffmeister

Danny Charlie and Bessie Woody

BLM has tried to deal with these concerns, yet respond to the demands of coal developers. The San Juan River Regional Coal Environmental Impact Statement (late 1970s-early 1980s) was one such effort. BLM held several public meetings and hearings in adjacent communities and local Navajo chapter houses. At some of these meetings, the Navajos asked me for my personal opinions on coal development and whether I had taken the side of non-Indians. My answer was simple, "While it's true I work for BLM, I'm here to give you the information in your own language so you will understand it. We need your input." Judging from the questions I receive daily, I'm sure I have their trust and I'm hopeful that I have done much to dispel the "Bad Guy" image some have attributed to the government. Certainly, my work with the Navajo people and public is challenging and rewarding—the highlight of my career.

In the late 1970s noncompetitive oil and gas leases issued by BLM in Fort Chaffee, Arkansas, through the simultaneous oil and gas leasing program (the "SIMO" lottery) were challenged in federal court by the State of Arkansas and supported by Senator Dale Bumpers, Chairman of the Senate's Energy and Natural Resources Committee. The court reversed this action and the tracts were eventually awarded through competitive bidding.

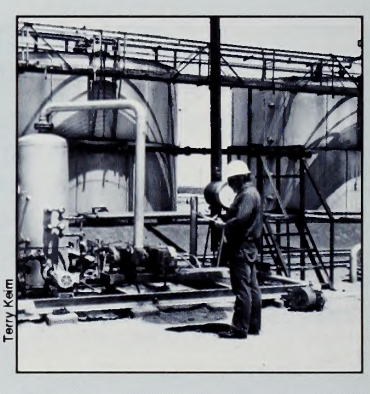
In 1982, BLM issued noncompetitive oil and gas leases on certain tracts in Amos Draw, Wyoming; one tract promptly sold on the secondary market

LIFE AS A P.E.T.

by Paul Parthun

Inspection & Enforcement Coordinator, Roswell District, New Mexico

"Sheesh! Another 3 a.m. cementing operation. Guess I'd better try for some earlier sleep tonight." I gather my gear and put it into my 4-wheel-drive pickup so I won't be delayed any longer than necessary when I get to the office at 1:30. My eyes don't want to stay open as I drive to the office, but the cold morning air helps a little. Once in the pickup I turn up the radio—loud—and check the drilling location. It's fully 40 miles into the boonies. Later, even though I see the bright lights of the drilling rig in the distance, I take a wrong turn and the road ends at a ranch cattle watering station.



Terry Keim

All Petroleum Engineering Technicians (PETs) empathize with such schedules. Well drilling is a 24-hour-a-day job and PETs must be on call to witness certain operations that are critical in protecting the subsurface such as fresh water or potash zones. And it's curious that most such witnessing occurs in the wee hours. PETs shrug it off saying, "Everybody knows cement doesn't set up in daylight hours."

After the well is drilled in concordance with BLM approvals, industry operators must continue to comply with Federal laws, regulations, and policies as they begin to produce the formation or abandon the well. This is the job of PETs—to ensure that oil and gas operations on federal and tribal lands are in compliance. They are inspectors who enforce these requirements as necessary.

Congress and the BLM have provided the PET with broad responsibilities and authority relating to oil and gas operations as they deal with safety, protection of the environment, proper disposition of production, accurate reporting of production, and adequate lease site security. PETs must exercise critical judgements in levying assessments for noncompliance, or under certain circumstances, even shutting down an operation.

PETs are certified by BLM only after undergoing a comprehensive training program that includes classroom (160 hours) and on-the-job activities. They are tested throughout this time, usually for about a year. If they perform satisfactorily, they are recommended by their

for over 1 million dollars. Widespread coverage in the national news media stirred up additional congressional concern about BLM's KGS procedures.

After Amos Draw Director Burford imposed a moratorium on oil and gas leasing to study KGS issues. BLM contracted with the National Academy of Sciences (NAS) and the Keplinger Technology Consultants, Inc., an independent consulting firm, to evaluate its oil and gas leasing program, particularly its KGS determinations. The NAS recommended that BLM broaden its criteria for determining KGSs, while the Keplinger

supervisor for certification. Industry background, skills in mathematics and knowledge of geology, together with a thorough knowledge of Federal laws, regulations, and policies are essential for a PET to do a good job. Then add an ability to analyze computer and records data, filing correct reports and keeping abreast of the latest operational information, and you have an idea of what it takes to be a PET at 3 a.m. or any other time.

It's a good job. PETs spend much of their time outdoors. Oil and gas activities are generally in the most beautiful and remote areas of the western United States. PETs work alone most of the time, making independent judgments. No place here for indecisive, super-gregarious types.

I arrive at the rig a half-hour late but I see that the crew isn't on hand yet to do the cementing operation. I zip up my jacket and walk to the company trailer to introduce myself, then climb the steel-grated stairs to the floor of the rig and into the "doghouse." I meet the driller and his crew, thank them for the hot coffee, then look at the driller's log to review the operation so far. I make sure the APD is posted and the operation is laid out as approved. The well ID is O.K. too—good operator. Out of the small window, I can see the yellow lights of six equipment trucks about a mile off, raising a cloud of dust visible even from here. Looks like a humongous caterpillar. On the ground again, I walk around the rig, making sure that everything is as it should be.

The crew arrives, hooks up, and begins forcing cement into the hole under high pressure, surrounding the steel well casing with an impervious layer of cement, assuring that nowhere along its 800-ft. length will drilling fluids or production be allowed to leak into the subsurface.

The job comes off without a problem—pretty rare. It's 9 a.m. now and I sit in the truck writing out my report. By 9:45 I'm on the way back to the office and I radio my supervisor that I'll be in by 11.

Once there I look in the mirror and I'm glad I don't have to be anywhere today where my appearance makes a difference. I look like hell and I don't feel much better. But, hot water, soap, comb and towel makes me feel like I can handle the rest of the day.

In our office PETs rotate by the job, so I know I won't be called out again tonight. Ahh, sleep. When I arrive home my wife greets me with a little reserve, then confides, "I've invited the Hortons over this evening. O.K.?" The Hortons? Sheesh! I'd rather have another 3 a.m. cementing job.

Technology Consultants recommended ways of improving BLM's program, focusing on standardization and documentation. In the meantime, Burford directed BLM to reinstate a long-standing Departmental policy requiring thorough geologic evaluations of lands before making KGS determinations.

BLM's intensified geologic evaluations resulted in larger KGS areas being designated on federal lands—causing a controversy with smaller oil companies who favored smaller KGS areas and increased noncompetitive leasing. At the same time, however, Senator Bumpers and others in Congress introduced bills to make all federal oil and gas leasing competitive. Congress eventually passed a compromise measure, the Federal Onshore Oil and Gas Leasing Reform Act of 1987, which eliminated the government's KGS program. The act specified that all federal oil and gas leases must be offered competitively at oral auction; tracts not receiving bids would then be available for noncompetitive leasing for up to 2 years.

RENEWABLE RESOURCES

The 1980s ushered in a fundamental change in the federal government's role in natural resource management. Funding for BLM renewable resource programs was trimmed to accommodate declining federal budgets and Reagan administration goals to simplify federal regulations. The Bureau focused its efforts on consolidating field activities, cutting down on duplication in renewable resource programs. Director Burford called for greater agency cooperation with BLM's publics and solicited more active participation from local land users, conservation groups, and other government agencies. Cooperative Management Agreements, used by BLM's wildlife program with state agencies since the 1960s, were expanded to include recreation and other user groups.

To more fully integrate renewable resource programs and make field operations more efficient, BLM began to collect and share data among its programs. The ecological site inventory (ESI) was developed to measure vegetation on the public lands. This and other joint ventures reduced the need for programs to conduct overlapping resource inventories. Data on vegetation came to be used as a measure of soil erosion, deer browse, livestock forage, watershed condition, or even dune stability in off-road vehicle areas. ESI data was used to develop land use plans, with more specific data then being collected by individual programs.

Riparian Areas

Another initiative crossing program lines during the 1980s was the Bureau's development of a policy for managing riparian areas. BLM had managed riparian areas since the 1960s, but with most of its emphasis related to the wildlife program. During meetings sponsored by the Congressional Research Service in 1984, riparian management surfaced as a significant issue in BLM's range program and was prominent during consideration of the Omnibus Range Bill by Congress. In May 1985, BLM's National Public Lands Advisory Council recommended that the

Bureau develop a comprehensive riparian area management program.

In a policy statement signed by Director Robert F. Burford on January 22, 1987, riparian areas were recognized as "unique and among the most productive and important ecosystems" on the public lands. Riparian areas, which comprise about 1 percent of BLM lands, were defined as "directly influenced by permanent water, with visible vegetation or physical characteristics." BLM policy was established to "maintain, restore, or improve riparian values to achieve a healthy and productive ecological condition for maximum long-term benefits." To do this, BLM would recognize riparian values in newly developed resource management plans and activity plans and would achieve its goals through management of existing land uses.

BLM range conservationists worked with livestock operators to design grazing systems that would improve riparian vegetation and streambank stability. Bureau employees in the Rock Springs District (Wyoming) transplanted beavers to rehabilitate eroding streams. Willow and aspen logs were delivered to streams, where beavers built dams—which, in turn, built up streambanks, water tables, and streamside vegetation. In Oregon, BLM biologists enhanced spawning habitats of salmon and steelhead trout by enlisting volunteers (local sportsmen's clubs and Boy Scout troops) to construct gabion check dams, which created pools within streams.

RANGE

In 1978, BLM successfully negotiated with the Natural Resources Defense Council (NRDC) to reduce the numbers of grazing environmental impact statements (EISs) it would prepare in the field from 212 to 158. BLM wanted to consolidate smaller planning areas and combine its grazing EISs with Resource Management Plans that were to be prepared for BLM Resource Areas. No grazing lands were omitted from the EIS requirement; NRDC and the Courts agreed with the change. With further consolidations agreed to by NRDC, BLM scheduled the last of 142 grazing statements for completion in 1989.

In 1980, BLM continued to rely on forage inventory data to prepare EISs and set stocking rates. Many permittees—and range scientists—took issue with this method of deciding grazing issues because BLM was using data collected in only one season of a given year. Livestock organizations and academia challenged the value of data, much of which had been collected during a drought year and did not reflect normal or long-range forage growth.

The Society for Range Management, the National Academy of Sciences, and other groups examined this question and recommended that BLM implement long-term studies to better reflect range forage production, condition, and trend. Under Director Burford, BLM moved away from relying solely on inventory data to monitoring range conditions on public grazing lands. BLM's monitoring activities examined

THE TRIALS AND TRIBULATIONS OF BEING A RESOURCE AREA MANAGER

by Phyllis Roseberry
Grass Creek Resource Area, Wyoming

In October 1984, I became Area Manager for the Grass Creek Resource Area. My assignment followed the completion of the Area's Management Framework Plan and Grazing Environmental Impact Statement. Thus, I was in an enviable position to implement a plan and actually be a party to the changes. This aspect appeals to me because I can experience direct feedback.

But feedback is definitely a mixed bag. Significant improvements have been made in the rangeland, watershed and wildlife resources but significant controversy has also been generated. This job is challenging to say the least.

People often ask me if I think being a woman has affected the public's or Bureau employees' reaction to me. I think there was considerable apprehension both from the staff and from the users prior to my arrival. Any change from the usual is always difficult to accept. I believe focusing on the joint public land use problems before us rather than on our individual physical differences helped develop a good relationship and mutual appreciation. Within a relatively short time, any misapprehension or distrust was alleviated.


Dave Stout

Area Manager Phyllis Roseberry with Wayne Erickson, Wyoming State Office recreation program leader.

As for the public land users, if anything, they have been extra polite to me. I remember being yelled at once by a permittee who had been trespassed. In the middle of a sentence he stopped and apologized profusely. I think he suddenly realized yelling at a woman was not "proper gentlemanly practice." I told him the yelling didn't bother me because it showed he considered me an equal to any man who would have trespassed him. Again, finding solutions to the problems far outweighs any differences.

I believe the team effort of a relatively small group of diverse specialists in a resource area setting is a most exciting situation. It offers abundant opportunities to learn more about human nature as well as resource problems. We are all different in many ways, but the important thing is that all of us do our jobs because we are basically dedicated to good public land management.

- Actual Use (number of livestock on allotment)
- Utilization (amount and type of forage used)
- Climate (monthly precipitation, temperatures, etc.)
- Trend (improving, declining, or static)

BLM also collected data on major events such as wildfires, insect infestation, or drought. According to Billy Templeton, Chief, Branch of Range Management, BLM's move to monitoring was of major benefit to the Bureau's range program: "It institutionalized range studies over time, instead of having the BLM rely on data collected for just one year."

BLM's range program also began to focus on allotments where management would bring the best results. Grazing allotments were placed in one of three categories:

"M" (Maintain) - Resource has high to moderate production potential; producing at or near potential; present management satisfactory.

"I" (Improve) - Resource has high to moderate production potential; producing at low to moderate level; resource will respond to improved management.

"C" (Custodial) - Resource has low production potential; producing at or near potential; opportunities for improvement do not exist.

BLM developed a more effective cost/benefit analysis for range improvements and began to target them on "I" allotments where they would do the most good. Working closely with allottees and other land users during the process paid significant dividends to the Bureau: many ranchers and conservation groups came to support the effort.

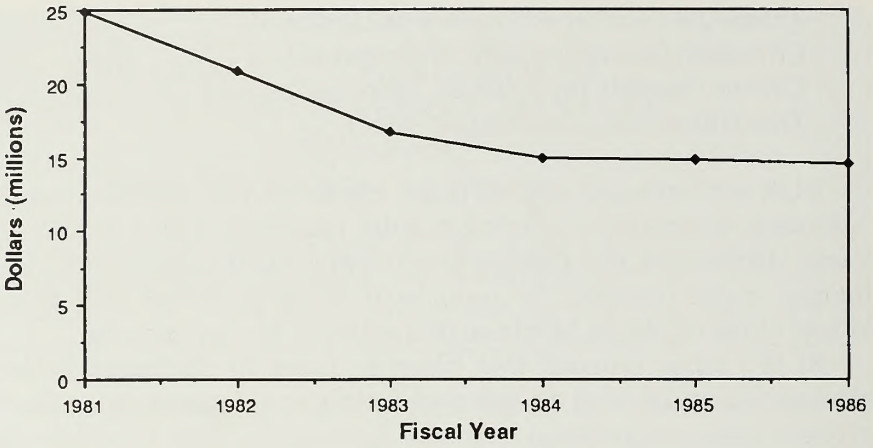
BLM Grazing Fees 1981-1987

Years	Animal Unit Month Fee
1981	2.31
1982	1.86
1983	1.40
1984	1.37
1985-1987	1.35

Grazing Fees

The grazing fee formula set by the Public Rangelands Improvement Act (PRIA) remained in effect on BLM and Forest Service lands until 1985. Congress then asked the agencies to study and report on the fee structure for 1986 and subsequent years, which was accomplished in their 1985 annual reports to Congress. The House and Senate, however, ran out of time to consider the study and did not enact any new legislation on grazing fees.

In the absence of Congressional action, Secretary William Clark was instrumental in convincing President Reagan to issue an Executive Order reestablishing the PRIA formula, but with a minimum fee of $1.35 per



Grazing Revenues 1981-1986

animal unit month. NRDC challenged the legality of this order, but the courts decided in favor of the government. As of September 1988, Congress continued to study legislative proposals setting new fee formulas.

Cooperative Management Agreements

After passage of the Public Rangelands Improvement Act in 1978, BLM developed an experimental stewardship program to test new approaches to improving rangeland conditions, as directed by the act. BLM set up 16 experimental stewardship projects in eight states with land users and other agencies (for example, the Forest Service and state wildlife agencies) to cooperatively develop new and innovative ways to manage public rangelands.

Cooperative Management Agreements (CMAs) and coordinated resource management plans grew out of this work. Director Burford introduced CMAs to BLM's range program in 1982 to recognize outstanding livestock operators on the public lands and assure them of continued long-term tenure on their allotments. Operators with CMAs were free to adjust livestock numbers, seasons of use, and kinds of livestock grazed on their allotments within predetermined limits agreed upon and included in the terms of the CMA. CMAs were issued for 10 years with resource evaluations scheduled at 5-year intervals. If multiple use objectives were met, BLM could renew the agreements—and grazing permits—for another 10 years.

The program was never fully implemented, however. BLM was sued by NRDC in 1984, asserting that the Bureau was allowing a specific group of land users to exert undue influence in managing grazing on public lands—without involving other interests in the process. After losing the case in 1985, BLM declined an opportunity to appeal the case and dropped CMAs from its range program.

Coordinated Resource Management and Planning

In the meantime, the Nevada State Office took the lead in developing Coordinated Resource Management and Planning (CRMP). This process involved everyone concerned with resource management in a given area—landowners, BLM and other agencies, resource users, and the interested public—to address resource conflicts at the local level. According to State

BUREAU AIR RESOURCE MANAGEMENT

by Al Riebau
Wyoming State Office

There is one resource that the Bureau has a responsibility to manage that exists in every state, district, and resource area. It's so universally pervasive that no other resource or Bureau resource program could exist without it. It is also quite probably the resource that we know the least about managing collectively as an agency and the one to which the BLM has assigned the smallest staff. That resource is, of course, the air around us.

Air doesn't mean just air quality to the Bureau's "air" specialists. Air to us means Air Resource Management (ARM). ARM is a new atmospheric science approach perhaps unique to land managers. It covers a broad range of activities including climate, weather, smoke management, pollution impact modeling, monitoring for such things as acid rain and visibility, and regulation development coordination.

BLM originally hired air specialists to perform air quality analyses to support EIS preparation. This was indeed a one-dimensional activity, involving only air quality work. Most of it centered around projecting the potential for air pollution against various state and federal air standards. It was, of course, a bread-and-butter activity and Bureau specialists enjoyed a well-defined if hectic role. At one time the Bureau had a staff of 12 specialists busy with these kinds of activities. Some of these early specialists worked on upwards of seven EIS teams at a time and administered analysis contracts to support the documents.

As minerals markets softened, EIS work dwindled. ARM personnel have gone the way of the EIS frenzy and we are now down to four full-time positions within the agency. At this writing, three State Office ARM specialists fill both state and agencywide functions. The Utah State Office specialist, Dr. William Wagner (hired in 1975, the first ARM specialist employed by any federal land management agency), is the Bureau's lead technical expert for air impacts from hazardous wastes. The Colorado State Office specialist, Scott Archer, is the lead for visibility (atmospheric clarity as it relates to air pollution) issues. I serve as a technical lead for acid rain issues, wilderness air quality and monitoring issues, plus some aspects of air quality and smoke management, and air pollutant modeling. The Washington Office program manager, Stan Coloff, provides overall program guidance and policy development besides coordination of training and interagency relations. Carrying out these Bureauwide duties at State Offices doesn't fit into the normal scheme of the Bureau's organizational structure. In truth, the factor that has allowed the program to function has been the support of managers who make allowances for the unorthodox (and recognize that these specialties at times must be shared) for the good of the Bureau as a whole.

The development of ARM in the Bureau is far from over. Applying climate information, especially if global climates shift as some predict, will require specialists with knowledge of Bioclimatology. As new particulate and visibility regulations are applied, ARM specialists in smoke dispersion prediction and dispersion meteorology will become more necessary. The challenge for the Bureau's ARM specialists will be to provide the support that these issues will demand. This means learning to manage the atmosphere as a resource that can be renewed and enhanced, with the Bureau taking an active role. Nothing as pervasive as the Earth's atmosphere can remain unnoticed for very long.

BLM's HAZARDOUS MATERIALS PROGRAM

by Myra Musialkiewicz and Michael Giblin
Hazardous Materials Staff

In April 1985, hydrogen sulfide gas was released from a liquid waste lagoon at the Lee Acres Landfill near Farmington, New Mexico. The gas caused temporary illness and discomfort to landfill users and emergency response personnel. At the same time, there was a release of surface water from one lagoon that ran into the adjacent arroyo.

Under the Recreation and Public Purposes Act, BLM is authorized to lease its lands to municipalities for varied public purposes. San Juan County in New Mexico holds such a lease to operate the Lee Acres Landfill, one of 336 operating landfills authorized under the Act. The lease allowed the County to provide essential sanitation services at a very low cost.

The Bureau, as landowner, is one of the parties that is responsible for protecting public health and safety. This responsibility derives from federal laws, specifically the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA, the "Superfund Act"). Private parties, local governments (like San Juan County) and states also have responsibilities under this statute as well as related federal and state laws.

BLM studied the site and identified potential risk, from several possible sources, to local well users. Once identified, the Bureau quickly took action to deal with the potential threat to the public health of landfill users and subdivision residents without regard to who was actually responsible for the threat. Once the imminent threat was handled, BLM began working on long-term assessment and control of risk in the area. Because of the other possible sources of contamination, the Bureau expanded the area of study to include not only the landfill but the surrounding industrial area that contains a refinery and numerous oil and gas wells. The study area as now defined contains 2,100 acres of federal, state, and private lands.

Since the site investigation, BLM has conducted soil-gas contaminant analyses and extensive hydrogeologic and water quality studies throughout the area, including the San Juan River. BLM is continuing to monitor groundwater levels and quality through 19 detection wells that were installed in the larger site area. In addition, the Bureau is in the process of awarding a contract to conduct a remedial investigation/feasibility study/EIS for the entire site. The contractor will determine the nature, quantity, and source(s) of pollutants and contaminants at the site and will include a search for potentially responsible parties who may share the costs of any necessary site cleanup. It will also examine alternative means for site cleanup and make recommendations for consideration by the Secretary as part of the decision process.

By 1988, BLM spent in excess of $1.3 million dealing with this contamination problem, with another $3 million anticipated for the additional studies. Based on EPA estimates, a site of this size could cost as much as $25 million to clean up. The cleanup is scheduled to begin in mid-1992, with monitoring continuing a minimum of 20 years.

In the meantime, BLM is not issuing any more R&PP leases for landfills; rather, it will transfer lands needed for municipal landfills and other waste disposal facilities out of federal ownership. In 1989, the Bureau will begin audits of other landfills on the public lands for compliance with EPA regulations and BLM environmental stipulations.

Director Edward F. Spang, CRMP plans were developed within the framework of laws, regulations, and applicable land use plans. "Major areas of conflict were subjected to the CRMP process, including livestock grazing, watershed problems, off-road vehicle designations, and wilderness suitability recommendations."

Soil, Water, and Air Activities

Soil, water, and air activities were placed in BLM's range program in 1982. Since then the branch has conducted soil surveys on the public lands at a rate of 4 million acres per year. Of 157 million acres targeted for such surveys, 129 million have been completed. The branch also developed an automated soil information system to integrate existing soils data with other resource information.

Watershed projects in the 1980s included nine hydrologic modeling programs focusing on water quality, erosion, and precipitation. Eight watershed activity plans were implemented in support of the Colorado River salinity program and four in support of flood and sedimentation mitigation. Instream flow assessments were completed for the Beaver Creek National Wilderness River in Alaska and the San Pedro River management area in Arizona to identify resources in these areas and the amounts of water required to sustain them.

Reynolds Creek Experimental Watershed

BLM has supported more than 20 years of research by the Agricultural Research Service (ARS) at the Reynolds Creek Experimental Watershed in southwest Idaho. Congress established the facility in the early '60s, to collect data on runoff and water yields from plateau and foothill grazing areas. The project was undertaken to facilitate the long-term improvement of grazing and rangeland management, and has been the largest and lengthiest watershed research project BLM ever participated in.

The Reynolds Creek watershed contains a wide range of environmental conditions found in a variety of western rangelands. BLM/ARS research yielded important data on resource monitoring and modeling, precipitation and climate, streamflow and runoff, erosion and sediment, water quality, vegetation, and soils.

During the 1980s, the extensive data base on rangeland activities was used to create simulations that estimate impacts and magnitudes of land practices in land use plans. A 1984 conference of federal and state land management agencies began an era of transfering Reynolds Creek data and analysis techniques into management practice.

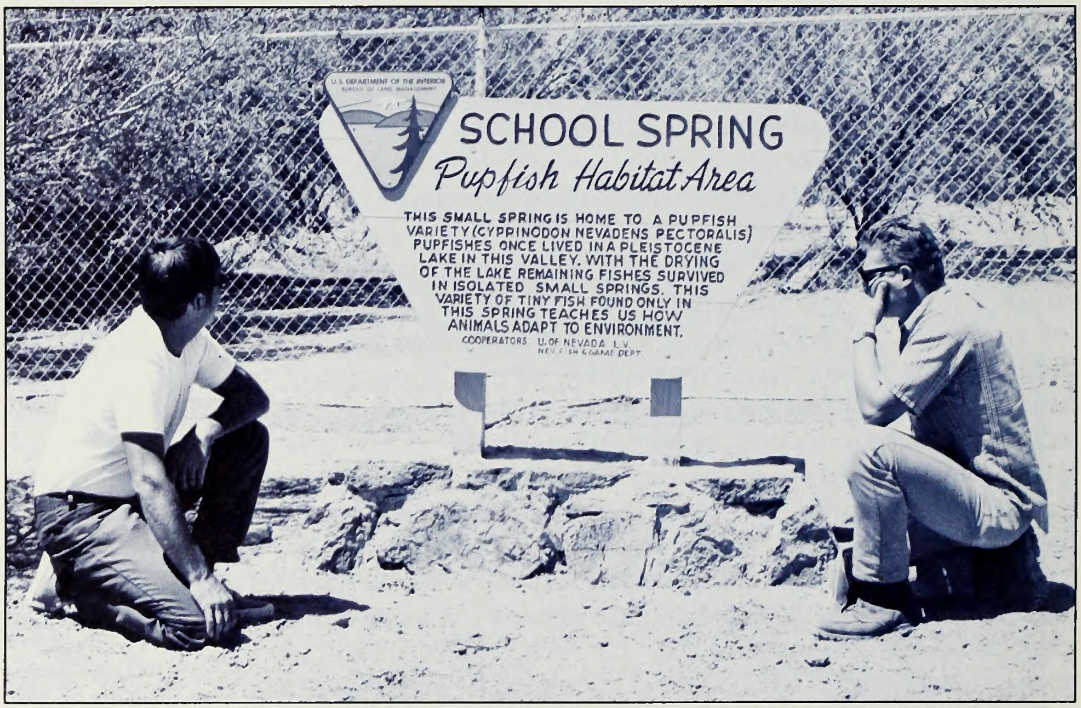
Starting in 1981, BLM's air resources program participated in the National Atmospheric Deposition Program to help quantify water chemistry (including acid rain) on the public lands. BLM also developed smoke and pollution estimation models which quantify atmospheric changes and dispersion potentials.

WILDLIFE

BLM's role in managing fish and wildlife resources on the public lands became more widely recognized in the 1980s. *Fish and Wildlife 2000,* a

strategic plan for the program, was signed by Director Robert Burford on May 21, 1987. It is the first long-range plan developed for the wildlife program, calling on BLM to manage "with emphasis on ecosystems to ensure viable populations and a natural abundance and diversity of wildlife, fisheries, and plant resources on the public lands."

BLM's wildlife program features three components: wildlife habitat management, fisheries habitat management, and threatened/endangered species management. The Bureau accomplishes its goals by implementing habitat management plans (HMPs); it also specifies fish and wildlife objectives in other activity plans and implements recovery plans for threatened and endangered species. In addition, BLM biologists place stipulations in leases, licenses, and permits to mitigate adverse impacts to fish and wildlife habitats and implement on-the-ground improvement projects.



Jim Yoakum

BLM has worked on cooperative fishery projects since the early 1960s, including the Las Vegas District's School Springs project to restore and maintain habitats for the endangered Warm Springs pupfish. Jim Deacon (left), University of Nevada, Las Vegas, and Lew Myers, BLM.

Since 1980, 160 HMPs were prepared in BLM, bringing the total developed to 399. More than 100 have been fully implemented, with 212 more in the process of being implemented. Fish are priority species in 106 aquatic HMPs prepared to improve habitat on 3,100 miles of streams crossing public lands, according to Art Oakley, fishery biologist in the Oregon State Office. The major species for 50 of these plans are either endangered or threatened, or candidates for listing. In addition, Bureau biologists contribute to interagency recovery plans for threatened or

DESERT BIGHORN AND BLM

By Allen Cooperrider
BLM Service Center

Desert Bighorn sheep are the only ungulate native to the southwestern deserts and mountains. About 80 percent of the current desert bighorn habitat is on federal land, most of which is administered by BLM. Although once in danger of extirpation, desert bighorns are now well on the way to recovery. BLM's past efforts have been key to this effort and the future of the desert bighorn depends on BLM's continuing efforts.

Most of the native ungulates of North America, such as elk, mule and white-tailed deer, and antelope had severely declined by the beginning of the 20th century. Desert bighorn continued to decline well after the other ungulates were on the road to recovery. About 1 million desert bighorn sheep were present in North America at the beginning of the 19th century. By the mid-20th century their numbers had declined to less than 10,000 due to overhunting, disease, competition from livestock and burros, and human disturbances.

In 1950, BLM began efforts to protect bighorn sheep and their habitat. These efforts were the first such efforts and the beginning of BLM's formal wildlife program. By 1960, BLM was actively working with biologists from state agencies to improve desert bighorn habitat. Those practices—cooperation with state wildlife agencies, conservative use of bighorn ranges by livestock, water development, avoidance of shifts from cattle to domestic sheep use, and preservation of critical areas in public ownership—have remained a cornerstone of BLM efforts for desert bighorn. By hiring wildlife biologists and establishing a wildlife program in the mid-1960s, BLM further enhanced several of its recovery programs.

In 1985, Congress appropriated a Challenge Grant of $300,000 to BLM specifically for the recovery of desert bighorn sheep. The appropriation stipulated that the grant be matched by private sector funding or in-kind services. With this, BLM was able to initiate numerous projects, including water developments, inventory and monitoring, and studies to determine causes of lamb mortality. Currently, about $1 million a year is being spent (including the Challenge Grant, matching contributions, and base funds) to continue these efforts.

In January 1988, Director Burford signed a rangewide plan for desert bighorn sheep that outlined a balanced program of inventory, on-the-ground projects, monitoring and research for facilitating recovery of desert bighorn in 115 habitat areas in the Southwest. By implementing this rangewide plan, BLM should be able to achieve a substantial recovery of sheep within the next 25 years.

BLM

A WILD HORSE ROUNDUP

by Robert E. Stewart
Nevada State Office

Management of America's wild and free roaming horses and burros has given the BLM a unique role in maintaining a colorful aspect of Western lore—the roundup. The modern rancher conducts few cattle roundups because of costs. Yet the roundup remains the only effective way to remove excess horses and burros from western rangelands.

In some places, the animals are water-trapped. A temporary fence is placed around a water hole, and when thirst overcomes caution, horses enter the enclosure, only to have a gate close behind them.

Far more common is the contract helicopter gather. This effort requires the Bureau wild horse specialist to thoroughly know the herd and the herd-use area. Before a contract is let, the specialist, through reconnaissance flights, locates the horses and identifies those to be removed.

Then trap sites are selected. These must be near a road, because the horses will be trucked to a center for freeze branding, vaccinations, and eventual adoption. More than a hundred metal fencing panels arrive— enough for a main trap pen, including sorting pens to separate mares, wet mares and foals, and stallions. Long wings of panels, a quarter mile or more, reach out from the trap entrance, creating a funnel effect. Experienced contractors can erect these in one day, two at the most.

Often, camouflage is used. Brush may be cut and woven into the panels. Canvas may be used to break the straight lines so the trap is less obvious to the spooky horses.

As the trap nears completion, the Bureau specialist and capture pilot reconnoiter the area by helicopter, being careful not to disturb the bands of horses. Now the colorful part begins. Still camera and motion picture photographers start gathering to capture some of the spirit and color of this bit of the Old West.

The helicopter, at low altitude, circles out to haze the horses toward the mouth of the trap. Drawing on experience, the pilot moves the horses at a pace which tires, but does not exhaust, them. One band may be "parked" while the pilot circles back to draw in more, grouping 35 to 75 horses some distance from the trap.

Now the pilot swings back and forth in the sky like a talented, tenacious sheepdog at work, moving the whole herd. Slowly at first, then faster, the pilot hazes the herd toward the open end of the trap.

Meanwhile on the ground, a trained "parada" (or "Judas") horse has been led to a point just outside the open end of the trap wings. It is held by a worker crouched close to the ground. As the helicopter-pushed horses draw closer, the tethered horse is released. It runs toward the trap, followed by a thunder of dust-raising hoofs. Timing is critical, for the worker holding the parada horse must get out of the way, unseen, to avoid personal injury or spooking the herd.

Deep in the trap wings, another crew member dashes out behind the horses, "closing" the trap with a canvas "gate." Though the horses could easily tear through the cloth, few of them do, never having seen "walls" before.

A more solid gate closes. The helicopter lands, and the next phase begins.

The startled horses mill about the trap, often charging around as they spot people outside. Once the horses are sorted a period of quiet and settling down begins. A state brand inspector often reviews the horses for signs of ownership; not only brands, but signs of having been saddled or having worn halters will put horses under jurisdiction of the state estray laws.

Brought into close proximity, the horses need special care. They are susceptible to injury and sickness, especially in the first few days. If they have been run too hard or over hard rocky ground, leg and hoof injury may take several days to show up. But the horses are now cared for daily by some of the best trained horse handlers in the world, the managers and staff of BLM wild horse facilities.

BLM

Roundup outside Susanville, California.

endangered species, including the Warm Springs pupfish in Nevada and the humpback chub, bonytail chub, and Colorado squawfish in the Colorado River system. A total of 73 recovery plans have been developed, 56 of which are currently being implemented.

Increased cooperation and partnerships have been developed with conservation organizations, commodity groups, and landowners to encourage outside participation in habitat improvement projects. For example, national-level agreements were signed with the Rocky Mountain Elk Foundation, Ducks Unlimited, the National Wild Turkey Federation, and Trout Unlimited to expand cooperation and joint activities at the field level. Congressional appropriations of challenge cost-share matching funds (funds set aside to match donations from private sources) made increased cooperative efforts possible. To encourage private investments on the public lands, *Fish and Wildlife 2000* also calls for development of a "gift opportunity catalog" to promote contributions to fish and wildlife projects, including land acquisition or access needs.

BLM placed greater emphasis on developing interdisciplinary rangewide management plans for certain high-visibility species, such as the desert bighorn sheep, desert tortoise, anadromous fish, waterfowl, and raptors to provide specific strategies for key species and ecosystems. An emerging issue for BLM is conservation of biological diversity on the public lands. The Office of Technology Assessment defines biological diversity as "variety and variability among organisms and the ecological complexes in which they occur....Thus, the term encompasses different ecosystems, species, genes, and their relative abundance." To date, most of this concern has concentrated on threatened and endangered species, but according to BLM biologist Allen Cooperrider, the Bureau's role in conserving biological diversity at the community or ecosystem level is likely to increase in the future.

WILD HORSES AND BURROS

BLM's wild horse and burro program in the 1980s focused on removing excess animals from the public lands to bring their populations down to appropriate management levels, which were established through BLM's planning process for about 95 percent of its herd management areas. In conjunction with the National Academy of Sciences, the Bureau also awarded contracts for research projects on fertility control and population genetics of wild horses. Removals from 1980 to 1988 reduced horse and burro populations by about a third, but BLM did not expect to reach its management objectives until the early 1990s. Because controversies continued to elevate this issue to national prominence, in 1988 Director Burford asked Congress to hold oversight hearings to provide the Bureau with guidance on administering this difficult program.

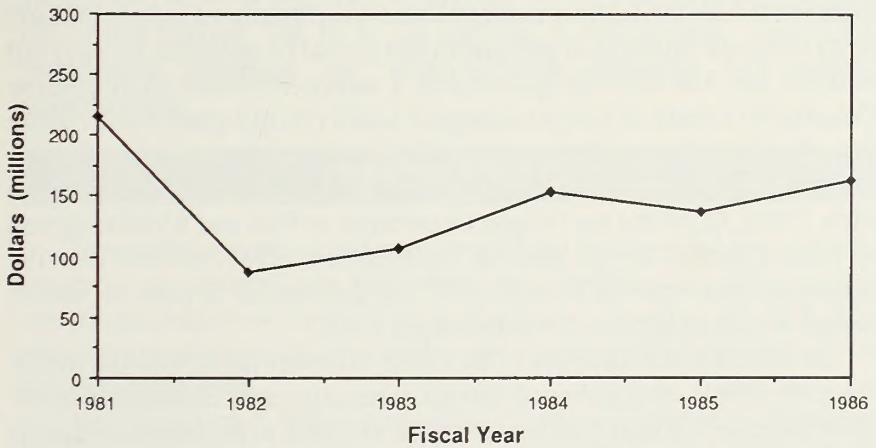
BLM found homes for nearly 75,000 excess wild horses and burros through its Adopt-A-Horse program since 1980, but many older horses proved to be unadoptable. Although the law authorizes humane destruction

of unadopted animals, the American public strongly opposed this approach. BLM has since turned to new initiatives, including an increase in adoption efforts in the East and the establishment of a pilot sanctuary for unadopted wild horses on private lands in South Dakota. BLM also sent horses to satellite (temporary) adoption centers in areas where adoption demand existed. From 27 such centers in 1983, the number of satellites grew to 71 in 1987. BLM also worked with prison systems in four states (California, Colorado, New Mexico, and Wyoming) to establish inmate wild horse training programs to increase the adoptability of wild horses.

FORESTRY

During the inflationary years of the late 1970s and early 1980s, a national housing boom caused a rash of speculative bidding for timber from federal lands in Oregon and Washington. Bids rose from around $100 per thousand board feet to $300 and $400. In 1982 the nation entered a recession. Timber prices plummeted to the $100-per-thousand level and sometimes below. The high-bid contracts became uneconomical; companies could not harvest without incurring severe financial hardship. Many faced bankruptcy. In addition, it was anticipated that massive defaults on contracts would cut even further into the already shrinking receipts going to both the O&C Counties and the U.S. Treasury.

BLM and the Forest Service created a program in 1982 to extend the term of the high-bid contracts. The intent was to give contract holders more time in which to harvest the timber, hoping that lumber prices would rise, and to blend high-bid and low-bid timber to soften the financial impact on the contract holders. In 1984 Congress passed the Timber Contract Payment Modification Act which allowed some contracts to be bought out by the holders at a reduced price and the remaining contracts to be extended through 1989.



Timber revenues 1981-1986

BLM

BLM law enforcement has "come of age" in the 1980s with Bureau agents and rangers participating in cooperative efforts with other agencies, such as this Interagency Marijuana Raid Team, consisting of BLM agents and the Oregon State Police in the Roseburg District.

During the 1980s environmental groups protested several O&C activities. One effort involved limiting BLM's use of herbicides on competing vegetation in young forest plantations. A 1984 legal challenge was successful; use of herbicides was stopped by court order until BLM could analyze their use on the public lands.

Preserving old-growth forests also became an issue; virtually all of the old-growth Douglas Fir forests remaining in the Pacific Northwest are found on federal lands. Environmentalists argued that management of O&C lands under the principle of sustained yield should be revised in favor of full multiple use. The northern spotted owl, a subspecies native to these same Douglas Fir forests, is thought to depend heavily on old-growth and mature forests as habitat.

After 10-year plans for western Oregon forests were completed in the early 1980s, BLM and the Oregon Department of Fish and Wildlife agreed to protect habitat for 90 pairs of owls through 1987. In that year the agreement was renewed through 1990 and the number of pairs for which habitat was to be provided was increased to 110.

In 1986, BLM's analyses of the effect of timber harvest on the owl in the early-1980s environmental impact statements was challenged. After State Director William Luscher found the analyses to be adequate, a court suit was begun. A district court ruling favorable to BLM is currently under appeal.

Woodlands

In addition to its management of O&C and commercial public domain forests, BLM started to manage woodland areas in the 1980s. These areas include pinyon-juniper woodlands in Utah, Nevada, New Mexico, and Arizona valuable for fuelwood (harvested by both commercial interests and individuals), plus items such as pinyon nuts and Christmas trees. BLM hired a forester in each district in Nevada to manage this program.

CULTURAL RESOURCES

Prior to the 1980s, the idea of managing cultural resources in BLM was almost entirely tied to compliance with Section 106 of the National Historic Preservation Act and to assisting other BLM programs in fulfilling their objectives. As the Bureau's compliance proficiency grew—and as FLPMA's multiple use emphasis became more ingrained in the Bureau—the cultural resource program was able to focus on a more long-term, planning-based management model.

Initial program manuals adopted in 1978 were developed with the conviction that the cultural resources program should be like other BLM resource management programs, according to John Douglas, current program leader in Washington. "Just as in the more traditional BLM programs, managers should be able to come out of a comprehensive land use planning process with cultural resource allocations and then manage the resources according to the allocations." A new BLM planning guidance manual in 1986 incorporating these concepts was the Bureau's first significant step toward realizing these ideas.

BLM's role in managing cultural resources for the public's benefit was given new visibility when the Anasazi Heritage Center opened in the Four Corners area of southwest Colorado in August 1988. Built as an interpretive, curatorial, and research facility, it will house millions of artifacts and records from the Dolores Project, one of the largest archaeological recovery projects ever undertaken. The BLM-managed facility will serve as a regional repository for the Bureau of Reclamation, the Forest Service, and BLM. In addition, it will provide visitors with interpretive programs and students with education and research opportunities.

RECREATION

Demands for recreational opportunities on BLM lands have continued to grow—an unsurprising fact when one considers that 90 percent of Americans participate in some form of outdoor recreation. In 1987, BLM estimated that there were 56.4 million visits to the public lands, a three-fold increase since 1968.

Because of other national priorities, BLM was not able to focus much attention on its recreation program through the early and mid-1980s. During this time, however, there were significant increases in ORV use, river

CULTURAL RESOURCE MANAGEMENT IN ARIZONA

by Gary Stumpf, Archaeologist
Arizona State Office

Cultural resource management has really matured in the past 10 years. We started out as rather naive stepchildren, asking as many questions of ourselves as the Bureau was asking of us. The very concept of cultural resource management was new, and BLM was one of the pioneers forging its standards, its procedures, and even its jargon. It has been a process of learning and adjustment for all of us. Some of that adjustment has been awkward but has in general been salved with a fair amount of humor. The result is that the cultural resources program has emerged with a secure footing in helping BLM carry out its multiple use mission.

One of our greatest challenges in cultural resource management today is communicating our knowledge and enthusiasm about the resources we manage to the general public who pays for the work we do. The public has always had a legitimate stake in the way we have managed historical and archaeological resources; after all, we wouldn't be in the business we are in without some far-reaching legislative expressions of public will. Few people have actually participated in cultural resource management activities, however, and the public's sense of ownership of, and responsibility for, those resources is not well developed.

Arizona is particularly fortunate in having two very large and active amateur archaeological societies—the Arizona Archaeological Society and the Arizona Archaeological and Historical Society. We also seem to have an uncommon number of non-affiliated amateurs and others who are willing to devote their efforts to preserving the past. In the past three years alone, amateur archaeologists and other volunteers contributed 18,000 hours of their time to assist Arizona BLM in cultural resource management work. That's a remarkable demonstration of public support, reflecting a spirit of interest and cooperation that I hope we never take for granted.

Peggy Avey

Archaeologist Jennifer Jack working with students

Our volunteers come from all over the United States; one of them last year even came from England. Some of them belong to organizations we don't usually associate with cultural resource preservation. For example, members of the Arizona Desert Racing Association recently volunteered to help us construct a fence around an archaeological site to protect it from off-road vehicle damage. Every once in a while things like that happen to remind us that stereotypes are not valid.

Arizona is also fortunate in having the most comprehensive cultural resource public awareness program in the nation, spearheaded by the State Historic Preservation Office. The program centers around Arizona Archaeology Week, an annual event which includes exhibits at the state capitol and local communities, tours of archaeological and historic sites, presentations to schools and community groups, poster contests, newspaper and television coverage, participation on radio talk shows, and other activities. BLM is a major participant in this event each year, and we cannot help but believe that these efforts have gone a long way toward shaping public attitudes on the need for preserving the fragile record of our past.

Mary Plumb

A very special group of people (from left to right, Barbara Hodel; BLM Utah State Director, Roland Robison; Secretary of the Interior, Donald Hodel; Miriam Mueller, friend of the Hodel family; and Moab District Manager, Gene Nodine) went on a fact-finding tour in 1987 to discuss BLM river management. They are shown at Vista Viewpoint overlooking Westwater Canyon's gorge on the Colorado River in Southwestern Utah.

running, caving, and snowmobiling on the public lands, plus the traditional uses of hunting, fishing, and back-country exploring.

By the late 1980s, the recreation program assumed a more dominant role in the Bureau. Several factors contributed to this increased emphasis, not the least of which was the President's Commission on Americans Outdoors, established by Ronald Reagan in 1986. Public meetings and a subsequent report heightened the public's interest in America's recreation resources, in a manner somewhat analogous to the work done by the Outdoor Recreation Resources Review Commission in the late 1950s and early 1960s.

Along with this effort, BLM developed *Recreation 2000,* a long-term strategic plan for the management of outdoor recreation opportunities on the public lands. The plan presents an overview of BLM's recreation and wilderness programs and provides policy for future efforts, including visitor information and interpretation; resource protection and monitoring;

land ownership and access adjustments; partnerships and volunteer programs; and facilities, permits, fees, and concessions.

WILDERNESS

Since 1981, BLM has managed 24.6 million acres of public lands in 855 separate locations as wilderness study areas while it prepared environmental impact statements to determine their suitability for inclusion to the National Wilderness Preservation System. Under FLPMA, BLM must complete its studies of these areas by 1991.

By 1988, Congress designated 25 of these areas (totaling 450,000 acres) as wilderness, starting with Bear Trap Canyon in the Lee Metcalf Wilderness in Montana in 1983. Aravaipa Canyon in the Safford District and eight areas on the Arizona Strip District were designated in the Arizona Wilderness Act of 1984. Cebolla and the West Malpais wilderness areas were designated in the Albuquerque District under the El Malpais National Monument and National Conservation Area Act of December 31, 1987.

The Bureau's first wilderness management plan was completed for Bear Trap Canyon in 1984. By 1988, 12 draft or final plans had been completed. BLM continued to develop management guidelines for its

BLM

BLM Wilderness Study Area, Kanab Creek Esplanade, Hack Canyon, Arizona.

THE EAST MOJAVE NATIONAL SCENIC AREA

by John Bailey
Needles Resource Area

The East Mojave covers 1.5 million acres, most of it public lands managed by BLM. All of the classic land uses are here—grazing, mining, recreation. The classic conflicts are here too, all within view of the 15 million residents of southern California and Nevada.

The California Desert often brings to mind off-road vehicles, sand dunes, and acres of creosote. The East Mojave, by contrast, has no "open areas." It contains pinyon-juniper woodlands and mountain peaks with white fir. While recreation in the area still requires vehicles, the 3,000 miles of roads and trails show very little incidence of cross-country travel. Most everyone at some point gets out and takes a walk. Interestingly, a casual observer would be hard-pressed to tell whether a particular group is affiliated with a conservation/preservation group or one of the many ORV groups in the region—they all do about the same thing when they come to the East Mojave and, in fact, individuals often belong to both groups.

In the past, public lands singled out for special attention were usually transferred to another agency that had the funding or skills to manage the area. The "old" BLM was merely a temporary caretaker. No more. FLPMA redefined BLM, allowing it to grow. In its desire to intensively manage unique areas, the "new" BLM stood on the cutting edge of the public debate on the proper balance between conservation and use of federal lands. Special areas such as the East Mojave National Scenic Area (or El Malpais), King Range and the proposed San Pedro National Conservation Area are important not only for the resources that led to their designation, but for their aesthetic qualities. The "new" BLM will be challenged in achieving this delicate balance.

How BLM develops recreational opportunities in the East Mojave will certainly set a tone for the region and perhaps the agency—arguments over developed campgrounds vs. primitive backcountry camping; fear that enhancing recreation opportunities will bring in too many visitors; controversy over whether hiking trails should also be used by equestrians or mountain bikes (expected to become a major activity in the not too distant future); firearm use; and the age-old argument (for BLM, anyway) of exactly what is a "proper" road?

BLM

View from Wildhorse Mesa to Providence Mountain.

How BLM handles the thorny issue of mining and grazing in a scenic area will also set an important precedent. We already require plans of operation for most activities, along with performance bonds. The future will most likely bring some attempts to define what undue and unnecessary degradation really means, and there is the ticklish issue of miners who are more interested in mining investors than ore. But these are not merely problems or conflicts—they are opportunities for BLM to tell the public about multiple use, what we are and what we do, and to redefine ourselves in the process.

WILDERNESS REVIEW PROCESS IN UTAH

by Gregory F. Thayn
Wilderness Coordinator and EIS Team Leader, Utah State Office

The BLM wilderness review in Utah began in 1978 with an inventory of the 22 million acres under BLM management. Studies are still in progress as of 1988 and the BLM anticipates possibly several years of interim management before Congress will consider wilderness designation for public lands in Utah.

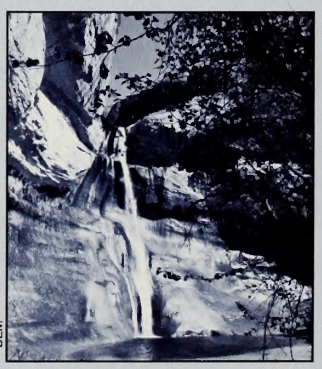
The review has been filled with controversy from the outset. Many of the issues relative to the Wilderness Act that were debated in the 1960s were never resolved and continue to complicate the Wilderness Review. Definitions and applications for terms such as "road," "outstanding," and "substantially unnoticeable" are subjective and can never be consistently understood or applied by everyone involved in the process.

The history of the BLM's Utah wilderness review is one of decisions by BLM and appeals by other parties. Constituencies have organized on both the pro-wilderness and anti-wilderness sides of the issue. The BLM has come to know the Southern Utah Wilderness Alliance, the Utah Wilderness Coalition, and the Utah Wilderness Association on the pro-wilderness side and the Multiple-use Coalition, Utah State Legislature, and associations of local government and mineral development interests on the anti-wilderness side. Misinformation abounds; facts never stand in the way of a good solid opinion.

Contributing to the problem is the fact that Utah possesses some outstanding areas that obviously meet the Wilderness criteria, but it also contains an abundance of resources such as uranium, coal, and tar sand. Some of the areas such as the Sid's Mountain Wilderness Study Area, are highly regarded by both wilderness and off-road vehicle enthusiasts and those who want a "wilderness" where they can use their off-road vehicle. The issue is complex and "compromise" is not part of the vocabulary for discussions between opposing factions.

BLM's Wilderness Study Areas include approximately 3.2 million of the 22 million acres of public lands in Utah. Citizen alternatives range from the Earth First, 16 million-acre alternative that ignores the presence of intrusions and land ownership, to the zero-acre, NO MORE WILDERNESS, alternative endorsed by the Utah State Legislature. More moderate alternatives of 3.8 and 5.2 million acres are proposed by the Utah Wilderness Association and the Utah Wilderness Coalition.

The Utah BLM Statewide Wilderness Draft Environmental Impact Statement (EIS) was published in 1986 and some 4,496 submissions with a total of 6,213 signatures were received during the comment period. The Final EIS will be completed in 1989 and the Secretary of the Interior will make wilderness recommendations to the President in 1991. The real test of the process will come in the legislative forum where Congress will hear the opposing viewpoints and compromise will be a necessity.



BLM

designated wilderness areas, including procedures governing aircraft flights, management of fish and wildlife habitats, and regulation of mining claims made in areas before they were designated.

In July 1988, the Justice Department concurred with an opinion by Interior's Solicitor which found that Congress did not intend to reserve federal water rights for wilderness areas when it passed the Wilderness Act of 1964. The opinion noted that Congress could reserve water rights for wilderness areas at any time or seek them under state law. According to Secretary Donald Hodel, "This opinion will help provide a sound basis for the ongoing creation of new wilderness areas while preserving state-law water rights which, in the West, are the lifeblood of most state economies."

LANDS

Conveyance of in-lieu land to states totalled 415,000 acres by 1988, leaving fewer than 90,000 acres of public lands for conveyance in the lower 48 states. Land exchanges were a high priority under Director Burford; 1.6 million acres of public lands were exchanged under his tenure for 2.1 million acres of state and private lands to consolidate ownership patterns and promote more efficient land management. More than 107,000 acres of BLM lands were sold to provide for community expansion. BLM continued to designate special management areas on the public lands. By 1988, the Bureau managed 162 natural areas totaling 2.4 million acres and more than 250 Areas of Critical Environmental Concern comprising 5.1 million acres.

ALASKA

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) decided how the state's public lands would be allocated and managed. In addition, ANILCA modified sections of both the Statehood Act and the Alaska Native Claims Settlement Act regarding issues such as ownership of inland waterways, easements, Native allotments, the state land selection period, and certain land conveyances to the state and to Alaska Natives.

ANILCA

BLM conveyed more than 34 million acres of land to Alaska since 1980, with the state receiving title to 84 million acres (over 80 percent of its allotment) by July 1988. In addition, more than 17.8 million acres were transferred to Alaska Native corporations. As of July 1988, title had passed for 36 million acres, or more than 70 percent of the land granted by ANCSA.

In total, BLM Alaska has been given the job of conveying 148 million acres of land since 1959. In the 1980s BLM adopted a "Patent Plan Process" to streamline the required field examinations, survey procedures, and patent preparation time. BLM plans to complete its land transfers by the year 2008.

Inland waterways cover more than 10 million acres of land in Alaska. BLM is currently determining how many of them are navigable. Until the Bureau completes this determination, it will not know which of these lands

Inland Waterways

belong to the state under the Statehood Act. The Submerged Land Act of 1988 ratified as a matter of federal law a 1983 Secretarial policy that applied similar standards to Alaska land ownership as has been applied to the Lower 48. In general, the act provides that the state and Alaska Native corporations will not be charged for lands under lakes larger than 50 acres or rivers wider than 3 chains (198 feet).

Other Federal Lands

In 1988, BLM managed 90 million acres in Alaska. When the title transfer program is completed, BLM will manage approximately 64 million acres, while retaining some functions (such as firefighting) on 150 million acres. ANILCA greatly expanded America's national parks and wildlife refuges; in addition, more than 70 percent of all federal lands classified as wilderness are found in Alaska. Sixteen national wildlife refuges cover 75 million acres, while national forests cover 23 million acres. The National Park Service administers some 50 million acres of parks and preserves. ANILCA also created 25 wild and scenic rivers in Alaska and identified 12 river systems for further study.

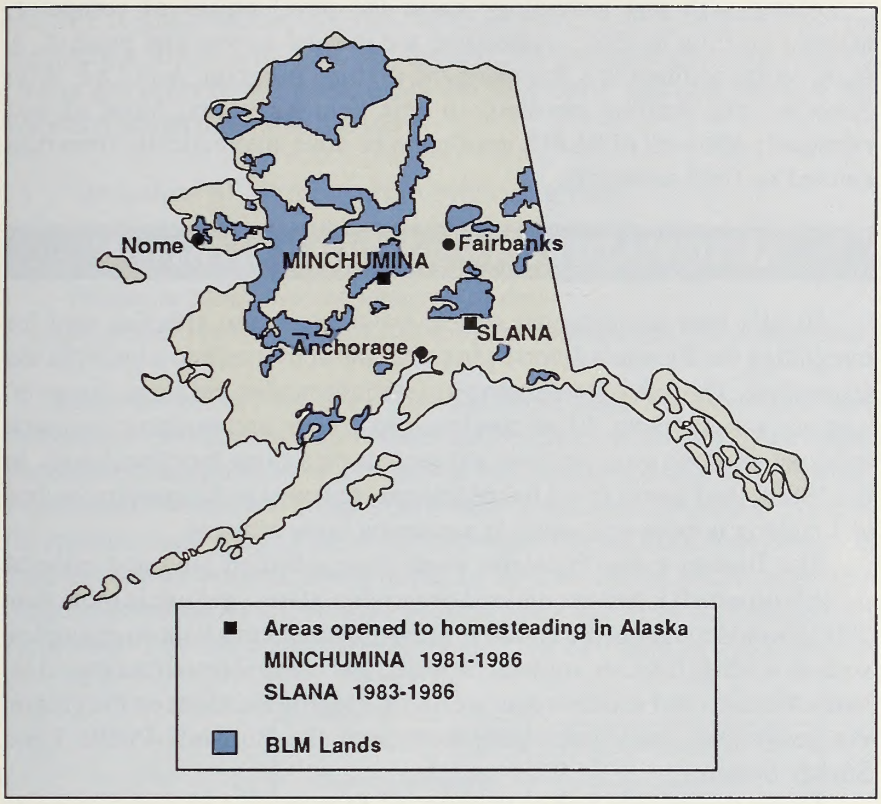
Under ANILCA, BLM's responsibilities for land management picked up something without parallel in the Lower 48: a requirement under Section 810 of the act to evaluate the effects of its actions on traditional subsistence uses of the public lands by rural residents—Indians, Aleuts, and Eskimos. Hunting, fishing, trapping, and the collecting of firewood and various plant foods have always occurred on these lands. With ANILCA's new mandate, BLM began to analyze the effects of its actions (withdrawing, reserving, leasing, or disposing of public lands) on subsistence uses and needs.

This effort has involved working with the Alaska Land Use Council plus state and federal agencies to obtain information from Native corporations, villages, and individuals; BLM hired anthropologists and additional biologists to complete this work. The results have been a more complete understanding of human use of Alaska lands and a new sensitivity for managing those lands to minimize impacts to people still living off the land.

All Native allotment applications made under the 1906 Native Allotment Act that were pending before the Department on or before December 18, 1971, must be processed by BLM. Title has been issued on 2,200 parcels. Over 5,000 applications for an additional 10,000 parcels must be resolved. Congress has legislatively approved many pending allotments, but the complexity of the remaining applications has resulted in a slow and tedious process that BLM plans to complete by the year 2000.

Homesteading

While FLPMA repealed federal settlement laws in the lower 48 states, settlement was allowed to continue in Alaska until October 21, 1986. In 1981, BLM opened about 950,000 acres in the Minchumina area of the Glennallen Resource Area for settlement; 129 applications were filed. In 1983, 10,250 acres were opened at Slana (also in the Glennallen Resource Area), with 500 applications received. But with no electricity or municipal water supplies available to settlers, homesteading became a sacrifice that most people were no longer prepared to accept—only about 20 patents were issued under the program since 1981.



Cadastral Survey

BLM's cadastral survey program faced major challenges in Alaska. Short field seasons, remote and hostile environments, and, until recently, the need for multiple visits to complete survey notes all contributed to a difficult and frustrating effort. Given its responsibility to survey the state in a reasonable time, BLM Alaska made great strides.

Less than 2 percent of the state's 365 million acres had been surveyed at the time of statehood. Shortly thereafter, innovative survey applications were developed: new distance-measuring equipment using radio waves replaced the measuring of distances on the ground and provided point-to-point measurements miles apart. Monumentation requirements for surveys of state and ANCSA selections were reduced to 2-mile intervals on exterior township boundaries. And an Airborne Control Survey system was developed, in which helicopters were employed to transport mobile distance measurement units.

Satellites provided additional surveying capabilities. The Bureau's first Doppler systems, called geoceivers, determined geographic coordinates from onsite data received from orbiting satellites. Today's technology allows even more exacting accuracy in just a few hours by observing several satellites simultaneously. In other areas, BLM has used aerial photo interpretation to determine meanderable bodies of water and to delineate meander lines.

Along with this technology came the development of computer-assisted drafting in 1982, automating the manual survey plat process. A more recent addition is a computerized drafting program, AutoCad. With AutoCad, plat drafting can keep up with field surveyors. AutoCad will eventually allow all of BLM's drafting to be done automatically from data entered by field surveyors.

AUTOMATION AND MODERNIZATION

BLM's land use planning system proved to be an effective tool for integrating the Bureau's diverse programs and activities into a multiple use framework. The task of integrating its vast information holdings, however, was not yet complete. BLM continued to collect and maintain resource information along program lines and records data along functional lines. In the 1980s, the Bureau faced the additional challenge of integrating its data and making it more accessible to a growing body of users.

The Bureau today maintains more than a billion land and mineral records on which it documents land ownership, status, and use in more than 200 offices throughout the country. BLM also maintains data on resources, such as wildlife habitats, mineral deposits, and cultural resources on public lands. Records and resource data are tied to specific locations on the ground via geographic coordinates generated from the Bureau's Public Land Survey System.

Under Director Robert F. Burford, BLM continued its early efforts to develop information resource management strategies, including standards for data, data bases, and information exchange between automated systems. Because the Bureau continued to decentralize its operations to field offices, it also planned to "distribute" its Land Information System to local users. Administrative systems, which were developed with 1970s technology, were also scheduled to be modernized. By the mid-1990s, the Bureau's target system will be implemented in field offices. In the meantime, existing ADP systems will be maintained.

BLM's Land Information System

The Bureau's Land Information System (LIS) will allow managers and the public to access and select information they need from any BLM office. The system will provide records information such as Master Title Plats on computer screens or printouts. The LIS will also create resource maps, allowing its users to select and overlay critical resource themes (locations of wildlife habitats, forests, mineral deposits, recreation areas, etc.) to determine potential conflicts in use. This information, combined with land and mineral records, will allow LIS users to pinpoint resource locations, identify land ownership and use, and more efficiently analyze issues—replacing the cumbersome, hard-to-locate, and difficult-to-update manual records and map overlay schemes employees and the public have had to use in the past.

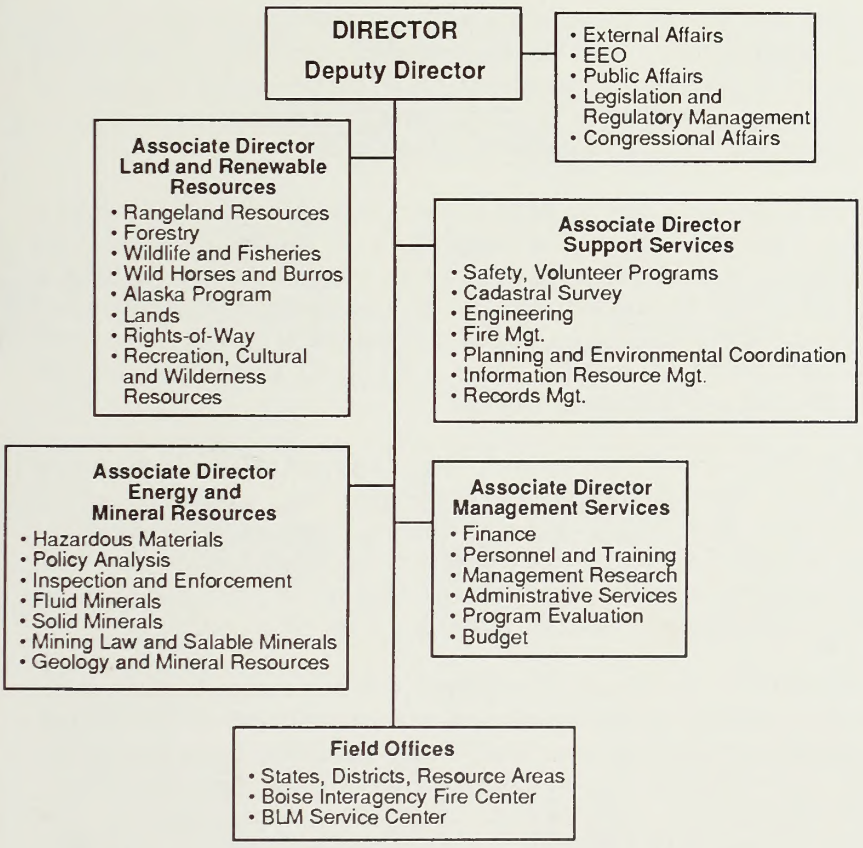
Information Management Goal

The Bureau of Land Management's goal for information management is to make effective use of automation in making resource management decisions and in providing information to the public. Data will be automated

only if it is cost-effective to do so—in many cases, manual methods will be maintained. BLM will continue to maintain personal contacts with its clients and support traditional hands-on field work. The objectives of the Bureau's automation plan are to:

- Streamline BLM responses to public inquiries.
- Facilitate processing of applications and permits.
- Improve access to land records and BLM resource data.
- Ensure accuracy and consistency of data.
- Improve BLM's planning, tracking, and evaluation of its programs.

Since the mid-1970s, the BLM Service Center has developed and maintained more than 40 automated data systems, running the gamut from Bureauwide administrative systems to centralized records and resource systems. BLM State and District Offices have also developed ADP systems for specific uses, such as the Western Oregon Digital Data Base, which is used to prepare 10-year forest plans. In the late 1980s, microcomputers became common in BLM field offices, reducing their dependency on Honeywell Level-6 computers. From being a rare item in 1985, micros



BLM organizational structure in 1987.

A DIRECTOR'S PERSPECTIVE: 1981-1989

by Robert F. Burford

Editor's Note: Robert Burford graduated from the Colorado School of Mines in 1944. He has worked as a mining engineer and has operated sheep and cattle ranches in northwest Colorado. He served three terms in the Colorado House of Representatives from 1974 to 1980, and was elected Speaker in 1979, before being selected as Director by President Reagan.

Robert F. Burford

It has certainly been a privilege to serve as the Director of BLM during the Reagan Administration. Not to sound prematurely nostalgic, but I carry many fond memories of the experiences and the friendships derived from my tenure. I cannot take credit for all Bureau accomplishments while I have been Director —a great number were pent-up ideas of BLM career professionals that had gone long unimplemented. On that count, BLM could not have reached its goals with out the creativity and dedication of its employees or from the cooperation of the public lands users of the '80s.

I do, however, take pride in seeing that BLM was set back on track. I was perhaps a bit more than a pacifist in the movement termed the "Sagebrush Rebellion." When I first came to Washington, our public lands were being managed, not as belonging to all the taxpayers of this nation, but more along the lines of private playgrounds for a number of special interests. The primary concern was the preservation of those playgrounds.

Lost had been the leadership to carry out BLM's mission to manage the public lands for a multiplicity of uses, not just a single use. The foundation for that mandate, the Federal Land Policy and Management Act (FLPMA), tells us to base our management of the public lands on this concept and on the principle of sustained yield. So, while our stewardship of the public lands includes protection of wildlife habitat, cultural ruins and federal wilderness areas, these BLM-managed lands yield a rich bounty of timber, and livestock forage, plus significant deposits of oil, gas, coal, and other energy minerals.

Given BLM's jurisdiction over 270 million acres (about 46 percent of the federally-owned lands), that's a big job. There will always be a bit of one-upmanship, I imagine, between all the different users of the public lands—whether it's ranchers, hunters, oil riggers, backpackers, river rafters, or hardrock miners. They each think their use as always the most important one offered by our public lands. The magnitude and value of the public land resources inevitably lead to conflicting demands by the many users of the public lands.

The FLPMA mandate for multiple-use management is BLM's most powerful tool for reconciling these demands and viewpoints about how the public lands are to be administered. It would be a travesty for BLM to become a single-focus organization like the Park Service or the U.S. Fish and Wildlife Service. It's a balancing act to be sure, but while difficult, multiple-use provides enormous results for the nation. In 1987, for instance, BLM oversaw a leasing program that produced 148 million barrels of oil from public lands; yet, on the other

hand, we designated new, more sensitive lands as Areas of Critical Environmental Concern (ACECs) that now total 5.1 million acres.

I set as my major goal a return to our congressional multiple use guidance. It was anticipated that with stricter attention to multiple use, conflicting user interests and desires would increase. To cope with this, I urged BLM employees to conduct their official public service duties in a manner that could best be described as a "good neighbor" approach. It was intended to place a greater emphasis and sensitivity to our working relationships with state and local governments and the public lands users themselves.

As I reflect upon past accomplishments, I have seen a strong bond develop between BLM and the public land users. This partnership has successfully reversed the lock-up trend of previous administrations and returned control from the chosen few to local governments that are more directly responsive to the public's needs.

One cooperative effort of which I am particularly proud is in BLM's land use planning process, where I have seen a dramatic improvement during the past eight years. BLM's resource management plans are the blueprints for future management; they are flexible and reflect the conditions of the land. Their effectiveness as a management tool comes from the close working relationship BLM people have established with public land users.

Another continuing challenge is automation. In the past few years, we have made a good start on modernization and automation—ALMRS, GIS, the Land Information System. The modernization effort is going to have a huge impact on BLM's ability to carry out its mission for many years to come. I hope the effort is ingrained enough by the time I leave here that its own momentum will carry it through the next administration, and the next one after that.

The elevation of energy and minerals to be co-equal with renewable resources was yet another key accomplishment. Our objective was to get the responsibility for onshore oil and gas operations moved from the former Geological Survey Conservation Division into BLM. As a result, we gained the responsibility for both subsurface and surface regulation. That was a good stroke for the land, and a good stroke for government. It did not make much sense that BLM was environmentally responsible for the surface of the land but not the subsurface. The fact that we were able to convince a couple of former Secretaries, James Watt and William Clark, that those two responsibilities should be melded together was an organizational coup.

In terms of personnel, feelings run deep and often mixed on the presence of political appointees within the ranks of the agency. Like it or not, this practice will continue to be a fact of life in Washington. I feel that BLM has been aided by this infusion of talent, men and women who brought with them different portfolios of accomplishment, because, by and large, they have been a complement to the careerist land manager's goals. Frankly, their presence will go far to assure that the Bureau of the future does not become an inbred, stagnant organization.

Will multiple use of the public lands survive? It can, and it should, but it will take more work and a renewed commitment from our elected officials. Multiple use, practiced wisely, is good for all Americans. Public lands are for the public to utilize and to enjoy. We have come too far to abandon our efforts now.

became a readily available tool for most BLM employees by 1988. BLM employees began to procure or write additional programs for specific local needs. These actions, however, pointed to the need for a unified automation plan in BLM—one that established data standards and common data bases as well as requirements for data exchange among systems.

After considering the use of existing systems to automate land and mineral record operations, BLM began developing the Automated Land and Mineral Record System (ALMRS) in 1984. The Bureau's Field Committee, composed of BLM Associate State Directors, is supervising this effort. ALMRS became a presidential priority system in 1987, the same year BLM decided to "bundle" hardware and software procurements with commercial off-the-shelf products rather than designing a unique system. In 1988 BLM started a comprehensive modernization study and began

THE HUMAN RESOURCE DEVELOPMENT COMMITTEE AND ITS ROLE IN IMPLEMENTING CHANGE IN THE BUREAU OF LAND MANAGEMENT

by Mike Evans
Management Services

The Human Resource Development Committee (HRDC) is an operating subgroup of the Bureau Management Team (BMT). It is chartered to recommend BLM policy and strategic direction to the BMT for employee development and training, organization and management development, and other human resource development activities.

The HRDC has three executive members that meet with managers and employees from all organizational levels. This enables the members to gain perspective and technical input, and it allows employees to participate in the development of the policies that affect them.

The HRDC assists the BMT in improving workforce productivity, competence, and morale by building and maintaining forward thinking, evaluating existing policies and programs, and making recommendations regarding change. The HRDC also provides guidance to Bureau HRD officials and information to employees.

Most recently, the HRDC sponsored a major workshop that set in motion many initiatives for further integrating the workforce through a special focus on minorities and women; guided a major process to increase morale and agency pride; and is sponsoring a comprehensive career development program for all BLM managers and specialists.

The HRDC will continue to represent the collective commitment of the BMT to human resource development, and it will continue to learn from all BLM people in its pursuit of excellence in managing both natural and human resources.

identifying system requirements to integrate ALMRS, LIS, and other automated systems in the Bureau and to ensure that its automation-related proeurements will be well eoordinated.

The results of this work should transform BLM. According to ALMRS Projeet Manager Brian Bernard, in the mid-1990s a typieal Bureau field office will do the same work it has always done—manage resourees, proeess right-of-way applieations, examine mining elaims, and so forth. However, the tools it uses to do the job will be different. Computers and terminals will be used as eommonly as they are today in banks and libraries. The result will be more time for employees to spend with individual members of the publie and for on-the-ground field work, with less time spent loeating case files or traeking down reports.

CONCLUSION

Public land management has become an increasingly complex seienee—and it will likely remain so. But despite BLM's increasing "proeedural" requirements, land management remains an art as mueh as it is a seienee. Administrations, manuals, systems, and reorganizations have eome and gone, but the role of individual employees in getting BLM's work done is as eritieal as ever.

The Bureau of Land Management today employs people in 197 oeeupational series—out of a total of 620 in the entire federal government. The growth and diversifieation of BLM's workforee is a good indieator of the responsibilities the Bureau has gained in serving the American publie. Now that we have secured a mission—with a firm eommitment to multiple use management of the publie lands—we must implement the vision.

The Bureau values its traditions and values its employees. There have been plenty of ehallenges and controversies on the publie lands sinee 1785, with battles won and lost, depending on your perspeetive, and more are yet to eome. But opportunity also remains—for BLM employees, land users, and the Ameriean publie at large, working together to manage the public lands for multiple use. And that's what makes the experienee exciting and worthwhile. BLM's unique values have developed from its unique history. An example of these values can be found from a page taken from the reeently completed strategie plan for the Bureau's reereation program, *Recreation 2000:*

INNOVATIVE PUBLIC LAND MANAGEMENT

> We are proud of what BLM people have accomplished over the years. However, we encourage each of you to recommend and try new ideas and options to meet the challenges of the future.... Our organization can develop innovation through people by

- establishing an environment within the organization that supports creativity;
- rewarding and recognizing employees who have implemented unique and successful programs or developed unusual approaches to the solution of problems;
- showing employees a willingness to invest in their future—a concern for them on a personal basis;
- encouraging experimentation while discouraging the attitude that it "cannot be done;"
- developing an attitude in managers of encouragement of employees to try new ideas or different directions in management styles;
- implementing a "bottoms-up" style of management—where all are encouraged to contribute and participate;
- establishing procedures and policies that break down the bureaucratic tendency to stifle creativity;
- developing a policy that looks toward the future and at long-term solutions to potential or real problems; and
- continually appraising and reappraising the direction and impact of policies with an eye on creative change to correct areas of concern.

We encourage managers and all employees to think, act, stimulate, encourage, and reward creativity, freedom of expression and the willingness to "give it a try."

Individual employees in the Bureau of Land Management and its predecessor agencies have clearly made a difference in getting things done on the public lands. This will remain true in the future. How we do our jobs influences millions of Americans.

BLM's history is America's history. How Americans view their public lands is reflected in the Bureau's evolving mission. Our history can and should be used as a guide to the future. History *does* repeat itself, and with this awareness, we should be well prepared to meet the challenges of the future.

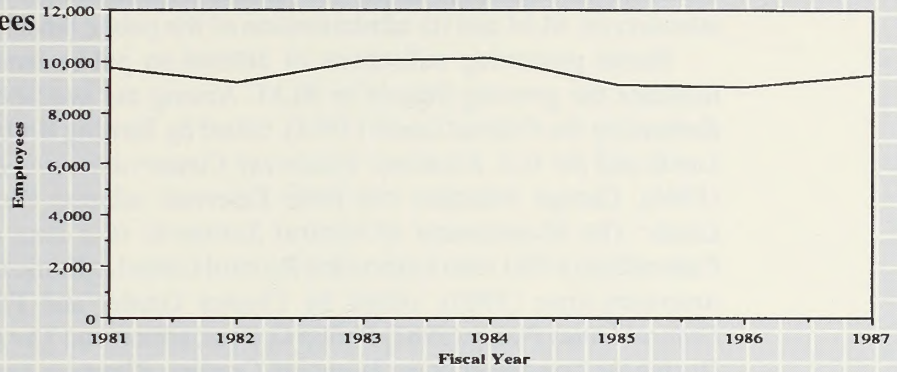
Public land issues that have shaped BLM in the past will continue to influence our future. Major themes include:

development vs. preservation
multiple use vs. dominant use
states' rights vs. federal control
new programs vs. traditional uses

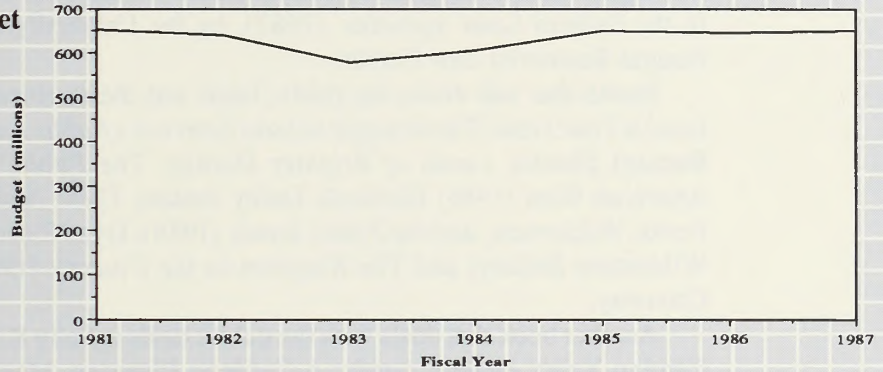
Balancing the needs, uses, and wishes of the American public on its lands is the Bureau's job. Working for BLM is exciting, frustrating at times, and, ultimately, rewarding. We hope that you've enjoyed this account of BLM's history and that you will be motivated to learn more.

Bureau of Land Management 1981-1988

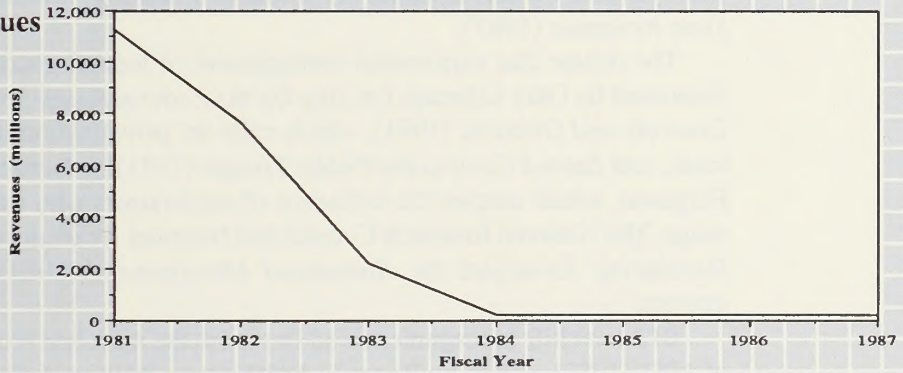
Employees



Budget



Revenues



Responsibility for offshore mineral leasing was transfered from BLM to the Minerals Management Service (MMS) in 1982. This leasing accounted for the bulk of revenues until 1982

Directors	Robert Burford	1981-1989
Major Legislation	BLM-MMS Merger	1982
	Federal Oil and Gas Royalty Management Act	1982

FURTHER READINGS

While it is too early for historical assessment of BLM and public land policies in the 1980s, there is no shortage of writings on the subject. Political scientists and natural resource professionals are increasingly focusing their attention on BLM and its administration of the public lands.

Books presenting collections of articles on public land issues best illustrate the growing interest in BLM. Among the available books, see *Rethinking the Federal Lands* (1984), edited by Sterling Brubaker; *Public Lands and the U.S. Economy: Balancing Conservation and Development* (1984), George Johnston and Peter Emerson, editors; *Western Public Lands: The Management of Natural Resources in a time of Declining Federalism* (1984) John Francis and Richard Ganzel, editors; *Land Reform, American Style* (1983), edited by Charles Geisler and Frank Popper; *Federal Lands Policy* (1987) Phillip O. Foss, editor; and *The Public Lands During the Remainder of the Twentieth Century: Planning, Law and Policy in the Federal Land Agencies* (1987), by the University of Colorado's Natural Resources Law Center.

Books that talk about the public lands and their values include *This Land is Your Land: The Struggle to Save America's Public Lands* (1984) by Bernard Shanks; *Lands of Brighter Destiny: The Public Lands of the American West* (1986) Elizabeth Darby Junkin; *These American Lands: Parks, Wilderness, and the Public Lands* (1986), Dyan Zaslowsky and the Wilderness Society; and *The Kingdom in the Country* (1987) by James Conaway.

Another book that deals with the public lands is Sally K. Fairfax's and Carolyn Yale's *Federal Lands: A Guide to Planning, Management, and State Revenues* (1987).

The debate that surrounded management of federal grazing policy is illustrated by Gary Libecap, *Locking Up the Federal Range: Federal Land Controls and Graziers* (1981), which calls for privatization of the public lands, and *Sacred Cows at the Public Trough* (1983) by Denzel and Nancy Ferguson, which decries the influence of stockraisers who use the public range. The National Research Council and National Academy of Sciences' *Developing Strategies for Rangeland Management* (1984) is also of interest.

BLM wildlife management is addressed in the *Audubon Wildlife Report of 1987* (1987), edited by Roger L. DiSilvestro, William J. Chandler, and Katherine Barton..

Mineral policy in the early 1980s is handled by Robert Nelson in his *The Making of Federal Coal Policy* (1983). A book critical of federal mineral policy and advocating reform is *Public Domain—Private Dominion: A History of Public Mineral Policy in America* (1985) by Carl Mayer and George Riley.

On Alaskan issues, see Frank Willis', *Do Things Right the First Time: The National Park Service and the Alaska National Interest Lands Conservation Act of 1980* (1985). Gary Stein discusses the Alaska state land selection program in *"Promised Land" : A History of Alaska's Selection of Its Congressional Land Grants* (1987).

APPENDIX 1
Commonly Used Acronyms

ACEC	Area of Critical Environmental Concern
ADP	Automated Data Processing
AFCS	Alaskan Fire Control Service
ALDS	Automatic Lightning Detection System
ALMRS	Automated Land and Mineral Record System
AMP	Allotment Management Plan
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska Natural Interest Lands Conservation Act
ARPA	Archaeological Resources Protection Act
AUM	Animal Unit Month
BIFC	Boise Interagency Fire Center
BLM	Bureau of Land Management
BMT	Bureau Management Team Bureau (see BLM)
CCC	Civilian Conservation Corps
CEQ	Council on Environmental Quality
CMA	Cooperative Management Agreements
CMU Act	Classification and Multiple Use Act
DM	District Manager
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMARS	Energy Mineral Allocation Recommendation System
EMARS II	Energy Minerals Activity Recommendation System
EPA	Environmental Protection Agency
ESI	Ecological Site Inventory
ESO	Eastern States Office
FLPMA	Federal Land Policy and Management Act
FOGRMA	Federal Oil and Gas Royalty Management Act
FS	Forest Service
FWPCA	Federal Water Pollution Control Act

FWS	Fish and Wildlife Service
FY	Fiscal Year
GLO	General Land Office
HMP	Habitat Management Plan
IAMS	Initial Attack Management System
KGS	Known Geologic Structure
LIS	Land Information System
LWCF	Land and Water Conservation Fund
MFP	Management Framework Plan
MMS	Minerals Management Service
MOSS	Map Overlay and Statistical System
MTP	Master Title Plat
NABC	National Advisory Board Council
NAS	National Academy of Sciences
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRDC	Natural Resources Defense Council
NWCG	National Wildfire Coordinating Group
OAS	Office of Aircraft Services
O&C	Oregon and California
OCS	Outer Continental Shelf
OEPR	Office of Environmental Project Review
OPEC	Organization of Petroleum Exporting Countries
ORRRC	Outdoor Recreation Resources Review Commission
ORV	Off-Road Vehicle
OTA	Office of Technology Assessment

P&EC	(Division of) Planning and Environmental Coordination
PET	Petroleum Engineering Technician
PLLRC	Public Land Law Review Commission
PRIA	Public Rangelands Improvement Act
PSD	Prevention of Significant Deterioration
R&PP Act	Recreation and Public Purposes Act
RAWS	Remote Automated Weather Stations
RMP	Resource Management Plan
SIMO	Simultaneous Oil and Gas Leasing Program
URA	Unit Resource Analysis
USGS	U.S. Geological Survey
WSA	Wilderness Study Area

APPENDIX 2
Chronology of Significant Events

1776

The Continental Congress declared the independence of the 13 colonies from Great Britain.

Maryland called upon the new states with claims to the territory west of the Appalachian Mountains to cede their titles to the United States for the common benefit of the nation. Virginia and other states with claims rejected Maryland's request.

1778

Maryland refused to sign the Articles of Confederation until the states with claims to the western lands ceded their interests.

1780

In an effort to appease Maryland and secure unanimous ratification of the Articles of Confederation, New York relinquished its interests to lands west of the Appalachian Mountains. Maryland signed the Articles of Confederation.

The Congress of the Confederation called upon all the states to relinquish their claims to the western country and pledged itself to administering the lands for the common benefit of the nation.

1781

The Congress of the Confederation accepted New York's relinquishment of interest in the western lands.

1783

Great Britain surrendered its interests to the lands south of the Great Lakes and east of the Mississippi River in Treaty of Paris.

1784

Virginia ceded its land interests, except in Kentucky, to the United States.

1785

The Congress of the Confederation enacted a Land Ordinance for the public lands northwest of the Ohio River. The law provided for the survey of public lands into townships 36 square miles in size. Lands were to be sold at no less than $1 an acre and in tracts no smaller than 640 acres.

1786

Connecticut ceded its interests in western lands.

1787

South Carolina relinquished its claim to the public domain.

1789

The Constitution gave Congress the "Power to dispose of and make all needful Rules and Regulations respecting The Territory and other Property belonging to the United States."

Congress established the Treasury Department and gave it the responsibility of overseeing the sale of public lands.

1790

The United States accepted North Carolina's relinquishment of title to lands beyond the Appalachian Mountains. The area of Tennessee was nominally considered part of the public domain, but the United States relinquished its interests to Tennessee in 1806 and 1846.

1796

The first general land law since ratification of the Constitution substantially reenacted the Land Ordinance of 1785. The rectangular survey system was retained. Public lands could still be sold in tracts no smaller than 640 acres, and the minimum price was raised to $2 an acre.

1800

The Land Law of 1800 reduced the size of tracts that could be sold to 320 acres and allowed purchasers up to 4 years to pay the amount bid.

1802

Georgia ceded its interest in the area south of Tennessee to the United States.

1803

The United States purchased from France the territory drained by the western tributaries of the Mississippi River. The Louisiana Purchase doubled the size of the young American republic.

Ohio entered the Union as first state carved from the public domain. The federal government retained title to public lands within Ohio's boundaries but gave the state Section 16 in each township to help promote the establishment of public schools.

1812

The General Land Office was created on April 25. Headed by a commissioner, the new bureau was responsible for the survey and sale of public lands. The agency was placed within the Treasury Department.

1818

The Convention of 1818 with Great Britain gave the United States the Red River Valley of the North.

1820

A new land law significantly changed public land sale policy. Credit payments were abolished. Lands were sold in tracts no smaller then 80 acres and the minimum price was reduced to $1.25 an acre.

1841

The Preemption Law provided for the preferential sale of 160 acres of public lands to actual settlers at the minimum price per acre.

1845

Texas entered the Union but retained title to the unappropriated lands within its borders.

1846

The Oregon Compromise with Great Britain put the boundary between Canada and America from the Rocky Mountains to the Pacific Ocean at the 49th Parallel. The Pacific Northwest—Washington, Oregon, Idaho, and western Montana—was made part of the public domain.

1848

Under the Treaty of Guadalupe Hidalgo, Mexico ceded California and the Southwest to the United States.

1849

The General Land Office was transferred to the new Department of the Interior.

1850

The United States purchased the northwestern portion of Texas and added 75 million acres to the public domain.

1853

The United States, through the Gadsden Purchase, acquired 19 million acres from Mexico.

1862

The Homestead Law passed on May 20th gave settlers the right to enter 160 acres and receive title after 5 years of residence and cultivation.

Public lands were granted to the Union Pacific and Central Pacific Railroad Companies to aid construction of the nation's first transcontinental rail line.

The Morrill Law granted each state 30,000 acres of public land for each congressman and senator to fund establishment of agricultural and mechanical arts colleges.

1866

The Lode Mining Law opened the public mineral lands to exploration and development. The law recognized local mining law and provided means for the patenting of mineral veins.

1867

The United States purchased Alaska from Russia.

1870

The Placer Mining Law provided for the patenting of placer mining claims.

1872

The General Mining Law was enacted.

Yellowstone National Park established—the nation's first national park.

1873

The Coal Lands Law permitted location and purchase of public lands chiefly valuable for coal.

The Timber Cultural Law was enacted by Congress to promote the growth of timber in the arid western United States. Law allowed entries of 160 acres.

1877

The Desert Land Law provided for the reclamation of arid lands west of the 100th Meridian (except Colorado) through irrigation. Entries of 640 acres allowed.

1878

The Timber and Stone Law provided for the entry and sale of 160 acres of timberland in California, Nevada, Washington, and Oregon.

1879

Congress established the U.S. Geological Survey. One duty of the new agency was the "classification of the public lands and the Geological Structure, mineral resources and products of the national domain."

The first Public Lands Commission was authorized by Congress to study the public land laws and recommend changes.

1884

Congress extended the provisions of the General Mining Law to Alaska but stated that no other public land laws applied.

1891

The General Public Lands Reform Law repealed the Preemption and Timber Culture Laws. Desert Land Law entries were reduced to 320 acres and the law's provisions were extended to Colorado. Townsite Laws were extended to Alaska and the sale of sites for trade and manufacturing was authorized.

The General Public Lands Reform Law also authorized the President to create forest reserves from the public domain.

1892

The Timber and Stone Law was extended to the remainder of public domain (except Alaska).

1894

The Carey Land Law provided up to 1 million acres of public land to western states interested in sponsoring large-scale irrigation projects.

1897

The administration of forest reserves was provided for by Congress. The General Land Office exercised this authority.

1898

Congress extended the provisions of the Homestead Law to Alaska. Timber cutting and railroad rights-of-way provisions were also provided for Alaska.

1900

The Coal Lands Law of 1873 was extended to Alaska.

1902

The Reclamation Law provided for the federal construction of large-scale irrigation projects.

1903

The second Public Lands Commission was appointed by President Theodore Roosevelt.

1905

The Forest Service was established within Department of Agriculture to administer and manage forest reserves (renamed national forests in 1907).

1906

The Antiquities Law provided for the preservation and protection of prehistoric, historic, and scientifically significant sites on public lands and the creation of national monuments.

1909

The Enlarged Homestead Law of 1909 provided up to 320 acres of nonirrigable, semiarid land to homesteaders.

The United States began a policy of reserving coal in patents issued for Homestead and other nonmineral entries.

1912

The Three-Year Homestead Law reduced the time settlers had to reside on and cultivate their entries from 5 to 3 years.

1914

United States began reserving petroleum, natural gas, phosphate, and other minerals in patents issued under the Homestead and other nonmineral land laws.

The lease of coal deposits in Alaska was authorized.

1916

The Stockraising Homestead Act allowed entries of 640 acres for lands determined to be chiefly valuable for grazing purposes. Patents issued under this law reserved all minerals to the United States.

Congress took back title to the Oregon and California Railroad Company land grant. The more than 2 million revested acres included some of the Nation's best timber. Administration of the lands was given to the General Land Office.

The National Park Service was created.

1920

The Mineral Leasing Law provided for the exploration and development of coal, petroleum, natural gas, and other minerals by lease.

1926

The Recreation Act allowed conveyance or lease of public lands valuable for recreational purposes to state and local governments.

1928

The Mizpah-Pumpkin Creek Grazing District was established by Congress as an experiment in leasing public lands for grazing purposes.

1930

President Herbert Hoover created the third commission to study public land issues. The commission recommended in 1931 that the public domain be granted to the states, but this proposal was rejected by Congress.

1934

The Taylor Grazing Act provided for regulated grazing on the public lands (exclusive of Alaska) to improve range conditions and stabilize the western livestock industry. The law permitted 80 million acres to be placed into grazing districts. Administration of grazing districts went to the Division of Grazing (later renamed the Grazing Service). The General Land Office was responsible for administering grazing on public lands outside the districts.

President Franklin D. Roosevelt withdrew most public lands in the western United States for classification.

1937

The Oregon and California Revested Lands Sustained Yield Act was passed to enhance the management of General Land Office administered timberlands in western Oregon.

1938

The Oregon and California Revested Lands Administration was placed within the General Land Office to implement the O&C Revested Lands Sustained Yield Act.

The Small Tract Act provided for the sale or lease of tracts no larger than 5 acres for home and other purposes.

1939

The Alaskan Fire Control Service was created within the General Land Office.

1945

The Small Tract Act was extended to Alaska.

1946

The Bureau of Land Management was created by the merger of the General Land Office and the Grazing Service in President Harry Truman's Reorganization Plan No. 3.

Fred W. Johnson was selected as the first BLM Director.

1947

The Acquired Minerals Leasing Act provided for the lease of petroleum, natural gas, coal, and other minerals on lands purchased by the United States.

The Materials Act gave the Bureau of Land Management authority to dispose of timber and other resources.

The Nicholson Plan provided a scheme for funding BLM's range management program through a new grazing formula.

1948

Marion Clawson became Director of the Bureau of Land Management.

BLM began decentralizing many management and decisionmaking responsibilities from Washington to its field offices.

1949

Congress provided for the sale of public lands in Alaska.

BLM began to manage its public timberlands outside the O&C area and Alaska.

1951

BLM inaugurated a new timber sales policy for O&C lands; the volume of timber sold and price received both rose.

BLM reported a need to improve public rangelands through massive range improvement and rehabilitation programs.

The discovery of oil in Montana and North Dakota sparked a rush to lease public lands for oil and gas exploration and production.

1953

Edward Woozley was selected as BLM Director.

The Outer Continental Shelf Act gave the Secretary of the Interior authority to lease mineral lands more than 3 miles offshore.

1954

The Recreation and Public Purposes Act amended the Recreation Act of 1926 to allow for the sale and lease of public lands for public purposes other than recreation.

The Multiple Mineral Development Act allowed for the development of locatable and leasable minerals on the same tract of public land.

BLM's reorganization resulted in the creation of the State Office system.

1955

The Multiple Surface Development Act was passed to prevent the use of mining claims for nonmineral purposes. Federal land management agencies were allowed to administer the surface resources of all claims staked after passage of the law. On claims staked prior to the act, agencies could acquire management authority through legal means.

The Multiple Surface Use Act also specified that sand, gravel, and certain other minerals were no longer locatable under the General Mining Law of 1872 but were subject to disposal by sale under the Materials Act of 1947.

A new grazing fee formula was developed for public rangelands based on livestock commodity prices.

BLM estimated that Alaska public lands had 350 billion board feet of timber and called for better management of the resource.

1957

An oil discovery in southern Alaska led to intensive petroleum exploration and development in Alaska.

Fires devastated Alaska. The Kuskokwin fire burned an area twice the size of Rhode Island.

1959

Alaska was admitted to the Union and granted more than 100 million acres of public land.

BLM began to use smokejumpers to fight fires in Alaska.

The Wild Horse Protection Act prohibited the roundup of wild horses by aircraft and motor vehicles.

1960

The Public Land Administration Act allowed BLM to use forfeited deposits to rehabilitate public timberlands, to accept donations for the improvement and management of public lands, and to enter into cooperative agreements with others to better manage the public domain and its resources.

BLM inaugurated Project 2012, a 50-year plan for improving the administration of the public domain.

1961

The Kennedy Administration introduced the "Third Conservation Wave".

Karl Landstrom became Director.

BLM emphasized a nationwide inventory and classification program for public lands to determine needed land tenure adjustments and improve resource use and development.

BLM inaugurated Master Unit plans to better determine desirable land tenure arrangements before acting on land-use applications.

BLM issued its first recreation policy handbook. Prepared for Oregon, the policy called for the development of recreation sites on BLM-administered lands and led to the hiring of BLM's first recreational specialist.

1962

Columbus Day windstorm in western Oregon destroyed 1.25 billion board feet of lumber on BLM-administered lands.

1963

Charles Stoddard selected as Director.

BLM's Vale Project was initiated in western Oregon to demonstrate the value of managing not only livestock numbers on the public range but also grazing methods and land improvement methods.

BLM established service centers in Portland, Oregon, and Denver, Colorado, to centralize administrative functions and technical expertise.

1964

The Public Land Law Review Commission was created by Congress to study the nation's public land laws and recommend changes.

The Classification and Multiple Use Act required BLM to determine which public lands should be retained in federal ownership and which should be disposed. The Act was to be in force only until the Public Land Law Review Commission issued its report.

The Public Land Sale Act gave BLM the authority to sell lands classified for disposal under the Classification and Multiple Use Act.

The Land and Water Conservation Fund was established to fund the acquisition of outdoor recreation areas.

The National Wilderness Act was enacted, but its provisions were not applied to BLM-administered lands.

1965

The Water Quality Act established water quality standards for the nation.

The Water Resources Planning Act created a council to coordinate water resources work.

The Oil Shale Advisory Board reported to the Department of the Interior that the "national interest is best served by the immediate commencement of oil shale development."

1966

Director Boyd Rasmussen appointed.

The National Historic Preservation Act expanded national cultural resources policy to protect prehistoric and historic properties of regional and local importance.

BLM officially established Resource Area Offices to provide better on-the-ground management of the public lands.

1967

BLM designated its first recreation area, the Red Rocks Recreation Lands in southern Nevada, under the Classification and Multiple Use Act.

1968

The Wild and Scenic Rivers Act provided for the preservation of free-flowing rivers. BLM administers portions of the Rogue River in Oregon, the Rio Grande in New Mexico, and several other rivers under this authority.

The National Trails System Act allowed for the establishment of a nationwide trails system.

Oil was discovered on Alaska's North Slope.

BLM established its first primitive areas in Arizona and Utah through the land classification process.

The "Johnny Horizon" program was initiated by BLM to promote public awareness of BLM-administered lands.

1969

The BLM's first wild horse range was established in the Pryor Mountains along the Montana-Wyoming border.

The Boise Interagency Fire Center officially opened.

1970

The National Environmental Policy Act made protection of the environment a national priority by requiring all federal agencies to assess the impacts of their actions on the environment and to mitigate adverse effects.

The Geothermal Steam Act provided for the leasing of geothermal energy on public lands.

Congress created the first National Conservation Area in the King Range of northern California to promote multiple use and sustained yield management of the area by BLM.

BLM implemented Management Framework Plans under its planning system to provide better consideration of social and economic factors when making management decisions.

1971

Burt Silcock selected as Director.

The Public Land Law Review Commission issued its report, *One-Third of the Nation's Land.* The commission called for a revision of public land laws and policies to better meet the many demands being placed on the public lands.

The Alaska Native Claims Settlement Act resolved land claims of Alaska Natives. The Natives were provided 40 million acres and more than $962 million. The act also provided for the Interior Department to withhold 80 million acres of public land from Native and state selection for study as potential national parks, wildlife refuges, wild and scenic rivers, and national forests.

The Wild and Free Roaming Horse and Burro Act provided for protection and management of these animals on federal lands.

The Snake River Birds of Prey Area was established to protect valuable raptor nesting areas.

The Department of the Interior set aside National Recreation Lands on BLM lands in the California Desert.

Executive Order 11593 required federal agencies to inventory their lands to identify and protect significant cultural resource properties.

1972

The Federal Advisory Committee Act required more effective use of advisory boards by federal agencies. BLM restructured its advisory boards to reflect a broader range of public user and interest groups.

1973

Curt Berklund became BLM Director.

BLM lost a suit brought by the Natural Resources Defense Council on the adequacy of BLM's programmatic environmental impact statement (EIS) for the range management program. BLM was required to prepare EISs on more limited areas.

Congress declared the environmental study of the Trans-Alaska pipeline sufficient and approved project construction.

The Endangered Species Act provided for the protection of plants and animals facing extinction, as well as their habitats.

1975

BLM's first automated land records system established in Alaska.

1976

The Federal Land Policy and Management Act (FLPMA) passed. Congress established policy to retain the public lands under federal ownership, to inventory and identify their resources, and to provide for the multiple use and sustained yield management of public lands and resources through land use planning.

BLM inaugurated its nationwide Adopt-A-Horse program in an effort to resolve overcrowding of the public range by wild horses and burros.

BLM completed its first Habitat Management Plan for public lands in the Arizona Strip District.

1977

Frank Gregg selected as BLM Director.

BLM developed Resource Management Plans to be prepared in conjunction with Environmental Impact Statements; the planning system also provided for more specific resource activity plans.

1978

The Public Rangelands Improvement Act sought to improve range conditions on the public lands.

The Surface Mining Control and Reclamation Act provided environmental safeguards for surface mining practices and ensured rehabilitation of mined areas.

1980

The Alaska National Interest Lands Conservation Act set aside millions of acres of public land in Alaska as national parks, national wildlife refuges, and wild and scenic river areas.

BLM and the Forest Service proposed a "Jurisdictional Transfer Program" to consolidate lands and operations in an effort to increase management efficiency. The proposal was pursued under the Reagan Administration and came to be called the "BLM/FS Interchange." Congress, however, did not implement the proposal.

The Energy Security Act advocated alternative energy sources by promoting the development of oil shale, synthetic fuel, wind power, and geothermal sources.

1981

Robert F. Burford was named BLM Director.

1982

The Federal Oil and Gas Royalty Management Act strengthened inspection and enforcement of onshore oil and gas activity.

Minerals Management Service (MMS) created when the Conservation Division was removed from the U.S. Geological Survey. BLM transferred its responsibilities for the Outer Continental Shelf to MMS in February. All onshore mineral responsibilities, except royalty accounting, were transferred from MMS to BLM in December; the BLM-MMS merger was completed by early 1983.

1983

Bear Trap Canyon in southwestern Montana was designated by Congress as BLM's first wilderness area. By 1988, 24 additional public land areas had been designated.

1986

Homesteading officially came to an end with the closing of Alaska lands. FLPMA had repealed the Homestead Laws in the lower 48 states in 1976 but allowed homesteading to continue for another 10 years in Alaska.

1987

The Federal Onshore Oil and Gas Leasing Reform Act changed the leasing of oil and gas to an all-competitive bid system.

Fish and Wildlife 2000, published by BLM as a strategic plan, emphasized the preservation and enhancement of ecosystems to ensure an "abundance and diversity of wildlife, fisheries, and plant resources on the public lands."

1988

The Anasazi Heritage Center opened in southwestern Colorado. The Center serves as both a museum and a facility for the study and interpretation of prehistoric cultures in the region.

BLM released *Recreation 2000*, a long-range, strategic plan that outlines the Bureau's efforts to increase outdoor recreation opportunities on the public lands.

APPENDIX 3
Commissioners and Directors

COMMISSIONERS OF THE GENERAL LAND OFFICE

Edward Tiffin	1812-1814
Josiah Meigs	1814-1822
John McLean	1822-1823
George Graham	1823-1830
Elijah Hayward	1830-1835
Ethan Allen Brown	1835-1836
James Whitcomb	1836-1841
Elisha Huntington	1841-1842
Thomas H. Blake	1842-1846
James Shields	1846-1847
Richard Young	1847-1849
Justin Butterfield	1849-1852
John Wilson	1852-1855
Thomas A. Hendricks	1855-1859
Samuel A. Smith	1859-1860
Joseph S. Wilson	1860-1861
James M. Edmunds	1861-1866
Joseph S. Wilson	1866-1871
Willis Drummond	1871-1874
Samuel Burdett	1874-1876

James Williamson	1876-1881
Noah C. McFarland	1881-1885
William A. J. Sparks	1885-1887
Strother M. Stockslager	1888-1889
Lewis Groff	1889-1891
Thomas Carter	1891-1892
William Stone	1892-1893
Silas Lamoraux	1893-1897
Binger Hermann	1897-1903
William A. Richards	1903-1907
Richard Ballinger	1907-1908
Fred Dennett	1908-1913
Clay Tallman	1913-1921
William Spry	1921-1929
Charles Moore	1929-1933
Fred W. Johnson	1933-1946

DIRECTORS OF THE GRAZING SERVICE

Farrington Carpenter	1934-1938
Richard Rutledge	1938-1944
Clarence Forsling	1944-1946

DIRECTORS OF THE BUREAU OF LAND MANAGEMENT

Fred W. Johnson	1946-1948
Marion Clawson	1948-1953
Edward Woozley	1953-1961
Karl Landstrom	1961-1963
Charles Stoddard	1963-1966
Boyd Rasmussen	1966-1971
Burt Silcock	1971-1973
Curt Berklund	1973-1977
Frank Gregg	1977-1981
Robert F. Burford	1981-

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ABOUT THE AUTHORS

James Muhn is a Land Law Historian with the BLM Service Center in Denver, Colorado. In his work Mr. Muhn researches and writes about previous administration of the public lands. He wrote Chapters 1 and 2, the Further Reading sections of each chapter, and the Appendices at the book's end.

Hanson R. Stuart, a writer/editor at the Service Center 1983-1988, has also worked for BLM as a public information specialist. Mr. Stuart has written numerous articles and brochures on Bureau programs and activities, as well as Chapters 3, 4, and 5 of this book.

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