

Resource Use

Good stewardship of America's public lands dictates that we use energy efficiently and conserve resources

Assistant Secretary Rebecca Watson, March 2003

The Department of the Interior manages and provides access to the resources needed by the Nation for its economic well being, consistent with its environmental responsibilities. Many of the revenues generated from Interior's resource use activities fund resource protection programs throughout the Nation. Annual revenues from resource use activities have reached as high as \$11 billion.

The more than 700 million acres of mineral estate underlying Federal and other onshore surface ownerships and the nearly 1.8 billion acres of the Outer Continental Shelf managed by the Department of the Interior supply:

- 28 percent of the Nation's domestic energy production.
- 48 percent of the Nation's geothermal energy production.
- 35 percent of the Nation's natural gas and coal.
- 32 percent of the Nation's oil.

The Bureau of Reclamation manages over 800 dams and reservoirs that provide drinking water to over 31 million people, deliver water to one of every five farmers in the West for about 10 million

acres of irrigated land, and supply 17 percent of the Nation's hydropower.

RESOURCE USE MISSION

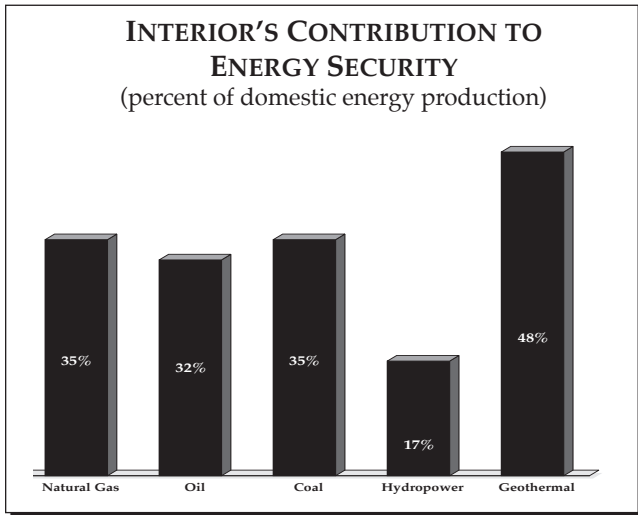
Manage natural resources to promote responsible use and sustain a dynamic economy

help the Department achieve resource protection and recreation goals.

The Department's 2005 budget requests \$1.6 billion to fulfill its resource use mission by providing access to resources in areas managed by its bureaus. Major initiatives in the 2005 budget request include:

- Promoting, through the Water 2025 initiative, the efficient and effective use of water resources in the West, while reducing conflicts surrounding scarce water resources.
- Improving forest health and strengthening timber management.
- Implementing the President's National Energy Policy.
- Streamlining offshore business practices through the e-government initiative, OCS Connect.

Water and energy demands are steadily increasing across the Nation, a trend likely to continue. Interior programs that help meet the Nation's needs for water, energy, minerals, forage, and forest resources also



fish and wildlife, vividly demonstrate the consequences of failing to address strategically the problem of competing demands for constrained water supplies.

Water 2025 minimizes future western water crises by fostering conservation and interagency coordination, enhancing water supplies through improved technologies, and managing water resources in cooperation with States, communities, and Tribes. In some cases, collaborative approaches and market-based water transfers can help meet emerging needs. In addition, Federal investments in research and development will improve water treatment technologies, such as desalination, to increase water supplies in critical areas.

WATER DELIVERY

The Bureau of Reclamation, the largest supplier and manager of water in the 17 western States, delivers water to customers, consistent with Federal and State water laws. The Bureau strives for efficient water delivery systems that optimize the overall benefits from the available water. Variations in yearly water supply, water management practices, and weather patterns determine water quantities. Through its watershed modeling, precipitation forecasting, enhancements to delivery systems, and other technological improvements, BOR enhances the productivity of water resource projects.



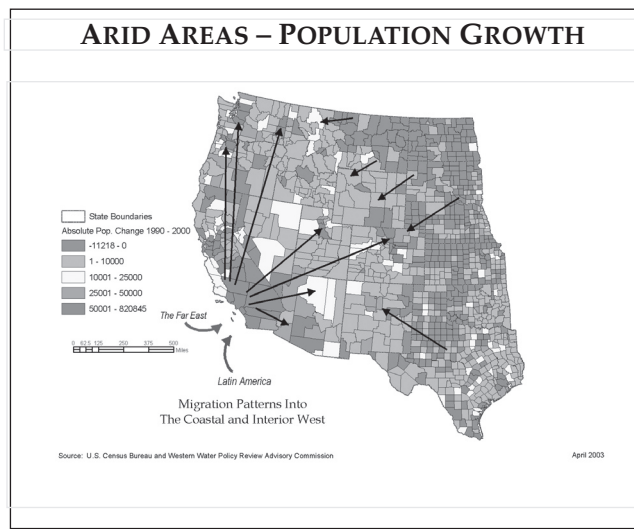
The 2005 budget request for the Water 2025 initiative includes \$20.0 million in BOR and \$1.0 million in the U.S. Geological Survey, an increase of \$13.3 million over the 2004 enacted level. Water 2025 has four key components:

WATER 2025 – PREVENTING CRISES AND CONFLICT IN THE WEST

Chronic water supply problems in the West will continue to challenge the Nation in the coming decades. Crisis management is not an effective way to address long-term water supply problems. Recent crises in the Klamath and Middle Rio Grande basins, where water shortages have affected Native Americans, farmers, urban residents, and

Conservation, Efficiency, and Markets – Water 2025 will improve water management and use market-based approaches by retrofitting and modernizing existing facilities; installing automated control and remote water measurement structures to measure water more accurately; lining canals; and facilitating the formation of water banks.

The experience of the Ochoco Irrigation District in Oregon demonstrates the benefit of improved water management. The District was losing approximately 26 million gallons of water per day due to inefficient equipment. The District, in partnership with BOR, installed



Water 2025 provides a basis for public discussion of the realities that face the West, so that decisions can be made at the appropriate level in advance of water supply crises.

Assistant Secretary Bennett Raley, January 26, 2004

advanced water measurement equipment, cutting daily losses by 75 percent.

Collaboration – Water 2025 exemplifies the Four C's. Cooperation, communication, and consultation, based on the recognition of the rights and interests of water users and others, maximizing innovation and creativity in promoting conservation.

In June 2003, Secretary Norton hosted a kickoff conference on Water 2025 that marked the beginning of public discussion, outreach, and education. Subsequently, the Department hosted a science and technology workshop and eight regional conferences with over 3,000 participants to identify the watersheds facing the greatest potential risk in the next 25 years; "ground-truth" the "hot-spots" map; evaluate the most effective ways of addressing water supply challenges; and seek recommendations on cooperative approaches and tools that have the greatest likelihood for success.

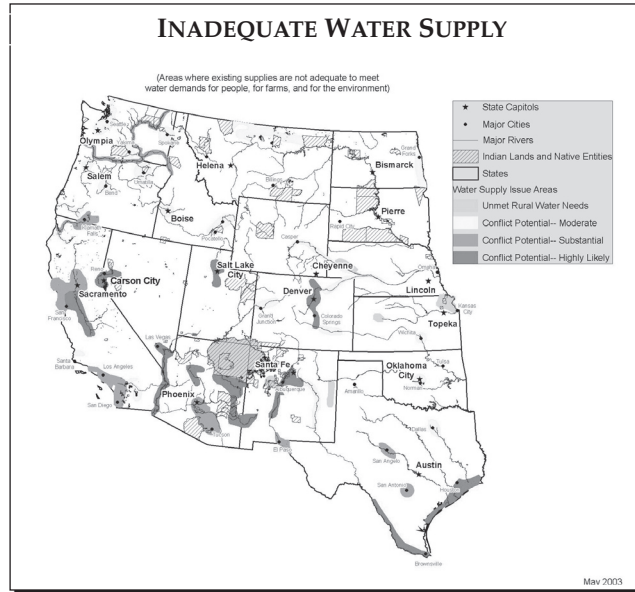
Improved Technology – Water 2025 funding in the BOR budget will facilitate research to reduce the high cost of purifying wastewater, salty water, and other impaired water to increase its utility. Less expensive methods of water desalination could provide an alternative to supply water to rural communities and Indian reservations. The \$1.0 million for Water 2025 included in the USGS budget also focuses on improved technology. It will fund ground water availability assessments; improved methods for characterizing aquifers; and the development of tools and techniques for preserving biological resources while meeting water supply needs.

Removing Institutional Barriers and Increasing Interagency Cooperation – As part of Water 2025, Interior will look for opportunities to use Federal facilities with excess capacity to store water during certain times of the year, potentially satisfying unmet water demands elsewhere. Interior will also cooperate with other Federal agencies to focus dollars effectively on areas with critical water shortages.

Interior will also cooperate with other Federal agencies to focus dollars effectively on areas with critical water shortages.

With the Water 2025 initiative, BOR will leverage Federal resources by awarding grants that will require 50:50 cost sharing. Grantees will be selected through a competitive process.

Projects selected will provide incentives to irrigation and water districts willing to use their money and resources to create markets and make



more efficient use of existing water supplies. The effort includes a research grant component for improvements in desalination. Each grant will include performance measures to track the successful implementation of Water 2025. The selection

BENEFITS OF CANAL LINING

Most irrigation water delivery canals in the West are unlined. In some instances, unlined canals can lose up to 50 percent of their irrigation water through seepage.

For every dollar spent on canal modernization (such as rehabilitating canal gates), an expected return of \$3 to \$5 in conserved water can be achieved.

For every dollar spent on maintaining an existing canal lining, a return of up to \$10 in conserved water can be realized.

criteria will consider the size of the non-Federal cost share (including in-kind work), total water savings, use of water markets or water banks, and other performance-based commitments.

The Department's \$21.0 million investment in Water 2025 will facilitate a more forward-looking focus on areas of the West facing water supply constraints. It will help stretch water supplies to satisfy the demands of growing populations; protect environmental needs; strengthen regional, tribal and

local economies; minimize water crises in critical watersheds by improving the environment and addressing the effects of drought on important economies; and provide a practical approach to water management for the next century.

INTEGRATED MANAGEMENT APPROACHES TO CONSERVATION

Water Management and the Endangered Species Act—The 2005 BOR budget applies both traditional and innovative methods to resolve water management and delivery issues involving endangered species in several western states. The Klamath and Columbia basin projects, Savage Rapids dam removal, along with the Columbia/Snake Rivers

salmon recovery and the Endangered Species Act recovery implementation programs, are funded at \$72.2 million, which is \$15.7 million above 2004 enacted levels. These increases, together with the Water 2025 initiative, will improve water supplies through effective and more efficient water management.

A \$1.9 million increase for the Klamath project will enable BOR to meet authorized project purposes and comply with the Endangered Species Act. Funding for the project in 2005 will support a water bank, development of a collaborative partnership, and implementation of measures under the water supply initiative to increase the quantity of water available. A more detailed description of the Klamath basin initiative is provided in the Resource Protection section.

A \$6.9 million increase for the Columbia basin project will improve water and energy management and remove barriers to fish passage in Icicle Creek. A \$2.0 million increase will begin the process to

remove the Savage Rapids dam, which is a barrier to fish passage on the Rogue River in Oregon. This funding initiates the estimated two-year process for National Environmental Policy Act compliance and final design work.

An increase of \$4.0 million for the Columbia/Snake River salmon recovery project will bring project funding to \$17.5

million. The increase funds implementation of reasonable and prudent alternatives contained in biological opinions issued by the National Marine Fisheries Service and Fish and Wildlife Service. The action items include extensive habitat, hatchery, and harvest initiatives and significantly increased research, monitoring, and evaluation activities, as well as operational changes to the water and power management of the Columbia River basin.



TIMBER MANAGEMENT

BLM Forest Management – The 2005 Bureau of Land Management budget request increases funding for improving forest health as well as meeting

timber production goals. It builds on and complements steps taken in 2004 to revitalize and increase capacity in BLM's forest management programs.

For the public domain forestry management program, the request includes a \$1.0 million increase to build BLM expertise and capability to utilize its relatively new stewardship contracting authority, a promising tool for thinning and conducting other health treatments on forest and rangelands. The increase will support restoration of 1,500 acres. In addition to improving forest health, the projects will expand job opportunities in local

communities and help stimulate the development of markets for small diameter wood byproducts and the nascent biomass industry. In response to a settlement agreement in the lawsuit *American Forest Resource Council v. Clarke*, BLM will fully fund the allowable sale quantity of timber under the Northwest Forest Plan. To support the sale of the allowable quantity, BLM must revise six resource management plans in western Oregon. The 2005 budget request for the Oregon and California resource management planning program includes \$7.0 million to revise these plans.

In 2005, BLM's Jobs-in-the-Woods program will emphasize forest health improvements with a focus on restoration activities within the late successional reserves. Within the Jobs-in-the-Woods budget, \$3.7 million will be used to prepare and contract thinning in younger stands to protect and restore late successional habitat. Together with an additional \$788,000 in new funding in the O&C forest management program, BLM will satisfy the terms of the *American Forest Resource Council* settlement agreement. The Jobs-in-the-Woods program will also support forest health treatments in 2005 with \$500,000 targeted to pre-commercial thinning in late successional reserves.



Tribal Forestry Program – The 2005 President's budget request for the Bureau of Indian Affairs includes a \$1.0 million increase to improve the management of Indian forests, which cover 17.9 million acres located on 275 reservations in 26 states. The request will increase the number of

reservations covered by forest management plans. Resource use plans optimize benefits and address use conflicts on reservations. Increasing the number of plans improves the utilization of trust resources and helps Tribes benefit from the full potential of their lands. Currently, only 44 percent of forested lands on reservations are covered by forest management plans.

ENERGY AND MINERALS

The quality of American life depends on stable and readily available supplies of 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 feeds our Nation and the world.

Lands and waters managed by Interior produce about 30 percent of our Nation's energy supply. Approximately one-third of our natural gas, coal, and oil, one-half of geothermal energy, 17 percent of hydropower, and 20 percent of wind power are produced in areas managed by the Department.

The Department is helping to implement the President's National Energy Plan, a part of which focuses on a long-term strategy for producing traditional and renewable sources of energy on Federal lands while maintaining environmental protections and involving all interested persons in open decisionmaking processes.

Promoting Domestic Energy Production – The BLM 2005 budget request will help meet the Na-

Chief Tom O'Keefe, of the California Department of Forestry, is among those who have seen the consequences of misguided forest policy. He put it this way, "A lot of people have been well-intentioned. They saved trees, but they lost the forest." We want to save the forests.

President George W. Bush, December 3, 2003

The President's National Energy Policy recognizes that conservation and efficiency, diversification of our energy supply, and increased production of renewable and nonrenewable resources are critical to our energy future.

Assistant Secretary Rebecca Watson, June 24, 2003

tion's energy needs by focusing on timely access to oil and natural gas resources on public lands, consistent with publicly developed land-use plans. As discussed in the Resource Protection chapter, the BLM budget also includes increased funding for monitoring of on-the-ground implementation of resource decisions.

The budget maintains BLM oil, gas, and coal programs at the 2004 enacted level through a combination of appropriated funds and \$4.0 million in additional user fees generated through a proposed rulemaking to bring fees closer to costs for certain services. This funding level preserves significant increases appropriated over the last few years that enable BLM to continue reducing permitting backlogs and expediting access to energy resources.

An \$800,000 increase in the BLM land and realty management program will enhance permitting of renewable energy development and processing of rights-of-ways for both renewable and non-renewable energy resources.

Gas Hydrates—In response to conversion of electric power plants from coal to cleaner burning natural gas, the demand for natural gas is expected to increase significantly in the next 10 to 15 years. Gas hydrates present promise as an additional domestic source of natural gas to meet this demand. Of all gas hydrates formed in nature, methane hydrate is the most abundant, with estimates of global resources ranging from 100,000 to 300,000 trillion cubic feet. The volume of carbon contained in methane hydrates worldwide is estimated by USGS to be twice the amount contained in all other fossil fuels on Earth, including coal.

The Minerals Management Service is the only agency with specific responsibility for the environmentally responsible extraction of gas hydrates. The

2005 budget proposes to build upon the \$300,000 program in 2004 with a \$600,000 methane hydrates increase for MMS. The agency will use \$200,000 to begin a tract-specific hydrate assessment to determine fair market value once production is practical. The MMS will spend \$400,000 to complete phase one of a two-year study to examine the potential environmental impacts of the recovery of this energy source, a necessity before the recovery of gas hydrates becomes economically viable.



OCS Connect – The MMS 2005 budget request includes an increase of \$4.3 million for the OCS Connect e-government initiative. The request represents the third year of a six-year project that will dramatically reform and streamline offshore business operations by improving connectivity between the government and the public; create a citizen-centered web presence; and build an e-government infrastructure across agencies. Total funding for the initiative in 2005 will be \$16.0 million.

This initiative enhances management practices by moving offshore business processes into a web-based online environment, reducing information collection costs for the regulated industry, increasing the public's access to offshore government business processes, and accelerating the movement of employees to areas where there are existing unfilled resource needs. All of these changes provide greater flexibility and efficiencies to accommodate a changing workload.

Increased resources will allow more of the private sector's required processes to be completed on-line with a lower burden of information collection. This effort will also allow the MMS to analyze and act on industry requests more quickly. The long-term result is that offshore oil and gas resources will be available more quickly.

With methane hydrates, we could have hundreds of years of natural gas supply. According to the Department of Energy, if only one percent of the methane hydrate resources could be made technically and economically recoverable, the U.S. could more than double its gas resource base. It appears the ideal locations for gas hydrates are the oceans and certainly Alaska.

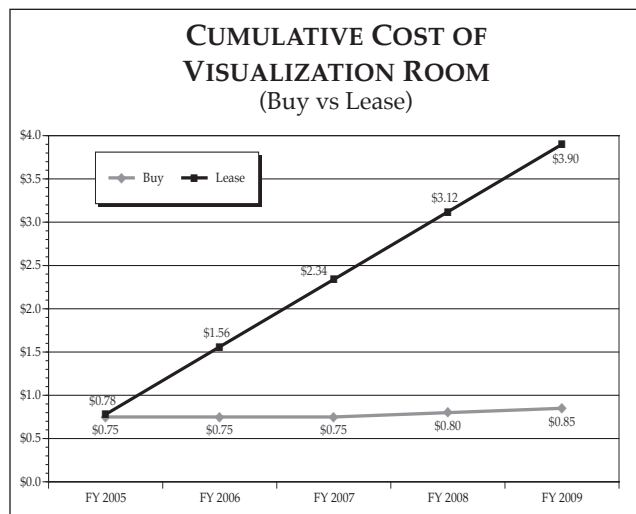
Secretary Gale A. Norton, July 22, 2003

Gulf of Mexico Region Interpretive Technologies

– To ensure that MMS receives optimal value on lease permits, it must keep pace with the private sector, which has embraced and developed new technologies to meet the increasing challenge of competition in exploring for petroleum resources. Geological interpretive tools allow MMS to maintain technological parity with industry to ensure accurate evaluations. The improved quality of interpretation allows for better evaluations and estimates by reducing uncertainties, thus optimizing value achieved through leasing activities.

additional geological interpretive tools training, workstation-ready well logs, and seismic data management. All of these technologies have been routinely used by the private sector since 1995 for making fair market determinations on lease sales. The MMS considered leasing the equipment but a cost-benefit analysis showed leasing to be far more costly in the long term. The benefits associated with updating MMS's interpretive capability will ensure a full return on the investment. One of the benefits will be realized through lease sale rejection decisions. The U.S. Treasury averages a net gain

The 2005 budget includes \$1.9 million for a 3-D visualization room,



of \$1.8 million for tracts rejected in lease sales that are subsequently leased successfully.