

CHAPTER TWO: LAND AND MINERALS MANAGEMENT

BUREAU OF LAND MANAGEMENT

Protecting and Restoring National Landscapes

The Clinton Administration has protected more acreage in the conterminous United States than any other administration. Under the leadership of President Clinton and Secretary Babbitt, 3.8 million acres—an area about the size of Connecticut and Rhode Island combined—are now protected as National Monuments or National Conservation Areas within the Bureau of Land Management. Since 1996, President Clinton has designated eleven new National Monuments, seven of which are exclusively managed or co-managed by the Bureau of Land Management (BLM).

National Monuments

Grand Staircase-Escalante

On September 18, 1996, President Clinton created the Grand Staircase-Escalante National Monument in southern Utah. This high, rugged region was the last place to be mapped in the lower forty-eight, and its plateaus and multi-hued cliffs run for distances that defy human perspective. The Grand Staircase-Escalante was the first national monument designated under the Clinton Administration, and the first ever to be managed by BLM.

The Grand Staircase's 1,870,800 acres are located in the southwest portion of Utah between Kanab and Escalante. The monument embraces a spectacular array of scientific and historic resources.

In 1999, President Clinton asked Secretary Bruce Babbitt to investigate other federal lands and to make recommendations regarding suitable areas for special protection. In response, Secretary Babbitt began to visit communities and surrounding federal lands that might warrant such protection.

Agua Fria National Monument

On January 11, 2000, President Clinton established Agua Fria National Monument. Comprising approximately 71,100 acres in central Arizona north of Phoenix, it is made up of two mesas—Perry Mesa and the adjacent, smaller Black Mesa—the public land north of these mesas, and the canyon of the Agua Fria River. The monument contains one of the most significant systems of prehistoric sites in the American Southwest. At least 450 prehistoric sites are known to exist within the monument. Agua Fria's abundant rock art includes intact symbols etched into the surfaces of boulders and cliff faces. Prehistoric peoples also extensively modified the landscape to improve it for agriculture, creating extensive terraces bounded by lines of rocks. The monument contains a wide array of sensitive wildlife species and native fish.

Grand Canyon-Parashant National Monument

Also created on January 11, 2000, the Grand Canyon-Parashant National Monument contains 1,023, 785 acres in the northwest corner of Arizona. Adjoining Grand Canyon National Park, the monument is a vast, biologically diverse landscape encompassing an impressive array of scientific and historic objects.

California Coastal National Monument

The California Coastal National Monument includes all unappropriated and unreserved islands, rocks, exposed reefs, and pinnacles owned by the United States along the entire 840-mile Pacific coastline of California. This beautiful monument, established on January 11, 2000, is of irreplaceable scientific value, and its preservation is vital to protecting the fragile ecosystems of the California coastline. The monument provides unique habitat for an estimated 200,000 breeding seabirds, including the endangered California least tern and brown pelican. It is also breeding habitat for the threatened southern sea otter.

Pinnacles National Monument Expansion

President Clinton also expanded Pinnacles National Monument under the Antiquities Act on January 11, 2000. The monument was created by President Theodore Roosevelt in 1908 to protect Pinnacle Rocks and the series of caves underlying them. The boundary enlargement is vital to reduce the threat of exurban development and watershed degradation. In addition to protecting more geological formations, the expansion lands hold some of the headwaters of the monument basin. The expansion lands provide important habitat for raptors—prairie falcons, golden eagles, and red-tailed hawks—as well as amphibians and reptiles.

Canyons of the Ancients National Monument

Designated on June 9, 2000, this national monument of 163,852 acres is located in southwest Colorado. Containing the highest known density of archaeological sites in the nation, Canyons of the Ancients harbors evidence of cultures and traditions spanning thousands of years.

The Canyons of the Ancients National Monument designation was preceded by several public meetings with local residents conducted by the Secretary and the BLM Resource Advisory Council in the spring and summer of 1999. Public discussions on the national significance of this area date back to a 1894 Salt Lake Times story detailing interest in protecting the region. In 1979, a bill was introduced in Congress to designate the area a National Conservation Area. Senator Ben Nighthorse Campbell introduced new National Conservation Area legislation in February 2000 (S. 2034), but he suspended all action on his bill on March 23, 2000.

Cascade-Siskiyou National Monument

Located in southwest Oregon at the convergence of the Cascade, Klamath and Siskiyou ecoregions, this 52,786-acre monument provides habitat for a spectacular variety of rare and beautiful species of plants and animals, including one of the highest diversities of butterfly

species of any area in the United States. Along with Canyons of the Ancients, this monument was established on June 9, 2000. The Jenny Creek portion of the monument is a globally significant center of fresh water snail diversity, and is home to three endemic fish species, including a historically isolated stock of redband trout. The area also contains old growth habitat crucial to the threatened Northern spotted owl.

Ironwood Forest National Monument

Also designated on June 9, 2000, the Ironwood Forest National Monument includes 129,022 acres near Tucson in south central Arizona. The ironwood tree for which the monument is named can live in excess of 800 years and is the dominant nurse plant in the Sonoran Desert region. The ironwood habitat in the Silver Bell Mountains contains more than 674 species, including 64 mammal and 57 bird species, several of which are threatened and endangered, such as the cactus ferruginous pygmy-owl. The desert bighorn sheep in the monument may represent the last viable population indigenous to the Tucson basin.

Hanford Reach National Monument

Hanford Reach National Monument encompasses approximately 195,000 acres of public land within the borders of the Department of Energy (DOE) Hanford Reservation. Bisected by the stunning Hanford Reach of the Columbia River, the monument contains the largest remnant of the shrub-steppe ecosystem that once blanketed the Columbia River Basin. Hanford Reach is the last free-flowing, non-tidal stretch of the Upper Columbia River, where approximately 80 percent of fall chinook salmon spawn. Within its mosaic of habitats, the monument supports native plant and animal species of a size and diversity unmatched in the Columbia Basin. The monument is also one of the few remaining archaeologically rich areas in the western Columbia Plateau, and is known for its dramatic geologic features. The monument was designated on June 9, 2000.

Craters of the Moon Expansion & Vermilion Cliffs National Monument

On November 9, 2000, President Clinton created the Vermilion Cliffs National Monument and expanded Craters of the Moon National Monument. The existing Craters of the Moon National Monument in Idaho covered 54,440 acres of lava flows; the expansion added an additional 661,000 acres of federal land to encompass the entire lava field. The National Park Service will manage lava flows on the added land, while the rest of the land will continue to be managed by the BLM.

Vermilion Cliffs National Monument covers 293,000 acres of federal land on the Colorado Plateau in northern Arizona and includes the Paria River Canyon. The monument provides habitat for twenty species of raptors, and California condors have been reintroduced into the area. The Paria River supports sensitive native fish, including the flannelmouth sucker and the speckled dace.

National Conservation Areas

National Conservation Areas (NCAs) are designated by Congress and feature exceptional natural, recreational, cultural, wildlife, aquatic, archaeological, paleontological, historical, educational, and/or scientific resources. During the Clinton administration, Congress established five new NCAs and one special protection and management area:

The Snake River Birds of Prey National Conservation Area

The Snake River Birds of Prey National Conservation Area was created by an Act of Congress in August of 1993. This National Conservation Area includes approximately 601,053 acres in southwestern Idaho. In addition to containing important historic and cultural resources, these lands contain one of the densest known nesting populations of eagles, falcons, owls, hawks, and other birds of prey in North America.

The Gunnison Gorge National Conservation Area

Gunnison Gorge National Conservation Area was created by an Act of Congress in October of 1999. The Act set aside approximately 57,725 acres in south central Colorado as a National Conservation Area and 17,700 acres within the NCA as the Gunnison Gorge Wilderness. In addition, the Act designated the adjoining Black Canyon of the Gunnison as a National Park. The Gunnison Gorge National Conservation Area is known for its diverse landscape, ranging from adobe badlands to rugged pinon- and juniper-covered slopes, and its unique geologic features.

Colorado Canyons National Conservation Area

Colorado Canyons National Conservation Area was created by Act of Congress in October of 2000. The Act set aside approximately 122,000 acres in western Colorado as an NCA and 75,000 within it as Colorado Canyons Wilderness.

Las Cienegas National Conservation Area

Las Cienegas National Conservation Area was created by Act of Congress in November of 2000. The Act set aside 42,000 acres as Las Cienegas National Conservation Area southeast of Tucson with a 142,000-acre acquisition district.

Santa Rosa and San Jacinto Mountains National Monument

Santa Rosa and San Jacinto Mountains National Monument, an area of over 150,000 acres near Palm Springs, California, was created by Act of Congress in October of 2000. This is the first Congressionally created national monument that gives management responsibility to the BLM, an important validation of BLM conservation management responsibility.

Steens Mountain Cooperative Management and Protection Area

The Steens Mountain Cooperative Management and Protection Act provides important new environmental protections to the Steens Mountain area of southwestern Oregon. The Act created a protection area of 425,000 and a wilderness area of approximately 155,000 acres. It sets apart 87,000 acres of public lands as "cow-free." The Act also establishes a one-million-acre withdrawal area.

National Landscape Conservation System

Following Secretary Babbitt's recommendation, the BLM established the National Landscape Conservation System (NLCS) in June 2000 to conserve, protect and restore nationally significant landscapes, so that their outstanding cultural, ecological and scientific value will be preserved for present and future generations. Components of the National Landscape Conservation System include the BLM National Monuments, National Conservation Areas, Wilderness, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails. Also included in the System is the Headwaters Forest Reserve, an area in California designated by an act of Congress. The system does not create new legal protections, but by providing more intensive management, it raises the profile of BLM areas that are a key part of the agency's portfolio.

Wilderness

Colorado Wilderness Act of 1993

On August 13, 1993, President Clinton signed the Colorado Wilderness Act of 1993 (Public Law 103-77) into law. The bill designated two tracts of wilderness to be managed by BLM: the 3,390-acre Uncompaghre Wilderness, and 48,115 acres in the Powderhorn Wilderness. BLM manages the Powderhorn Wilderness jointly with the U.S. Forest Service, which controls over 12,000 acres of adjacent land. The protected land represents a mix of sub-alpine and alpine ecosystems.

California Desert Protection Act of 1994

President Clinton signed into law one of the largest land conservation bills in U.S. history (Public Law 103-433) on October 31, 1994. Among its many provisions, the Act designated sixty-nine BLM wilderness areas, totaling 3.6 million acres. These BLM wilderness areas contain unique scenic, ecological, scientific, cultural, environmental, recreational, historic, and wildlife resources. Since passage of this major land law, BLM has managed the California Desert in cooperation with other state and federal agencies, users, and local communities, tribes, and additional partners to ensure that these lands continue to provide their extraordinary values to current and future generations.

Otay Mountain Wilderness

On December 9, 1999, President Clinton signed Public Law 106-145, one of the few wilderness bills passed by the 106th Congress. It designates 18,500 acres of BLM-administered public

lands adjacent to metropolitan San Diego as part of the National Wilderness Preservation System. Rugged Otay Mountain is internationally known for its diversity of rare plants and animals. Its wilderness areas play a critical role in San Diego's multi-species conservation plan, which was designed to maintain the area's biodiversity.

Major Land Acquisitions

Southern California (Catellus)

In January of 1999, Secretary Babbitt took title to the first of several tracts of land that BLM acquired from the Catellus Development Corporation. Totalling 322,520 acres, these key parcels were privately held in-holdings spread throughout the California Desert. Part of an unprecedented public-private partnership to protect the Desert's natural values, BLM completed the transaction through purchase (\$10 million) and donation assistance (\$25 million) from The Wildlands Conservancy, a non-profit organization based in Oak Glen, California.

Headwaters Forest

In March of 1999, BLM acquired 7,400 acres of redwood forest—using \$250 million of federal funds, plus \$130 million dollars contributed by the State of California—to protect ecological and wildlife values in Northern California. The stands of old-growth redwoods secured through this purchase are home to the marbled murrelet, a threatened seabird, and shelter the headwaters of several major streams which provide habitat for the threatened coho salmon and other fisheries.

Baca Ranch Acquisition and New Acquisition Authority

The Baca Ranch is almost entirely surrounded by the Santa Fe National Forest, home to one of the largest remaining herds of wild elk. The Valles Caldera Preservation Act of July 25, 2000 created the 88,900-acre Valles Caldera National Preserve, a unit of the National Forest System.

The unique management approach created for Preserve management under the Act is the Valles Caldera Trust, a wholly owned government corporation. A nine-member Board of Trustees will govern the Trust, and the Supervisors of the Santa Fe National Forest and the Bandelier National Monument will be members of that Board. President Clinton, in consultation with the New Mexico Congressional delegation, will appoint the other Trustees, selecting candidates based upon their areas of expertise. The Board will assume management of the Preserve approximately sixty days after its appointment. Until the Valles Caldera Trust assumes management of the National Preserve, the Santa Fe National Forest will provide interim management.

The Baca Ranch purchase also added 823 acres within the Alamo Watershed to Bandelier National Monument, and the Pueblo of Santa Clara purchased 5,045 acres located in the Pueblo's upper watershed.

The purchase price for the entire ranch was \$101 million including the portion purchased by the Pueblo of Santa Clara. The Land and Water Conservation Fund—established in 1965 with

revenues derived from offshore oil and gas drilling royalties and other user fees—was tapped for this federal land acquisition.

The Baca Ranch contains the headwaters of two rivers and twenty-seven miles of streams. Several threatened, endangered or sensitive plant and animals species are located within the diverse ecosystem. In addition, this property encompasses most of the fifteen-mile-wide caldera of an ancient volcano. Two eruptions formed the present-day caldera; fifty cubic miles of volcanic ash and rock—over sixteen times the amount of material released from Mount St. Helens—exploded from the volcano.

New Authority

Title II of the Baca Bill—formally known as the Federal Land Transaction Facilitation Act—provides for the use of receipts obtained from the sale of certain BLM lands across the West for the acquisition of private in-holdings by land managing agencies (BLM, U.S. Fish & Wildlife Service, National Park Service, Forest Service). Under this act, the Secretary of the Interior and the Secretary of Agriculture are given funds to purchase in-holdings (privately owned lands lying within the boundary of federally designated areas) and other privately owned lands which have exceptional scientific, natural, historic, cultural, or recreational resource value.

Money received by the United States from the sale or exchange of public lands is deposited in a separate account in the Treasury of the United States entitled the "Federal Land Disposal Account." The designated Cabinet Secretaries may use these funds to purchase land, to complete land appraisals, to satisfy administrative costs, or to fulfill any other legal requirements associated with the sale or exchange of public lands identified for disposal.

The Secretary of the Interior and the Secretary of Agriculture are responsible for establishing procedures to identify in-holdings by state that private landowners are willing to sell to the U.S., and for developing standards and procedures for the orderly purchase of in-holdings and other privately owned lands with exceptional resource value. Under the Act, private landowners are not obligated to sell their lands to the United States, nor is the U.S. obligated to purchase lands from private landowners, and any purchase from private willing sellers must not exceed fair market value. The Act does not require new regulations; BLM will continue to use existing regulations found in the 43 Code of Federal Regulations 2700 sales regulations.

National Land Exchange Team and Land Exchange Legislation

Land exchanges are an important management tool to acquire lands with significant resource and public values. Land exchanges involve highly complex and multi-faceted processes to appraise land, weigh public values and benefits, and analyze the trade-offs between lands leaving federal ownership and those being acquired. These processes require a high level of oversight and management involvement. In many areas, rapidly developing real estate markets are highly speculative and are in a constant state of flux, heightening the complexity of the exchange processes and the level of controversy associated with exchange decisions

BLM Director Fry announced the formation of a National Land Exchange Evaluation and Assistance Team on August 14, 1998. The Team was formed after audits performed by the Office of the Inspector General criticized the land exchange program, faulting BLM for failing to consistently follow established procedures and regulations governing land exchanges. The Team's purpose is to take the initiative in addressing external concerns related to BLM's land exchange program, and to take corrective actions before BLM is irreversibly committed to any further exchange transactions.

The Southern Nevada Public Lands Management Act allowed receipts from the sale of certain lands in Clark County, Nevada, to be used to either acquire lands needed for federal programs or to develop recreation and other areas for use by the public. To date two sales have been held—in November 1999 and June 2000.

Great Basin Restoration

In the fall of 1999, teams of specialists met to map out a strategy for restoring Nevada's Great Basin ecosystem, which had suffered severe wildfire damage earlier that year. Acknowledging that the ecological resiliency of the Great Basin—a sagebrush-dominated area of desert mountains and basins—was failing as non-native annual grasses and noxious weeds covered the land, the team recommended that a restoration effort begin as soon as possible, before an ecological "point of no return" was reached.

Since then, the Great Basin Restoration Initiative has prioritized the restoration in order to protect healthy, functioning ecosystems of native plant communities; restore degraded landscapes with high potential for recovery and restore decadent shrub lands. The BLM has published several reports on the Great Basin restoration efforts, which include: *Out of Ashes* (November 1999); *Healing the Land* (April 2000); and *Great Basin Restoration Initiative Brochure and Interpretive Display* (December 2000).

Protecting and Restoring Public Land Resources

Restore and Maintain the Health of the Land

Many of the public rangelands managed by the BLM were degraded by the end of the 19th century because of unsustainable livestock grazing, timber harvesting, and mining practices. Despite 20th century efforts to reverse this trend, a 1993 U.S. Forest Service report found that many of the Nation's rangelands remained deforested, dotted with abandoned mine sites, and afflicted with a continuing loss of biological diversity.

In 1993, Secretary of the Interior Bruce Babbitt announced a Healthy Rangeland Initiative to improve the management and health of public rangelands. The program aims to restore the natural characteristics of healthy rangelands—abundant plant and animal life, clean water, functional watersheds and stable soils. The initiative culminated in the 1995 regulations that set standards for rangeland health and the use of Resource Advisory Councils (RACs) in the development of these standards.

The Secretary was particularly concerned to develop improved standards and guidelines for livestock grazing, which is the most common traditional use of public lands in the American West. The twenty-four RACs created by the initiative represent a balance of views among various local interests with a stake in the management of public lands. BLM works with the Councils to develop a broad consensus on standards of rangeland health.

Because healthy rangelands recover quickly from ecological disturbances and are stable over time, they support a wide variety of sustainable uses and create lasting economic benefits. The land health standards developed through the initiative are included in BLM's land use plans, and help BLM's land managers determine the proper number of livestock to run, the correct time of the year for grazing, the kinds of fences to be used, and the water developments and vegetation treatments necessary to maintain the health of the land.

Resource Advisory Councils

Secretary Babbitt established Resource Advisory Councils throughout the West to help chart a new course for public land management by BLM. These locally based citizen councils provide an opportunity for individuals from all backgrounds and interests to have a voice in the planning and management of public land resources located within their geographic areas. This voice is particularly vital at a time of rapid growth and changing demographics in the West, whose population, which was 17 million in 1945, now exceeds 60 million. The councils help ensure citizen involvement in management of the nation's public lands.

A notable feature of these advisory councils is their balanced composition. Five members represent the traditional uses: livestock grazing, energy development, timber production, commercial recreation, rights-of-way, and organized off-highway vehicle use. Another five members represent conservation and non-commercial recreation interests in these areas: environmental protection, historical and cultural preservation, wild horse and burro advocacy, and general recreation. The other five members consist of local elected officials, academicians, tribal representatives, and state or local agency personnel, as well as individuals from the general public.

This balanced composition is most apparent in each advisory council's voting requirements. Each council's charter specifies that a majority of each interest group must vote affirmatively to refer any recommendation to the BLM for consideration. This requirement makes achieving consensus more difficult than in a "majority-rules" scenario, but it also encourages each group to seek support from members of other groups. Win-lose propositions are not viable in such an environment; general agreement among (as well as within) the groups is essential. Such consensus-driven recommendations are far more likely to lead to sustainable outcomes that benefit natural resources and enjoy high levels of public support.

Jobs-in-the-Woods

The Pacific Northwest experienced a reduction in timber-related employment in the 1990s due to changes in federal land policy and changing economic conditions in the timber industry. The Jobs in the Woods program was created to lessen the impact on communities by providing

employment opportunities. Through this program, displaced timber workers perform ecosystem restoration on BLM lands in western Oregon and northern California.

Implementing Jobs-in-the-Woods has provided an opportunity to integrate various social, economic, and environmental components of BLM's natural resources work, while simultaneously creating quality jobs that benefit both individuals and communities in the Pacific Northwest.

BLM has implemented this program through the contracting process as well as through innovative agreements with cooperating partners including government agencies, tribes, universities, private individuals, industry, and other organizations such as watershed associations. Since 1994, more than \$47 million has been invested in the Jobs-in-the-Woods program. This has resulted in approximately 1,389 jobs and 1,026 restoration projects.

BLM has focused restoration efforts on the Governor of Oregon's Coastal Salmon Initiative, thereby playing an effective role in restoring Pacific coast salmon while continuing to provide job opportunities to displaced workers. This has been accomplished through contracts with small businesses in local communities, and shared partnerships with communities and watershed associations.

The resulting restoration work has benefited Western Oregon forests, streams and rivers, as well as the fish and wildlife that depend on these lands for habitat. Projects made possible through the Jobs-in-the-Woods program—such as culvert replacement for fish passage and sediment reduction, riparian restoration, and stream and river rehabilitation—are contributing significantly to the health of western Oregon forests and watersheds.

BLM is also focusing on projects with partners to support the Oregon Plan for Salmon and Watersheds, while efforts in northern California will focus on watershed restoration and fuels treatments. BLM is funding a share of restoration projects on private lands through legislation that allows systematic planning of restoration projects to achieve maximum benefits to watersheds.

Clean Water Action Plan and the Unified Federal Policy for Watershed Management

Clean Water Action Plan

In 1997 and 1998, the U.S. Department of Agriculture (USDA) and the Environmental Protection Agency developed the Clean Water Action Plan (CWAP) in coordination with the Department of the Interior. The CWAP directs federal agencies to adopt a watershed approach to the restoration of America's waterways. Restoration priorities are established and clean-up actions planned with the integrated health of the watershed in mind. This means taking into account the various needs and capacities of the people, wildlife, and ecosystems, which depend on water resources within the river basin. Once stronger water quality standards are proposed, under CWAP federal agencies coordinate their activities to support locally led watershed restoration and to improve the caliber of publicly available information concerning watershed health and the safety of drinking water.

CWAP has facilitated improved funding throughout the Departments of the Interior and Agriculture for water quality improvement initiatives, and for programs aimed at the restoration of riparian habitat, upland watershed conditions, and abandoned mine lands.

Nonpoint source pollution—pollution traceable to a distant source—is the biggest cause of degradation to water quality in the U.S. Activities affecting water quality on public lands often originate off public lands. CWAP made several commitments designed to yield long-term improvements in aquatic health and water quality, with BLM specifically addressing stream corridor restoration, abandoned mine cleanup, road decommissioning and water quality protective measures for forest roads and trails.

BLM completed about 1,500 miles of stream corridor restoration in both 1998 and 1999. There are BLM abandoned mine land cleanup projects in nine states, with projects underway in thirty watersheds. BLM is assessing several million of acres annually for conformance with rangeland and watershed health standards.

Unified Federal Policy for a Watershed Approach to Federal Land & Resources Management

Several federal agencies and the Department of the Interior have nearly completed a final Unified Federal Policy on watershed management to protect water quality. This policy, which provides a framework for a watershed approach to federal land and resource management activities, is one of the action items in CWAP, and has been developed collaboratively, with public involvement solicited through eleven regional meetings and a draft *Federal Register* comment period.

The Unified Federal Policy is a proposal in which BLM and the U.S. Forest Service (USFS) would share the lead for a consistent approach to water quality protection and restoration. It calls for a science-based approach to watershed assessment and greater collaboration between the federal and state governments, tribes, and other stakeholders in watersheds.

Public land is important to millions of Americans for drinking water, irrigation, transportation, recreation, and wildlife habitat. Federal land managers are responsible for protecting and restoring these resources under the Clean Water Act and water quality standards established by states and tribes.

This Unified Federal Policy provides a model for water quality stewardship and the protection and enhancement of aquatic resource values.

Threatened & Endangered Species Management Guidelines

The Federal Endangered Species Act (ESA) requires BLM to protect and restore the health of public lands, which provide habitat for threatened, endangered, and candidate species. The goal of BLM's management program is to promote species recovery and prevent additional species from being listed. BLM's management program therefore addresses not only plants and animals that are federally listed, but also those that are proposed for listing, as well as species designated

by the agency as sensitive. The public lands managed by BLM support at least 300 federally listed species, forty-six proposed species, fifty-five candidate species, and an additional 1,500 sensitive species. Collectively these species occur over a significant portion of the 264 million acres of public lands managed by BLM. The agency has updated its policies and guidance to ensure that actions authorized by BLM do not jeopardize a listed species or contribute to the need to list sensitive species.

With the increasing numbers of listed, proposed, and candidate species occurring on BLM managed lands, the agency under Secretary Babbitt took a more aggressive approach, in some cases implementing plans to protect multiple species and entire ecosystems. For example, the agency is developing multi-species conservation plans for prairie grasslands and sagebrush ecosystems on public lands to be implemented on an entire landscape. These plans are being developed in concert with other federal land managing agencies as well as state agencies and private conservation organizations. "The Lynx Conservation Assessment and Strategy" (developed with the USDA Forest Service and the U.S. Fish and Wildlife Service) and the "Lynx Conservation Agreement" (developed with the U.S. Fish and Wildlife Service) represent broader more inclusive landscape level conservation efforts designed to more effectively manage for threatened and endangered species. BLM is taking a similar approach to the conservation and protection of the black tailed prairie dog. Prairie dog habitat typically supports a great diversity of additional plants and animals.

BLM recognizes it can not conserve and protect endangered species in isolation. The agency has developed national agreements with a number of groups interested in working cooperatively on endangered species issues, organizations such as the Society for Ecological Restoration, the Nature Conservancy, Bat Conservation International, the Lady Bird Johnson Wildflower Center, and the Western Association of Fish and Wildlife. In addition, BLM has been instrumental in developing partnerships such as the Plant Conservation Alliance, a consortium of fifteen federal agencies and over 170 non-federal partners working together on native plant conservation and restoration as well as invasive plant issues. In concert with other federal agencies, BLM has played a significant role in developing interagency Memoranda of Understanding on candidate species conservation, on the required (ESA Section 7) consultation process, and on endangered species recovery efforts. Throughout the Clinton Administration, BLM has worked successfully with other federal agencies and the private sector on a range of endangered species issues, including protection of the California condor and desert tortoise.

Riparian-Wetland Initiative

The term "riparian" refers to the type of ecosystem adjacent to streams and lakes that is strongly influenced by water. The concept includes the plants, animals, soil, and water that interact to create these special natural resources. Wetlands are areas that are inundated or saturated by water long enough to influence the type of vegetation present. Because they contain scarce water and support vegetation in vast areas of otherwise arid landscape throughout the western United States, these areas are very important to fish, wildlife, and people.

BLM administers 180,000 miles of streams flanked by riparian systems and 16 million acres of wetland scattered across fourteen states. Although comprising only about nine percent of the

land base, these areas constitute some of the most valuable resources managed by BLM. Wetlands and riparian areas provide clean, cool water, high quality reproductive habitat, and a variety of forage for fish, birds, and other wildlife species. They support biological diversity for a wide range of game and non-game species. When managed properly, riparian areas can provide abundant forage, water, and shade for livestock. Along with the life-sustaining value water provides for people, visitors are drawn to these special areas for the wide variety of recreational opportunities they provide.

In recognition of the critical values and important roles that riparian/wetland areas fulfill, BLM initiated a program called the "Riparian-Wetland Initiative of the 1990s." The principal objective of the initiative is to return these areas to "proper functioning condition" or "PFC". An area is in PFC when adequate vegetation, land form, or large woody debris is present. These features serve to dissipate energy associated with high water flow, promote rapid recovery from any disturbance, and sustain valuable physical and biological resources native to riparian/wetland systems.

BLM has been implementing the initiative in several ways, using strategies designed to restore long-term health and function to riparian and wetland areas. The first step is to take inventories calculated both to determine the current condition of a given area and to identify the causes of any existing dysfunction. Over the last eight years, BLM has assessed conditions on about 34,000 miles of flowing-water riparian areas in the western states and 132,000 miles in Alaska.

Concurrent with the inventory process, BLM has been prioritizing work, planning restoration actions, and implementing change. In some cases, modifying land use activities may be sufficient to initiate recovery and eliminate deleterious impacts. For example, where there is inadequate vegetation—failure to meet PFC—in an area used for season-long grazing, temporary livestock exclusion, accompanied by a permanent change in the grazing system, may be sufficient to move the system to PFC. If conditions suggest that stronger measures are necessary, BLM will design and implement projects which correct the dysfunction.

BLM has implemented about 400 new projects annually to protect, restore, or improve riparian-wetland areas. These projects have included water developments; fence construction, tree, shrub and grass plantings, prescribed burnings, and noxious weed control. Since modification of land use and activity plans can restore or protect riparian areas, BLM has prepared or revised approximately 150 activity plans per year to address riparian-wetland management issues. The plans include management prescriptions related to riparian-wetland areas for activities such as livestock grazing, surface protection, fish and wildlife habitat management, and recreational use.

Acquisition and expansion of key riparian areas is a strategy selected to maximize public benefit as well as to protect and enhance natural values. Working in close coordination with the Environmental Protection Agency, the Army Corps of Engineers, and others, BLM administers its acquisition program, so as to ensure compliance with the Clean Water Act and the Endangered Species Act. Over several years, the agency has acquired hundreds of miles of streams and thousands of acres of wetlands, focusing efforts on habitats critical to endangered species, such as those in migratory pathways or in areas where development was imminent.

Since water is essential to riparian-wetland functions, BLM has worked to secure rights or cooperative agreements to sustain water flow.

In support of its riparian-wetland program, BLM has joined with state and federal agencies and private interest groups to develop a cooperative training and information network. This delivery technique helps reach a large, diverse audience and takes advantage of existing research, outreach networks, and education programs administered by the various partners. The National Riparian Service Team, a cooperative training and consulting team, is staffed by BLM and U.S. Forest Service employees. In cooperation with the Natural Resources Conservation Service, Cooperative Extension, and others, the team members train hundreds of workshop participants annually. The Service Team delivers assistance both locally, through a network of individual state training cadres, and internationally, through workshops in both Canada and Mexico.

Through BLM's National Applied Resource Sciences Center, incorporating field experience as well as research and technology of universities and other institutions, BLM has developed and published ten technical reference documents on riparian and wetland inventory, assessment, and management.

BLM strives to create and nurture partnerships at the national, state, and local levels, promoting coordinated efforts with private landowners, state and federal agencies, and numerous interest groups. Each year BLM has allocated significant funding to projects with multiple funding partners, stretching limited financial resources and helping local and national interest groups accomplish local restoration goals.

Since riparian-wetland ecosystems do not begin or end at land ownership boundaries, restoration of these complex ecosystems depends on cooperation among resource users and managers, and both groups must learn to think on a watershed scale. A watershed, however vast, is a unified, delicately balanced system; the human beings, animals, and plants living within the watershed are inextricably connected to one another, and the welfare of each ultimately depends upon the health of the whole. BLM is working with local public land users and adjacent private property owners to develop a common understanding and incorporate multiple views and needs into long-term management plans. The use of "interdisciplinary teams," which include individuals trained in the hydrology, vegetation, soils, biology, and range management fields, helps to communicate the functions and interactions of the various resource components in riparian-wetland areas. This technique helps both the layman and the technical specialist understand the complex interactions occurring between people, soil, water, animals, and vegetation in riparian-wetland areas.

BLM has teamed up with the University of Montana's Riparian and Wetland Research Program to develop and implement an Internet-accessible database which allows anyone with access to a computer to view and query riparian data collected in Montana and Idaho. BLM has also cooperated on publishing riparian management guides and private property success stories, sharing information with a diverse audience.

Riparian-wetland systems are resilient and capable of recovery after disturbance, having evolved under conditions of frequent natural disturbance. However, periodic floods and droughts, along with climatic variations of moisture distribution, do affect the ability of these systems to tolerate

periods of environmental stress or to recover from a severe ecological shock. Human impacts on stream systems such as livestock grazing, mining, logging, water diversions, and road construction, further compromise any system's ability to support the physical and biological functions that BLM strives to restore and perpetuate. These valuable resources exist within a complex land ownership pattern, necessitating cooperative public-private management strategies to fulfill multiple objectives. BLM will continue to embrace cooperative planning and management, building upon many successful efforts already begun across the West.

Federal Wildland Fire Policy and Program Review

In 1994, thirty-four wildland firefighters lost their lives, including fourteen on the South Canyon fire in Colorado. As a result of this tragic fire season, the Secretaries of the Interior and Agriculture chartered the BLM, National Park Service, U.S. Fish and Wildlife Service, Bureau of Indian Affairs and Forest Service to conduct a review of federal wildland firefighting policies. This review, the "Federal Wildland Fire Management Policy and Program Review" (Policy) dated December 18, 1995, launched a major shift in wildland fire policy.

The Policy reconfirms public and firefighter safety as the agencies' top priority. It also recognizes that wildland fire is a critical natural process, and encourages its reintroduction into areas where fuels have accumulated and pose threats to wildland/urban interface areas, and forest and rangeland health.

The "Federal Wildland Fire Policy" consists of nine guiding principles, which have been endorsed by the federal land management agencies and their state partners: 1) firefighter and public safety is the first priority in every fire management activity; 2) the role of wildland fire as an essential ecological process and natural change agent will be incorporated into the land use planning process; 3) fire management plans, programs, and activities support land and resource management plans and their implementation; 4) sound risk management is a foundation for all fire management activities; 5) fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource objectives; 6) fire management plans and activities are based upon the best available science; 7) fire management plans and activities incorporate public health and environmental quality considerations; 8) federal, state, tribal, and local interagency coordination and cooperation are essential; 9) standardization of policies and procedures among federal agencies is an ongoing objective.

The emphasis on safety and the shift in the wildland fire policy from total suppression to one that includes wildland fire use has resulted in several changes and new initiatives in both management and operations. These include:

- The development of minimum qualification standards for key fire management positions. These incorporate key competencies for fire management positions, standard performance elements, and required and recommended training for agency managers.
- The expansion of fire research capabilities to provide agencies with information on treating hazardous fuels successfully, reducing the threat of severe wildland fires, and restoring or maintaining the appropriate role of fire in ecosystems.

- The development of goals and recommendations to help improve safety in firefighting based on input from more than 1,000 wildland firefighters.
- The establishment of national operating standards for wildland fire management. Updated and published annually, the *Standards for Fire and Aviation Operations* provides guidance and clarification on wildland fire policy, safety procedures, fire use and suppression, fire preparedness and prevention, protection priorities, interagency cooperation, roles and responsibilities, and wildland/urban interface issues. This reference, more commonly known as the "Red Book" helps ensure safe, effective and efficient operations.
- The initiation of formal preparedness reviews of fire and aviation programs in BLM field offices. The goal of these reviews, conducted by a national team every three years, is to ensure that the standards established in the "Red Book" are being met. As part of the preparedness reviews, employees complete a series of drills to ensure they have received the needed training, and are able to apply that training. Organizations that do not meet the standards are grounded until the deficiencies are corrected. BLM State Offices also conduct their own preparedness reviews for units within their state each year.
- The establishment of Interagency Fire Use Management Teams to help land managers make and implement decisions relating to the use of fire to reduce hazardous fuels and improve forest and rangeland health. The teams focus heavily on risk assessment and fire growth projections.
- The establishment of National Wildland Fire Prevention and Education Teams to help land managers create awareness about how to reduce human-caused fires, and educate the public about fire-safe practices. The teams also help the public understand the benefits of naturally occurring fire. In conjunction with these efforts, BLM collaborated with Florida State University to develop an interactive multimedia program to help middle and high school students learn about the role of fire in ecosystems and the benefit of managing fire in natural areas. The program, entitled "Burning Issues", leads the student through a variety of "Ecoventures" to help users learn about prescribed fires; fire suppression; the effects of fire on the relationships among predators, prey and invasive plant species; and firewise building techniques in wildland/urban interface areas.

Invasive Weeds

Non-native invasive plants are spreading at unprecedented rates in rangelands, forests, prairies, wetlands and waterways. They crowd out native plant species, disrupt ecosystem processes, alter wildlife habitat and cost Americans billions of dollars each year. It is estimated that weeds are spreading at the rate of 4,600 acres per day on federal lands alone. Much of this spread is occurring on BLM-managed lands in the Western United States.

Although the spread of weeds is exponential, it is believed that close to 90 percent of BLM's public lands are not yet significantly infested by weeds. This provides an excellent (and urgent) opportunity for the agency to prevent the majority of public lands from becoming seriously infested. BLM therefore has targeted prevention, control, and containment of invasive plants as a top agency priority. BLM has made significant progress in the 1990s despite only slight increases in its budget.

In 1996, BLM initiated Partners Against Weeds, a national invasive weed management strategy which outlines necessary prevention, detection, education, inventory, planning, coordination, monitoring, and research activities necessary to manage public land weed issues. Because invading plants do not respect property lines, the plan emphasizes concerted community and partnership efforts to help stem the spread of noxious weeds. Examples of cooperative weed control efforts among private parties, state officials, and BLM include the following:

In 1999, a BLM seasonal-spray crew spent two weeks working with Juab County, Utah, to treat thousands of Scotch thistle plants in an area that had burned the previous summer. In late May of 2000, BLM staff found only a dozen plants. Successful control of the thistle in this area was a result of vigilance and timing. Had BLM and local officials missed this window of opportunity, repeated control measures would have been required for the next twenty years. Because it initiated this cooperative project, BLM saved thousands of public dollars.

Also in central Utah, during the "Cove Fort Weed Day," BLM collaborated with several hundred high school and middle school student volunteers to dig thistle. The result of this joint effort has been an increase in the quality of elk habitat within Millard county.

Four high school students from Columbus, Montana, along with their vocational-agriculture instructor, successfully introduced the use of the horned beetle to reduce the spread of leafy spurge. Starting with a modest 200 beetles, the students successfully reproduced millions of insects. This project is believed to be the only one that has succeeded in reproducing these beetles in large numbers.

In Montrose, Colorado, BLM and the Sierra Club have received national recognition for their anti-weed partnership. Members from across the country pay to participate in a service vacation during which they work along the Dolores River, digging and pulling non-native weed species from some of the most heavily used boating stops along the river.

In addition to working with community partners, BLM has also worked within the agency to incorporate a new emphasis on invasive plant management into BLM handbooks and strategies. For example, in 1999 BLM changed its handbook on implementing the National Environmental Policy Act (NEPA) to identify weeds as a critical element in NEPA evaluations. The restoration strategy for the Great Basin, "Healing the Land," also recognizes that the invasion of weeds is a major obstacle to restoration efforts and recommends techniques such as establishing fuel breaks, greenstripping and other methods to protect areas from wildland fire impacts and weed invasions.

In 2000, BLM established a training course on management of invasive plants for all field staff. The purpose is to get all employees, not just botanists or plant specialists, to take an active role in identifying and controlling weed invasions, and, more importantly, preventing new invasions on healthy lands.

In support of its goal to increase the total acreage treated to control non-native weeds in 1999 by 40 percent, BLM adopted a management approach which integrates chemical, cultural, biological, and mechanical means of weed control. In 2000, BLM inventoried a total of 7

million acres of public land for weed occurrence and funded a number of new cooperative weed management projects throughout the western states. Although BLM Field Offices submitted approximately 200 detailed proposals for high priority work in their states, funding was not available to fund all of these projects. Available resources are directed toward the following priorities: weed pilot projects where cooperative partnership efforts help prevent the spread of weeds at the local community level; weed education, prevention, and early detection strategies; weed control treatments; and cooperative weed inventories involving state, local and private partners.

In April of 1998, BLM hosted a "Science in Wildland Weed Management" symposium in Denver, which concluded that education must be a top priority in any national effort associated with nonnative invasive plant problems. Education is critical to help people understand the extent of the problem, the part they may have played in contributing to the problem and, most importantly, how they can play a meaningful role in controlling the spread of these plants. With this in mind, BLM spearheaded development of a comprehensive invasive species education plan, "Within Our Grasp," as part of Partners in Resource Education, is a national partnership of educators from BLM, Fish and Wildlife Service, Forest Service, and National Park Service. Additional partners are the Natural Resources Conservation Service, representing private landowners, and the non-profit National Environmental Education and Training Foundation which coordinates the program. The plan enlists partners at the national and local levels to join in the effort to mobilize communities to minimize the spread of invasive plants. It addresses both formal (kindergarten through high school) and informal education. These programs compliment related federal efforts such as those by the Federal Interagency Committee on the Management of Noxious and Exotic Weeds (FICMNEW), on which BLM serves.

In order to raise awareness of the seriousness of the spread of invasive plants, President Clinton signed an Executive Order on invasive species (E.O. 13112) on February 3, 1999. It establishes a framework in the fight against weeds and other invasive species and calls for a coordinated federal effort. It directs the creation of an Invasive Species Council and an advisory committee comprised of non-federal stakeholders. A comprehensive plan to address the growing economic and environmental threat on a national basis is under development in the year 2000. The BLM, manager of 264 million acres, will continue to play an important role in the national weed control program currently being formulated.

CASHE: Compliance Assessment - Safety, Health and the Environment

The Compliance Assessment - Safety, Health and the Environment (CASHE) Program is an audit process to improve facility management. BLM program areas that are benefiting from CASHE audits include recreation, fire, wild horse and burro, and noxious weeds.

The Bureau's National Applied Resource Sciences Center (now the National Science and Technology Center) proposed the creation of a Bureau-wide environmental auditing program after learning of the benefits private industry and the Department of Defense were receiving from similar endeavors. In Fiscal Year 1993, the Washington Office agreed to the establishment of an environmental auditing program.

During the initial program development, BLM identified the need for an auditing program that evaluated more than just the environmental compliance issues facing its facilities. As a result, the audit program was expanded to include safety, health, environmental, transportation, and fire prevention regulations, and the CASHE Program was created. The CASHE Program's comprehensive scope ensures that BLM facilities comply with the regulation or standard that most protects human health and the environment.

The first CASHE audit was conducted in October 1993; in September 1997, the Department of the Interior required all its agencies to develop environmental auditing programs. The CASHE program received a Department of the Interior Environmental Achievement Award in 1997 and an Environmental Protection Agency, Region 8, Environmental Achievement Award in 1998.

During a CASHE audit, in addition to facility evaluation, personnel receive training on how the regulations apply to their operations. In order to provide immediate feedback to the audited unit, a written draft final report is given to each field office during an exit briefing with the CASHE Team. Problems are outlined for the management team during the briefing, and the draft report recommends how to correct them. Since 80 to 90 percent of CASHE findings can be corrected at no cost; and fewer than 1 percent cost over \$2,500 to correct, the vast majority of recommendations can be implemented promptly.

The CASHE review process encourages audited facilities to begin to plan for the implementation of recommendations immediately, and results in a final report that serves as an action plan. The final report includes estimated completion dates and points of contact for the implementation of each recommendation.

National Public Lands Day

In 1994, BLM and Times Mirror Magazines created Public Lands Appreciation Day (PLAD) to provide citizens with opportunities to participate in volunteer and education activities linked to public lands. The National Environmental Education & Training Foundation (NEETF) signed on in 1996 as the new national coordinator of the event, and PLAD became "National Public Lands Day" (NPLD). As national coordinator for National Public Lands Day, NEETF works with federal land managers to promote and support NPLD events. The Foundation works with agencies to select sites; assists sites with planning, promotion, and environmental education materials; and develops resources from public and private organizations for program implementation.

Each year, NPLD volunteers build trails and bridges, and transform many sites into universally accessible areas. They renew buildings, improve wildlife habitat, revegetate stream banks, restore shorelines, and complete other projects that could not be undertaken without the infusion of volunteers provided by National Public Lands Day. In addition to improving public lands, NPLD events help to educate citizens about critical environmental and natural resource issues and the need for shared stewardship of public land resources. NPLD also helps to build partnerships between the public sector and the local community centered on mutual interest in the enhancement and restoration of America's public lands.

Celebrated on or near the last Saturday of each September, NPLD has grown since its inception from a handful of sites in a few states to a true national celebration. In 2000, eight participating federal land management agencies hosted events at more than 250 sites across the nation, with 50,000 volunteers performing public lands work with a value of more than \$8 million. Preliminary BLM statistics for 2000 indicate that 6,000 volunteers participated in planned activities at fifty BLM sites in eighteen states.

In addition to BLM, federal agencies participating in National Public Lands Day 2000 were the U.S. Fish and Wildlife Service, National Park Service, Bureau of Reclamation, U.S. Army Corps of Engineers, Department of Defense, USDA Forest Service, Tennessee Valley Authority, and U.S. Environmental Protection Agency. Numerous state and local parks and recreation departments also participated, and governors' proclamations were issued in nineteen states. The Public Lands Foundation committed personnel and funds at several western sites. National corporate sponsors included Toyota, the Outdoor Life Network, Galyans Sports, Sunbeam Corporation, and Leave No Trace. A wide array of local public and private partners also contributed to events at individual NPLD sites.

Innovations and New Approaches

National Wild Horse and Burro Policy

In 1998, BLM faced several questions about the fiscal management of the Wild Horse and Burro (WH&B) program and management of viable herds on healthy range. The first issue was the organization of the program. In the late 1980s, the BLM had decentralized management of the WH&B program from Washington, D.C. to Reno, Nevada and placed responsibility under the Nevada BLM State Director. Only liaisons were left in Washington to interact with upper management, other agencies, and Congress. A second issue was the extremely poor public perception of the program and its management, expressed in allegations in nationwide news articles. Third, adoptions of wild horses and burros had dramatically decreased nationwide and preparation facilities were at capacity. There were large numbers of unadoptable animals in the pipeline and populations were burgeoning on the range. Fourth, the budget had been reduced. Fifth, there was no a formal plan guiding the management of the program. Last, the program was essentially a loose aggregation of several separate programs run by individual BLM state offices.

In response to recommendations from several internal and external evaluations, BLM began implementing many steps to improve management of the program, beginning with reorganization of the program administration. The program was redefined as a national program and management was moved back to Washington, D.C. The Wild Horse and Burro Advisory Board was rechartered, as authorized by the Wild Free-Roaming Horse and Burro Act of 1971, to assist the agency.

Strategic planning was conducted for the program. A long-term goal and two quantifiable performance measures were inserted into BLM's Strategic Plan. The long-term goal, to be met by 2005, is to manage the wild horse and burro populations in a manner consistent with land standards and healthy herds in order to achieve and maintain a thriving natural ecological

balance on 15 percent of the Herd Management Areas, and to ensure that wild horses and burros continue as living symbols of the historic pioneer spirit of the West.

The Wild Horse and Burro program developed a pilot instituting the use of business tools. Specific costs for each of the discrete activities of the program-gathers, preparation, adoption, compliance, titling-were developed for each state through Activity Based Costing (ABC). BLM also used a population model developed specifically for the WH&B program to develop several on-the-ground management options based on biological data.

Surprisingly, the use of ABC and population modeling data supported a management strategy that had been repeatedly discarded in the past as too costly. The data clearly demonstrates that the chosen strategy is the most cost effective in the long term and will enable BLM to meet management goals in the shortest time.

BLM Science Advisory Board

Secretary Babbitt established the BLM Science Advisory Board on April 15, 1998. The Board advises the Director on improving the communication of BLM science and research needs to other federal agencies, the scientific community in general, Congress, and the American public; transferring new technology and scientific findings to BLM field office staff; and coping with current and emerging resource issues.

Membership on the Science Advisory Board has included university professors, executives from industry and non-governmental organizations, and state government officials. Each board meeting has had a specific science agenda. Agendas have included: fertility control for wild horses; the science of wildland fire management and post fire rehabilitation; the Great Basin restoration initiative; the science associated with cultural resource management; and the use of current and emerging technologies for natural resource management.

The Board's main project during 1999-2000 was assisting a team of BLM and USGS staff in creation of a strategic science plan. The strategic plan outlines how science will be used in BLM decision making, defines a process of identifying and prioritizing BLM's science needs, and suggests how BLM can communicate its needs to science providers.

The Science Advisory Board was re-chartered by Secretary Babbitt on July 14, 2000 for two years.

Service First

Begun with two pilot sites in 1996, Service First is a BLM-Forest Service (FS) partnership created to enhance public service and improve land and resource management practices. By merging the efforts of the two agencies on a local level, BLM and FS expect to achieve dramatic improvements in customer service, operational efficiency, and quality of resource stewardship.

Fiscal realities and public demands continually challenge federal agencies to find new and better ways of doing their jobs. The Service First program aims to provide convenient and effective

"one-stop shopping" to its customers, and to apply good judgment and common sense in response to local circumstances and needs. Service First seeks to increase public satisfaction with agency services through a collaborative approach to resource management and through sharing of resources for more cost-effective service delivery. Joint management of intermingled and/or adjacent public lands also enhances benefits to the natural resources themselves, particularly in such large-scale programs as noxious weed control and watershed restoration.

Under the Service First provision for shared personnel, BLM and FS can allocate human resources to areas in which they are most needed. For example, BLM does not have an archaeologist in the Alamosa area of Colorado; the nearest BLM archaeologist is located in Canon City, a distance of 140 miles. Through Service First, the FS archaeologist in the Alamosa area can respond to the archaeological needs of both BLM and FS constituents in this vicinity. Co-location of staff improves customer convenience and interagency communication, and sharing of equipment and facilities stretches limited funding. Coordination in permitting and contracting and the joint pursuit of common administrative projects also lead to greater efficiency.

Hammer Awards have been presented by Vice President Gore's National Performance Review to the Colorado Trading Post and the Central Oregon Initiative, the two pilot Service First projects, for "work [resulting] in a government that works better and costs less."

Recreation Fee Demonstration Program

BLM participated in the six-year Recreation Fee Demonstration Program authorized by the Omnibus Consolidated Rescissions and Appropriation Act of 1996 (Public Law 104-134). The National Park Service, Fish and Wildlife Service and the Forest Service also were included in this legislation. This law gives BLM the authority to collect fees at various sites under its jurisdiction, and then to use 100 percent of those monies to fund much-needed improvements at the sites which generated the revenue. The law directed BLM to select a minimum of 10 and up to 100 sites to participate in the program.

Prior to fee demonstration, restrictions found in the Land and Water Conservation Fund (LWCF) Act had limited BLM's authority to collect recreation fees. A 1972 amendment to the LWCF Act authorized BLM to issue permits and charge fees for special uses such as group activities, major recreation events, or motorized recreation vehicle use. It also allowed BLM to levy fees for certain recreation sites and facilities. In 1989, the Omnibus Budget Reconciliation Act permitted BLM to return a limited amount of fee money to the area of collection. BLM was later authorized to charge entrance fees at its eight National Conservation Areas through the 1993 Omnibus Budget Reconciliation Act.

Under the Recreation Fee Program, BLM increased its recreation fee pilot projects from an initial ten projects in Fiscal Year 1997 to sixty-eight projects in Fiscal Year 1998, ninety-five projects in Fiscal Year 1999, and the full 100 sites in Fiscal Year 2001. BLM collected recreation fees totaling \$3.7 million in Fiscal Year 1997, \$6.1 million in Fiscal Year 1998, and \$6.7 million in Fiscal Year 1999. BLM fee demonstration projects accounted for \$5.1 million of the Fiscal Year 1999 total. The fee demonstration project revenues are being used to maintain

and upgrade facilities; improve and expand campgrounds; provide visitor services, including interpretation, environmental education and stewardship ethics; improve visitor safety; enhance access to persons with disabilities and provide for fee collection and operation costs.

Overall, visitation to recreation areas managed by BLM has increased during the course of participation in the demonstration program, although several BLM fee demonstration areas received slightly less use during the first two years of the program. As would be expected, sites with the greatest visitation collected the most money, particularly in those areas that had a single or limited points of access, such as Red Rock Canyon National Conservation Area, located just a short drive from Las Vegas, Nevada; Little Sahara Off-Highway Vehicle Recreation Area, Utah; Yaquina Head Outstanding Natural Area, Oregon; and, the Anasazi Heritage Center, Colorado. All of these sites had high numbers of visitors and a single point of entry to the fee site.

Frequent agency presence on site is critical in order to have a high public compliance rate. For instance, the National Historic Oregon Trail Interpretive Center achieved more than 90 percent public compliance because the self-serve pay station is in full view of the staff and volunteers in the Center's lobby. Volunteers and organized groups that have played a role in the development and management of a particular recreation site have been given exemptions from fees based on their services and contributions to the particular site.

Although the legislation authorized agencies to retain up to 20 percent of the new fees at the national level for recreation related expenditures, BLM authorized its fee demonstration site managers to retain the full 100 percent of collections. This funding arrangement gives local managers an incentive to participate in the Recreation Fee Demo Program. Revenues collected at recreation sites with a high volume of visitation exceeded the cost of collection, while the less frequently visited sites collected revenues just sufficient to offset their collection costs. Since start-up capital costs were also involved, the revenue to collection-cost ratio will improve in the future, as the one-time start-up costs are amortized. Costs of collection also vary with the method of collection.

In Fiscal Year 1999, BLM spent approximately one-half (52 percent) of the revenues from fee collections on annual operating and maintenance work, including cost of collection. The other one-half of the collections was spent on reducing BLM's backlog maintenance projects (24 percent); improving interpretive services and providing improved or enhanced visitor amenities (13 percent); providing law enforcement services (2 percent); and protecting and conserving natural resources (9 percent).

Projects that have been completed or started include: maintaining existing facilities; retrofitting restrooms and access to picnic areas for persons with disabilities; repairing or constructing restrooms; repairing, replacing, installing and expanding water systems; landscaping sites; expanding campgrounds; adding new grills and tables; constructing trails and additional tent pads; increasing services and adding seasonal positions; constructing fee collection facilities; adding and repairing equipment; developing exhibits and other outreach materials; expanding partnerships; designing and creating interpretive displays, maps and brochures; creating and adding directional signs; repairing roofs and vehicles; paving and grading roads and bridges; repairing and adding communication systems; repairing, replacing, and constructing boat ramps;

replacing and constructing boat and fishing docks; purchasing and installing lighting for exhibits and kiosks; repairing gates, fences and flood damage; providing law enforcement officers; and eradicating weeds and other invasive species. These projects would not have been accomplished without the funds provided by the Recreation Fee Demonstration Program.

Reducing Barriers to Cross-Jurisdictional Planning

BLM seeks to reduce barriers to cross-jurisdictional planning by engaging in collaborative efforts with Indian tribes, other federal agencies, state and local governments, and communities.

Individuals, communities, and governments work together under collaborative planning to improve stewardship of public lands. These efforts aim to achieve healthy landscapes, promote sustainable development for local communities, and a better quality of life for all. BLM also uses alternative dispute resolution techniques.

Through established partnerships, federal land use planning becomes a community-based process. BLM's initiatives have been focused in several areas:

- Offering training in community-based partnerships on site in several western communities.
- Sharing computer data with many state and local governments
- Cooperatively planning with several counties and states
- Sharing resource assessment data among agencies and several states and counties
- Establishing partnerships among federal agencies and universities to undertake scientific research in support of land use planning.

Multi-jurisdictional planning is particularly important where BLM surface lands and subsurface mineral interests are intermingled with lands that are under the jurisdiction of other government entities. It fosters coordination of existing plans and encourages cooperative planning on a regional, sub-basin, or watershed unit basis.

Collaborative, cross-jurisdictional planning has been undertaken in a number of states. Among these planning efforts are:

- Carson City, Nevada, Urban Interface Plan Amendment;
- Gunnison Basin Sage Grouse Conservation Plan;
- Empire-Cienega Resource Conservation Area land use plan, Arizona;
- San Miguel Watershed Coalition, Colorado, plan to preserve its undisturbed river system;
- Rio Grande Resource Management Plan, Taos, New Mexico;
- Lake Pleasant/Bradshaw Foothills land use plan, Phoenix.

Additionally, BLM has entered into several partnerships to improve planning and decision making at BLM, and the health of the landscape, including a community-based planning effort in Safford, Arizona, to develop a plan for Watson Wash hot well; a Taos, New Mexico partnership for public land improvement, community economic development, and improved watershed health; a partnership with the Lake County Open Space Association to preserve open space and ranch land; and the Southwest Strategy, to coordinate land use and decision making.

In California, innovative, cross-jurisdictional planning efforts have been underway for several years. BLM partnerships with various national organizations, including the Sonoran Institute, the National Association of Counties, and the National Governors Association, among others, have helped to foster opportunities to work with state and local governments and communities. Also, cross-jurisdictional agreements have been developed among several federal agencies and universities as the Cooperative Ecosystem Study Unit projects.

Recreation.Gov

Federal lands host hundreds of millions of recreational visits each year, generating billions of dollars in economic activity. Vice President Gore initiated a multi-agency effort in 1997 to improve service to this important set of customers by establishing an electronic information system for recreation on federal lands, Recreation.Gov.

Recreation.Gov <www.recreation.gov> provides a single point of Internet access to information about more than 1,900 recreation sites managed by eight agencies from four different departments. These sites include national parks and national forests; national wildlife refuges; public land campsites, lakes, rivers, and historic sites managed by BLM; and more. The system also provides information on recreation permits, as well as links to on-line reservations for more than 50,000 campsites and other facilities nationwide. Users can search for recreation sites by activity, state, agency, or site name.

Before Recreation.Gov was established, potential visitors to federal lands had to look for recreation information by locating relevant agency Web sites one by one. Now, all of these federal agencies are accessible through one Web site, while introducing them to information about lesser-known recreation areas.

Through an interagency partnership approach, the agencies launched Recreation.Gov under budget and eighteen months ahead of schedule. The site, which debuted in 1998 to outstanding reviews, was rated one of the top fifteen Web sites in the federal government ("Best Feds on the Web") by *Government Executive* magazine in May 1998, and also received the Vice President's Hammer Award for innovative federal projects.

Native Americans

Spirit Cave Man Determined Culturally Unaffiliated

In a high-profile case involving an Indian tribe's claim under the Native American Graves Protection and Repatriation Act, and after several years of study, the Nevada State Director decided in August 2000 that there is no basis in evidence for assigning the 9,000-year-old human remains from Spirit Cave to any contemporary Indian tribe. The partially mummified remains and associated materials have been preserved in the Nevada State Museum since being excavated sixty years ago. In 1997, the Fallon Paiute-Shoshone Tribe, representing all Northern Paiute tribal governments, asserted cultural affiliation with the remains and requested their repatriation.

Cultural affiliation, under the Native American Graves Protection and Repatriation Act, means a relationship of shared group identity which can reasonably be traced historically or prehistorically between members of a present-day Indian tribe and an identifiable earlier group. Cultural affiliation is established when the preponderance of the evidence indicates a relationship. The kinds of evidence reviewed can be geographical, biological, archaeological, linguistic, or based on folklore, oral tradition, historical, other information and expert opinion. In the case of Spirit Cave Man, BLM found that these kinds of evidence were not able to support the Fallon Paiute-Shoshone Tribe's assertion.

National Programmatic Agreement on Cultural Heritage Preservation

Through a National Programmatic Agreement executed in 1997 with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers, BLM managers have accepted more of the responsibility for complying with Section 106 of the National Historic Preservation Act. As a key part of implementing the agreement, the Director created BLM's Preservation Board. The Board consists of the Preservation Officer in the Washington Office, a Deputy Preservation Officer in each state office, plus four field office managers and two field office specialists serving on overlapping two-year assignments. The Board meets twice annually and acts as a staff body to advise the Director and State Directors on improving preservation policies and practices. State Historic Preservation Officers (SHPO) and the Advisory Council on Historic Preservation (Council) now become involved at earlier stages of planning and decision making, increasing the consideration given to historic preservation in BLM's decision-making process. This also relieves the SHPOs and the Council from most of the routine case work for which BLM has a proven track record, while allowing them to continue to be involved as advisors in the more complex, non-routine cases.

The operation of the agreement has resulted in better communication at all levels within BLM, between BLM and the SHPOs, and even among the western SHPOs themselves. One of the significant by-products of the agreement is a BLM-SHPO data-sharing project, through which BLM is helping the SHPOs to digitize their comprehensive records and make them accessible online in GIS (Geographic Information System) format. This direct accessibility will greatly improve BLM's ability to incorporate historic property information in its land-use and project planning and will further streamline the compliance process that is a required part of all planning.

Commercial Films and Motion Pictures Policy

Regulations were implemented in 1996 to make it easier for commercial filming companies to obtain permits for filming on public lands, provided that the filming will not have environmental consequences that cannot be mitigated. Public Law 106-06, recently enacted, allows land managing agencies to retain both rental and cost recovery fees for commercial filming activities conducted on federal lands. BLM proposes to use fee money not only to cover the costs associated with processing commercial filming permits, but also to provide for outreach on commercial filming to help the public and permittees gain a better understanding of the agency's process for authorizing commercial filming on public lands.

Paleontology

The Fossil Report

Congress asked Secretary Babbitt in 1999 to review federal policy concerning fossils, and the Secretary asked eight agencies—six Department of the Interior agencies, the U.S. Forest Service, and the Smithsonian Institution—to conduct a study, drawing heavily on public input. BLM accepted the writing lead for the study report. The May 2000 report emphasizes the public importance of fossils on federal lands as a part of America's heritage. It addresses fossils' rarity (particularly vertebrate fossils), their extraordinary scientific significance, their endless educational values, and their unmatched attractiveness to the public. Unfortunately, rarity and public attraction also contribute to a market value, and fossils on federal lands are increasingly subject to theft.

The report recommends that collection of vertebrate fossils be restricted to qualified personnel; that collected fossils should remain permanently in federal ownership; that penalties for fossil theft should be strengthened; that government agencies should do more to inventory and monitor fossil localities on federal lands; that federally owned fossils in museums and educational institutions should be readily available for scientific research and public education; and that federal fossil management should include an emphasis on public education and public participation in stewardship of the public's fossil resources.

BLM's Red Gulch Dinosaur Tracksite

In 1997, an arroyo with over 1000 dinosaur footprints was discovered near the Red Gulch/Alkali National Backcountry Byway, in the area of Shell, Wyoming. Named the "Red Gulch Dinosaur Tracksite," this unique area, until recently thought to be an ancient ocean bottom, is located within an 1800-acre tract managed by BLM.

The 40-acre Red Gulch site is approximately 165 million years old, and contains only footprints (trace fossils), and none of the usual bones and teeth (body fossils) that paleontologists might excavate. The tracks were made by small to medium-sized theropods (meat-eating dinosaurs) that weighed 15 to 400 pounds. As they walked along a smooth beach covered with ripple marks, the dinosaurs left tracks ranging from eight to three-and-one-half inches in length. Their footprints were preserved by a thin film of algae that held the mud together.

BLM's Worland District manages the Red Gulch Tracksite and coordinates scientific research in the area. Nearly 1000 tracks have already been mapped, and there may be many others. Using photogrammetry and computer-assisted analysis, it will soon be possible to estimate how many animals left footprints at the site, and whether the dinosaurs were all of one species. The tracks will be preserved for further study and public viewing.

Minerals Policy

Oil and Gas

National Petroleum Reserve - Alaska (NPRA)

A BLM-led interagency effort resulted in the 1998 announcement of an Interior plan for the 4.6-million-acre National Petroleum Reserve - Alaska (NPRA). The plan prohibits surface disturbance in the sensitive wildlife habitat comprising almost one-third of the planning area, but still makes 87 percent of the area available for oil and gas leasing. Special stipulations protect subsistence hunting and fishing grounds. In 1999, BLM held an oil and gas lease sale offering 425 tracts on 3.9 million acres within the NPRA, the first such sale for the reserve since 1984. Oil companies paid \$104.6 million in bids for 132 leases in this high-potential oil and gas area.

Stripper Oil/Heavy Oil Royalty Rate Reduction

In order to bolster the domestic oil industry during a 1992 price downturn, BLM granted royalty relief to the operators of "stripper" oil properties, i.e., those producing less than an average of fifteen barrels of oil per day. This effort was designed to encourage production from marginal wells, prevent premature well abandonment, motivate operators toward enhanced oil recovery projects, and increase domestic oil production. In 1997, an interagency team determined that production of 3.54 million barrels of oil was attributable in large part to the rate reduction, representing an 18 percent increase over what otherwise would have been produced. In 1998, BLM formally extended this highly successful program for an indefinite period. As a similar incentive, in 1996, operators of federal heavy oil leases were also provided a royalty rate reduction to offset the typically higher production costs associated with heavy oil production.

Idle Wells; Bond Review; Orphan Wells

As of June 2000, approximately 30 percent of the 15,000 BLM-supervised shut-in and temporarily abandoned wells had been idle for ten years or more, with operator bonds insufficient to cover the costs of well plugging and surface reclamation. These wells were economic liabilities for BLM, and posed significant threats to the environment. Accordingly, BLM began in the latter half of the 1990s to pursue a policy of idle well review and classification, with a goal of requiring operators to permanently plug and abandon wells of no further economic value. Bond amounts are also reviewed in order to ensure that they are sufficient to protect the government in case of operator default. In addition, many of BLM's 105 orphan wells (those that were not properly abandoned and for whom no responsible party can be identified) are located in vulnerable watersheds and present a siltation threat to rivers and streams. BLM has provided affected states with special Fiscal Year 2000 and Fiscal Year 2001 funding to assist in plugging orphan wells.

Naval Oil Shale Reserves Nos. 1 and 3

The National Defense Authorization Act for Fiscal Years 1998 and 1999 transferred jurisdiction over Naval Oil Shale Reserves Nos. 1 and 3 (Colorado) from the Secretary of Energy to the

Secretary of the Interior. The law also authorized the Secretary of the Interior to lease such transferred areas for the exploration, development, and production of petroleum, under specified conditions. In 1999, an interagency agreement was signed to formalize the working relationship between the two Departments and to establish respective responsibilities.

Coal Bed Methane Development and Policy

With the increased demand for natural gas in the late 1990s, coal bed methane on federal lands became a prime target as a natural gas source. In order to meet the tremendous increase in demand for development, BLM diverted resources to the areas of greatest potential. In both the Powder River Basin of Wyoming and the San Juan Basin of New Mexico and Colorado, BLM concentrated its efforts on more timely completion of planning and National Environmental Policy Act work to address increased development. At the same time, the agency developed national policy to address the sometimes conflicting interests and rights of oil and gas, coal, and coal bed methane owners to ensure orderly and timely development of those resources. The national policy is designed to prevent expensive, time-consuming litigation, allowing for prompt development of vital natural resources.

National Petroleum Forum

The creation of a national BLM oil and gas work group was proposed during the performance review of BLM's oil and gas program, inspired by the success of local BLM oil and gas work groups in California, Wyoming, and New Mexico. BLM formally established the National Petroleum Forum in 1999. It has since been used to institute an ongoing dialogue with industry in order to exchange information, address concerns, and resolve issues before they become an obstruction to development. The Forum also ensures that industry is aware of and understands BLM's position regarding those areas where oil and gas production may be prohibited or limited.

Comprehensive Oil and Gas Rules

In the mid-1990s, BLM undertook a major redesign and rewrite of federal oil and gas regulations. In late 2000, BLM will publish final rules that make a number of significant changes in the way the agency regulates oil and gas operations on federal lands. By reference, these rules incorporate certain industry standards pertaining to oil and gas operational activities on federal lands. The rules significantly increase lease liability bonding for federal oil and gas leases in order to minimize potential liabilities due to a lessee's failure to comply with the terms and conditions of a lease or with environmental laws and regulations. The redesigned oil and gas regulations also strengthen BLM's inspection and enforcement program and simplify civil penalty regulations. The rules exempt some low-producing wells from complying with certain requirements; over time, such exemptions are expected to save small operators money while still maintaining environmental safeguards. The rules also help protect federal lands from being drained of oil and gas without compensation.

Hardrock Minerals (Metallic Minerals and Some Special Non-Metallic Minerals)

Hardrock Mining Regulations (43 Code of Federal Regulations (CFR) 3809)

In 2000, as an outgrowth of mining law reform efforts made in the early 1990s, BLM finalized regulations that strengthen environmental standards for the permitting of mining operations and the reclamation of mined lands. In some cases, these regulations provide for the discretionary rejection of mining plans of operation based on "substantial irreparable harm to significant resource value." These regulations, which apply to minerals that fall under the authority of the Mining Law of 1872, were released in December 2000.

Use and Occupancy Regulations (43 CFR 3715)

In 1996, BLM published regulations that severely limited mining claimants' leeway to use the Mining Law of 1872 as a pretense for building summer recreation homes and campsites on their mining claims. The regulations give BLM authority to assess criminal and civil penalties for illegal occupancies, and also require that structures used for mining purposes meet public health and safety standards.

Mining Claim Rental/Holding Fees

As part of the Fiscal Year 1993 Interior Appropriations Act, Congress imposed a rental fee of \$100 per mining claim, in lieu of assessment work, for both Fiscal Years 1993 and 1994, with failure to pay resulting in statutory forfeiture of the claim or site. The effect of the increased fee was dramatic: from July to August 1993, BLM's inventory of claims in good standing dropped from 760,000 to 293,000. Congress imposed other fees, including a one-time \$25 location fee, with these requirements extended for various periods.

Uniform Pricing of Publicly Traded Minerals for Mining Claim Validity Determinations

New BLM policy in 2000 established consistent methods to be used by BLM mineral examiners in determining what values to give to publicly-traded mineral commodities (a commodity listed on a national or international exchange) for validity examinations of mining claims.

Change in Approval Process for Mineral Patents Based on Secretarial Order 3163

In 1993, a Secretarial Order revoked BLM State Directors' delegated examination and approval authority for those mineral patents that transferred mining claims out of public ownership. In conformance with the Order, first-half final certificates and patents under the Mining Law of 1872 are to be reviewed and issued by the Secretary.

Unmarketable Industrial Mineral Resources Under the Mining Laws

Because of inconsistent case law addressing assessment of large reserves of industrial minerals claimed under the mining laws, BLM established a policy limiting patents on non-metallic mineral resources to 40 years.

Legal Limit of Five Acres of Millsite Location for Each Mining Claim Location

On the basis of a 1997 Department of the Interior Solicitor's Opinion (M-36988) construing the Mining Law of 1872 as limiting location of millsites to five acres per mining claim, BLM gave agency personnel the flexibility to challenge mining operations where millsites in excess of five acres were included in a plan of operations. The policy also provided guidance for rejection of plans of operations for lands withdrawn from the mining laws and for lands where operations would unacceptably conflict with other significant resources.

Non-Energy Leasing Regulations (43 CFR 3500)

In response to Vice President Gore's National Performance Review "Plain English" initiative, BLM's non-energy leasing regulations were among the first to be consolidated and rewritten. In 1997, the reformulated regulations won a Clarity Award from the Plain English Committee of the State Bar of Michigan.

Abandoned Mined Lands (AMLs)

Hundreds of thousands of abandoned mine sites are located on BLM-managed public lands. Most of the sites consist of the remains of small- to medium-size hardrock mine and mineral processing sites, and many date from the mid-1800s. In 1994, after President Clinton recommended amendment of the Clean Water Act to address water quality impacts associated with AMLs, the Secretaries of Interior and Agriculture invited the Environmental Protection Agency Administrator to assist them in focusing on those AMLs that presented the most severe threats to water quality. The agencies produced an initiative based on adoption of a watershed approach, clean-up of the worst sites first, and integration of the expertise of land management, scientific, and regulatory agencies into the AML restoration task.

Leadership

Jim Baca of New Mexico served as the Clinton Administration's first confirmed Director of the BLM from 1993 through 1994. Mike Dombeck, a career U.S. Forest Service manager, served as the Acting Director of the BLM from 1994 through 1996. Sylvia Baca, the Deputy Assistant Secretary for Land and Minerals Management, was appointed Interim Director of the Bureau in January 1997. In the summer of 1997, the Bureau once again had a confirmed Director, Pat Shea. Pat Shea served as Director from 1997 to 1998, until he was promoted to Deputy Assistant Secretary for Land and Minerals Management. Tom Fry became the Acting Director of the Bureau in 1998 and was confirmed as the Director of the BLM in May 2000.

Director Shea worked to improve the Wild Horse and Burro Program, automation of Bureau services, control and elimination of invasive plants, the national fire program, land exchanges, recruitment and training of diverse employees, and using science to assist with land management decisions.

Prior to becoming the Acting Director of the BLM, Tom Fry was the Deputy Director of the Bureau from April 1997 through November 1998. As Acting Director and, later, as the Director of the Bureau, Fry directed the establishment of BLM landscape monuments and other protected areas as well as the creation and management of the National Landscape Conservation System, sought increases in appropriations, and directed federal response to the catastrophic wildland fire season in 2000.

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

The Surface Mining Control and Reclamation Act

In 1977, President Carter signed the Surface Mining Control and Reclamation Act—the first federal law to regulate the environmental effects of strip mining and to require the reclamation of land and water damaged by coal mining. The Act also created a fund to correct health and safety problems through reclamation of abandoned mines.

The United States covers only about five percent of the world's land area, yet it has one-quarter of the world's coal reserves. During the last two centuries, this abundance of coal fueled the nation's tremendous industrial growth, but that growth carried a price. For those miners fortunate enough to survive the dangers of working below ground—cave-ins, explosions and the lingering death of black lung disease—there were plenty of dangers above ground. Land and water scarred by coal mining posed a constant threat to the health, safety and well-being of people living in America's coal regions. Mine wastes dumped down slopes or poorly compacted on hillsides created an ever-present threat of landslides. Dangerous highwalls loomed over barren stretches of stripped earth where even weeds wouldn't grow. The landscape was dotted with mining pits filled with polluted water, streams clogged with sediment and rivers poisoned by acid runoff from exposed coal seams. There were places in Appalachia that looked more like the moon than planet earth.

It was well into the twentieth century before a handful of states began to require reclamation at coal mines. Even those meager efforts were largely unsuccessful as the demand for coal increased to support the war efforts in the first and second world wars. By the mid-1900s, the advent of larger and more effective earth-moving machines made strip mining of coal more efficient than ever before. Compared to traditional underground coal mining, strip mining generally costs less, is safer for miners, and usually results in more complete recovery of the coal. Washington came under increasing pressure from citizens and environmental advocates to develop a national program to require coal mining reclamation.

The Surface Mining Control and Reclamation Act created two major programs to be implemented jointly by the states and the federal government. The first was an environmental protection program to establish standards and procedures for approving permits and inspecting active coal mining and reclamation operations, both surface and underground. The second was a reclamation program, financed by fees paid by active coal operators, to restore land and water at abandoned mines. Congress included provisions for prohibiting mining in sensitive areas, requirements that coal companies obtain bonds to cover the costs of reclamation in case the companies failed to meet their obligations, and provisions for citizen participation in mine permitting, inspection and enforcement.

The Office of Surface Mining Reclamation and Enforcement

Ensuring that the Surface Mining Act's requirements are met is the responsibility of the Interior Department's Office of Surface Mining Reclamation and Enforcement (OSM)—a small bureau of about 650 employees nationwide. Under the Act, the Secretary of the Interior grants direct

regulatory authority to state governments, provided they develop programs that meet certain conditions. Once a state is granted "primacy," it takes over responsibility for issuing coal mine permits, conducting inspections, and taking enforcement actions. Of the twenty-six coal-producing states, twenty-four have primacy. OSM retains regulatory authority on federal lands and Indian reservations, and in the coal states that do not have primacy.

Although most coal states have primacy, OSM retains responsibility for monitoring states to ensure that they properly carry out their delegated authorities and require operators to meet certain minimum requirements. Through independent oversight, OSM evaluates how effectively each primacy state is administering its approved program. If OSM finds serious deficiencies in a state's conduct of its program, OSM can exercise backup enforcement authority or rescind primacy and resume direct federal regulatory authority. OSM's oversight role helps states to maintain high standards, contributes to operator compliance, and maintains a level playing field so that the coal industry in any one state does not have an unfair economic advantage in interstate competition.

OSM supports primacy states with training and technical assistance and by providing fifty percent of regulatory program funding. OSM also provides primacy states and Indian tribes with full funding for the reclamation of abandoned mine lands. In addition, OSM operates programs to eliminate the environmental and economic impacts of acid mine drainage from abandoned mines, encourage reforestation of reclaimed mine land, develop techniques that can ensure reclamation of prime farmland soils, and publicly recognize outstanding reclamation work.

New Administration: Reinventing OSM

During the first decade-and-a-half after the Surface Mining Act became law, communities, homes, and businesses, particularly in Appalachia, were made safer. There were reduced dangers of highwall failures and dam breaks. The Act's restrictions on dumping spoil in steep slope areas greatly reduced damage to homes, roads, and other structures from landslides. Requirements for sediment control reduced stream flooding, and hydrologic protection requirements reduced the adverse impacts of mining on streams, aquifers, and other surface and ground water features. Wildcatting—mining without a permit—once common in Appalachia, was nearly eliminated. More than \$2 billion of Abandoned Mine Land Program funds were spent to correct health and safety dangers caused by abandoned mines.

The technical problems of reclaiming surface-mined land are complex, and the requirements of the Act cover virtually every aspect of coal mine operations. Not every operator complied, and the problems created by a small number of irresponsible mining operators continued to taint the vast majority who complied with the law. Some key requirements of the Act remained to be clearly defined following successful court challenges by coal industry and environmental advocates to OSM's regulations. Despite how much had been spent on AML reclamation, state and federal inventories of abandoned mines showed that federal appropriations were insufficient to fully address even the most serious safety and health hazards.

Change and Challenge

Leadership

By early 1993, OSM was at a crossroads and needed to step back and assess accomplishments and shortcomings. W. Hord Tipton, OSM's Deputy Director for Operations and Technical Services, served as Acting Director of the agency from January through October of 1993. In November 1993, Secretary Babbitt named an Interim Management Team (IMT) and charged it with evaluating every aspect of OSM's operations as a first step in setting a future direction for the bureau. The Secretary also appointed Interior's Deputy Solicitor, Anne Shields, as Acting OSM Director.

The Interim Management Team conducted an exhaustive survey, interviewing nearly everyone directly affected by OSM's programs—employees, citizens, environmental groups, state regulatory authorities, the coal industry, and unions. The Team looked into every aspect of OSM's organizational structure, management, policies, programs and regulations. Based on the results, the Team developed the Management Guidance Plan—a compilation of tasks and schedules that would serve as a blueprint for the future.

Having brought stability to OSM, Anne Shields returned to the Solicitor's Office after four months as Acting Director. On March 10, 1994, Robert Uram, a former Associate Solicitor at Interior during the Carter Administration, was sworn in as OSM's Director. In addition to drawing on his own extensive experience with surface mining issues, Uram turned to capable career employees and looked to the Management Guidance Plan to help him bring new direction to OSM.

Soon after his confirmation, Uram issued OSM's Mission and Vision Statement to clarify the basic purposes and objectives of the Surface Mining Act for all of OSM's employees. He developed OSM's first strategic plan to serve as the context for setting program priorities in the years to come. Planning and budget were redesigned around a handful of core business lines to emphasize more efficient use of fiscal and human resources. Customer service standards were established so that states, tribes, the coal industry, and citizens would know what to expect from OSM in the way of services.

1995: Restructure and Reduction in Force

During its evaluation, the Interim Management Team found that OSM employees and other stakeholders frequently criticized OSM's poor organizational structure, particularly the lack of clear lines of authority, accountability and responsibility. In early 1995, to address these concerns, Director Uram appointed a group of employees from OSM offices nationwide and asked them to identify options and recommend a new organizational structure. Following extensive review and consultations, OSM was restructured in late summer of 1995.

The new structure included three regional coordinating centers to serve as links between Washington and field staff in communicating policies and decisions throughout the bureau. Every two to three months, senior managers in Washington and the Regional Coordinating

Centers convened as the OSM Management Council to identify priorities, develop strategic initiatives, and set annual performance goals. OSM's new structure was designed to ensure consistent implementation of agency policies, clarify lines of authority, remove unnecessary layers of management, and reduce management-to-staff ratios. Most importantly, these changes moved decision-making closer to OSM's primary customers—the citizens of the coal fields.

As soon as the reorganization had been implemented, Congress slashed OSM's budget, forcing the bureau to lay off one-third of its employees. OSM went through a reduction-in-force in late 1995 that eliminated 300 employees from the bureau. While OSM and the Department did what they could to find other jobs for affected employees, many skilled and valued employees were laid off. It was an experience from which many who left, and some who stayed, never recovered.

In spite of the difficulties, Director Uram was successful in developing strong, mutually supportive relationships between OSM and states, Indian tribes, industry, and citizen groups. In September 1996, having guided OSM through some of its most difficult years and laying a foundation for OSM's continued success, Bob Uram returned to his private law practice.

Secretary Babbitt turned to one of Interior's experienced managers—Associate Solicitor Kay Henry—to lead OSM until a new director could be named and confirmed. Relying on her experience in mining law, Henry was able to keep OSM on track until the arrival of a new Director.

Sworn in on August 4, 1997, Kathy Karpan was the first OSM Director from a western state. In her first year, Karpan traveled throughout the coal fields to meet with citizens and stakeholders and observe mining and reclamation first-hand. She came away with a determination to make OSM a model agency—one that offered better protection of people and the environment, and better program operations.

Karpan launched a multi-agency effort to promote reforestation during reclamation, and was a tireless advocate for additional AML funding. While her goal of full funding was not realized, Karpan galvanized public and private sector forces that support full funding, and AML funding was increased. By the time she left OSM in April 2000 to become a Deputy Assistant Secretary for Land and Minerals Management, Kathy Karpan had set the stage for full funding of reclamation of all abandoned mine lands nationwide.

After Karpan's promotion, Secretary Babbitt brought Associate Solicitor Kay Henry back to OSM to serve as Acting Director for the remainder of the Clinton Administration. During the months following Henry's return to OSM on April 17, 2000, she worked to finish key regulatory actions begun by her predecessors.

Policy and Program Initiatives

Partnership with States and Indian Tribes

Under the Surface Mining Act, primacy states have direct responsibility for permitting, inspection and enforcement under approved regulatory programs. They also decide which abandoned mines are to be reclaimed with AML funds and then award contracts for the reclamation work. Early in the history of the program, as states were developing the expertise and capability to effectively operate regulatory and AML programs, OSM's oversight focused on the processes and procedures states used in making those decisions. By the early 1990's almost all state programs had matured to the point where OSM could focus oversight reviews on measuring on-the-ground reclamation success.

The National Performance Review recommended that OSM, in consultation with the states, develop national standards of excellence and establish goals and performance standards for regulatory and abandoned mine land reclamation programs. A team of OSM and state employees devised a new results-oriented oversight strategy that emphasized cooperative problem-solving, tailoring evaluations to state-specific conditions, and the development of performance agreements between each state and OSM. State program oversight now reports on environmental impacts that occur outside of permit areas to better protect the public, property and the environment from all adverse impacts of mining and reclamation activities. For their work, the federal and state team that developed this policy were presented with Vice President Gore's Hammer Award.

Helping to Meet Interior's Indian Trust Responsibilities

During the 1990s, OSM identified a need to provide training to staff members on agency trust responsibilities to American Indian tribes. OSM worked with other Interior Department bureaus to educate staff on the Department's trust responsibilities, ensure that cooperating agencies know their responsibilities and are operating from a common understanding, and develop a resource handbook to be used as a desk reference manual.

While primacy is authorized for states, Indian tribal authority under the Surface Mining Act is limited to administering AML programs. However, the Energy Policy Act of 1992 gave authority to provide grants to tribes to assist in developing regulatory programs, create tribal regulations and policies, and work with OSM in the inspection and enforcement of coal mining on Indian lands. In addition to developing draft legislation that would authorize tribal primacy, OSM prepared an action plan and provided grants to the Crow, Hopi, Navajo, and Northern Cheyenne tribes to help them prepare to assume regulatory authority should Congress authorize tribal primacy.

Mining in the Mountains

In the late 1990s, numerous lawsuits were filed to stop West Virginia mountaintop mining operations and the valley fills that mountaintop mining creates. OSM and other federal and state agencies performed an extensive environmental impact study on the effects of mountaintop

mining. OSM also completed a report that clarified the requirements of the Surface Mining Act and OSM's regulations on post mining land use for mountaintop mining operations

Bonding

The Handbook for Calculation of Reclamation Bond Amounts is the guide used by OSM staff to determine the amount of bond needed for each permitted site in cases where OSM is the regulatory authority. The Handbook also serves as the instruction manual in OSM's technical training course on bond calculations, and as a reference guide for states, industry and other agencies. OSM revised and updated the Handbook to address, in particular, the adequacy of bond amounts in the event of bond forfeiture.

Hydrology Policy and Guidance

Protecting water quality and quantity are central to successful implementation of the Surface Mining Act. In 1997, OSM prepared an Acid Mine Drainage Policy statement, which detailed OSM's goals, objectives, and strategies for correcting, preventing, and controlling acid mine drainage at coal mine sites.

In 1999, OSM developed a formal and comprehensive framework for current and future actions and activities related to hydrology issues in the regulatory program, including acid mine drainage, bonding and bond forfeiture. Among numerous hydrology-related initiatives and activities, OSM updated and revised its guidance on Probable Hydrologic Consequence determinations and Cumulative Hydrologic Impact Assessments. This technical guidance helps states and the coal industry to meet their responsibilities to identify hydrologic issues and ensure they are adequately addressed in the permitting process.

Acid Drainage Technology Initiative

The Acid Drainage Technology Initiative is a partnership of OSM, the coal industry, states, academia, other government agencies, and public and private groups designed to identify, evaluate and develop "best science" practices to prevent acid mine drainage (AMD) and eliminate existing sources of pollution. Located at the National Mine Land Reclamation Center of the University of West Virginia, participants include the Interstate Mining Compact Commission (representing eastern coal-producing states), the National Mining Association (representing the U.S. coal industry) and the Eastern Mine Drainage Federal Consortium (coordinating federal participation).

While the initial focus of the initiative was on the coal fields of Appalachia, the initiative has expanded to include western states. In 1999, the Metal Mining Sector Work Group was formed to address western non-coal mining issues. Also in 1999, the Remediation Work Group's *AMD Remediation Handbook—A Users Manual on AMD Remediation Methods*, was published. In 2000, the handbook *Review of Mine Drainage Prediction Methods* was published to address overburden testing, sampling, and field validation issues.

Electronic Permitting

Electronic permitting, the ability to share electronic information in the mine permitting process, is a long-term OSM initiative to save time and money and achieve more complete and up-to-date permitting records. Permit reviewers use computer-based tools to access electronic documents, maps and data; to perform environmental analyses; and to share electronic data with field personnel, other agencies, and the public. With developmental assistance from OSM, many primacy states are actively permitting electronically.

Improving AML Reclamation

Simplified grant funding of state abandoned mine land programs started in 1994. This grant application process eliminates the requirement for separate advance approval of each reclamation project before a grant is awarded to the state. States now receive amounts based on appropriated spending levels and are held accountable for using those funds in accordance with their approved abandoned mine land reclamation plan. OSM is no longer involved in cumbersome and detailed pre-award scrutiny of state grant applications based on individual projects.

Appalachian Clean Streams Initiative

Launched by OSM in the fall of 1994, the Appalachian Clean Streams Initiative supports local efforts to eliminate the environmental and economic impacts of acid mine drainage from abandoned coal mines. The Initiative supports and coordinates the efforts of citizen groups, university researchers, the coal industry, corporations, the environmental community, and local, state, and federal agencies to clean up polluted streams. In distributing millions of dollars to states for stream clean-up at more than fifty sites, OSM has provided a considerable incentive for others to contribute to the projects.

Watershed Projects

As part of the Appalachian Clean Streams Initiative, and in cooperation with local organizations, OSM funded watershed-based acid mine drainage reclamation projects. These funds provide money to complete projects designed to improve water quality. The watershed projects were funded through cooperative agreements to assist as many groups as possible in beginning actual construction projects to clean polluted streams. In 1999, the first year of the projects, eleven watershed cooperative agreements were awarded.

Summer Watershed Internship Program

Also starting in 1999, ten summer interns working in five states inaugurated the first summer season for a new watershed assistance initiative. Each intern was sponsored and hosted by a local watershed group working on acid mine drainage. OSM provided a portion of the funding for the cooperative agreements with non-profit watershed organizations, including stipend dollars and some expenses for each intern. OSM set standards for the interns and then worked with each watershed group to develop and define individual summer projects that would leave the watershed group stronger, the water cleaner, and the intern better educated.

Reforestation

OSM's reforestation initiative, begun in 1998, launched multi-agency efforts to promote the planting of trees during reclamation of mined lands. There are multiple benefits to reforestation, including restoration of clean water and air, prevention of erosion, creation of wildlife habitat and recreational opportunities, promotion of commercial forestry, and enhancement of other economic opportunities due to the increased availability of forest products. In addition to hosting interactive forums on reforestation, OSM conducted an evaluation of its own programs and regulations to determine where reforestation could be promoted under the Surface Mining Act.

Defining Valid Existing Rights

The Surface Mining Act prohibits surface coal mining operations on certain lands unless the operation existed when the Act was passed in 1977, or a person had valid existing rights (VER) to conduct such operations. Protected lands include units of the National Park System, wildlife refuges, wilderness areas, historic sites, federal lands in national forests, and buffer zones for roads, public parks, public buildings, occupied dwellings, and cemeteries. Because the Act does not define valid existing rights, OSM attempted to do so in regulations. Since 1978, four attempts to define valid existing rights were successfully challenged in court. In 1999, following full public notice and an exhaustive review of public comments, OSM issued a comprehensive final rule defining valid existing rights.

Declaring Lands Unsuitable for Mining

Under section 522(a) of the Surface Mining Act, mining can be prohibited in certain environmentally sensitive areas if the mining could result in significant damage to important esthetic values and natural systems. The Clinton Administration made two important unsuitability designations in Tennessee, a state where OSM has direct regulatory authority. On September 13, 1996, Fern Lake was declared unsuitable for surface coal mining operations. On June 17, 2000, Secretary Babbitt designated selected watersheds within Fall Creek Falls State Park as unsuitable for coal mining. These two designations provide the greatest level of protection afforded by the Surface Mining Act.

Improving the Abandoned Mine Land Inventory System

Under the Surface Mining Act, OSM maintains an inventory of high priority abandoned coal mine lands. Using the Abandoned Mine Land Inventory System (AMLIS), OSM creates reports on abandoned mine land accomplishments and problems that still require reclamation. Beginning in 1995, states and Indian tribes managed their own data, entering it electronically into the system. As of September 30, 1999, the system contained information for over 15,000 problem areas at abandoned mines.

While the AML program is one of the nation's most successful environmental restoration programs, with over \$1.2 billion worth of coal-related high priority problems reclaimed, many projects have yet to be funded. The inventory of unfunded coal-related problems is reduced each year by state, Indian tribe, and federal reclamation projects. Unfortunately, new problems are

discovered as development expands into old coal mining areas. Through AMLIS, the federal government now has the capability to identify the extent and scope of AML problems nationwide.

Using Coal Combustion By-products in Mine Reclamation

In the 1990s, the use of coal combustion by-products (CCBs) in mine reclamation became increasingly beneficial for new mining and in abandoned mine reclamation. Beyond just being disposable waste, CCBs can be recycled and used to help control acid mine drainage and in the prevention of underground mine subsidence. OSM worked with other agencies to find economical and environmentally safe ways to dispose of CCBs, including hosting a series of interactive forums that provided the opportunity for agencies to assess the impacts of their programs and options for using CCBs in reclamation. OSM also worked with EPA to jointly address common concerns about how to treat the disposal of CCBs in cases involving hazardous elements.

Prime Farmland

Successful reclamation of prime farmland is a priority of operators and citizens in the Midwest. In 1998, OSM and other agencies sponsored a Prime Farmland Forum to present the latest research findings and successful reclamation techniques to the public, mine operators, and state and federal officials. Proceedings from the Forum were published, and a follow-up workshop was held to highlight reclamation techniques.

Technical Training Program

During the 1990s, OSM stepped up its national technical training program. By 1999, the program was offering twenty-nine technical courses to state and tribal partners to enhance skills in regulatory and reclamation staff. All aspects of the training program, from identification of training needs to course development and presentation, are cooperative efforts of states, tribes, and OSM.

National and Regional Coal Symposia

To keep pace with constantly changing mining and reclamation technologies, OSM has sponsored several events during the Clinton Administration to bring people together to find new approaches to problem-solving and work collaboratively to achieve better results. Through OSM's widely attended National Coal Symposium in 1998 and a series of regional symposia that followed, OSM developed more effective working relationships and shared technical information with other government agencies with coal-related missions, including the Departments of Energy and Agriculture, the Labor Department's Mine Safety and Health Administration, the Environmental Protection Agency, and other bureaus within Interior.

Small Operator Assistance Program

Under the Small Operator Assistance Program (SOAP), OSM provides technical assistance to help owners of small mining operations obtain technical data needed for permit applications.

As a result of amendments to the Surface Mining Act in 1990 and 1992, additional technical requirements can be paid for with SOAP funds, and more small operators became eligible for assistance under the program. Despite these increased authorities, additional SOAP funding was not provided by Congress. By the 1990s, small operators were in jeopardy of losing the valuable technical services the program provided. Following an intense effort by OSM to heighten public and Congressional awareness of the benefits of the program, stop-gap funding was authorized by Congress enabling SOAP to continue offering assistance to small operators that have difficulty meeting all the complex technical permitting requirements of the Act.

Applicant Violator System (AVS)

The Surface Mining Act prohibits the issuance of new permits to applicants who are responsible for outstanding violations until those violations are corrected. To identify those responsible for such violations, OSM created the Applicant Violator System (AVS)—a centrally-maintained database of violation records and ownership and control information. State and federal officials check the system in evaluating applicant eligibility for new permits and in determining eligibility to receive Abandoned Mine Land reclamation contracts. Due to permit-blocks in AVS, OSM has collected tens of millions of dollars in delinquent AML fees and civil penalties from those with outstanding violations.

In 1994, OSM opened AVS to the general public. This public access has helped to correct violations prior to the permitting process and avoid unnecessary disruptions of mining operations. It also enables other federal, state and local agencies, as well as coal companies, to check the violation status of companies with which they do business.

In 1997, following a court decision that invalidated regulations governing the AVS, OSM and its state partners faced considerable uncertainty about how to meet the basic permit-blocking requirement in the Surface Mining Act. To remove this uncertainty and to bring OSM's program into compliance with the court decision, OSM published interim emergency regulations on April 21, 1997, and committed to propose new regulations with full opportunity for public comment. Following extensive outreach, public meetings, and opportunities for public comment, OSM proposed new regulations on December 21, 1998, and those rules were prepared for final adoption at the end of 2000.

Abandoned Mine Land (AML) Fee Collections

The Surface Mining Act requires OSM to ensure that active coal operators pay AML reclamation fees in full. During the seven-year period 1993-1999, average AML fee collections exceeded \$250 million per year. In 1999, the compliance rate for tonnage reporting and fee payment peaked at 99 percent. To achieve this rate of success, it is necessary for OSM to track all mines that have the potential of producing coal, provide coal mine operators with the information and assistance needed to comply, and conduct a comprehensive audit program.

A 1997 Office of Inspector General report on OSM's fee compliance program, including both the fee collection and audit functions, concluded that the activities were conducted in a highly efficient and effective manner and in accordance with the Surface Mining Act. Those

conclusions reflect OSM's emphasis on the best possible execution of this vital program that provides the funding for state, tribal, and federal AML reclamation throughout the country.

Assistance to the Republic of Indonesia

In many countries, mining has been practiced for centuries without regulation or noticeable concern for health, safety or the environment. The successful implementation of the Surface Mining Act in the United States has become a model for nations facing the challenge of producing coal and protecting the environment. In recent years, several governments have requested assistance from OSM in developing or improving mining and reclamation programs. Most noteworthy among these is the Republic of Indonesia.

Beginning in 1995, OSM has provided technical assistance to Indonesia to improve the country's capacity to regulate surface coal mining and reclaim mined lands. In the first project, fully funded by the World Bank, OSM and state personnel traveled to Indonesia to provide training, on-site assistance with inspection practices, permit processing, and program management. By the conclusion of the project in 1998, Indonesia had developed requirements and issued guidelines for carrying its regulatory program.

In early 1998, Indonesia again asked OSM for help, this time to combat wildfires that had been ravaging dense forests for months. Suppressing these fires had been made more difficult by dozens of outcrops of exposed coal that re-ignited the forests long after the wildfires had been brought under control. For the next two years, with full funding from the U.S. Agency for International Development (AID), OSM and state regulatory specialists provided training and technical assistance in coal fire suppression to Indonesian firefighters. Key to the success of this program was the transfer of fire-fighting know-how from U.S. technicians to Indonesians. As a result, Indonesia now has a comprehensive coal fire suppression program, and has successfully extinguished dozens of coal fires using the training and equipment provided by OSM. Among the successes of this program was the eradication of fires that threatened the Wanariset Nature Preserve, a release area for endangered orangutans rescued and rehabilitated following the forest fires which swept East Kalimantan in 1997.

By early 2000, OSM had embarked on a third technical assistance agreement with Indonesia and AID to guide Indonesia in decentralizing the regulation of mining and reclamation based on the federal-state model used in the U.S. under the Surface Mining Act.

The Surface Mining Act in the 21st Century

In 1999, to prepare to meet the challenges of the next century, OSM developed a new training course—The Surface Mining Act in the 21st Century. The course was designed to meet the needs of OSM and its state and tribal partners in developing and evaluating on-the-ground performance measures for future coal mining and reclamation. The course also sought to build outreach skills and increase the effectiveness of regulatory and reclamation programs through sharing of information on emerging technologies.

During the Clinton Administration at OSM, the foundation has been laid for a national surface mining reclamation program. OSM and the states and tribes have a better working relationship than ever before, and together have developed one of the most effective environmental protection programs in government.

MINERALS MANAGEMENT SERVICE (MMS)

In 1995, President Clinton announced proposals to reduce the size and expense of the federal government. One of the proposals announced was abolishing the MMS by dispersing its functions to other agencies.

After several months of meetings with industry, Congressional, state, and tribal leaders, the proposal to devolve MMS was abandoned. It was agreed that key functions of MMS could not be easily transferred or readily accomplished by other agencies.

MMS survived the federal downsizing but realized that it was to remain viable in a slimmed-down modern federal government, it would have to become a model agency. MMS became successful enough in achieving that goal to win several awards from the National Performance Review, the same initiative that appeared to signal its demise seven years earlier.

The Role of MMS

The federal government manages a vast amount of land, both onshore and offshore. These lands are managed for various purposes, including mineral production. Offshore lands are known as "OCS" or "outer continental shelf" lands, and are located beyond state coastal waters. Federal offshore lands begin three miles off coastal shorelines and extend 200 miles out to sea.

Several laws govern the leasing, development, and production of minerals on federal lands. These laws require that environmental standards be maintained, and that the government receive a fair monetary return for the public resources it leases. Federal law also requires that a portion of the monies received by the government from mineral production be shared with states, and that all revenue collected from mineral production on Indian lands be given to the tribes or individual Indian landowners.

The agency's role is to help carry out these federal laws by ensuring that all revenues (about \$4 billion annually) derived from mineral leasing are collected, and distributed properly. MMS leases offshore lands, regulates development activities, protects the coastal and marine environment, and collects and accounts for OCS revenues.

MMS is a relatively small organization with about 1,800 employees. To be successful, it must monitor a rapidly changing industry and improve and its operations frequently. The agency operates through two programs: Offshore Minerals Management (OMM), and Minerals Revenue Management (MRM).

Offshore Minerals Management (OMM)

MMS's Offshore Minerals Management program manages the exploration and development of oil and gas, and other minerals, on the OCS, currently more than 44 million leased acres. OMM's oversight helps to ensure safe exploration and development, environmental protection and impact mitigation, and receipt of fair market value for mineral development.

About 27 percent of domestic natural gas and 20 percent of domestic oil production occurs on the nation's Outer Continental Shelf (OCS). The OCS covers about 1.5 billion acres in waters ranging from a few feet to thousands of feet deep along the U.S. coastline. The majority of OCS exploration and development occurs in the Gulf of Mexico, the Pacific Ocean and off the coast of Alaska.

The pace of exploration and development in the deepwater (areas deeper than 1,000 feet) has accelerated rapidly in the last few years. In deepwater, the use of conventional, bottom-founded platforms quickly becomes uneconomic. As new discoveries are made in progressively deeper water, technologies continue to evolve to meet technical, environmental and economic needs of deepwater development.

Minerals Revenue Management (MRM)

Minerals Revenue Management collects and disburses the revenues generated from America's mineral resources on federal lands, and those revenues are the major source of funding for land purchases for national parks, wildlife refuges, wilderness and recreation areas. The revenues collected also help states to fund recreation facilities. About \$4-\$6 billion per year in mineral revenues are collected from more than 80,000 onshore and offshore leases. MRM accomplishes this through state-of-the-art computer equipment processing over 7 million reporting transactions annually. Approximately 61 percent (\$2-\$3 billion) of the money collected is sent to the U.S. Treasury; 24 percent is sent to special purpose funds, such as the Land and Water Conservation fund; 12 percent is sent to states, and 3 percent is sent to American Indians. MRM collects and disburses the money within one month of receipt.

MRM also conducts a comprehensive compliance effort to ensure that royalty payments from lessees are on time and accurate. Because of the nature of business transactions in the oil and gas industry, this is a complex and challenging assignment. Production is frequently traded within and between companies rather than sold in an open market, so determining the correct value on which to base royalty payments can be difficult. To meet the challenge maintaining a high level of accuracy and efficiency, MRM retooled and reengineered its entire organization during the late 1990s.

MMS Pays

Federal *onshore* and *offshore* (or Outer Continental Shelf) mineral leases generate over \$4 billion annually and are one of the federal government's greatest sources of non-tax revenue. About \$3.5 billion per year, on average, is collected and distributed by MMS from bonuses, rents, and royalties from *offshore* (OCS) mineral leases. This provides \$2.5 billion per year to the federal treasury and to state treasuries, \$900 million per year to the Land and Water Conservation Fund and \$150 million to the National Historic Preservation Fund.

Federal Onshore and Offshore Mineral Leases

Under the Mineral Leasing Act (MLA), states whose boundaries encompass federal mineral leases are entitled to receive a portion of the revenues generated. The amount a state receives can vary by land category. Generally, states receive half of all bonuses, rents and royalties

collected from public lands located within their respective borders, except for the State of Alaska, which receives 90 percent of all such revenue. Further, Alaska receives 50 percent of all mineral revenues generated from the National Petroleum Reserve.

MLA monies are used as the states deem necessary, without federal restrictions. The monies are often used for schools, roads, public buildings, or general operations. In FY 1998, MMS distributed \$550 million to the states in shared onshore mineral receipts. Historically, MMS has distributed about \$8.2 billion in shared onshore mineral receipts to the states. The U.S. Treasury's General Fund receives 10 percent of the receipts and the Reclamation Fund receives 40 percent for Bureau of Reclamation water-related projects.

About \$1 billion per year, on average, is collected and distributed by MMS from bonuses, rents, and royalties from federal *onshore* mineral leases, of which about \$500 million is distributed to the states. The remainder is distributed to the federal treasury and the Reclamation Fund. In Fiscal Year (FY) 1998, MMS distributed a total of nearly \$6 billion (\$4.6 billion from OCS activities and \$1.4 billion from federal *onshore* and Indian activities).

Tribal and individual Indian minerals owners benefit from a range of MMS programs. MMS, along with the Bureau of Indian Affairs (BIA) and the Bureau of Land Management (BLM), provides services that help fulfill the Secretary's trust responsibility to the Indian minerals community. MMS collects, verifies, and distributes mineral revenues and supporting data to Native American mineral lessors from almost 7,700 Indian leases. From 1937 through 1998, MMS has distributed over \$3.6 billion to about forty-five Indian tribes and over 20,000 individual Indian mineral owners.

In 1997, MMS instituted an Indian Royalty Internship Program. The goal of this program and other efforts is to help the tribes better prepare to assume royalty management services. MMS staffs four service-oriented Offices of Indian Royalty Assistance near Indian tribes and allottees. These offices are in Farmington, New Mexico; Oklahoma City, Oklahoma; Muskogee, Oklahoma; and Denver, Colorado. To improve service to Indian customers, the functions of MMS, BLM, and BIA are combined under one office in Farmington, N.M. This arrangement enables the federal government to be more responsive, effective, and accountable to Navajo mineral owners—by providing outreach, inspection and enforcement, lease administration, and royalty compliance activities.

Indian tribes are actively involved in MMS royalty collection activities. MMS contracts with tribes to help it audit Indian mineral leases. Participating Indian tribes include: Blackfeet, Jicarilla Apache, Navajo Nation, Shoshone and Arapaho, Southern Ute, Ute, and Ute Mountain Ute. In FY1998, MMS spent over \$1.8 million to fund these cooperative audit efforts.

Meeting the Challenge

In 1999, MMS celebrated its first seventeen years as a bureau within the Department of the Interior and the Department celebrated its 150th birthday. During its relatively short lifespan as an agency, MMS experienced dramatic and profound changes, responding to a need to continuously improve in rapidly changing business, energy and governmental climates. The

most dramatic changes were made in response to external forces challenging MMS to keep pace, such as evolving offshore technology, changing energy markets, emerging global markets, compelling safety and environmental issues, transforming legislation, increasingly sophisticated constituencies, advancing information technology, and innovative governmental initiatives.

In responding to the forces and the challenges they presented, MMS displayed its commitment to operate in the collective best interest of its many customers, including U.S. taxpayers, states, Indian tribes and mineral owners, and the energy industry. The agency set the standard for other resource management agencies—that is, to be “the best in the business.”

Improvement Initiatives

Because of MMS’s effort to be the best, it can point to significant achievements, particularly during the mid-1990s:

- 1993: Finalist Federal Quality Institute’s Quality Improvement Prototype Award
- 1994: Finalist Federal Quality Institute’s Quality Improvement Prototype Award
- 1994: Federal Environmental Quality Award
- 1995: Vice President’s Hammer Award
- 1996: Federal Environmental Quality Award
- 1997: Vice President’s Hammer Award
- 1997: Department of the Interior’s Steve Kelman Award for Procurement Franchising
- 1998: Outstanding Partnership Award (BLM/NPRA)

These awards were in recognition of numerous achievements that not only changed the way MMS conducts business but also the way the government conducts business. For example, the Vice Presidential Hammer Award, given to MMS in 1995, was for using plain English in government documents. Government regulations and everyday correspondence had the reputation of being unintelligible. MMS introduced the idea of writing regulations in simple English. The idea was accepted by senior management in the Department of the Interior and then began to spread throughout the federal government.

Approximately four years later, on June 1, 1998, the President directed, in a Memorandum for the Heads of Executive Departments and Agencies, that the “federal government’s writing must be in plain language.” This directive included all new documents, other than regulations, and the re-issuance in plain language of documents created before October 1, 1998. All proposed and final regulations were required to use plain language by January 1, 1999.

It took a couple of years of training, education and practice to perfect its plain language regulatory writing style, but since 1997 most MMS regulations have been published in a new and easier to read style. Other directives to the public, such as Offshore’s “Notices to Lessees and Operators” (NTLs) were subsequently written in plain language.

The Vice President’s Hammer Award in 1997 was given to MMS in recognition of its Innovative Achievements Program, which was an agency-wide, staff-driven initiative that included a long list of projects aimed at improving the operations and procedures of the agency. The first improvement initiative, directed towards streamlining the royalty and production reporting

system, was announced in September 1995. At the time MMS was awarded the Hammer Award in October 1997, it had announced and implemented twenty-two innovations. The effort continued well into the later part of 1998 with innovations transforming many of the major operating and policy procedures of the agency.

Leadership

Thomas A. Fry (July 1993 - November 1994)

Thomas A. Fry was MMS director from July 1993 to November 1994. He guided MMS through significant changes in the Outer Continental Shelf leasing program, safety and environmental operations, deepwater operations and financial responsibilities stemming from the Oil Pollution Act of 1990.

Secretary Babbitt designated Cynthia Quarterman Deputy Director of the Minerals Management Service on September 1, 1993. She assisted Director Tom Fry until his departure from MMS, then became Acting Director and was appointed Director in March 1995.

Serving from March 1995 to February 1999, Director Quarterman led MMS during the period the Administration sought to dissolve the bureau, and presided over its major initiatives to reinvent itself. She oversaw the rewriting of royalty oil valuation regulations and closely monitored negotiated agreements to settle billions of dollars in claims on leases subject to moratoria offshore Alaska and Florida.

Walt Rosenbusch has directed MMS since Quarterman's departure. Completion of the reengineering of the Royalty Management Program into the Minerals Revenue Management Program was one of his top priorities, as was Royalty-in Kind (RIK) pilot projects which had the potential to improve royalty collection and increase the net benefit of a government program to taxpayers. He worked with MMS stakeholders to develop new deepwater royalty relief regulations for properties that might otherwise be considered uneconomic to develop.

Implementing Major Legislation

During the 1990s MMS operated under the following key legislation:

Oil Pollution Act

Congress enacted The Oil Pollution Act of 1990 (OPA 90) in the wake of the *Exxon Valdez* oil spill in pristine Alaska waters. The Act combined various oil spill response mechanisms from other legislation, such as the Outer Continental Shelf Lands Act. The Act also addressed oil discharges into navigable waters and onto shorelines. It required emergency response plans, raises liability limits in cases involving gross negligence or willful misconduct and expands cleanup and economic damage collections. The act created an Oil Spill Liability Trust Fund to pay for removal costs and damages if the government is unable to collect cleanup costs from the liable party.

The Act created several new responsibilities for MMS, including expanded research and oil spill prevention and response authority (including state offshore waters). Interior's OPA 90 responsibilities were assigned to the Secretary by Presidential Executive Order 12777.

Because certain aspects of OPA 90 were unclear, MMS worked with Congress, industry and state representatives to revise sections of the legislation before implementation of new regulations could be accomplished. In September 1996, proposed changes to the oil spill financial responsibility requirements in OPA 90 for offshore facilities were passed by the House and Senate. These changes were incorporated in S. 1004, the Coast Guard Authorization Act of 1996.

Deepwater Royalty Relief Act

The Deep Water Royalty Relief Act of 1995 encouraged development in deepwater areas of the Gulf of Mexico, including the entire central and western gulf areas and a small portion of the eastern gulf offshore Alabama. Under the Act, all new leases issued within five years of enactment must be offered with a provision suspending royalties on a specified volume of production, depending on water depth. Operators on existing leases are able to apply for royalty relief on set amounts of oil and natural gas produced from tracts in specified depths.

MMS issued interim regulations for the Act in May of 1996, and followed with final regulations in February of 1997. These regulations described the application process for requesting royalty relief, including the content of the submission materials

The Act was extremely successful in serving as an incentive for bidders in the deepwater portions of the central and western Gulf of Mexico. During the first four-and-a-half years of leasing with royalty suspension, 3,307 tracts eligible for royalty relief were leased (1,836 in five sales in the central Gulf of Mexico and 1,471 in four sales in the western Gulf of Mexico). Those tracts received high bids of \$3 billion

Federal Oil and Gas Royalty Simplification & Fairness Act

President Clinton signed the Federal Oil and Gas Royalty Simplification & Fairness Act (RSFA) on August 13, 1996, to improve the management of revenues from Outer Continental Shelf (OCS) and federal onshore mineral leases. This law amended the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA), the Outer Continental Shelf Lands Act (OCSLA), and the Mineral Leasing Act of 1920 (MLA).

RSFA introduced a variety of new requirements, including delegation of certain additional MRM functions to interested states; specific royalty reporting standards for federal oil and gas leases and pooling agreements; payment liability standards and a new statute of limitations for federal oil and gas leases; reporting options for marginal oil and gas properties; payment of interest on all federal oil and gas overpayments; and, statutory deadlines for administrative appeals of orders issued to royalty payers.

MMS conducted over twenty outreach workshops with state and industry representatives and issued several federal regulations to implement the different parts of RSFA. Published final

rules included a rule addressing the delegation of royalty management functions to the states; appeals and self-bonding rule; a rule requiring electronic reporting of certain royalty and production forms; and, a rule addressing payment responsibility between lessees and designees.

To meet the new requirements of the law MMS implemented numerous automated computer systems enhancements. MMS resolved over 14,500 pre-RSFA and production volume exceptions within the two-year period prescribed by RSFA. Between August 1996 and August 1998, MMS closed nearly 50,000 cases, collecting an additional \$54.4 million in royalties.

Better Relationships with MMS Customers

Improved Services to the Indian Community

Although Indian mineral revenues historically have represented only a small portion of total annual collections (about 3 percent), MMS dedicates approximately 20 percent of its budget to manage Indian revenue. This disparity is due in part to some of the unique provisions in Indian leases and to the emphasis MMS has historically placed on Indian leases, including priority processing of Indian workloads and enhanced automated accounting systems and verification processes.

MMS has always taken special measures to serve the interests of its Indian constituents. Two key organizations established solely to handle Indian affairs are the Office of Indian Royalty Assistance, and the Indian Minerals Steering Committee.

Indian Minerals Steering Committee

The MMS Office of Indian Royalty Assistance (OIRA) is responsible for coordinating and communicating with the nearly 20,000 individual Indian mineral owners throughout Indian country. MMS reaches out to the Indian community through many other sources including the Indian Minerals Steering Committee (IMSC), which was chartered by the Department in late 1994. The Steering Committee is composed of members from the five Department bureaus that manage American Indian mineral leases, as well as members from the Offices of the Secretary and the Assistant Secretaries. MMS provides the executive secretary to the IMSC and is represented by the Deputy Associate Director of the Royalty Management Program, the Office of Indian Royalty Assistance (OIRA) Chief, and the Policy and Management Improvement Division Chief in Denver.

The IMSC members conduct regular meetings which address important lease management issues, such as fractionation, a problem involving multiple owners with increasingly smaller ownership percentages in allotted mineral leases as a result of lease heirship; pre-leasing processes and requirements, including drainage of American Indian lands; and, post-leasing problems, including off-lease measurement.

The IMSC members also address management and operational issues of a jointly staffed office by representatives from BIA, BLM, and MMS at a single location under one MMS manager in Farmington, New Mexico. The joint operation evolved from a National Performance Review initiative to test new techniques to manage American Indian allottee minerals and to improve

services and Departmental cooperation. The pilot program provides assistance and resolves problems for only the Navajo lessors of allotted leases.

Links to the Communities

As it entered the 1990s, MMS began looking for opportunities to strengthen relationships with states where offshore oil and gas activities take place, and to improve the credibility and use of environmental research conducted by outside parties for the agency. These connections to the community occur in many forms including workshops, public hearings, and structured organizations such as advisory boards or committees.

Coastal Marine Institute

In the Coastal Marine Institute (CMI) initiative, scientists and students work on numerous research projects in areas affected by offshore oil development to determine the social and environmental aspects of this development.

The agency has formed partnerships with the University of California at Santa Barbara, Louisiana State University, and the University of Alaska, strengthening relationships with the university community and the states.

By matching funds with the states, CMI has been able to carry out important research, including oceanographic studies from deepwater areas to the continental shelf, and social and economic studies designed to answer questions about potential impacts from oil and gas and marine mineral extraction activities.

Minerals Management Advisory Board

MMS has numerous links with the private sector. Its formal link with industry and the scientific sector is the Minerals Management Advisory Board. Comprised of four committees, the board offers MMS stakeholders a direct line of communication to the Secretary of the Interior and MMS senior managers. It consists of four committees, chartered under the provisions of the Federal Advisory Committee Act: OCS Policy Committee, Scientific and Alaska Committees, and the Royalty Policy Committee. Each committee provides advice to the Secretary of the Interior or other officials on mineral leasing, revenue collection, environmental impact, and safety issues. These committees, with representatives from state and local governments, Indian tribes, and industry and environmental interests, meet twice a year.

State Initiatives

MMS has extensive working relationships and partnerships with most of the coastal states covering a wide range of projects. One initiative during the 1990s identified sand deposits in the OCS that were suitable for beach restoration. The OCS Land Act was amended in 1994 permitting sands on the OCS to be dispersed under a negotiated agreement process rather than a competitive bidding process. This permitted MMS to provide OCS sand to state and local governments for beach nourishment and wetlands restoration projects.

MMS established cooperative programs with Alabama, Delaware, Florida, Maryland, New Jersey, North Carolina, South Carolina, Virginia, and Louisiana to identify OCS sources of beach nourishment sand for potential use in shore protection projects. These partnerships rely primarily on State Geological Surveys—in cooperation with other state and federal agencies—to identify the state's needs and to propose suitable offshore areas for study. When warranted, and when funds are available, environmental studies are developed and conducted within the identified sites. Both types of studies provide the information base needed to negotiate sand access agreements between MMS and respective state and local governments.

The information gathered through state cooperative partnerships and environmental studies has enabled MMS to enter into negotiated agreements for the use of OCS sand resources for beach renourishment projects in Florida, South Carolina, Maryland and Virginia. From 1995 through mid-2000 six shore protection projects used over 7.9 million cubic yards of OCS sand resources identified by these joint MMS/state cooperative programs. Discussions continue with several state and local governments; within the next three years, upwards of 17.7 million cubic yards of OCS sand resources may be employed in shore protection projects.

The Need for Creative Management

Sustainable Development

In the spring of 1999, MMS formed a task group to “outline the concept of a sustainable offshore oil and gas industry” and “determine how Offshore Minerals Management’s goals, policies, and objectives support the findings of the President’s Council on Sustainable Development.” The charge to the task group underlined a determination to make MMS a leader among federal bureaus in implementing actions supporting sustainable development.

Royalty-in-Kind (RIK)

In 1997, an MMS feasibility study concluded that, under the right conditions, royalty-in-kind (RIK) programs could generate additional revenues and be more efficient for both government and industry. The study led to a series of pilot projects by MMS.

In 1998, MMS and the State of Wyoming initiated the first RIK Pilot Project, an onshore pilot for crude oil from federal leases in the Powder River and Big Horn Basins of Wyoming. This pilot was eventually converted to an operational project. MMS and Wyoming are expanding joint competitive open-market sales of RIK crude oil from those properties and monitoring the cost-effectiveness of the RIK approach to crude oil sales.

The second RIK Pilot Project, also initiated in 1998, was for natural gas from federal leases in the Texas 8(g) zone (roughly 10-13 miles off the coast) of the Gulf of Mexico. MMS entered into a partnership with the Texas General Land Office to explore ways to cost-effectively market federal RIK gas from the 8(g) zone and state natural gas production to additional purchasers. Some 8(g) gas was also delivered to the General Services Administration (GSA) for sale to federal facilities.

A third RIK Pilot Project, initiated in 1999, for natural gas from federal properties in the Gulf of Mexico, was larger and more comprehensive than the other two. In addition to selling the gas competitively to the public, a portion of the gas was also transferred to GSA for sale to federal agencies.

In 2000 a fourth RIK Pilot Project was initiated to address the feasibility of taking royalty crude oil from federal properties in the Gulf of Mexico. This offshore oil pilot makes the federal royalty crude available, under public competitive sales, to a broad range of qualified bidders, without limitation to those eligible under the Small Refiner RIK Program.

Globalization

During the Clinton Administration, MMS has increased its international activities and become a world leader in offshore regulatory and management practices. With emerging oil interests in several countries, the agency is frequently called upon for its expertise.

MMS regulates the U.S. offshore activities of an international industry. The character of international standardization has changed dramatically in the 1990s in response to, among other things, the creation of the European Union (EU). The EU moved to impose a single set of standards in order to achieve regulatory harmony across borders, the removal of trade barriers, and related ends.

Because of MMS interest in promoting safe operations, it is increasingly being called upon to assist and participate in international forums and projects. The agency assisted the Caspian Basin states in their development of new regulatory regimes to govern their oil and gas resources. It partnered with Turkmenistan, Georgia, and Kazakhstan in their efforts to establish new rules in accordance with international standards. It joined with the Norwegian Petroleum Directorate to assist the Russians in reforming their offshore oil and natural gas regulatory system, and it shared its regulatory policies with representatives from China.

International Standards

Many offshore oil and gas producing nations are considering what role developed standards should play in their overall regulatory regime. MMS is actively participating in the International Standards Organization's (ISO) efforts towards greater standardization of oil and gas operations. The standards developed by various technical committees of the ISO will impact the oil and gas industry for years to come.

MMS has promoted the participation of regulators from other countries and encouraged U.S. companies to contribute their resources and support the work of the ISO. MMS believes open communication and data sharing between regulators, industry, and the Standards Developing Organizations (SDOs) will enhance participation in standards development at both the domestic and international levels.

Electronic (E-)Commerce

In early 1998, the MMS Director Quarterman announced a goal of 100 percent electronic reporting to reduce both the government and industry reporting costs in the royalty collection program. This announcement was implemented in a final rule published on July 15, 1999. Increased automation permits more efficient processing of business transactions, drastically reducing the amount of paper and eliminating non-value-adding tasks common to traditional workflow processes.

The number of MRM reporters using electronic reporting increases each month by approximately 100 reporters. MRM awarded a contract to Harbinger Corporation on April 30, 1999 to develop, implement and operate a Commercial-Off-The Shelf (COTS) electronic reporting system, and the COTS system began operation in January 2000. It will provide all MRM reporters with secured data reporting and electronic transmission of royalty and production reports. MRM receives prompt delivery of reporter data in the Electronic Data Interchange ANSI ASC X12 format. As of July 15, 2000, Harbinger Corporation had converted over 650 MRM reporters. All MRM reporters are scheduled for completion by October 1, 2001.

MRM established one of the first electronic FOIA systems in the Department, with the ability to scan, fax, index, store and retrieve documents electronically. Frequently requested data (with indexes) are published on an Internet Web page to provide external customers access. MRM completed work on the first phase of an "Instant Information" Internet site to provide the public data on collections, disbursements, state mineral summaries, sales volumes and values, and MRM operations and program activities for the period of 1993 through 1999. Enhancements are added to the system as required. A CD-ROM is available at no cost to constituents who do not have Internet access.

MRM also automated the Solid Minerals Lease history folders to provide end-users access either through a desktop tool or Web interface. The system also permits end-users to add documents directly into electronic folders by utilizing their desktop scanners. MRM has also implemented an Intranet user-based access to all MRM source documents which allows MRM users fast access to documents without having to load an application on their desktop.

Franchising Services

As efforts increased to reduce the size of government certain functions in government became candidates for consolidation or outsourcing to other organizations. Early on, MMS saw an opportunity to provide first-class personnel and procurement services to other organizations on a reimbursable basis. It began its Human Resources Franchising initiative in 1995 with an agreement to provide services to the Department of the Interior's Office the Secretary. Under this agreement, MMS provided personnel services to over 600 employees in various Interior offices throughout the country. By mid-2000 it was providing service to Interior's Office of the Special Trustee and five other organizations outside of Interior, with the list of potential clients growing.

Rather than downsize its acquisition staff, the MMS decided to pursue as those agencies experiencing acquisition support delays as clients. The MMS acquisition team developed a very

robust, aggressive and business-like approach to contracting, maximizing the opportunities presented by changes to the Federal Acquisition Regulations.

Concurrent with the development of this entrepreneurial effort in 1996, MMS sought and was delegated franchise status under the Interior Franchise Fund. The acquisition franchise delegation provided the MMS with the capability of receiving and holding annual appropriations without regard to fiscal year. This feature, added to the business-oriented contracting approach established, is attractive to other federal agencies as the fiscal year ends.

In 1997 MMS awarded contracts totaling \$33 million on behalf of other agencies. Contract awards for FY 2000 totaled over \$142 million. From an initial client base of one agency the franchise now provides support to over 150 clients. MMS serves its client agencies by providing acquisition support to include negotiation, award, administration, and closeout of contracts. MMS obtains all necessary internal approvals required for each contract action and provides an experienced project manager to help with technical direction. In return for this support, MMS collects an administrative fee. The exact fee is negotiated with each client and differs with project complexity and term.

Although human resources and procurement services are the main franchising activities, MMS is pursuing other opportunities. For example, based on MMS's extensive audit and royalty collection experience, the Bureau of Indian Affairs contracted with MMS to provide audit services for its Office of Special Trustee for American Indians.

Performance Based Management: Safety and the Environment

Since the early 1990s, MMS has been incorporating recommendations put forward by the Marine Board of the National Academy of Sciences and other scientific studies by emphasizing performance and safety management systems. In making these changes, MMS has had to consider the diversity of its operators—from the international giant to the small independent—and the uniqueness of the different OCS regions where operations are conducted.

In 1991, MMS introduced the Safety and Environmental Management Program (SEMP) to industry. SEMP encouraged the industry to voluntarily develop, document, and implement a structured, systems-level safety management program. In response to SEMP, the American Petroleum Institute (API) developed *API Recommended Practice 75* (API RP75), a guide that assists companies in developing safety management programs.

The American Petroleum Institute, with participation from MMS, developed another API guide, *Design and Hazards Analysis for Offshore Production Facilities*. API issued these two documents in 1993 and, in cooperation with the Offshore Operators Committee (OOC) and MMS, conducted a series of workshops for companies and encouraged API members to adopt the practices voluntarily.

In 1994, 80 percent of companies operating in the Gulf of Mexico were developing safety and environmental management programs. By 1995, 95 percent of operators were developing programs. In 1996, a work group of seventeen companies, the major industry associations, MMS and the Coast Guard developed a series of generic industry performance measures that would

permit a company to compare its internal measures to the industry average and range for each measure. In 1997, API initiated a revision of API RP75, which included additional detail on contractor relationships and the consideration of human factors.

The Joint Industry-MMS Performance Measures work group completed a final report in November 1997, covering eighteen performance measures in ten different operational areas. The report is available on the MMS Web site at www.mms.gov.

Annual Performance Reviews

Another essential component of emphasizing performance over process is the institution of annual performance reviews in 1997. These reviews are conducted on an operator's entire portfolio of activities in a region. For the largest operator in the Gulf of Mexico, this can encompass activity on 651 facilities. This annual review provides large companies an opportunity to discuss the performance of a number of different business units with different operational managers. This helps ensure a corporate focus on safety management.

Disqualifying Operators

During the Clinton Administration, MMS developed a process for disqualifying operators with a clear record of poor performance. Previously the ability to operate on the OCS was tied strictly to financial capability. The intent of the poor performance initiative is to develop criteria tied to performance that could lead to a hierarchy of prohibitions—from being banned from operating on a specific facility, to a region-wide ban, to a national ban, to being prohibited from acquiring any new leases.

Just as steps are being taken to punish poor performers, MMS will continue to recognize the good performers through its SAFE (Safety Award for Excellence) program. This program has been expanded to include three award categories: majors, independents, and contractors. MMS is also willing to work with outstanding operators on alternative compliance programs.

Valuation

One of MMS's responsibilities is to assure that the American people receive fair market value for their resources. It starts with determining the best way to develop OCS property and ends with making sure proper royalties have been paid on the sale of minerals. MMS is constantly evaluating the way the marketplace completes transactions and consequently how it determines value. This quest is complicated by contentious debates among MMS customers and stakeholders.

During the 1990s, the agency spent considerable time revising its regulations covering oil and gas valuation on federal and Indian properties.

Indian Gas Valuation Negotiated Rulemaking Committee

MMS published a Notice in the *Federal Register* on February 7, 1995, to establish the Indian Gas Valuation Negotiated Rulemaking Committee (Indian Committee). The goal of the Indian

Committee was to publish regulations that would maximize royalty revenues for tribes and individual American Indian mineral owners consistent with the Secretary's discretion to establish value. The regulations would further satisfy industry concerns by clarifying and reducing information requirements, thus providing for the computation of royalties in an accurate, timely manner.

The Indian Committee included representatives from MMS, the Bureau of Indian Affairs, Indian mineral tribes, and the oil and gas industry. The representatives met thirteen times and concluded negotiations in May 1996. The negotiations focused on improving gas valuation under the following circumstances: gas sold under arm's-length and non-arm's-length contracts subject to the major portion requirements of American Indian lease terms; and gas processed and subject to the dual accounting requirements of American Indian lease terms.

The term "major portion" denotes the highest price paid or offered at the time of production for the major portion of oil or gas production from a given field. Dual accounting is the comparison of two values of gas: 1) the value prior to processing at a gas plant, and 2) the value after processing. Royalty payments are based on the higher of the two values. The Indian Committee agreed on a formula to value gas produced from American Indian lands using available public "spot market" index prices and a factor for transportation.

MMS published a proposed rule in the *Federal Register* on September 23, 1996. A final rule was published in August 1999 with an effective date of January 1, 2000. MMS conducted eighteen American Indian gas-valuation training sessions in FY 2000, attended by approximately 350 participants representing industry, tribes, and the MMS audit staff. A Web site was also set up to assist the Indian community.

Federal Oil Valuation Rule

In December 1995, MMS began an effort to revise the regulations covering the valuation of oil. Historically, there had been a reliance on prices posted by oil producers. MMS prepared numerous drafts of the revised rule in response to public comment and published the initial proposed rule on January 24, 1997, followed by a supplemental proposed rule on July 3, 1997. MMS reopened the public comment period on September 22, 1997, to solicit comments on several alternative valuation procedures suggested by constituents. MMS published a second supplemental proposed rulemaking on February 6, 1998. Before MMS could consider comments on the revised proposal and publish a final rule, a rider was added to a FY 1998 emergency supplemental spending measure in April 1998 that barred MMS from implementing the rule until October 1, 1998.

MMS reopened the public comment period from July 9-31, 1998, in response to a request from several U.S. Senators and a review of all comments received throughout the rulemaking process. A further supplemental proposed rule was published on July 16, 1998, in response to meetings with members of Congress and other interested parties. The General Accounting Office provided a positive report on MMS rulemaking efforts on August 19, 1998. However, language in Conference Report H.R. 4328 prevented MMS from finalizing the rule until October 1999, or until a negotiated agreement was reached.

On March 13, 1999, MMS once again reopened the public comment period on the proposed rule. MMS conducted additional public workshops seeking new ideas, not discussed in previous workshops, to help move the rulemaking process forward, while ensuring the public received fair value for its resources. The comment period closed on April 27, 1999.

The Department's FY 2000 appropriation bill included language extending the moratorium on publication of a final rule until March 15, 2000. On December 30, 1999, MMS published a further supplementary proposed rule addressing some of the comments received during the public comment period that ended April 27, 1999. In January 2000, MMS conducted three additional workshops. MMS reviewed comments addressing the supplementary proposal and revised the rule further.

MMS published the final rule for valuing crude oil produced on federal lands in the March 15, 2000 *Federal Register*. The rule became effective June 1, 2000.

The final rule balances the legitimate interests of the oil and gas industry and the government's absolute obligation to assure a fair return for the public's mineral resources.

The rule applies spot market pricing to the transactions of the major integrated oil companies, doing away with the traditional reliance on posted prices for non-arm's-length contracts-crude oil sales between divisions of a single, integrated company. These posted prices, which reflected internal prices set by producers selling to affiliated refiners, consistently understated the real or market value of crude oil produced from federal lands. Spot market pricing-the price paid for oil on the open market-is the best indicator of crude oil's true value.

With respect to arms-length crude oil sales between non-affiliated producers and refiners, the new rule does the following:

- The MMS will continue to accept prices under arm's-length contracts as it did under the 1988 rules. Small independent producers that sell under arm's-length contracts to non-affiliated companies will not be affected.
- The rule includes language affirming that MMS will not second-guess producers' marketing decisions.

For non-arms-length crude oil sales contracts between affiliated producers and refiners the new rule:

- Uses market-based spot pricing in most situations.
- Provides tailored valuation methods to fit different marketing areas of the country.
- Allows options to fit federal lessees' unique marketing situations.
- Provides for location and quality adjustments between the lease and market center when using spot-market pricing.
- Allows for actual costs of transportation.
- Allows the first purchaser of a pipeline to begin a new depreciation schedule based on the price they paid for the pipeline.
- Allows for a minimum return on fully depreciated pipelines.

- Spells out new and clearer criteria for determining company affiliation.
- Provides for binding value determinations.

The new rule does not:

- Allow marketing costs as a deduction from royalty.
- Use comparable sales or tendering at the lease, other than in the Rocky Mountain region.
- Allow FERC tariffs for non-arm's-length transportation.

MMS estimates that \$67.3 million per year in increased royalty revenues will accrue to the government under the new rule. Approximately \$2.4 million of this revenue will be shared with the states where federally-owned oil resources are located: California, Wyoming, New Mexico, Louisiana, North Dakota, Texas, Montana, Colorado and Utah.

About 90 percent of the additional revenue will come from the major integrated oil companies. Smaller, independent operators who buy and sell crude on the open market will be largely unaffected. Because the new rule streamlines royalty valuation procedures, MMS estimates that administrative efficiencies under the new rule will save industry a net \$63.5 million.

In April 2000, the Independent Petroleum Association of America (IPAA), later joined by the American Petroleum Institute (API), sued the Department over the rule and its "duty to market" provisions. Industry had consistently objected to these provisions. The rule went into effect on June 1, 2000. The lawsuit is still pending.

Impact of FERC Order 636 on Transportation and Gas Marketing

The Federal Energy Regulatory Commission (FERC) issued Order 636 in April 1992 to enhance competition among suppliers and improve the industry's ability to compete effectively for new markets. The Order mandated that interstate pipelines separate their sales and transportation services, negating the advantage that a particular pipeline company would have in the sale of its own gas as opposed to the gas of other suppliers. Pipelines were required to provide open access transportation services equal in quality, whether the gas was purchased directly from the pipeline company or from another source. Each pipeline was required to complete restructuring of its services by November 1, 1993.

The FERC Order had an impact on MMS valuation regulations. MMS published a final regulation in the *Federal Register* on December 16, 1997, to clarify royalty implications of FERC Order 636. The regulation identified which cost components or other charges were deductible, or related to transportation, and which costs were not deductible, or related to marketing. Deductible transportation costs included firm demand charges, commodity charges, banking fees, parking fees, and wheeling costs. Nondeductible marketing costs included long-term storage, aggregator fees, and intra-hub title transfer fees. The final rule became effective on February 1, 1998.

The IPAA and API filed suit against the Department in March 1998. The suits alleged that the rule was illegal because it required lessees to pay royalties based on more than the value of the

gas at the wellhead and unilaterally changed the terms of the oil and gas lease. Motion and cross motion summary judgments were filed in September and December 1998. Final simultaneous reply briefs were submitted February 11, 1999. On March 28, 2000, Federal District Court Judge Royce Lamberth (District of Columbia) ruled in favor of IPAA and API.

American Indian Oil Valuation Rule

In 1997, MMS elected to develop an independent rule for valuing oil produced from American Indian leases. This decision was prompted by consideration of MMS trust responsibilities and the unique lease terms contained in American Indian leases, particularly major portion provisions. MMS convened a diverse group of American Indian representatives to solicit their views before drafting the rule then published a proposed rule in the *Federal Register* on February 12, 1998.

Public hearings were conducted in Albuquerque and Denver in March and April 1998. The comment period for the rule closed on May 13, 1998. Meetings were held with various American Indian representatives in December 1998 and January 1999 to discuss comments received and to obtain their feedback on potential changes to the rule.

The language in Conference Report H.R. 4328, that prevented MMS from finalizing the federal oil rule until October 1, 1999, also applied to the American Indian oil valuation rule. The subsequent extension of the moratorium to March 15, 2000 again applied to both the federal and American Indian rules.

MMS published a supplementary proposed rule on January 5, 2000, in response to earlier comments received. The supplementary proposal included changes to the way index prices would be applied and transportation allowances would be calculated. The supplementary proposal further included changes to the information collection associated with this rulemaking. MMS conducted an additional public workshop on February 8, 2000. The comment period on the supplementary proposed rule ended on March 20, 2000. A final rule was scheduled for publication before the end of 2000.

Deepwater Strategy

When exploration reaches water depths beyond 1,000 feet, oil producers are in "deepwater," according to industry terminology. Advanced technology is digging deep to explore ways to enhance the nation's energy resources and economy.

In the early 1990s, some industry experts considered the Gulf of Mexico a "dead sea" when it came to offshore oil production. Most of the early indicators pointed to an oil and natural gas basin nearing the end of its productivity. Many thought the Gulf would only attract the small investor. There appeared to be little potential for new discoveries. The new deepwater drilling technologies changed all that, and the Gulf reemerged as a major source of the nation's energy.

Today there are approximately 7600 active leases in the Gulf of Mexico, 48 percent of which are in deep water. In 1992 only about 27 percent of the 5600 active leases were in deepwater regions. By the end of 1999, there were thirty producing fields, up 30 percent in twelve months.

New technology coupled with discoveries of high production-rate wells have lowered the cost of finding, extracting and delivering deepwater oil and natural gas to energy markets. Areas of the Gulf of Mexico once thought beyond reach, that is, depths beyond 5,000 feet, are now being explored and developed successfully. A new generation of drill ships and techniques allows drilling in water depths down to 10,000 feet.

In 1990 about 4 percent of the oil and less than 1 percent of the natural gas produced on the Gulf's outer continental shelf was from deepwater. By the end of 1999, more than 50 percent of the Gulf's oil production and 20 percent of its natural gas was from that area. This represents a 1,770 percent increase in oil produced from those depths during the 1990s and a 2,630 percent increase in natural gas production from deepwater. In the early part of the 1990s, Gulf of Mexico oil production hovered around 300 to 315 million barrels per year, but has since skyrocketed, reaching almost 500 million barrels in 1999.

Reengineering the Mineral Revenue Collection System

Enactment of the Federal Oil and Gas Royalty Simplification and Fairness Act (RSFA) in August 1996 materially changed many historic MMS operating assumptions as well as some fundamental federal oil and gas financial activities. Although immediate changes in processes and systems needed to be made to implement the law, it was apparent that long-term strategies, business processes, and aging systems had to be addressed for MMS to be cost-effective and responsive to customer requirements.

MMS announced on April 1, 1997, that the effort would expand beyond compliance reengineering to a comprehensive reengineering of the Royalty Management Program. A Program Reengineering office was established to manage and coordinate the initiative.

The initial redesign work, including prototype development and testing, was completed through a multi-disciplinary team of MMS, state, and tribal representatives, with technical contract assistance. MMS also worked with its industry partners to pilot new approaches. Consultations with customers were critical in better defining future business approaches and processes.

The principal objective of the expanded initiative was to design, develop, and implement new core business processes with supporting systems for the 21st century. Goals in the development of new business practices were 1) to provide revenue recipients with access to their funds within twenty-four hours of the due date and, 2) assure compliance with applicable laws, lease terms, and regulations for all leases in the shortest possible time, but no later than three years from the due date.

In March 1998, the MMS Reengineering Team issued the *Preliminary Design Concepts for the RMP of the 21st Century*. The document presented the findings and preliminary design concepts for future MMS royalty management processes and support systems. The concepts were based on extensive technical and analytical studies performed or commissioned as part of the reengineering initiative, past studies and recommendations prepared within the MMS, and studies and recommendations presented to the MMS by the Royalty Policy Committee (RPC), the Office of the Inspector General, and other organizations. The recommendations served as the

foundation for further work performed in technology prototyping, process modeling, and implementation planning.

RMP's business implementation plan, the *Road Map to the 21st Century*, was published November 1998. The *Road Map* placed RMP on a three-year path for implementation of new business processes, realignment of organizational structure, and development of supporting automated systems. Implementation of the *Road Map* proceeded on schedule during FY 1999 and the reengineered Royalty Management Program became the Minerals Revenue Management (MRM) organization effective October 1, 2000.

During the Clinton Administration, MMS became a more modern, efficient and responsive agency focused on its vision to be the best in the business.