Mission Area Two

Resource Use

How we manage our natural resources now directly affects the availability of those resources in the future. Four Outcome Goals for this Mission Area provide a framework for Interior's stewardship work.

- (Energy) Manage or influence resource use to enhance public benefit, responsible development, and economic value
- Deliver water consistent with applicable State and Federal law in an environmentally responsible and cost-efficient manner
- (Land-Related Resources) Manage or influence resource use to enhance public benefit, responsible development, and economic value
- Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy

Benefits

Striking a balance between meeting our country's energy needs while ensuring responsible use of the land that contains these valuable resources is a worthy goal, especially in this time of heightened environmental consciousness. Our mission to manage America's natural resources includes promoting responsible development and use of energy, grazing land, forest products, and non-energy mineral deposits.

The quality of life that Americans enjoy today depends largely upon a stable and abundant supply of affordable energy. Energy heats and cools our homes. It fuels our ambulances, fire trucks, ships, and airplanes. It powers the companies that create jobs and the agricultural economy that feed our Nation and the world.

The Minerals Management Service issues offshore leases to oil and gas companies for prospective development. The Bureau of Land Management leases land that potentially holds coal, oil or gas onshore. Interior manages land and water that produce about 30 percent of America's energy supply. Typically, Interior's role is to provide responsible access to energy producers, not to perform the actual production. However, in the case of Interior's Bureau of Reclamation, energy production via hydropower is a Bureau function. Reclamation is the second largest producer of hydroelectric power in the Western United States, with 58 power plants annually providing more than 40 billion kilowatt hours of hydroelectricity to serve 6 million homes. Reclamation is also the largest wholesaler of water in the country. BOR brings water to more than 31 million people and provides one out of five western farmers with irrigation water for 10 million acres of farmland that produce 60 percent of the Nation's vegetables and 25 percent of its fruits and nuts. USGS research on, and assessments of, undiscovered non-fuel mineral and energy resources assist these Bureaus in their goal of providing responsible management of resources on Federal lands.

Representative Strategic Plan Measures

Our representative Strategic Plan measures that give an overall picture of our performance in the Resource Use Mission Area are organized under four Goals:

GOAL: (Energy) Manage or influence resource use to enhance public benefit, responsible development, and economic value

- Percent of fluid mineral leases with approved applications for permits to drill
- Number of onshore Federal acres under lease for coal development
- Number of offshore lease sales held consistent with the Secretary's 2007–2012 Five-Year Program
- Percent of active coal mining sites that are free of off-site impacts
- Percent of Federal and Indian revenues disbursed on a timely basis per statute

GOAL: Deliver water consistent with applicable State and Federal law in an environmentally responsible and cost-efficient manner

- Water infrastructure is in fair to good condition as measured by the Facilities Reliability Rating

GOAL: (Land-Related Resources) Manage or influence resource use to enhance public benefit, responsible development, and economic value

- Percent of grazing permits and leases processed as planned consistent with applicable resource management plans
- Percent of allowable sale quantity timber offered for sale consistent with applicable resource management plans

GOAL: Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy

- Percent of targeted science products that are used by partners or customers for land or resource management decisionmaking

Discussion

GOAL: Manage or influence resource use to enhance public benefit, responsible development and economic value

Representative Strategic Plan Measure: Percent of fluid mineral leases with approved applications for permits to drill

FIGURE 1-24

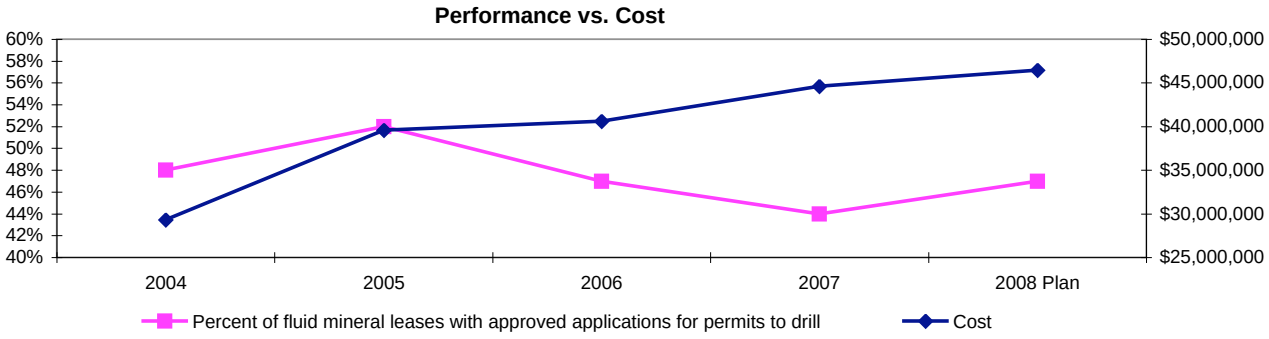


FIGURE 1-25

	2004	2005	2006	2007	2008 Plan
Performance	48%	52%	47%	44%	47%
Federal oil & gas leases in producing status	21,889	23,511	22,859	21,612	23,393
Federal oil & gas leases in effect	45,836	45,479	48,423	49,152	49,731
Cost ($)	29,295,306	39,601,102	40,612,263	44,611,378	46,447,919

Performance on this measure was at 44 percent for 2007. BLM expects the increased demand for Applications for Permits to Drill to continue in 2008, although the number of leases is expected to remain at a comparable level each year. The number of APDs approved does not necessarily have a direct effect on the number of producing leases. APDs can be approved and drilled on leases that are already producing and, therefore, would not increase the number of leases in production. In most cases, a producing oil and gas lease will contain several producing wells.

An APD is a package that oil and gas operators submit to BLM that provides all the information related to how a well will be drilled, its construction, the tests conducted during drilling, how it will be plugged and abandoned if necessary, and all of the equipment that will be used during the drilling process. BLM reviews the drilling plan from a technical standpoint before approving the APD to ensure that the operator will manage the site responsibly.

In 2007, BLM issued 3,188 oil and gas leases. At the end of the year, 49,152 oil and gas leases were in effect, and 21,612 of these leases were in a producing status. The percent of oil and gas leases producing is related to the following:

- Number of oil and gas leases issued each year
- Number of oil and gas leases that expire at the end of their 10-year terms without going into production during the year

Environmental Inspections Increase

In the Farmington Pilot Office, inspection and enforcement staffing has doubled since 2001. Under a new inspection strategy implemented in late 2005, the number of total inspections is up 22%. The 3,000 inspections conducted in FY 2006 included nearly 6,000 wells. The most dramatic increase has been in the number of environmental inspections, due to higher staffing levels and to greater awareness of the environmental issues associated with oil and gas development in the area. At the same time that the number of inspections is increasing, the unit-cost of labor per inspection has decreased, down 9% in the first year of the Pilot Project.

Under the authority given to Pilot Offices in the Energy Policy Act of 2005, an inspector from the New Mexico Oil Conservation Division and eight tribal inspectors from the Navajo Nation and the Jicarilla Apache Tribe are also assigned to the Farmington Office. Cooperation and coordination with NMOCD and tribal inspectors eliminate duplication of effort and allow sharing of common inspection goals. The new inspection strategy ensures that all 20,000 producing oil and gas wells in the San Juan Basin will be inspected every three years.

- Number of producing oil and gas leases that terminate due to lack of production during the year
- New leases that become productive during the year

Costs budgeted for this activity increased in 2005 and reflected both the increased industry demand and the new requirements stemming from the Energy Policy Act of 2005. Those requirements included timely action on APDs and compliance with the National Environmental Policy Act.

The 2008 budget proposes that BLM's oil and gas program transition from dependence on mandatory mineral leasing rental receipts to increased reliance on fees for processing APDs. The Administration submitted legislation to repeal provisions in Section 365 of the Energy Policy Act that prohibit BLM from charging fees for processing applications. The proposed legislation will also redirect mineral leasing receipts from BLM's Permit Processing Improvement Fund back to the Treasury. This approach should help BLM improve planning and customer service by strongly linking program funding to actual demand.

Every lease contains standard stipulations designed to protect air, water, wildlife, historic and cultural resources, as well as require reclamation. Stipulations are part of producing oil and gas in an environmentally responsible way. Before a drilling permit is issued and a well is actually drilled, experts conduct additional environmental analysis.

Representative Strategic Plan Measure: Number of onshore Federal acres under lease for coal development

FIGURE 1-26

	2004	2005	2006	2007	2008 Plan
Number of onshore federal acres under lease for coal development	456,578	453,442	466,652	466,943	464,450
Cost ($)	2,982,176	3,921,020	4,019,503	3,522,116	2,901,627

At the end of 2006, BLM administered 293 Federal coal leases, covering approximately 460,000 onshore acres. The number of acres under lease for coal development is expected to be comparable between 2007 and 2008, and costs are expected to decrease slightly due to an expected decrease administration costs.

The Nation's reliance on Federal coal leases administered by BLM has increased from providing 29 percent of the Nation's coal in 1994 to 45 percent in 2006. Two years ago, according to the Energy Information Administration, over half of the Nation's electricity generated came from coal. That amount accounts for 92 percent of the total coal extracted.

Annual coal production is slightly more than one billion tons, and demand for coal is expected to increase to nearly two billion tons over the next 25 years. Much of the projected increases must come from Federal reserves in the western States administered by BLM.

Reducing the Environmental Footprint of Development

Like all BLM Field Offices that process Applications for Permits to Drill, new Pilot Offices are finding ways to ensure that oil and gas operations on public land are environmentally responsible. The configuration and staffing in the Pilot Offices are being tested to see whether, in addition to processing APDs more efficiently, they can better integrate environmental Best Management Practices into permitting and improve inspection and enforcement during the operations phase.

The Grand Junction/Glenwood Springs Pilot Office exemplifies integration of BMPs to reduce the environmental footprint of development. On leases in the Piceance Basin, operator Williams Exploration and Production is using a new drilling rig that can simultaneously drill and complete up to 22 wells spaced seven feet apart on a single well pad. Combined with other BMPs, the drilling technology shortens the production cycle, minimizes impacts to wildlife and noise disturbances, and reduces truck traffic. Williams is using these same techniques on non-federal leases, and other operators are following the company's example on their leases in the Piceance Basin. The company received a 2007 BLM Oil, Gas and Geothermal Development Environmental Best Management Practices Award for this project.

Representative Strategic Plan Measure: Number of offshore lease sales held consistent with the Secretary's 2007–2012 Five-Year Program

FIGURE 1-27

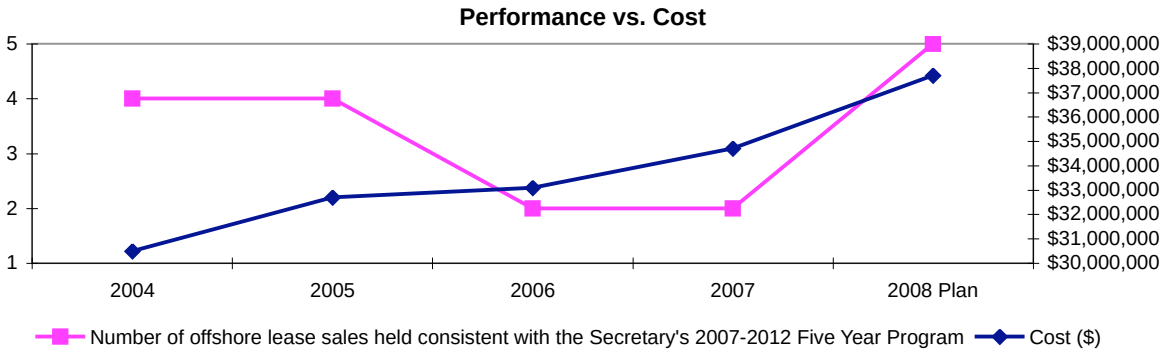


FIGURE 1-28

	2004	2005	2006	2007	2008 Plan
Number of offshore lease sales held consistent with the Secretary's 2007-2012 Five Year Program	4	4	2	2	5
Cost ($)	30,500,000	32,700,000	33,100,000	34,700,000	37,700,000

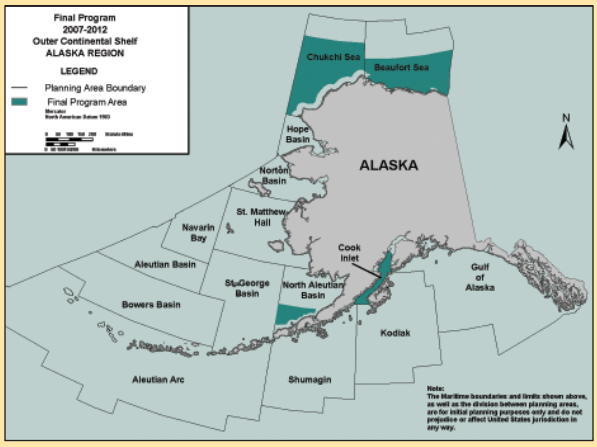
The Outer Continental Shelf Lands Act requires the Secretary of the Interior to prepare and maintain an Offshore Oil and Gas Leasing Program that indicates the size, timing, and location of leasing activity determined to best meet national energy needs for the 5-year period following its approval. The Department provides the Nation with about 30 percent of its domestic oil production and 21 percent of its domestic natural gas production.

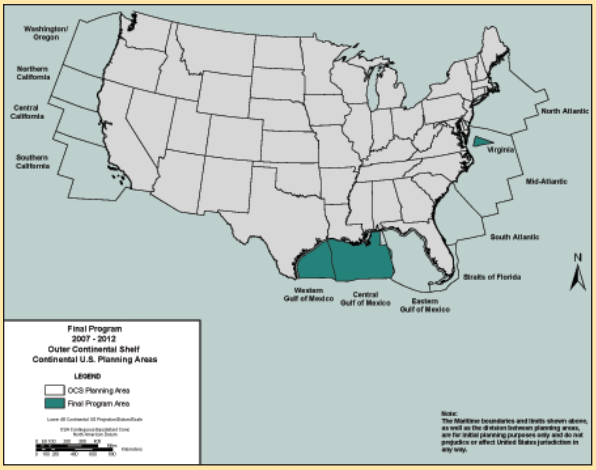
The two 2007 lease sales met the target set in the Secretary's 5-Year Program. A total of 21 lease sales in 8 of the 26 Outer Continental Shelf areas available for leasing were proposed during the next five-year program starting July 1, 2007. The eight OCS sites include three areas in the Gulf of Mexico, one area in the Mid-Atlantic, and four areas offshore Alaska. Costs cover the preparation, conduct, and processing of each lease sale. Even though a lease sale occurs in a given year, costs for any lease sale are incurred over several years.

The Minerals Management Service estimates the program could produce 10 billion barrels of oil and 45 trillion cubic feet of natural gas, generating almost $170 billion in net benefits for the Nation over a 40-year time span. Beneficiaries of offshore revenues are the U.S. Treasury, States adjacent to OCS leases, Land and Water Conservation Fund and the National Historic Preservation Fund.

Outer Continental Shelf

The Federal Outer Continental Shelf, a major supplier of oil and natural gas for the domestic market, consists of submerged lands, subsoil and seabed starting from three to nine statute miles out to 200 nautical miles from the U.S. coastline. The two maps show the program areas where lease sales will be held in Interior's Final 2007-2012 OCS Oil and Gas Leasing Program. This





leasing program, effective July 1, 2007, was developed through an extensive consultation process with Members of Congress, State, local and tribal officials, industry, environmental organizations, and the general public. This program ensures that the OCS remains a solid contributor to the Nation's energy needs through careful regulation and conservation of resources.

Representative Strategic Plan Measure: Percent of active coal mining sites that are free of off-site impacts

FIGURE 1-29

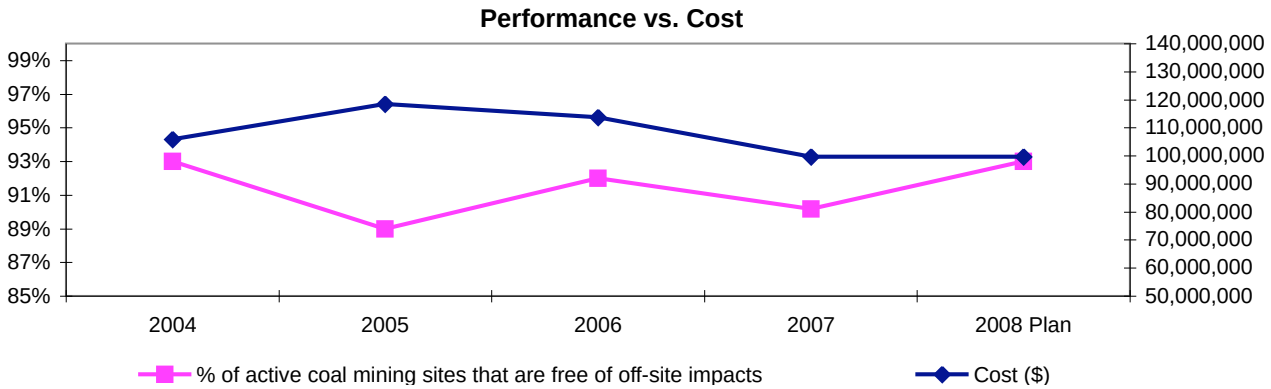


FIGURE 1-30

	2004	2005	2006	2007	2008 Plan
Performance	93%	89%	92%	90%	93%
Number of mining sites free of off-site impacts	6,364	7,436	7,454	7,103	
Number of mining sites	6,872	8,335	8,142	7,877	
Cost ($)	105,813,000	118,487,000	113,684,000	99,688,551	99,688,551

Thirty years ago, in 1977, the Surface Mining Control and Reclamation Act was signed into law to provide National environmental standards for the regulation and reclamation of surface and underground coal mines. Congress created the Office of Surface Mining Reclamation and Enforcement at that time to carry out the regulatory programs.

OSM uses two measures to gauge success in promoting responsible mineral extraction: protection of the environment and public from off-site impacts and successful reclamation of land affected by surface coal mining operations. Off-site impacts are negative effects resulting from surface coal mining activities, such as blasting or water runoff that affect people, land, water or structures outside the permitted area of mining operations.

The percent of mining sites free of off-site impacts was at 90 percent in 2007 and is expected to increase slightly in 2008 to 93 percent. Costs associated with this work will continue at the same level. Current coal mining operations include over 4.4 million acres in 26 States and on the lands of three Indian tribes.

Representative Strategic Plan Measure: Percent of Federal and Indian revenues disbursed on a timely basis per statute

FIGURE 1-31

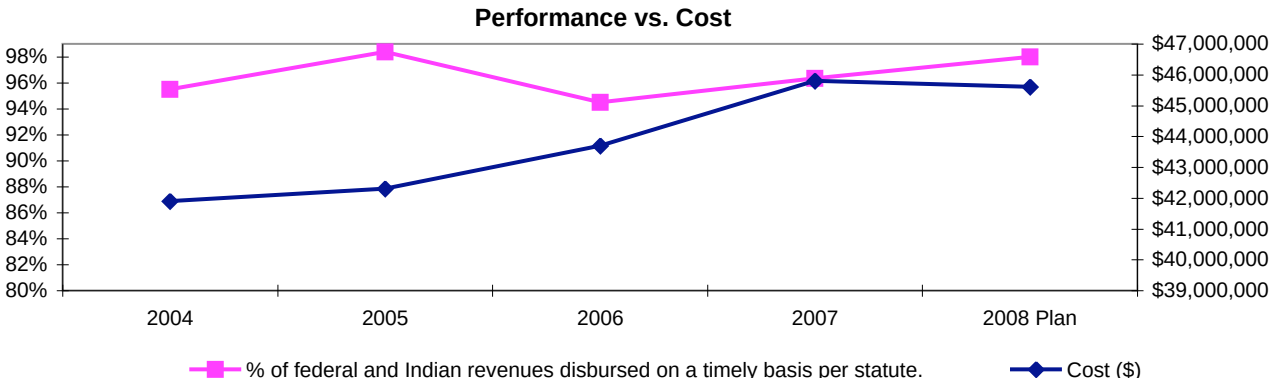


FIGURE 1-32

	2004	2005	2006	2007	2008 Plan
Performance	95.5%	98.4%	94.5%	96.3%	98.0%
Value of revenues disbursed on a timely basis	1,344,102,572	1,978,000,000	2,505,305,626	2,250,620,140	
Total Value of revenues disbursed	1,407,075,930	2,011,000,000	2,650,350,794	2,336,377,325	
Cost ($)	41,900,000	42,300,000	43,700,000	45,800,000	45,600,000

When the Minerals Management Service was created in 1982, a consolidated system for the collection, accounting, and disbursement of revenues from mineral production on Federal and Indian lands was established. Since 1982, the MMS Minerals Revenue Management program has ensured the distribution of more than $165 billion to Federal, State, and Indian recipients.

The Federal Oil and Gas Royalty Management Act of 1982 requires monthly distribution and disbursement of payments to States and Indians for their share of mineral leasing revenues. Historically, the distribution and disbursement function of the MMS has ensured that collections from Federal and Indian mineral leases are properly disbursed to the appropriate recipients—the U.S. Treasury, five Federal agencies, 38 States, and 41 Indian tribes. When disbursements are not timely, the MMS must pay late-disbursement interest. One of the MMS performance goals is to disburse Federal and Indian revenues on a timely basis per statute. This is a measure of how timely Federal onshore funds are disbursed to the appropriate State recipients and of how timely MMS provides lease information on Indian royalty revenues to BIA, enabling timely payment of royalties to the individual Indian owners. This measure includes only the funds that are subject to late disbursement interest.

In FY 2006, the MMS focused on reducing accounts receivable and unapplied payments. This resulted in the processing of several older payments, which lowered performance to 94.5 percent compared to 98 percent in 2005. After this work was completed, timely disbursements increased to 96.3 percent in 2007. In FY 2008, MMS will begin a two-year interactive payment matching and billing initiative that will increase their capability to reduce accounts receivable, increase timeliness of disbursements, and reduce accompanying late-disbursement interest.

GOAL: Deliver water consistent with applicable State and Federal law in an environmentally responsible and cost-efficient manner

Representative Strategic Plan Measure: Water infrastructure is in fair to good condition as measured by the Facilities Reliability Rating

FIGURE 1-33

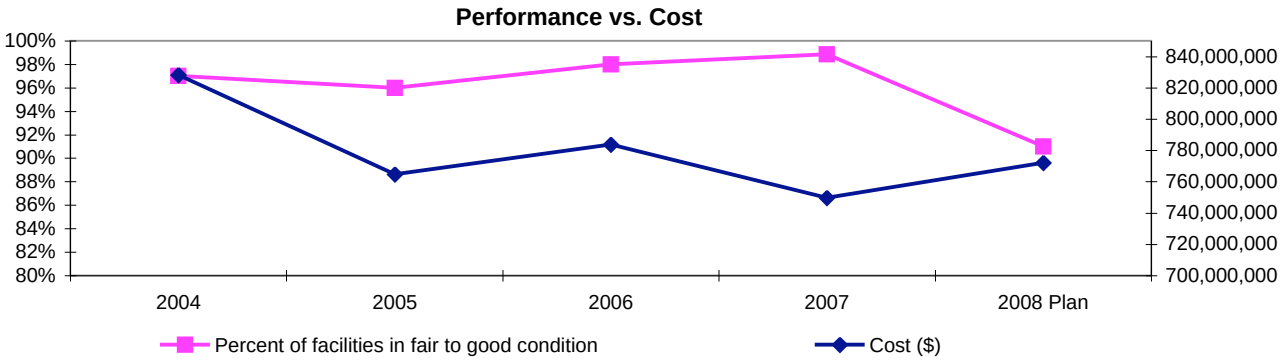


FIGURE 1-34

	2004	2005	2006	2007	2008 Plan
Performance	97%	96%	98%	99%	91%
Dams and associated facilities in good condition	331	326	333	341	316
Total number of dams and associated facilities	340	338	340	345	347
Cost ($)	828,165,354	764,708,017	783,874,681	749,680,635	772,171,055

Operating and maintaining safe and reliable water infrastructure are key factors in the Bureau of Reclamation's ability to deliver water. Reclamation delivered 28 million acre-feet of water against water delivery contracts in 2007.

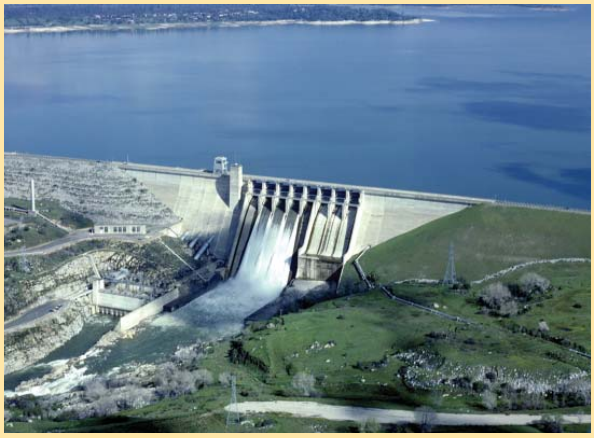
The Facilities Reliability Rating used in this measure is a score derived from a set of weighted criteria to assess dam condition, maintenance, and operations. The score is then correlated to a *condition descriptor*, i.e., good/fair/poor. Of 345 dams classified as high or significant hazard dams, 341 were considered in fair to good condition last year. *Significant hazard* dams are those located upstream that could potentially flood populations living downstream if the dam fails. A 2008 increase in funds is allocated to this effort. Results will take time to show up beyond 2008. Due to an excellent FY 2007 performance, Reclamation will be reevaluating their 2008 target.

The Dam Safety Program continues to be one of Reclamation's highest priorities. Approximately 50 percent of Reclamation's dams were built between 1900 and 1950, and about 90 percent of the dams were built prior to current state-of-the-art design and construction practices. Aging dams require more reliance on monitoring, examinations, and reanalyses to assure safe dam performance. Under the program, dams are examined by specialists every three years, with additional internal reviews performed annually.

Increased Dam Safety

The Bureau of Reclamation has awarded the first in a series of construction contracts for a new auxiliary spillway at Folsom Dam and Reservoir.

The auxiliary spillway, or Joint Federal Project, represents an unprecedented partnership among Reclamation, the U.S. Army Corps of Engineers, the California Department of Water Resources/Reclamation Board, and the Sacramento Area Flood Control Agency. When completed, the JFP will address the hydrologic risk of possible overtopping of the dam or dikes during an extreme storm. The JFP also achieves the Corps' objective of increasing flood control at Folsom to protect against an event of such magnitude.



The project will be constructed in three successive phases by Reclamation and the Corps. Work on Phase I will begin in late fall 2007 and will be completed by 2009. Phases II and III will follow, with full completion of the JFP expected by 2021.

The photo above shows the new auxiliary spillway project and to the left is the Folsom Dam as it is today.

GOAL: Manage or influence resource use to enhance public benefit, responsible development, and economic value

Representative Strategic Plan Measure: Percent of grazing permits and leases processed as planned consistent with applicable resource management plans

FIGURE 1-35

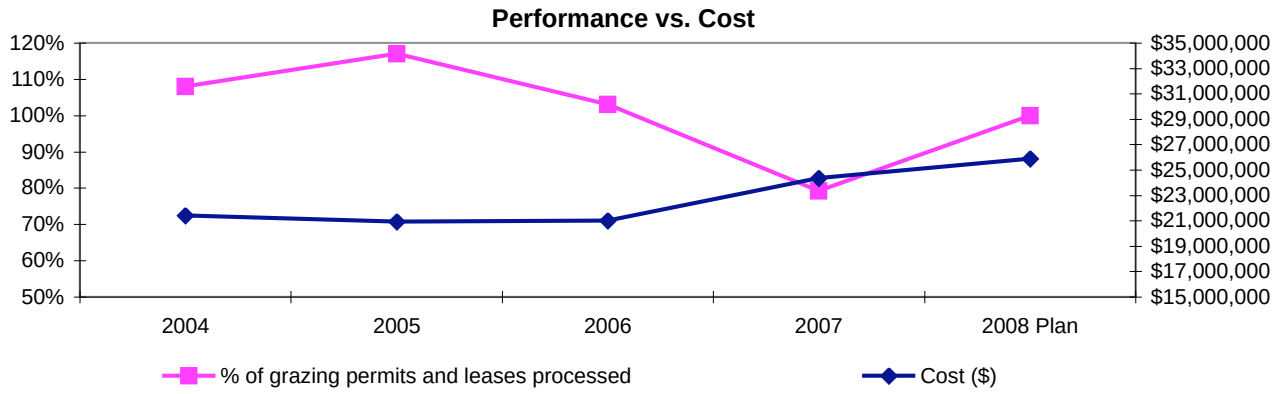


FIGURE 1-36

	2004	2005	2006	2007	2008 Plan
Performance	108%	117%	103%	79%	100%
Grazing permits processed	2,512	2,730	2,565	2,058	2,600
Grazing permits received for processing	2,329	2,342	2,479	2,600	2,600
Cost ($)	21,405,348	20,917,613	21,019,714	24,352,483	25,894,497

BLM manages approximately 158 million acres authorized for livestock grazing. The Bureau administers more than 18,000 grazing permits and leases on nearly 22,000 allotments. The permits are issued in compliance with local and land use plan objectives and direction, including a requirement that conditions meet land health standards. If an area is not meeting those standards and current livestock grazing is a significant factor in not meeting the standards, changes in grazing management are made to address those conditions by the next grazing season. Livestock use is measured in animal unit months—the amount of forage needed by an "animal unit" for one month. The grazing use on BLM-managed public land has decreased from about 22 million AUMs in 1941 to 12.7 million AUMs in FY 2007.

Grazing permits are issued typically for 10 years, but can be issued for a shorter period. Although grazing permit targets have been met, there is still a backlog in the number of permits that have been fully processed. The backlog is due to the extensive amount of litigation associated with permits, along with increased complexity in the permit process. Both factors have increased the time and cost required for a permit to be issued. There is no indication this trend will change in the foreseeable future.

Representative Strategic Plan Measure: Percent of allowable sale quantity timber offered for sale consistent with applicable resource management plans

FIGURE 1-37

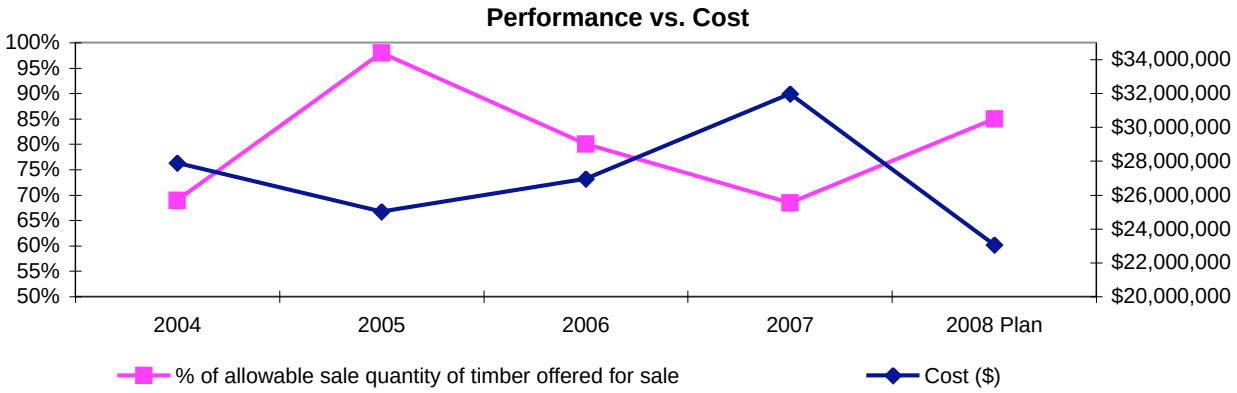


FIGURE 1-38

	2004	2005	2006	2007	2008 Plan
Performance	69%	98%	80%	68%	85%
Timber offered (MMBF)	140	198	162	139	172
Allowable sale quantity of timber (MMBF)	203	203	203	203	203
Cost ($)	27,906,311	25,033,019	26,945,719	31,975,747	23,067,388

The Oregon and California grant lands consist of about 2.4 million acres and are some of the most productive timber lands managed by the Federal government. They are managed under the O&C Act (Public Law 75-405) and the Northwest Forest Plan. The O&C Act requires that the land be managed for permanent forest production in conformance with the principle of sustained yield. That is, management of the land is to provide a permanent source of timber supply, protect watersheds, regulate stream flow, contribute to the economic stability of local communities and industries, and provide recreational opportunities. The NWFP intended to provide a balanced, long-term management plan that maintained a stable supply of timber while also protecting fish and wildlife habitats.

The allowable sale quantity of timber is measured in million board feet. The chart shows performance achieved compared to 203 MMBF, the amount of timber offered annually within western Oregon.

Performance declined in 2007 because BLM was required to remove about one-third of the timber sale plan offerings as a result of litigation and the loss of several court cases invalidating critical biological opinions needed for the timber sales. The BLM and the regulatory agencies are replacing the rescinded biological opinions so the planned sales can proceed in the future. Costs increased in FY 2007 due to increased unit costs for additional survey requirements, sales needing to be reworked, and delays in contract awards. The challenge for FY 2008 will be to achieve the performance target while reducing these costs.

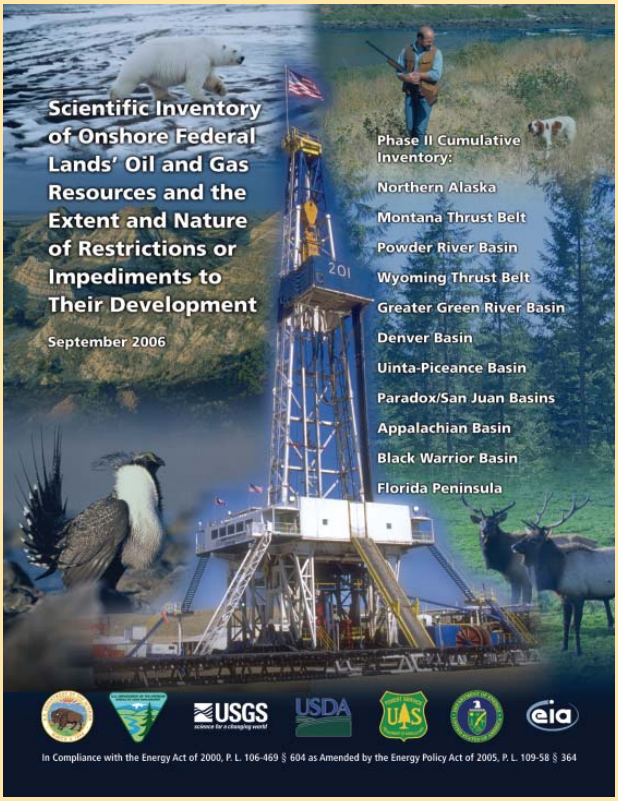
In terms of historical data, the large increase in 2005 occurred because the BLM reported the entire volume offered in that year rather than just the ASQ volume offered. This reporting was in error.

Improved Understanding to Responsibly Meet America's Energy Resource Needs

The second phase of the Energy Policy and Conservation Act Amendments of 2000 inventory was delivered to Congress and released to the public in November 2006. This inventory is the culmination of a multi-agency collaborative effort that includes the USGS, Bureau of Land Management, the U.S. Forest Service, the Department of Energy, and the Energy Information Administration.

The report presents a comprehensive review of federal oil and gas resources in eleven basins in the United States and constraints on their development. The basis for the inventory came from USGS assessments for undiscovered, technically recoverable oil and gas.

The Phase II inventory studied approximately 100 million acres of federal lands, including split estate. USGS estimates undiscovered oil and gas resources under these lands total 21.2 billion barrels of oil and 186.9 trillion cubic feet of natural gas. Undiscovered oil and gas resources are concentrated in Northern Alaska and the Interior West. The study also finds that approximately 24% of the Federal land in these areas is accessible under standard lease terms, approximately 30% of the federal land is accessible with restrictions on oil and gas operations beyond standard stipulations, and approximately 46% of the federal land is inaccessible.



GOAL: Improve the understanding of energy and mineral resources to promote responsible use and sustain the Nation's dynamic economy

Representative Strategic Plan Measure: Percent of targeted science products that are used by partners or customers for land or resource management decisionmaking

FIGURE 1-39

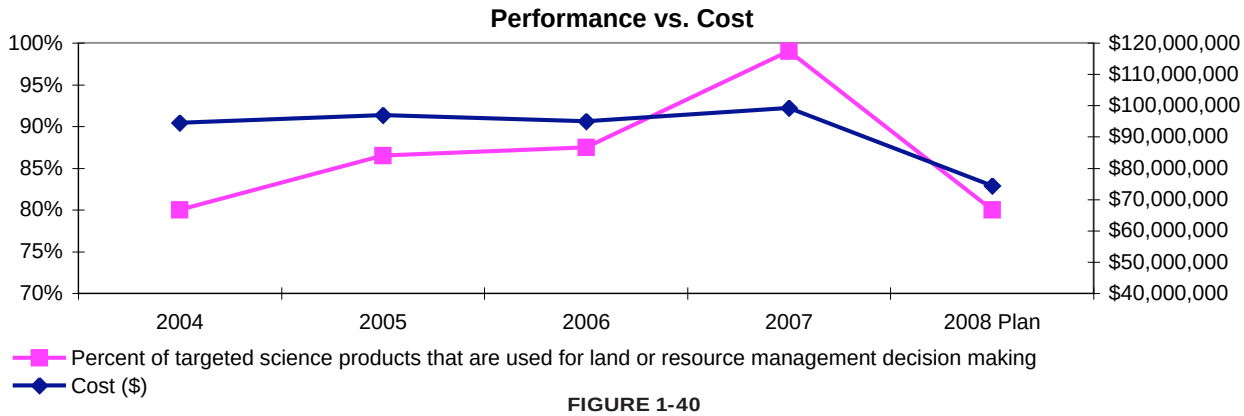


FIGURE 1-40

	2004	2005	2006	2007	2008 Plan
Percent of targeted science products that are used by partners or customers for land or resource management decision making	80%	87%	88%	99%	80%
Cost ($)	94,429,073	96,883,040	94,898,465	99,256,515	74,308,201

Performance on the science products measure is assessed through two USGS programs: the Mineral Resources Program and the Energy Resources Program. Together they provide reliable and impartial scientific information on geologically-based natural resources.

The Mineral Resources Program is the sole Federal provider of scientific information for objective resource assessments and unbiased research results on mineral potential, production, consumption, and environmental effects. Among the tools and technologies USGS developed and employed are (1) assessments for as yet undiscovered mineral deposits in the United States and around the world and (2) Web-based data delivery tools that serve 128 years of mineral resource, geochemical and geophysical data to land managers, Federal agencies responsible for National security and economic policy, the public, and other research scientists. Costs for this program are expected to be reduced in 2008 as a result of proposed funding reductions to support other priority programs.

The Energy Resources Program researches and assesses oil, natural gas, coalbed methane, gas hydrates, coal, geothermal resources, oil shale, and uranium resources, both globally and nationally. The program also evaluates environmental and human health impacts associated with production, occurrence and use of energy resources. Costs for 2008 are expected to remain essentially the same as in 2007.

USGS performance is expected to be in the 80th percentile despite the reduced investment for the Mineral Resources Program. The 80% target for FY 2008 reflects the performance threshold set by USGS. Performance results typically exceed this established target level.

An Unconventional Energy Resource

Recently, the U.S. Department of Energy, BP Exploration (Alaska), and USGS successfully drilled a research well on the North Slope of Alaska to collect samples and information about gas hydrates, a potential unconventional natural gas energy resource. Gas hydrates, which are accumulations of methane (natural gas) trapped in ice-like structures with water, represent an immense potential energy resource underlying large portions of the world's marine continental shelves and Arctic continental areas.

The target for this test well, located at Milne Point, was gas hydrate within the Sagavanirktok Formation in the Mt. Elbert prospect accumulation. This occurrence had been identified by seismic, well, and reservoir modeling studies during earlier phases of this research program. Drilling crews and research team members collected about 430 feet of core samples from this well. Subsequent data collection and analysis will continue for several months and research findings will be reported thereafter.

This research provides a better understanding of the occurrence of gas hydrates, as well as information with which to assess the endowment of this resource. This research also improves the understanding of the types of technology and protocols needed to identify, explore, and ultimately produce this resource.

The photos show a drill rig on the North Slope and a hydrate-saturated, fine-grained sand core from the Mt. Elbert #1 well.