



New Mexico Energy, Minerals and Natural Resources Department



ANNUAL REPORT



2012

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Photo by: Lauren Aguilar



Photo by: Danny Norlander

New Mexico Energy, Minerals and Natural Resources Department



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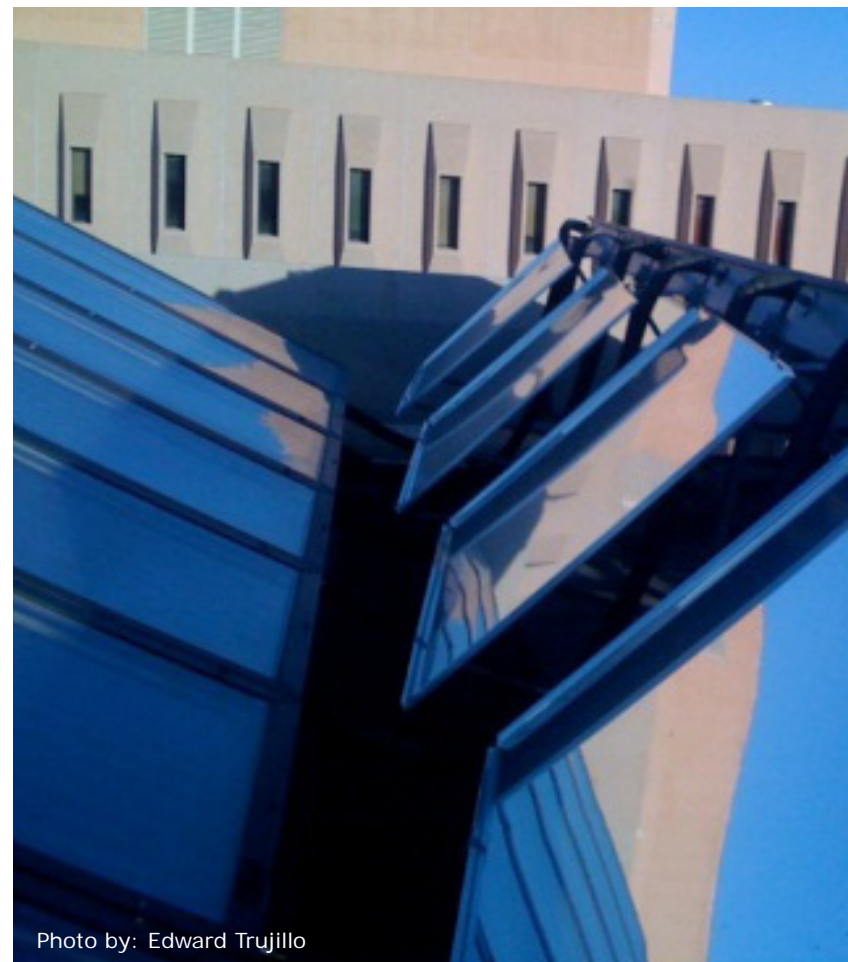


Photo by: Edward Trujillo



# Energy, Minerals and Natural Resources Department

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**V**ision: A New Mexico where individuals, agencies and organizations work collaboratively on energy and natural resource management to ensure a sustainable environmental and economic future.

**M**ission: To position New Mexico as a national leader in the energy and natural resources areas for which the department is responsible.

**Natural**

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Photo by: Daniela Roth

# Resources

# John Bemis

## Cabinet Secretary



### Energy, Minerals and Natural Resources Department

#### A Message from Cabinet Secretary John Bemis

One cannot begin to describe the dedicated efforts that the five hundred employees at the Energy, Minerals and Natural Resources Department (EMNRD) perform every day for our state. New Mexico has magnificent resources and the level of care by which they are managed by EMNRD employees is extraordinary.

We invite every citizen to get involved in what we do: whether you visit one or all of our thirty five state parks, jewels located throughout the state that are expertly run by the State Parks Division; say thanks to the wildland firefighters in the Forestry Division who hold the line every wildfire season protecting lives, homes and property; stop by the Energy Conservation Management Division to have your alternative energy system certified; participate in hearings at the Oil Conservation Division where they play a critical role in providing the energy needs for our state and the nation; or use the essential mining products overseen by the Mining and Minerals Division that make everyday life easier. All of these divisions rely on the help that the Program Leadership and Support Division provide.

We have recently updated our website and invite you to visit it at [www.emnrd.state.nm.us/](http://www.emnrd.state.nm.us/).

It is our collective pride as a department to present this annual report of our activities. We play a vital role in the lives of every New Mexican and we hope the information contained in this report will help you understand our dedication and commitment to protecting New Mexico's resources.



Governor Susana Martinez

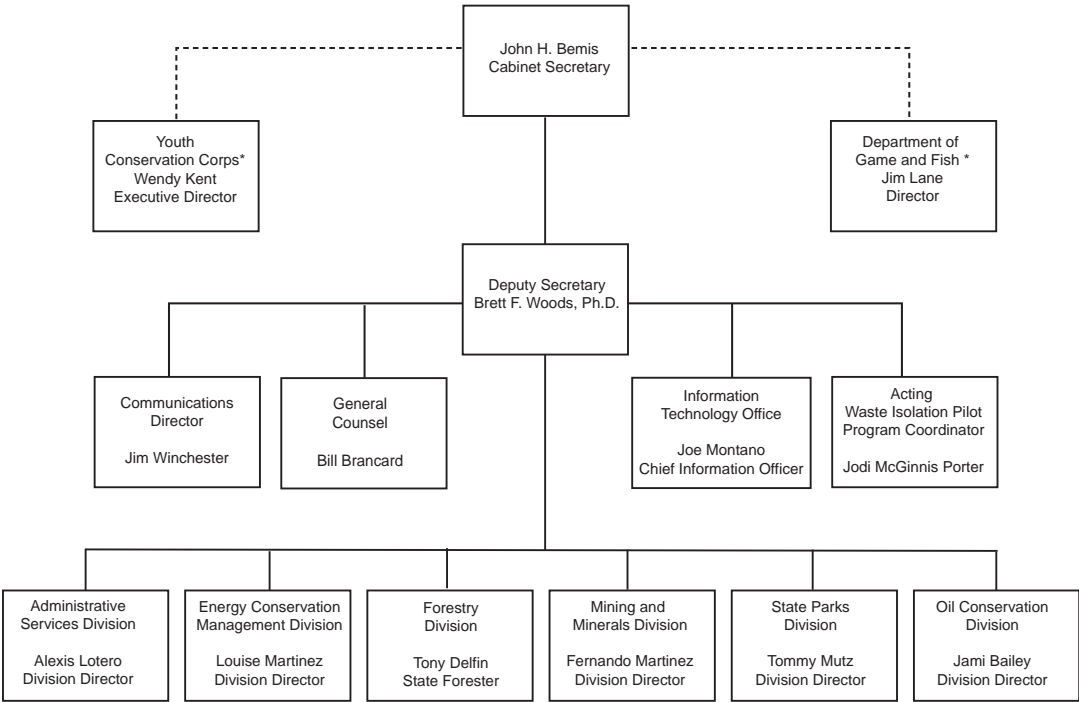
# Organization

## Chart



Photo by: Lauren Aguilar

### Energy, Minerals and Natural Resources Department



\* Administratively Attached. No direct budget support from EMNRD



## **PROGRAM LEADERSHIP AND SUPPORT**

Program Leadership and Support provides leadership, sets policy and assists the divisions in achieving their goals. Program Support consists of the Office of the Secretary (OFS), Administrative Services Division, and the Information Technology Office, which provide administrative support functions—legal, human resources, fiscal and information technology. OFS also administers the Waste Isolation Pilot Plant Transportation Safety Program.

### **Office of the Secretary**

OFS provides leadership, strategic planning and policy direction, and establishes procedures for the department and program performance. OFS oversees all divisions within the department; it also houses the Office of Information Technology, Public Information, Office of the General Counsel, and the Waste Isolation Pilot Plant Transportation Safety Program.

OFS serves as the focal point for the department's communications with the Governor, legislators, and other state agencies (including the Department of Game and Fish and the Youth Conservation Corps which are administratively attached to EMNRD). It establishes department policies and provides legal, programmatic, and public outreach direction to the divisions.

### **Administrative Services**

The Administrative Services Division (ASD) oversees the agency's finances and property. Specific functions include budget, procurement, accounting, payments, federal grant reporting, and property and material management. Among ASD's duties are the processing of payment vouchers, travel documents, purchase orders, and deposits, for the department's daily operations. ASD also coordinates the annual financial audit and prepares the annual financial statement and related footnotes for governmental funds.

### **Office of General Counsel**

The Office of General Counsel manages all legal affairs for the Energy, Minerals and Natural Resources Department. This includes representation of the department in administrative and judicial proceedings as well as drafting and analysis of proposed legislation and rules, assistance with human resources issues, and review of contract documents.

### **Human Resources**

The Human Resources Bureau (HRB), within ASD, provides services and information for applicants, employees and employers throughout the state. HRB verifies that the department follows all rules, regulations, and laws governing employment; guides managers and supervisors through a variety of employment issues; and helps employees to understand the rules, and laws. HRB helps employees with position classification, compensation and discipline. HRB also provides guidance on medical leave and workers' compensation.



## Information and Technology Office

The Information and Technology Office is the central information technology and information systems provider for the department's 509 employees and 54 remote sites. It employs 18 technical positions that are responsible for maintaining and supporting EMNRD's computer systems, network-telecommunications infrastructure, and application development needs, using the latest technology for Windows and Web applications on the Intranet and Internet.

## Public Information Office

The Public Information Office manages the dissemination of information to the general public, media organizations and other inquiring entities. It coordinates and synthesizes information from EMNRD's divisions to write speeches, news releases, and articles. It serves as project manager for department-wide publications such as the annual report, strategic plan, and other reports as needed. It coordinates and oversees EMNRD's internal communications, including Internet and Intranet, newsletters, memos, award ceremonies, and other department-wide events. The office works closely with all divisions housed within EMNRD providing guidance on marketing and public relations issues.

## New Mexico Radioactive Waste Consultation Task Force - Waste Isolation Pilot Plant Transportation Safety Program

Under EMNRD's leadership, and through the New Mexico Radioactive Waste Consultation Task Force, six other state agencies (Department of Public Safety, Department of Homeland Security and Emergency Management, Department of Health, Environment Department, Department of Transportation, and State Fire Marshal's Office) collaborate on the Waste Isolation Pilot Plant (WIPP) Transportation Safety Program. The program ensures the safe and uneventful transportation of radioactive waste in the state of New Mexico. The program includes the setting and updating of policies and operating procedures; training and equipping emergency responders along all of New Mexico's WIPP shipping routes; keeping the public informed on radioactive materials issues; monitoring and maintaining highway safety; and inspecting all WIPP shipments at their points of origin or at the New Mexico ports of entry.



# **Energy Conservation and Management Division**



## Energy Conservation and Management Division

**MISSION:** The Energy Conservation and Management Division (ECMD) develops and implements effective clean energy programs—renewable energy, energy efficiency and conservation, clean fuels and efficient transportation—to promote environmental and economic sustainability for New Mexico and its citizens.

**PROGRAMS:** ECMD oversees and implements the state's programs in clean energy: the Renewable Energy Program, the Energy Efficiency in Buildings Program, and the Clean Fuels and Efficient Transportation Program. These programs are implemented through a combination of tax credit certifications and clean energy projects. Through these efforts, ECMD encourages public and private organizations to use energy more efficiently, more economically, and with less dependence on foreign sources. In addition, New Mexico benefits from economic development and the jobs created.

For additional information on ECMD programs, see [www.CleanEnergyNM.org](http://www.CleanEnergyNM.org).

## Accomplishments

**TAX CREDIT CERTIFICATIONS:** ECMD manages several certification programs for renewable energy systems and energy efficiency in buildings, which yield benefits to participating New Mexico citizens and corporations in the form of tax credits. Combined with other state, federal, and utility incentives, clean energy is made more affordable and creates economic development opportunities for New Mexico businesses.

The Renewable Energy Production Tax Credit (PTC) - supports utility-scale wind, biomass, and solar projects. There are now 750 megawatts (MW) of wind power generation and 152 MW of solar power generation operating in New Mexico. In the last 12 months through October 2012, ten applications for solar power plants and four for wind farms were received, reviewed, and processed by ECMD. Nine certifications for solar generators and one for a wind farm were issued. Although the allocation of the PTC has reached its ceiling of available tax credits, retirement of tax credits issued to older certified generators will begin in 2013, making those funds available for newer approved projects.



The Solar Market Development Tax Credit - helps to make residential-scale solar systems more affordable. In the last 12 months, solar development occurred in 23 of 33 New Mexico counties. A total of 1,168 system certification applications were received, reviewed, and processed during this latest annual period (1,090 photovoltaic, 78 thermal). This represents 5.2 MW of renewable electricity and 2,400 square feet of solar thermal collector area..

Many schools and state/local governments used ARRA funding to implement commercial-scale solar photovoltaics to reduce electricity costs. Shown here: Las Cruces Convention Center.



Photo by: Ken Hughes

The Sustainable Building Tax Credit - incentivizes energy-efficient and green design techniques in residential and commercial buildings. In the past 12 months, ECMD received, reviewed, and processed 1,036 applications including two commercial buildings of 109,000 square feet; 294 multifamily housing units of 267,249 square feet; 79 manufactured homes of 128,257 square feet; and 665 single-family homes of 1,303,105 square feet. The construction of these new homes and commercial buildings, meeting ENERGY STAR, LEED, or Build Green New Mexico standards, have provided jobs in 30 counties.

The Geothermal Ground-Coupled Heat Pump Tax Credit - has been in effect since 2010, helping to make this system type more affordable for homeowners and commercial building owners. ECMD received, reviewed, and processed a total of 28 applications in the past 12 months. This activity took place primarily in Doña Ana County.

ECMD manages all of the above tax credit certification programs according to the respective underlying statutes and administrative rules. An additional tax credit certification program became available in 2012: the Agricultural Biomass Tax Credit. This tax credit can be used to support waste-to-energy programs for dairy farms.

**CLEAN ENERGY PROJECTS:** The American Recovery and Reinvestment Act (ARRA) of 2009 yielded many benefits to the state in clean energy through U.S. Department of Energy programs managed by ECMD: the State Energy Program, Energy Efficiency and Conservation Block Grant, State Energy Efficient Appliance Rebate Program, and Energy Assurance Planning Program. The many clean energy projects initiated by ECMD are assisting our schools, universities, state agencies, tribal organizations, cities, and counties to be energy efficient and to reduce costs. ARRA dollars were used to eliminate barriers to implementing energy efficiency, renewable energy, and alternative fuels; to increase demand for services that create and retain green jobs; to reduce energy use and utility costs; and to increase energy efficiency and renewable energy production to improve the reliability of electricity, fuel supply, and delivery of energy services.

ECMD managed over 150 clean energy projects in 2012 in various phases of implementation and monitoring, with most projects now completed. The ongoing assessment of these building upgrade projects shows that 16 percent energy savings is being achieved. Over \$2,000,000 in annual utility bill savings has been established in these facilities which are owned and operated by taxpayer-funded schools, higher educational institutions, state agencies, tribal organizations, cities, and counties. Additional cost reduction in government operations is anticipated, as more clean energy projects are completed, monitored, and evaluated.



## Data and Statistics

**ENERGY CONSUMPTION:** Total New Mexico energy consumption was 802.1 trillion BTU (tBTU) in 2010 (latest available data). Most of the energy consumed in the state came from coal (267.5 tBTU, 33 percent), followed by petroleum (248.5 tBTU, 31 percent) and natural gas (246.1 tBTU, 31 percent) resources. In 2010, renewables contributed 5 percent or 40 tBTU. Although this is relatively small, wind and solar have seen significant growth, increasing by 16 percent in the past year. Net energy consumption for in-state needs was actually 680.1 tBTU after subtracting the energy used for exported electricity, which was 121.9 tBTU in 2010 (Figure 1). Also being a major exporter of oil and natural gas, New Mexico produced a total of 2,258 tBTU of energy in 2010, which is 3.3 times the amount of statewide consumption.

Of New Mexico's net energy consumption in 2010, the industrial sector consumed the most energy at 34 percent (233 tBTU), followed by the transportation sector at 29 percent (199 tBTU), the commercial sector at 19 percent (126 tBTU) and the residential sector at 18 percent (123 tBTU). New Mexico's residential sector consumed less energy out of the total consumption compared to the nation, the commercial sector consumed about the same energy as national percentages and the transportation and industrial sectors consumed more (Figure 2).

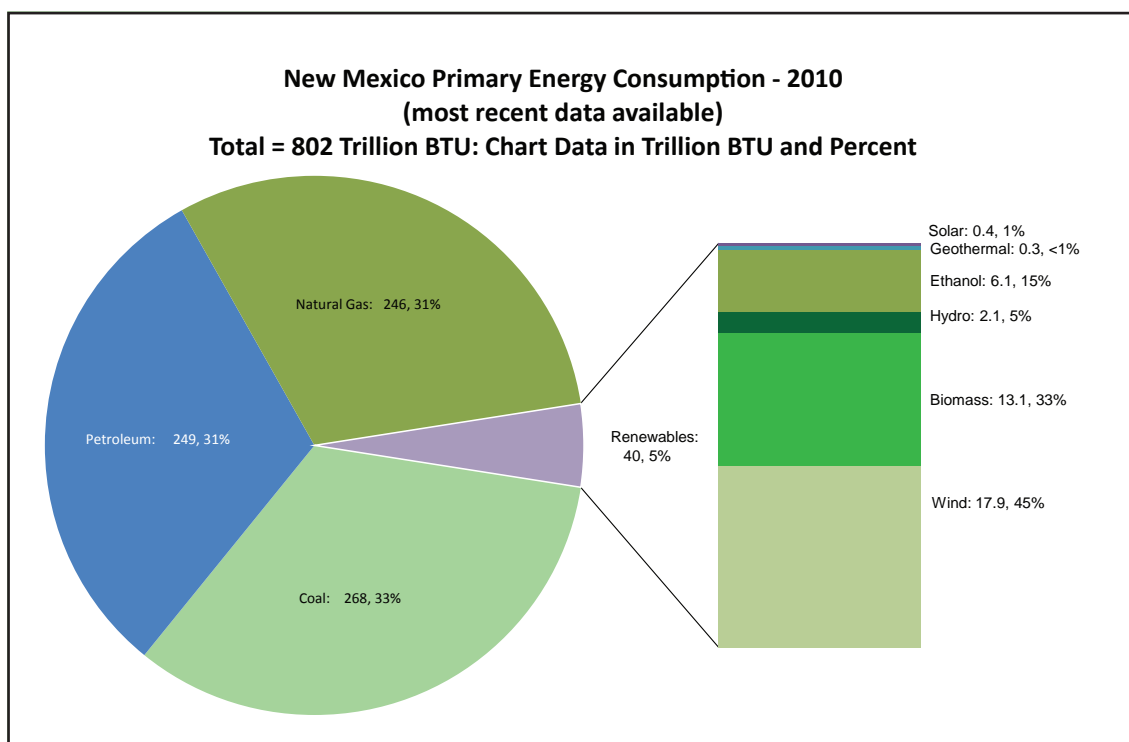


Figure 1



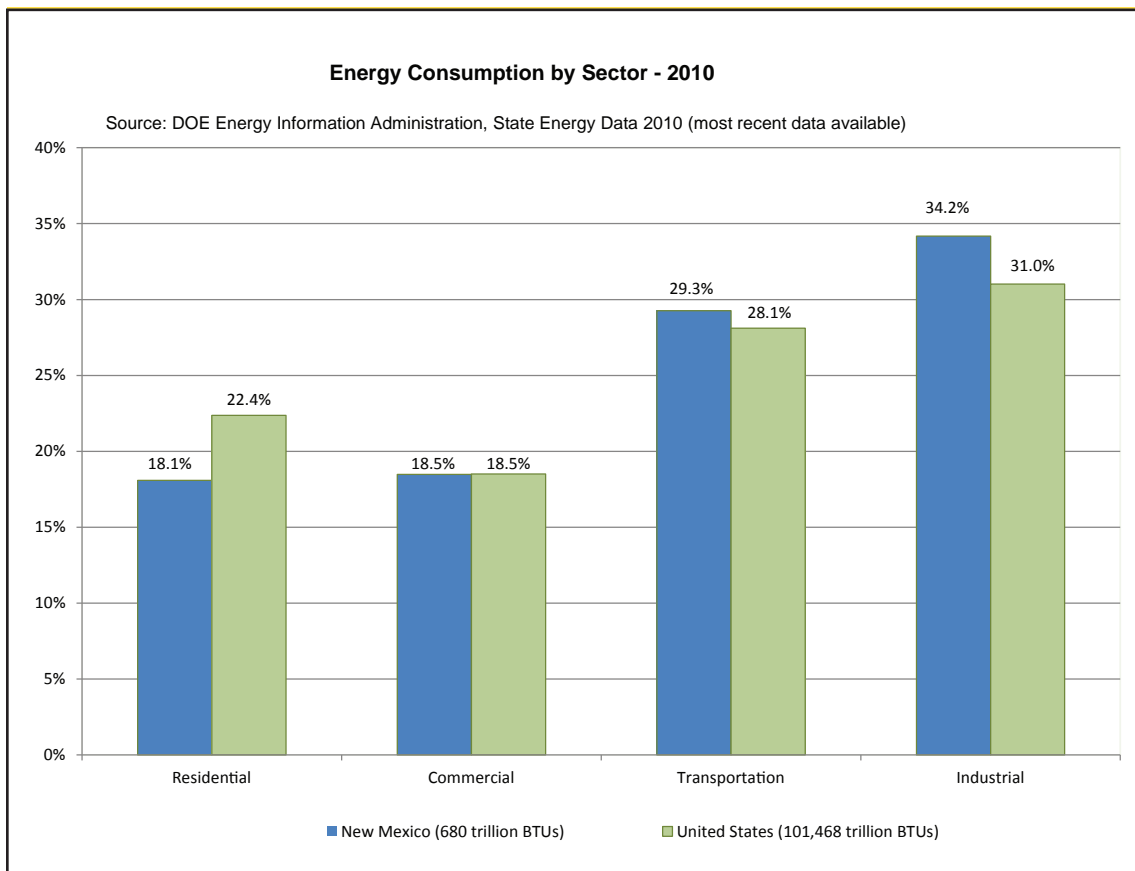


Figure 2

**RENEWABLE ENERGY CONSUMPTION:** Total New Mexico renewable energy consumption was 40 tBTU in 2010. This has increased steadily from 8.2 tBTU in 2002. Of the current renewable energy consumption, wind accounted for 45 percent (17.9 tBTU), biomass 33 percent (13.1 tBTU), ethanol 15 percent (6.1 tBTU), hydroelectric 5 percent (2.1 tBTU), solar 1 percent (0.4 tBTU), and geothermal less than 1 percent (0.3 tBTU). Wind energy development has been the major source for growth in renewable energy consumption in the state since 2003. Nationally, wind is the third largest renewable resource after biomass and hydropower. Renewable energy (8,056 tBTU) as a whole produced nearly as much as nuclear electric power plants (8,434 tBTU) in 2010.

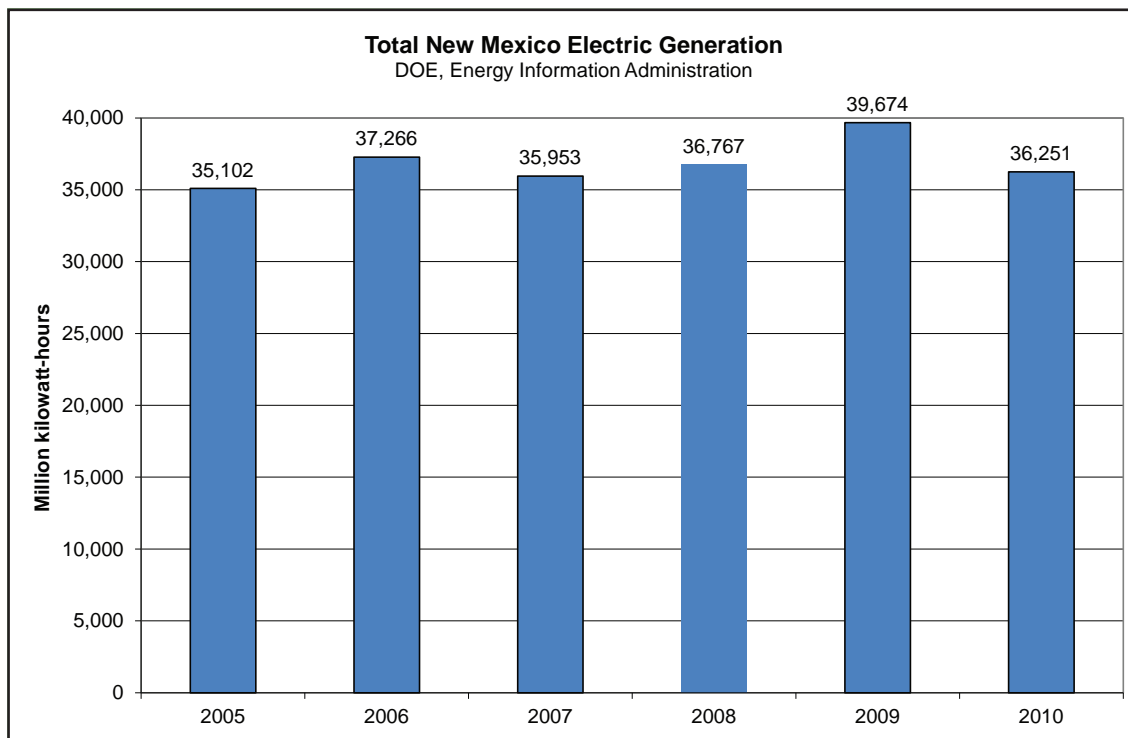


Figure 3

**ELECTRICITY:** Electricity supply affects industrial growth in both the energy and non-energy sectors of the state's economy. Electric utilities consume substantial amounts of natural gas and coal resources extracted in the state, generating considerable revenues in the process. New Mexico's power plants have a total capacity of more than 6,000 MW, about 60 percent of which is located at two coal-fired plants near Farmington: the Four Corners and San Juan Generating stations.

Approximately one-third of the electricity generated in New Mexico is consumed in other states. Total electricity generation for the past several years is shown in (Figure 3) on the next page. Electricity generated in 2010 decreased by 8.6 percent over 2009 to 36,252 million kilowatt-hours (kWh). In 2010, electricity generation in New Mexico was 70.7 percent from coal, 23.5 percent from natural gas, 0.6 percent from hydropower, and 5.1 percent from other renewables, e.g., wind and solar.

Investor-owned utilities in New Mexico serve approximately 71 percent of the state's customers (Figure 4). The 20 rural electric cooperatives serve about 21 percent of the customers, although they service about 85 percent of the state's land area. Tri-State Generation and Transmission Association is a wholesale supplier of 13 member cooperatives. There are seven municipal electric utilities serving the remaining 8 percent of the state's electricity customers.

The number of New Mexico customers buying electricity and the price paid per kWh has been on an increasing trend for many years, but New Mexico's prices still remain low compared to the rest of the U.S. The price paid in New Mexico increased 15 percent in the residential sector, 10 percent in the commercial sector, and 7 percent in the industrial sector over the six-year period of 2005 through 2010. As of 2010, New Mexico's prices compared to average U.S. prices were 9 percent lower in the residential sector, 16 percent lower in the commercial sector, and 11 percent lower in the industrial sector.

### Number of Customers per Utility - 2010

(data from USDOE, Energy Information Administration)

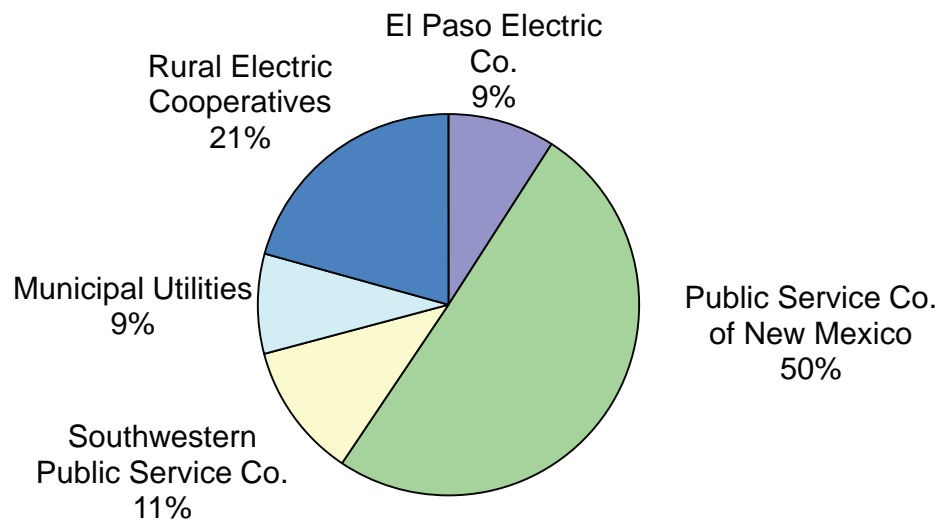


Figure 4

**CARBON DIOXIDE EMISSIONS:** Carbon dioxide emissions from the consumption of energy sources amounted to 59 million metric tons in 2009. Emissions from coal were 50 percent (29 million metric tons), petroleum 28 percent (16 million metric tons), and natural gas 22 percent (13 million metric tons). Almost all of the coal consumed generated electricity.

**ENERGY EXPENDITURES:** New Mexico's 2010 primary source energy expenditures were \$6.5 billion. Most expenditures were for petroleum at \$5 billion (77 percent). Natural gas expenditures were \$898 million (14 percent), coal \$550 million (8 percent), and renewable energy \$56 million (1 percent, all biomass). There were no fuel expenditures for the renewable energy sources of wind, solar, hydroelectric, and geothermal. With these energy sources needing no processing, there are no fuel costs incurred in providing energy to end users. In 2010 New Mexicans paid \$250 million more for petroleum than in 2009.





# Forestry Division



## Forestry Division

**MISSION:** Forestry Division (Forestry) retains lead responsibility for wildland fire management on non-federal and non-municipal lands, maintaining fire suppression capacities, and emphasizing firefighter and public safety. Forestry promotes healthy, sustainable forests in New Mexico for the benefit of current and future generations.

Forestry is responsible for fire suppression on 43 million acres of non-municipal, non-federal, and non-tribal land across the state and assists New Mexico communities by evaluating those most at risk to wildfire and insect infestation by developing appropriate management programs and implementing mitigation projects.

Forestry staff provides technical assistance to landowners for developing sustainable forests that enhance quality of life by providing tree care training, distributing low-cost seedlings, developing resource management plans, and delivering forest health project funding.

**PROGRAMS:** Forestry's priority is to assist in the continued development of the forest products industry (e.g., forest harvesting, landscaping, construction, woody biomass) that uses land treatment byproducts. In addition, Forestry oversees an inmate work camp which utilizes trained minimum security inmate crews for work on conservation projects and wildland fire suppression.

Forestry regulates the harvest of commercial forest species on private forestland and conducts habitat protection projects by studying plant species abundance, defining ecosystems, acquiring easements, and purchasing key properties.

Landowners and communities receive assistance with fire prevention and preparedness planning, forest management and improvement, urban and community forest development and management, conservation easement and tax incentive programs, and numerous educational presentations on these topics. Forestry works to implement projects and programs with a goal of improving overall forest and watershed health statewide.

## Accomplishments

**OVERVIEW:** In the midst of another very active year for wildland fire, Forestry was able to help facilitate the treatment of thousands of acres of state and private land during the calendar year. These treatments are a vital tool in establishing and maintaining not only good forest and watershed health, but wildfire protection for homes and communities as well.

Countless factors play roles in New Mexico's forest health. Although some of these factors are controllable by land managers, many are not. The largest influence over the past year was the extension of the drought that the state has experienced for the last few years.

This, in conjunction with a continued increase of insect populations from previous years, has resulted in a greater area of land impacted by detrimental forest pests. Local, state, federal, and tribal lands across the state are affected. Aerial surveys conducted during the summer months indicate that more than 556,600 acres of forests and woodlands were affected by defoliators like the western tent caterpillar and western spruce budworm, an increase of about 30,000 acres from 2011. The same surveys showed 175,500 acres with some degree of tree mortality, an increase of roughly 5,500 acres over the previous year. The Sacramento Mountains continued to be a very active area for insect pest activity this year, as is expected with the current buildup of bark beetle populations. Land managers lack an easy or quick way to deal with the continued decline in forest health; at this point, substantial moisture is the greatest need.

Landowners are working toward increasing the resiliency of their properties through thinning and removing infested and susceptible trees to reduce the spread of damaging insects, mistletoe, and other forest health issues. Forestry works closely with private and state land managers to ensure compliance with outlined best management practices.

The Forest Health Program goals continue to be incorporated into numerous areas of the division's work. Many landowners and managers receive various forms of technical assistance from Forestry staff including site visits, management, and project plan review and classes on forest health. The division's Forest Health Specialist conducted aerial surveys of more than 5.1 million acres of land, and tens of thousands of acres were surveyed from the ground. These surveys look for all manners of forest health issues but focus primarily on insect and disease issues.

Thinned area post Little Bear Fire – This area of the forest had been treated by mechanical thinning before the Little Bear Fire. Because of the treatment, the fire primarily moved along the forest floor rather than tree tops, which spared many of the trees and allowed for quick regeneration of native grasses following the fire.

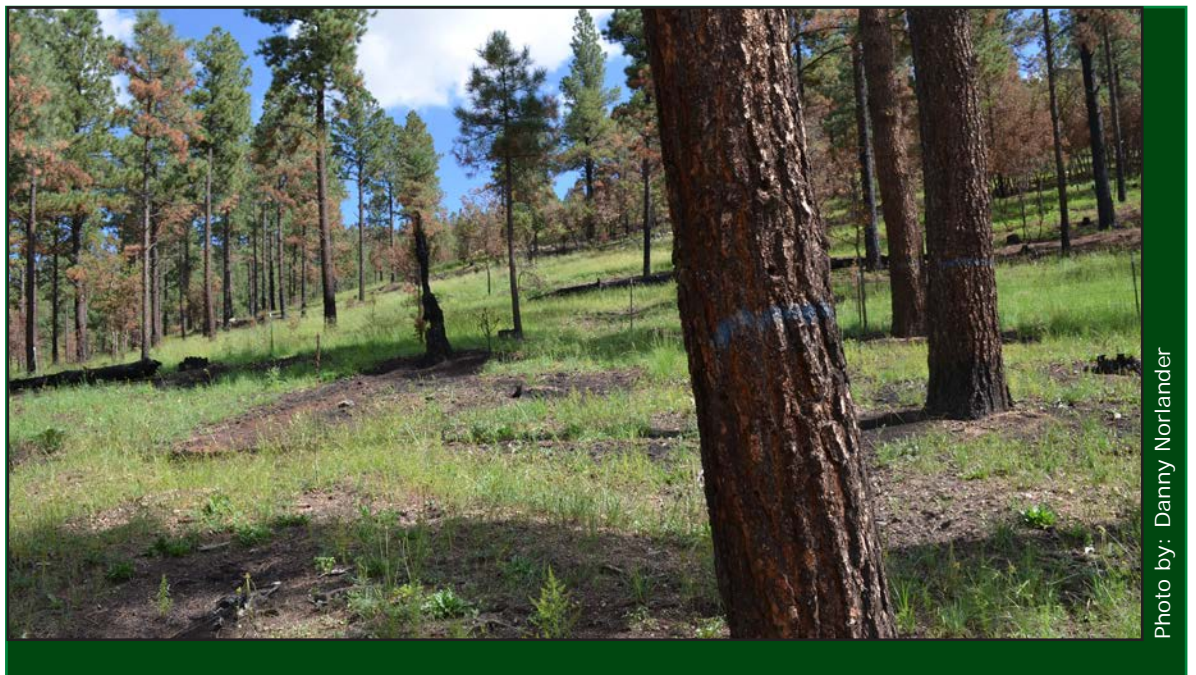


Photo by: Danny Norlander

**FOREST INVENTORY ANALYSIS:** A concerted effort over the past three years to collect inventory data resulted in answers to questions about such issues as wood supply, carbon storage, forest conditions prone to fire and insect outbreaks, and many other natural resource concerns. The USDA Forest Service's National Forest Inventory and Analysis program serves as the nation's census of forests and woodlands. However, data collection in New Mexico was stalled to the point that, in 2009, the state requested and received an American Recovery and Reinvestment Act grant to hire contractors to fill the gap. Working in collaboration, Forest Service crews, contract foresters, as well as tribal employees, gathered data for over 5,000 plots in New Mexico on all jurisdictions – federal, state, tribal, and private. The information represents the most comprehensive data set that not only answers today's pressing questions about forest and woodland conditions, but establishes an important baseline for tracking the impacts of drought, wildfires, and changing climates in the future.

**FOREST AND WATERSHED HEALTH:** Forestry's district offices, Inmate Work Camp Program and Forest and Watershed Health Office continued addressing issues that traditionally have been a barrier to proper treatment and land management in New Mexico through the implementation of the New Mexico Forest and Watershed Health Plan and the Statewide Natural Resource Assessment and Strategy.

In 2012, the Forest and Watershed Health Office put increased emphasis on strengthening relationships with other state and federal agencies and non-governmental partners. The office spearheaded a new Financial Assistance Agreement with the BLM and secured a two-year extension of EMNRD's Cooperative Agreement with the Natural Resources Conservation Service. Both agreements make it easier for the state and federal agencies to collaboratively plan, fund, and implement on-the-ground projects that cross jurisdictional boundaries. Working together to improve forests and watersheds across a larger landscape benefits both private landowners and the public.

The Forest and Watershed Health Coordinator serves on regional and national committees that track and provide input into policies that affect how our natural resources are managed. Office staff oversaw restoration projects that treated more than 1,100 acres of forest and bosque land. They also contributed technical expertise to many boards and task teams cooperating on fire and watershed issues here in New Mexico and across the Southwest.

**URBAN AND COMMUNITY FORESTRY PROGRAM:** Forestry's Urban and Community Forestry Program works to empower New Mexico communities to recognize and maximize the benefits from their community forests through technical assistance and support with identifying funding sources.

The Urban and Community Forestry Program saw an overall increase across the state in the number of volunteers, citizens, and communities managing or developing programs to plant, protect, and maintain their urban and community trees and forests. In 2012, four communities received and implemented Community Forestry Assistance Grants to develop and strengthen urban forestry programs. Six applications were received and are being reviewed for 2013. Five communities received New Mexico Forest Re-Leaf tree planting grants. Twelve communities were recognized for the national Tree City USA program and the community of Roswell was awarded the prestigious Sterling Tree City USA Award. Sixty-four communities have active local advocacy/advisory organizations, such as active tree boards, commissions or non-profit organizations that are formalized or chartered to advise or advocate for the planting, protection, and maintenance of urban and community trees and forests. Across the state, 5,624 volunteer hours have been logged related to Urban and Community Forestry and tree planting.



**FIRE MANAGEMENT:** The fire season in 2012, while shorter in duration and intensity than 2011, saw the largest recorded fire in state history, the 297,845-acre Whitewater Baldy Fire, as well as the most destructive fire, the Little Bear, which destroyed 254 structures. While both of these fires burned primarily on federally owned land, thousands of acres of state and private lands were affected as well and the division provided resources to aid in the fire suppression activities.

During fiscal year 2012, 707 fires burned approximately 123,447 acres of state and private land.

While human-caused fires continue to be a major concern, Forestry reports that 306 fires in fiscal year 2012 were human-caused, a significant decrease in the percentage of wildfire starts from the previous year. Equipment use and debris burning were the leading contributors. Forestry continues to work collaboratively with local, state, federal, and tribal fire agencies to educate New Mexicans about fire prevention and preparedness. Wildland fire incidents are reflected in the location map in the Data and Statistics section of this report.

In fiscal year 2012, Forestry provided wildland fire training to more than 1,200 volunteer, municipal, state, federal and tribal firefighters, and provided fire training to fire and law enforcement investigators at two Wildland Fire Academies and wildland fire investigation-related courses.

Following two very destructive years for wildfire across the state, Forestry's fire prevention and education programs have been very active. The formal programs Forestry helps facilitate, Firewise Communities and Ready, Set Go!, both saw interest from communities and fire departments statewide.

Firewise Communities is a community-based and-run recognition program, focusing on residents, businesses, and elected bodies working together to create cities, towns, and even neighborhoods that take steps to address the issue of wildfire risk. To date, 13 active Firewise Communities Programs operate around New Mexico, and four more communities are in the process of gaining formal recognition from the national Firewise Program.

Flames taken during the Little Bear Fire near Ruidoso, NM during the summer of 2012.



Photo by: Danny Norlander

Ready, Set Go!, a sister-program to Firewise, focuses on being prepared both inside and outside the home for the eventuality of wildfire. Residents work with Forestry and their local municipal or county fire departments and emergency management offices to become better prepared should a wildfire approach their community. There are currently more than 30 New Mexico local, state, federal, and tribal agencies partnered with the Ready, Set Go! Program.

Information about these programs and Forestry's other wildfire education can be found on the division's website: [www.nmforestry.com](http://www.nmforestry.com).

**RESOURCE MANAGEMENT AND PROTECTION:** Forestry works with private landowners, state and federal agencies to protect land from future development that could fragment the landscape. Through various incentive programs, landowners can place large tracts of land into conservation easements that allow them to retain ownership while protecting it.

Sixty-four new or revised forest stewardship and treatment plans were prepared in 2012 for a total of 4,969 acres on private forested land in New Mexico. In addition to this, 434 landowners received technical assistance on their private forest lands, with an additional 915 landowners participating in educational programs related to forest stewardship, fire prevention, and forest management.

**CONSERVATION SEEDLING PROGRAM:** The Forestry Conservation Seedling Program provides economically priced tree and shrub species to New Mexico landowners for the establishment of windbreaks, erosion control, crop and livestock protection, Christmas tree farm establishment, energy cost savings, and landscape aesthetics. In 2012, the Conservation Seedling Program distributed 105,553 seedlings through sales during the New Mexico State Fair, New Mexico Agriculture Expo, educational donations, and the spring and fall distribution cycles.

**THE ENDANGERED PLANTS PROGRAM:** Forestry has statutory responsibility for the State Endangered Plant Species List. NMSA 1978 Section 75-6-1 directs the investigation of all plant species in the state for the purpose of establishing a list of endangered plant species.

In this capacity, Forestry gathers information related to population abundance, distribution, habitat requirements, threats, limiting factors, and other biological and ecological data to determine the status of an endangered species. The information is used to develop conservation measures necessary for the species' survival. The statute further directs Forestry to establish a program to promote the conservation of listed endangered plant species including research, inventory and monitoring, law enforcement, habitat maintenance, education, and propagation. Currently, New Mexico has 37 plant species that are listed as endangered, including 13 federally listed species.

The Endangered Plant Program is primarily federally funded through Section 6 of the Endangered Species Act for endangered plant research and management. In 2011/2012, endangered plant projects included the annual monitoring and status evaluation of Knowlton's Cactus and the Holy Ghost Ipomopsis and status reports on the Acoma Fleabane and the Cloudcroft Phacelia.

**LAND CONSERVATION TAX INCENTIVE PROGRAM:** In 2012, Forestry received and processed 12 Assessment Applications for the Land Conservation Incentive Act Tax Credit Program. All applications were approved to move forward to the Certification Application phase. Currently, four applications are with the New Mexico Taxation and Revenue Department's Property Tax Division, Appraisal Bureau awaiting final certification for a tax credit. To date, 11 applicants received certification awarding more than \$2.17 million in tax credits on a total appraised land value of over \$5.11 million for 7,713 acres.

**INMATE WORK CAMP PROGRAM:** Forestry's Inmate Work Camp Program was established in 1997 for the purpose of conducting forest health/urban interface projects on public land in New Mexico. The crews are also trained to conduct wildfire suppression activities and function as an efficient, cost effective resource for New Mexico.

In cooperation with the New Mexico Corrections Department, the inmate crews comprise 12 minimum security inmates; each crew is transported to project areas and supervised by one Forestry Division Crew Supervisor. The program has the ability to field six crews per workday throughout the year and is based in Los Lunas at the state's minimum security prison facility. This year the program provided crews from the Los Lunas Inmate Work Camp to work on 10 projects for 10 different local, state, federal, and private co-operators, performing 1,190 man-days of work and 13,000 man-hours of work. Crews were assigned to 36 wildfires, performing 256 crew-days of fire suppression.



Photo by: Daniela Roth

Wright's Marsh  
Thistle at Blue Hole  
Cienega Preserve,  
2012.

# Data and Statistics

## 2012 SEEDLING CHART:

Forestry’s Conservation Seedling Program provides landowners the ability to take advantage of fall and spring planting seasons with two distribution periods. With the combined distribution periods, 105,553 tree seedlings were distributed through the program’s annual sales, sales at the New Mexico Agriculture Expo and New Mexico State Fair, and through educational donations.

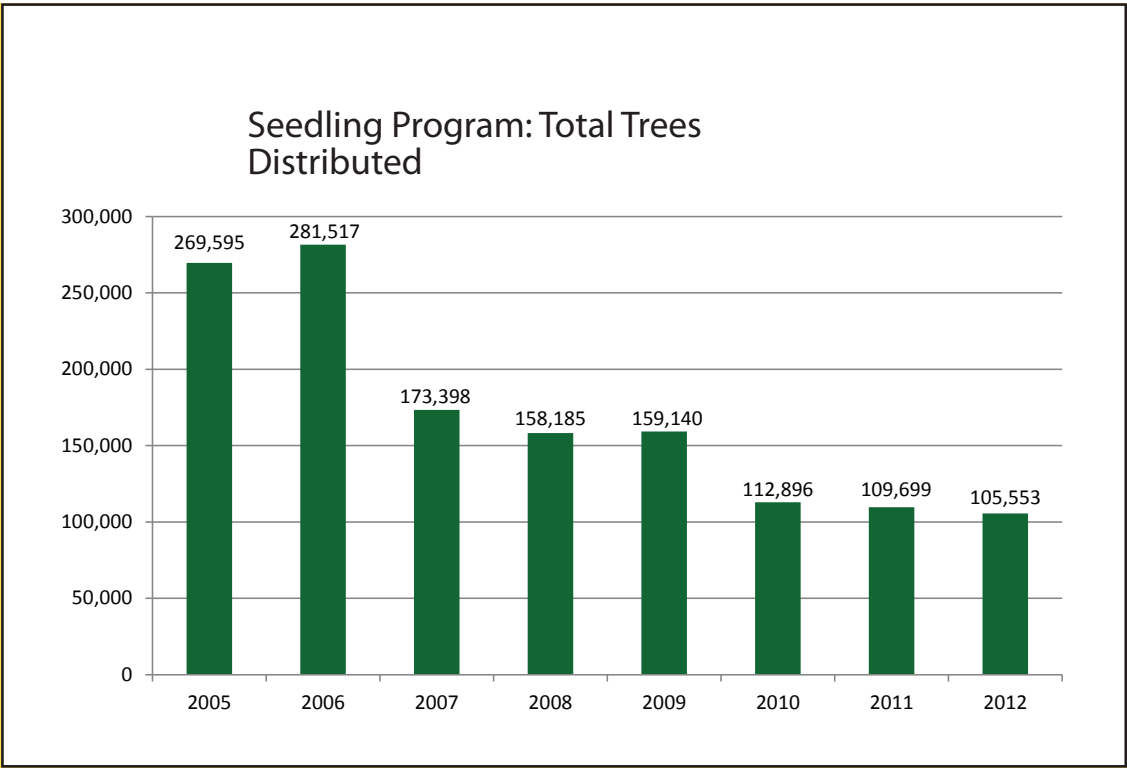


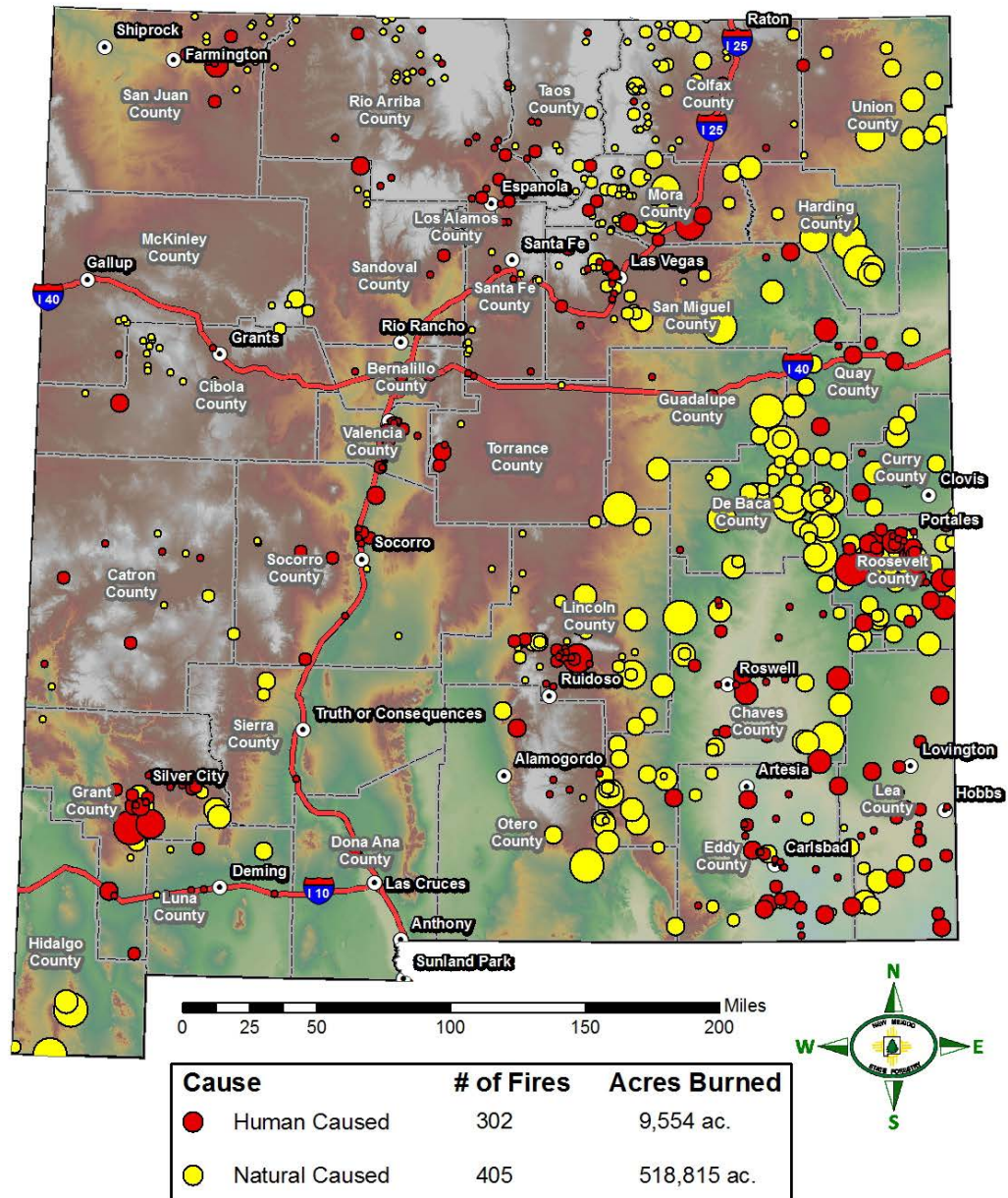
Figure 1



**2012 FIRE MAP:** Fire season 2012 saw more acres burn across New Mexico than any year in recent history. During fiscal year 2012, 707 fires were reported on state and private land. These fires burned 123,447 acres. Total number of acres burned, including federal land, totaled 596,857.

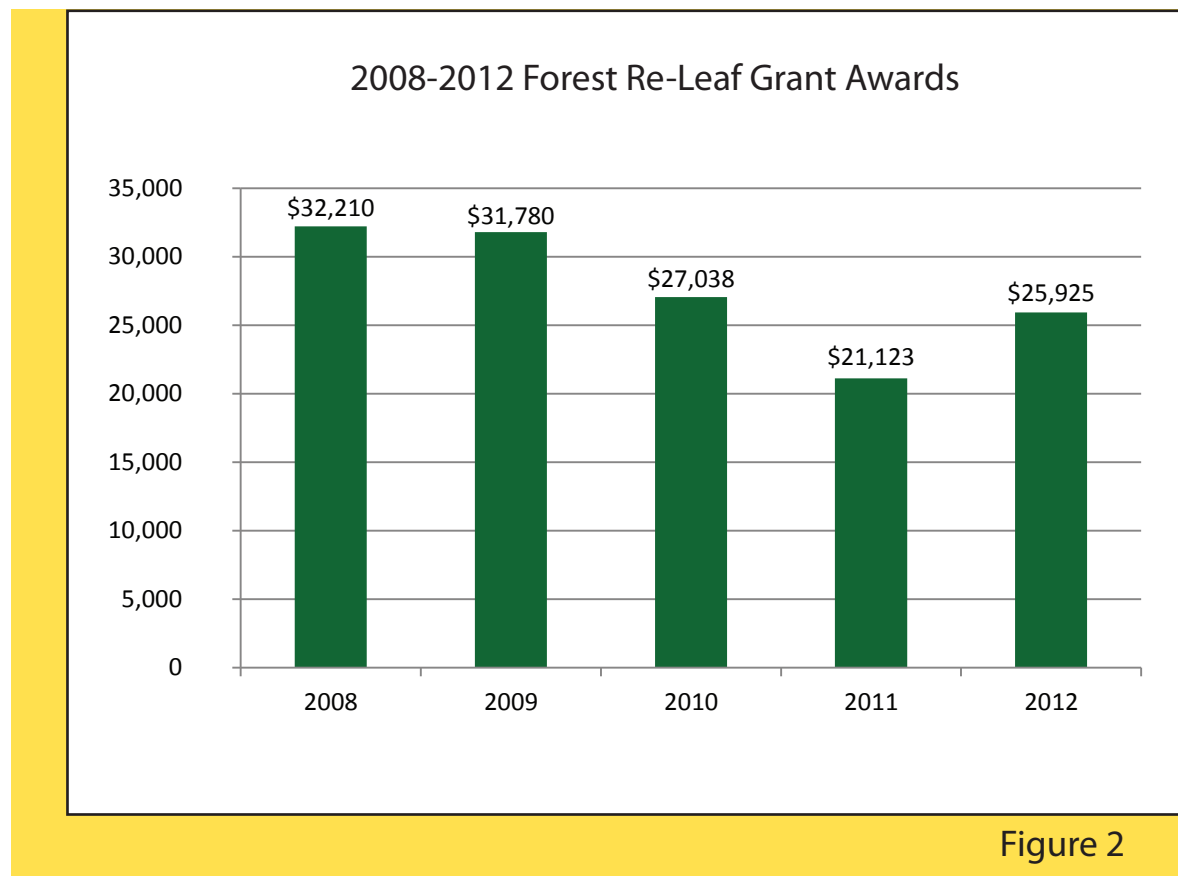


## New Mexico Wildfires On State and Private Lands FY 2012





**2012 RE-LEAF GRANTS:** Forestry's New Mexico Forest Re-Leaf Program awarded \$25,925 in grant funding to the communities of Carrizozo, Raton, Rio Rancho, Santa Fe, and Taos. The program aids communities by providing funds for tree planting for conservation purposes, educational outreach, windbreak establishment, and general aesthetic enhancement. Re-Leaf grants are funded completely through corporate and private donors. Since 1990, more than \$560,000 has been distributed to New Mexico communities for tree planting.



# **Mining and Minerals Division**



## Mining and Minerals Division

**MISSION:** The Mining and Minerals Division (MMD) seeks to promote the public trust by ensuring the responsible utilization, conservation, reclamation and safeguarding of land and resources affected by mining. MMD strives to make New Mexico a leader in responsible mine operation and reclamation.

## PROGRAMS AND ACCOMPLISHMENTS

**MINE REGISTRATION, REPORTING AND SAFEGUARDING PROGRAM:** Decision-makers throughout New Mexico benefit from the valuable information compiled and disseminated through this program which also serves as MMD's public information office. Comprehensive information is provided on mineral resources, mine registration, reclamation and safeguarding efforts, legislation, and other MMD activities related to New Mexico's mineral extraction industry and mineral resources. For individuals more interested in talking to a real live staff member, as opposed to surfing the website, the program prides itself on its responsiveness to questions received via telephone or email.

Public outreach is an important component of this program and the other MMD programs. Outreach to mine operators and the public regarding abandoned mine safeguarding projects and current and proposed mining operations has been expanded by making more information available on MMD's webpages. Projects can be tracked by status or county, and project documents are downloadable. Getting to the website is now much easier - just type NMMiners.com into a browser to quickly reach MMD's section of the department's redesigned website.

The program is involved in several initiatives that serve MMD by coordinating with other agencies and groups. Staff assists and coordinates with the Bureau of Geology at New Mexico Tech to select the annual recipients of the Earth Science Achievement Award which honors New Mexicans who have made significant contributions to advancing the role of earth science. Also, MMD staff select worthy candidates for the Excellence in Reclamation Award which is presented annually at the New Mexico Mining Association's convention.

**ABANDONED MINE LAND (AML) PROGRAM:** The AML Program works to identify dangerous abandoned mine areas across the state and to abate their hazards. MMD estimates that more than 10,000 hazardous mine openings remain un-reclaimed throughout New Mexico.

In 2012, the AML Program completed four construction projects at abandoned mine sites in New Mexico, including the largest project AML has undertaken. On Vermejo Park Ranch outside of Raton, the historic Swastika Coal Mine and mine features in nearby Dutchman Canyon were reclaimed using geomorphic reclamation, a technique that recreates natural drainage and hill slope forms, at a cost of \$4.4 million. MMD presented Excellence in Reclamation awards to AML's construction contractors, Kiewit and 814 Solutions, and project designers, Water and Earth Technologies and Habitat Management Inc., for their work on this project. The three other projects of 2012 were small undertakings that safeguarded eight mine openings at abandoned hard rock sites, including two structural closures.

Geomorphically constructed main channel and side channels at the Swastika Mine.



Photo by: AML Staff

The AML Program continues to develop projects in areas of New Mexico impacted by historic mining, including Madrid, Silver City, Cookes Peak, Raton, San Pedro Mountains, Grants, and Tierra Amarilla.

The Bureau of Land Management remains a strong AML partner, providing funding for abandoned hardrock mine reclamation that supplements AML's annual grants received from the federal Office of Surface Mining.

Public outreach is an important component of AML's work, especially when working directly in communities impacted by historic mining. Community outreach efforts are underway in Madrid and in Silver City for the Boston Hill area. Educational outreach continues in Raton with youth and adult field trips to the Swastika/Dutchman project site.

Program staff is nearing completion of a two-year project to scan and save all its historic and current information as searchable portable document files (PDFs). Program staff will be able quickly access and research information on more than 30 years of abandoned mine land work in New Mexico.

**COAL MINE RECLAMATION PROGRAM:** The Coal Program is responsible for regulating coal mines on all federal, state and private lands within New Mexico, with the exception of Indian lands. The program oversees more than 85,000 acres of permitted mine lands and nearly \$500 million in financial assurance.

Program staff worked with Chevron Mining, Inc. personnel, in consultation with the Navajo Nation and the federal Office of Surface Mining, to finalize the reclamation of the McKinley Mine after five decades of operation. Chevron has made great strides in creating reclaimed topography based on geomorphic principles. The Coal Program has also been working with Peabody Natural Resources Company personnel to incorporate geomorphic reclamation methods at El Segundo Mine, an active strip mine operation that is required to achieve contemporaneous reclamation. To our knowledge, the work at El Segundo is the

first effort to construct Natural Regrade™-designed topography within active mining areas.

The Coal Program assumed responsibility for permitting new uranium exploration and mining during the course of the year. We are hopeful that this initiative will help to ensure timely processing of uranium applications, as well as ensure an equitable workload across MMD's regulatory programs.

The Office of Surface Mining named David Clark, Coal Program manager, as the recipient of its inaugural ECHO Award. Dave was honored for his continued work to enhance environmental protection and his leadership in developing geomorphic coal mine reclamation.

MMD Director Fernando Martinez, Governor Susana Martinez, ECHO Award Recipient David Clark and U.S. Office of Surface Mining Director Joseph Pizarchik at the presentation in the Governor's Office.



Photo by: Jim Winchester

## MINING ACT RECLAMATION PROGRAM (MARP):

MARP is responsible for regulating hard rock mines on all federal, state and private lands within New Mexico. MARP oversees the reclamation of all exploration and extraction activities conducted at all mines and mills, excluding coal, potash and aggregate mines. MARP has permitted 481 mining and exploration projects encompassing over \$572 million in financial assurance. The overall disturbed acreage under permit with MARP is 25,522 acres. The total number of acres reclaimed throughout the history of the Program (1994-2010) is now at 5,870 acres.

In 2012, Freeport-McMoRan Tyrone Inc., one of MARP's permitted mine operators, was awarded the Excellence in Reclamation Award for work performed from 2005 through 2011. The company was honored for large scale and innovative reclamation at the Tyrone Mine, a copper mine in Grant County. Beginning in 2005, Freeport-McMoRan Chino Inc. initiated large-scale reclamation of the inactive tailing piles comprising approximately 1,600 acres. The reclamation took place while the mine was still active and under full-scale operation.

MARP staff is currently working with Chevron Mining, Inc., operator of the Questa Mine in northern New Mexico, and the New Mexico Environment Department and the U.S. Environmental Protection Agency to develop a remediation plan for the mine. The Questa Mine is a superfund site and is being addressed under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Company staff and agency staff put in a significant amount of time in 2012 to negotiate two separate Administrative Orders on Consent to deal with preliminary reclamation and design issues at the mine. In the future, agency staff and the operator will negotiate one or several Consent Decrees (CDs) to address reclamation of the tailings facility and waste rock piles. These CDs will implement long-term plans to address reclamation, monitoring of impacted areas, and the treatment of mine-impacted waters at the Questa Mine.



Photo by: MMD Staff

Overview of the San Juan Underground Mine and San Juan Generating Station. The materials in the foreground are transported above ground, and then delivered to work areas below ground via a utility borehole.



Photo courtesy of Freeport-McMoRan Tyrone, Inc.

An aerial view of the Grant County copper mine and the large-scale reclamation of inactive tailing piles comprising approximately 1,600 acres. The reclamation took place while the mine was still active, and under full scale operation.





# Data and Statistics

## MINERAL RESOURCES: EMPLOYMENT, PRODUCTION AND VALUE

More than \$2.2 billion worth of minerals was extracted from New Mexico mines in 2011, a 24 percent increase from 2010 levels (Table 1 and Figure 1). This is the second highest minerals production value reported for New Mexico, behind 2008's total of \$2.36 billion. While coal production was flat and potash production was actually down in 2011, commodity price increases of 20 to 30 percent improved production values considerably. This, in conjunction with copper production and value up 25 percent and 45 percent, respectively, accounts for the lion's share of the increase.

New Mexico remains a leading U.S. mineral producer with 2011 rankings of first in potash, perlite and

**New Mexico Summary of Commodity Production, Production Value, Employment, Payroll, Revenue and Ranking: 2011**

| Mineral                          | Production <sup>1</sup> | Production Rank <sup>2</sup> | Production Value \$    | Employment <sup>3</sup> | Reclamation Employment | Payroll \$ <sup>4</sup> | Revenue Generated \$ <sup>5</sup> |                     |
|----------------------------------|-------------------------|------------------------------|------------------------|-------------------------|------------------------|-------------------------|-----------------------------------|---------------------|
|                                  |                         |                              |                        |                         |                        |                         | State                             | Federal             |
| Coal                             | 21,916,599              | 13                           | \$ 797,007,997         | 1,604                   | 101                    | \$ 95,945,409           | \$ 25,555,399                     | \$ 3,850,306        |
| Copper                           | 145,094,072             | 3                            | \$ 581,101,762         | 1,754                   | 120                    | \$ 78,015,148           | \$ 4,606,351                      | \$ -                |
| Gold                             | 6,815                   | -                            | \$ 10,682,651          | 73                      | 2                      | \$ 2,186,857            | \$ 89,878                         | \$ -                |
| Industrial Minerals <sup>6</sup> | 1,472,746               | -                            | \$ 107,097,166         | 462                     | 16                     | \$ 16,562,338           | \$ 848,383                        | \$ 112,838          |
| Aggregates <sup>7</sup>          | 9,813,528               | -                            | \$ 68,432,817          | 956                     | 95                     | \$ 14,041,061           | \$ 1,890,674                      | \$ -                |
| Other Metals                     | 40,046                  | -                            | \$ 947,100             | 17                      | 2                      | \$ 903,048              | \$ -                              | \$ -                |
| Molybdenum                       | 386,439                 | -                            | \$ 6,115,669           | 245                     | 3                      | \$ 12,258,000           | \$ -                              | \$ -                |
| Potash <sup>8</sup>              | 781,282                 | 1                            | \$ 636,047,697         | 1,521                   | 30                     | \$ 92,290,141           | \$ 5,944,656                      | \$ 9,394,316        |
| Silver <sup>9</sup>              | 206,728                 | -                            | \$ 7,274,091           | -                       | -                      | \$ -                    | \$ 57,812                         | \$ -                |
| Uranium <sup>10</sup>            | -                       | -                            | \$ -                   | 29                      | -                      | \$ 1,566,888            | \$ 61,832                         | \$ -                |
| <b>TOTAL</b>                     |                         |                              | <b>\$2,214,706,950</b> | <b>6,661</b>            | <b>386</b>             | <b>\$ 313,768,890</b>   | <b>\$ 39,054,985</b>              | <b>\$13,357,460</b> |

Source: Mining and Minerals Division, unless otherwise noted.

<sup>1</sup> Production is in short tons for coal, industrial minerals, aggregates, other metals and potash; copper and molybdenum in pounds.

<sup>2</sup> Production rank is based on 2011 production value in relation to other U.S. states. Molybdenum ranking unavailable.

Sources: Metals, potash, industrial minerals and aggregates: Mineral Resources Program, United States Geological Survey ([minerals.er.usgs.gov](http://minerals.er.usgs.gov))

Coal: Energy Information Administration, United States Department of Energy ([www.eia.doe.gov](http://www.eia.doe.gov))

<sup>3</sup> Employment category includes direct and contract employees.

<sup>4</sup> Payroll is for direct employees and does not include contract employees. Payroll does not include benefits.

<sup>5</sup> State revenue includes state trust land mineral lease royalties, rentals and bonuses; and severance, resource excise and conservation tax revenues.

Federal revenue includes 50% state share of federal royalties.

Sources: State data: New Mexico Taxation and Revenue Department ([www.state.nm.us/tax](http://www.state.nm.us/tax)), New Mexico State Land Office ([www.nmstatelands.org](http://www.nmstatelands.org))

Federal data: Bureau of Ocean Energy Management, Regulation and Enforcement ([www.boemre.gov](http://www.boemre.gov))

<sup>6</sup> Category includes brick clay, calcite, dimension stone, gypsum, humate, perlite, Portland cement, pumice, salt, silica, and zeolite.

<sup>7</sup> Category includes base course, caliche, clay and shale, crushed rock, flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria and topsoil.

<sup>8</sup> Potash production is K<sub>2</sub>O mill production.

<sup>9</sup> Employment and payroll for silver included in copper and gold.

<sup>10</sup> Employment/payroll numbers are for licensing/permitting at proposed uranium mines, and reclamation activities/maintenance at closed mines and mills.

**Table 1**

zeolite; third in copper (up from fourth in 2010); and thirteenth in coal, as reported by the U.S. Geological Survey (USGS) and the U.S. Energy Information Administration. The principal minerals, in descending order of 2011 production value, were coal, potash, and copper. According to USGS, for 2011, New Mexico ranked sixteenth when ranking states by the production value of non-energy minerals, producing 1.75 percent of the total U.S. production value of non-energy minerals (up from twentieth and 1.6 percent in 2010, respectively).

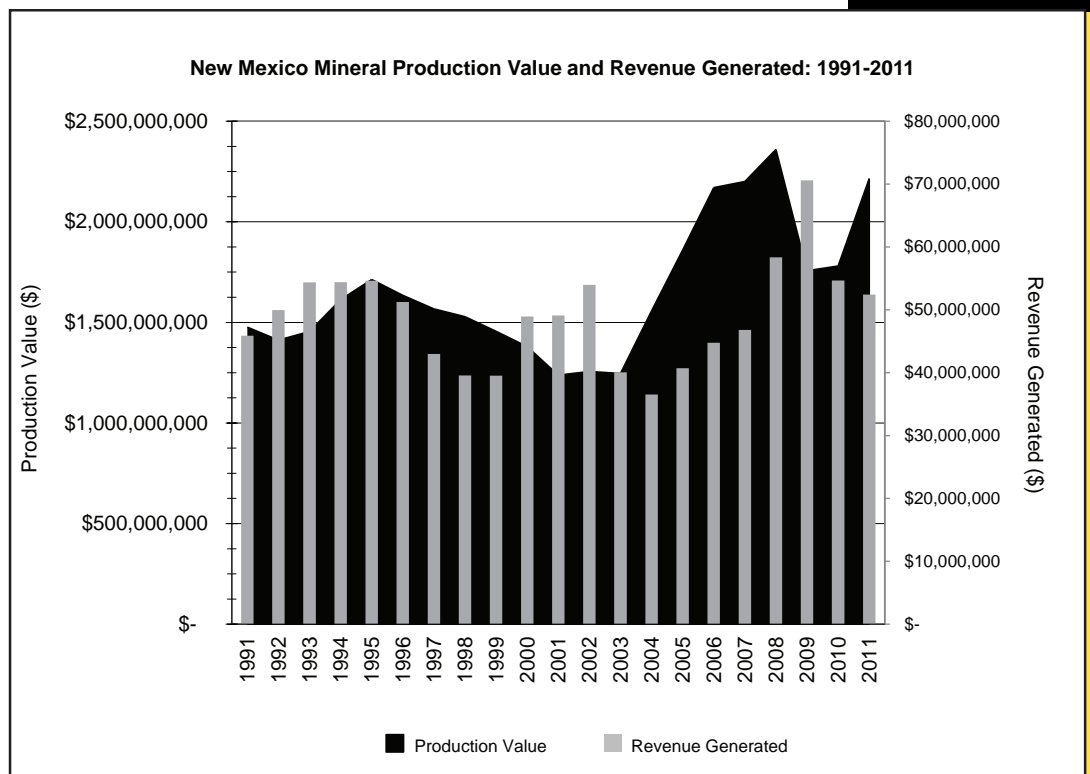


Figure 1

Coal claimed the top spots for production value and payroll in 2011; also, the coal industry generated the greatest revenue for the state (Table 1 and Figure 2). Total 2011 revenues (state and federal) generated by mineral production in New Mexico declined just four percent from 2010 levels to \$52.4 million (Figure 1). State revenues include state trust land mineral lease royalties, rentals and bonuses and associated taxes; whereas federal revenue includes a 50 percent state share of federal royalties. In any production year, these revenues only accrue if the lessee is actually mining and producing commodities on federal or state land.

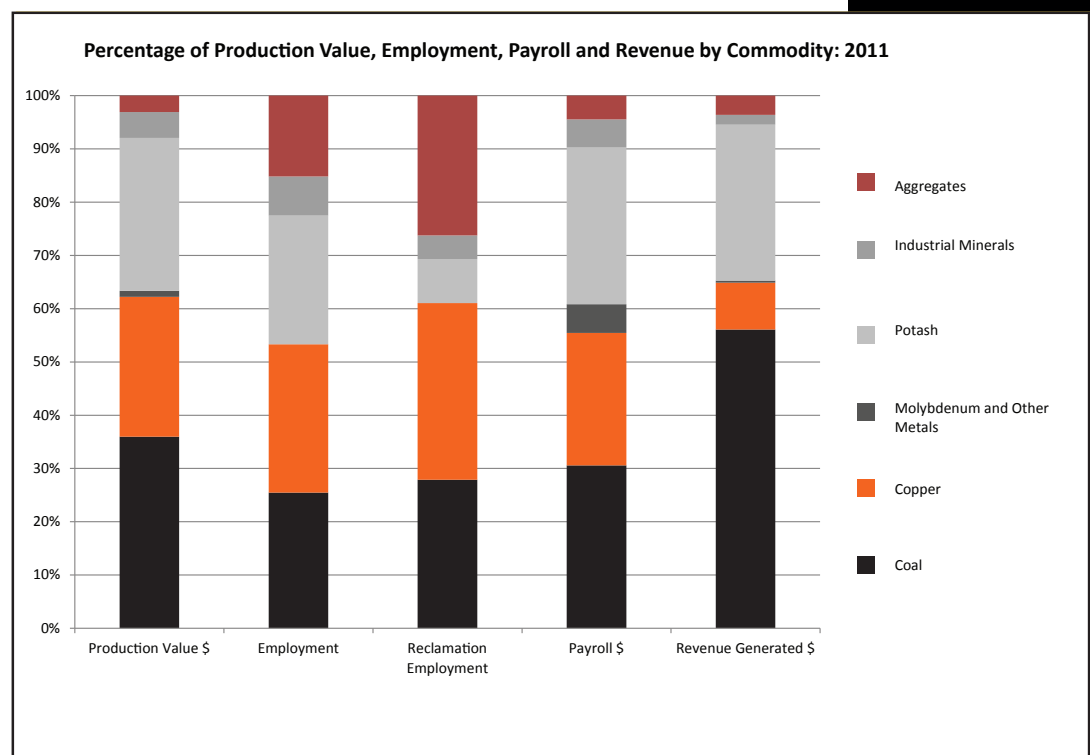
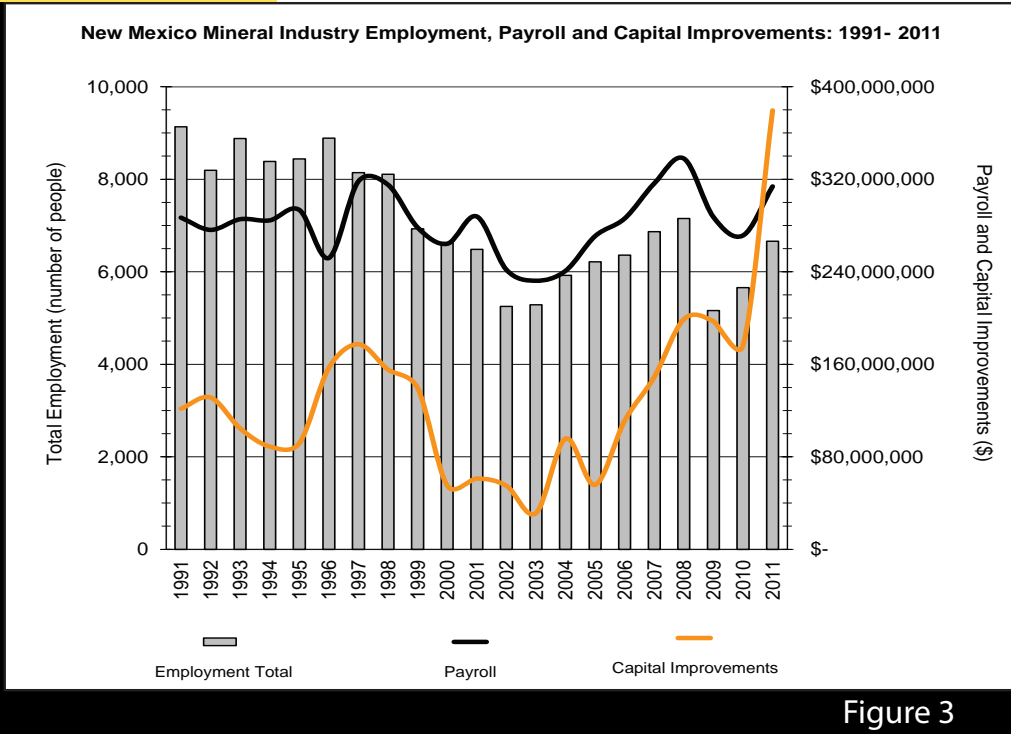
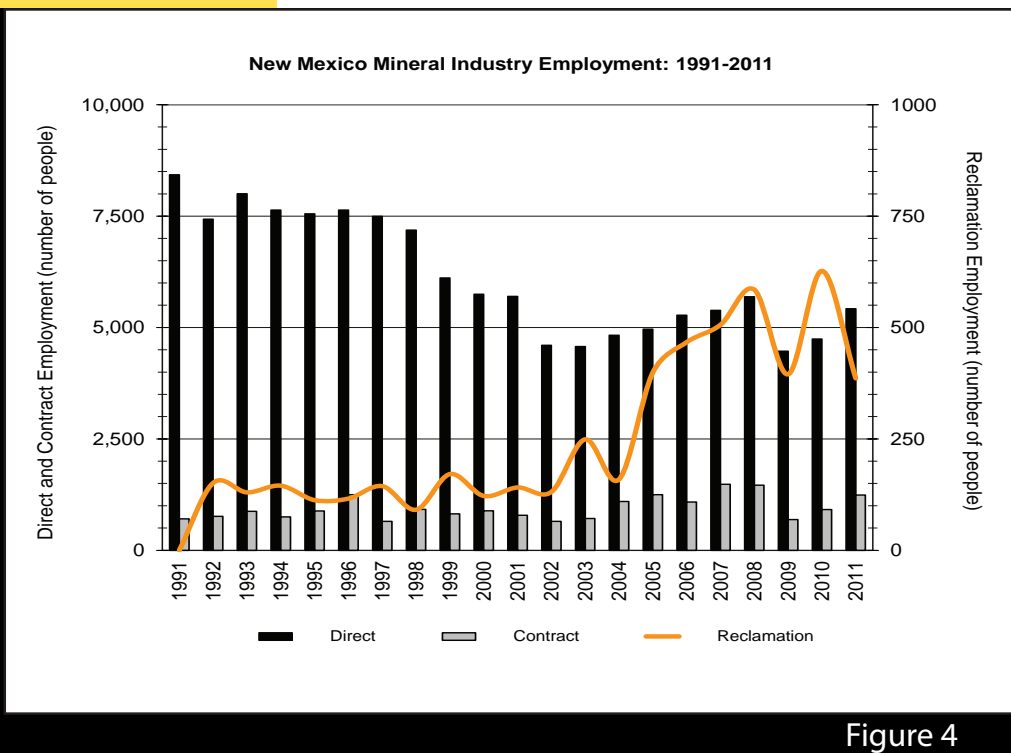


Figure 2

Total mining sector employment increased from 2010 to 2011 as did payroll amounts. The total number of direct and contract employees in the mining industry in 2011 was 6,661, an almost 18 percent increase from 2010; direct employment increased over 14 percent to 5,422 employees; contract employment increased more than 35 percent to 1,239 workers. Reclamation employment declined 38 percent to 386 workers (Figure 4). Industry payroll exceeded \$313 million (excluding benefits), an increase of nearly 16 percent from 2010 (Figure 3). Copper was the largest employer in New Mexico's mining industry, followed by coal and potash.



Capital improvement expenditures more than doubled from 2010 to 2011. New Mexico mining companies invested just under \$380 million in capital improvements and equipment in 2011, up from \$176 million in 2010 (Figure 3). This spike in monies put into improvements is largely a result of projects in potash country including Mosaic Potash's new compaction plant which successfully came on line in May 2012 after two years of construction; and Intrepid Potash, Inc., through its subsidiary HB Potash, LLC, which is presently constructing an in-situ solution mine in the abandoned HB Potash Mine.



Registered active mining operations in New Mexico in 2011 numbered 246: four coal mines; eight potash operations (includes mines, refineries and compaction plants); 11 metal mine, mill and SX/EW operations (includes copper, molybdenum, gold, and silver); 21 industrial mineral mines; 15 industrial mineral mills; and 187 stone and aggregate operations (Figure 5).

## Active Mines in New Mexico in 2011

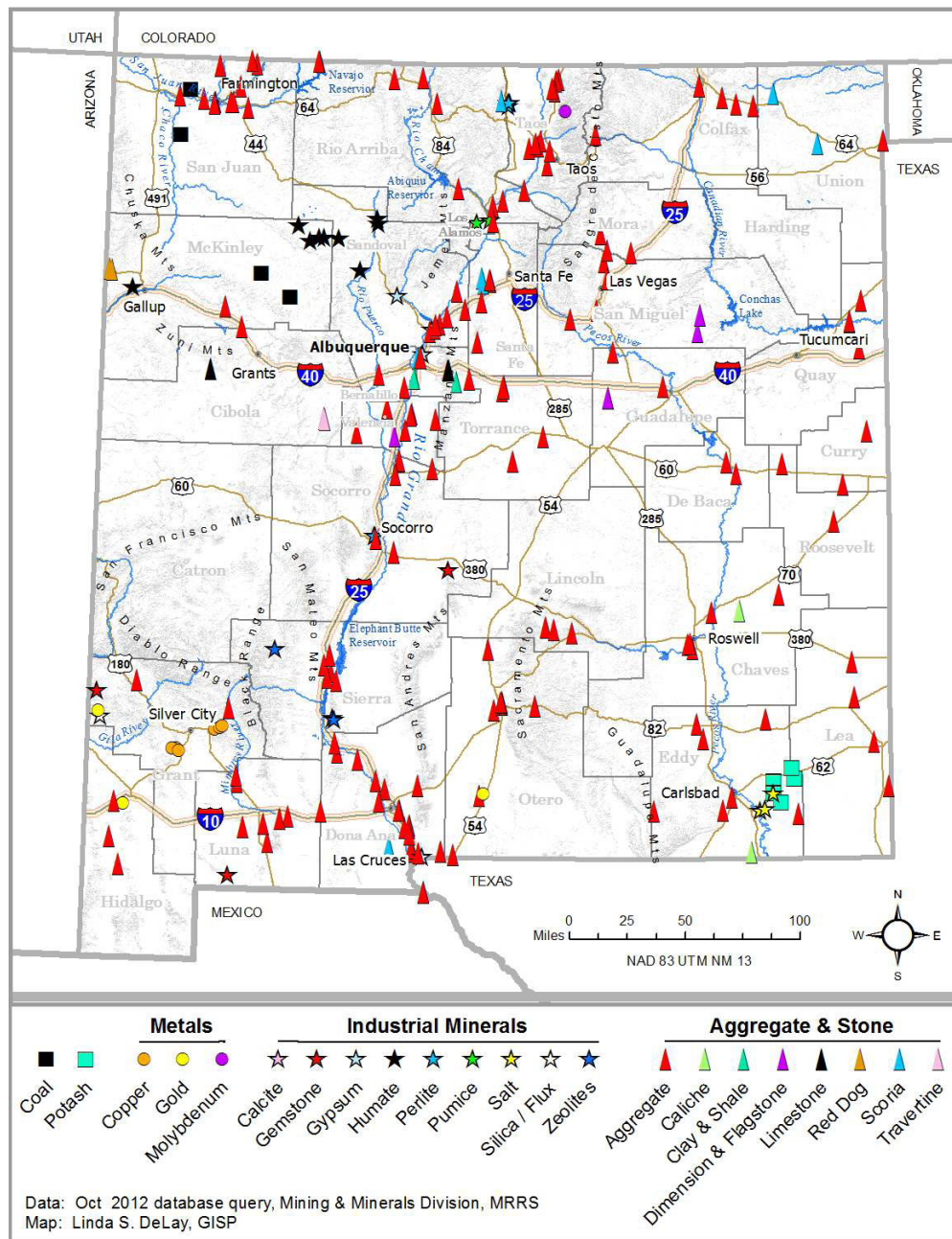


Figure 5

Figures 6 through 9 provide graphic representation of 20-year production amounts and dollar values for coal, copper, potash and aggregate (base course, caliche, clay and shale, crushed rock, flagstone, fill dirt, gravel, limestone, red dog, rip-rap, sand, scoria and topsoil).

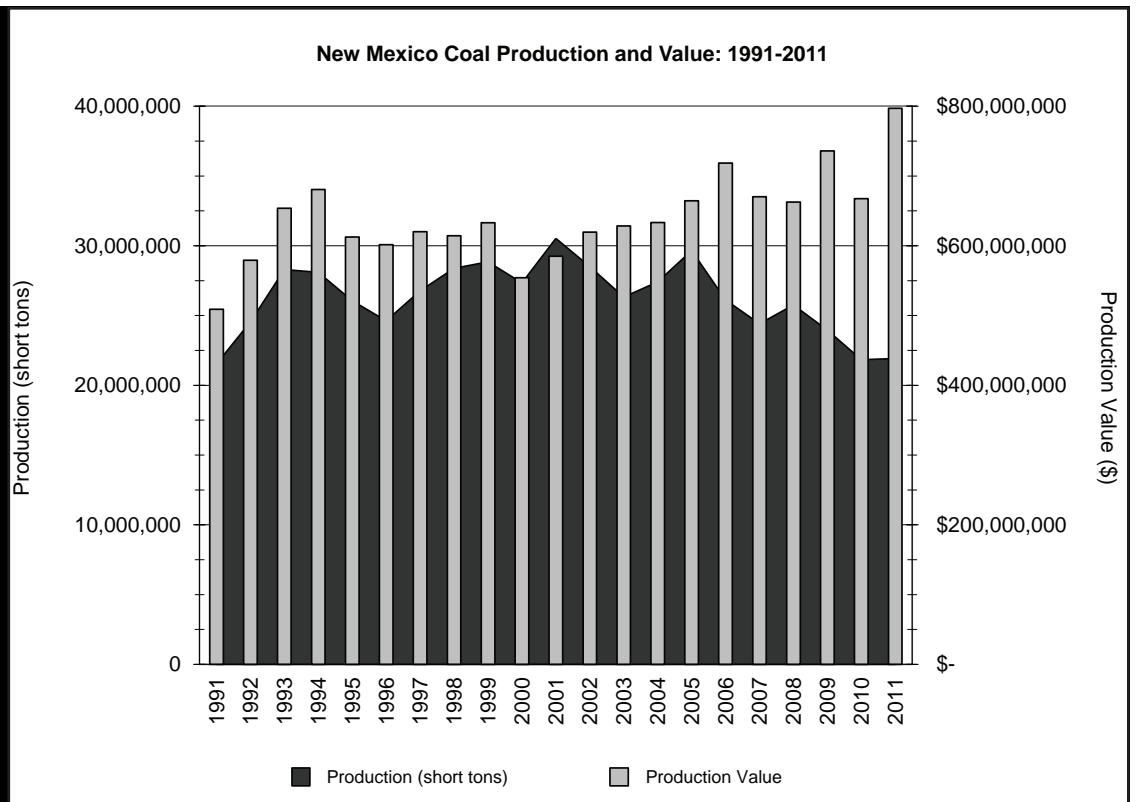


Figure 6

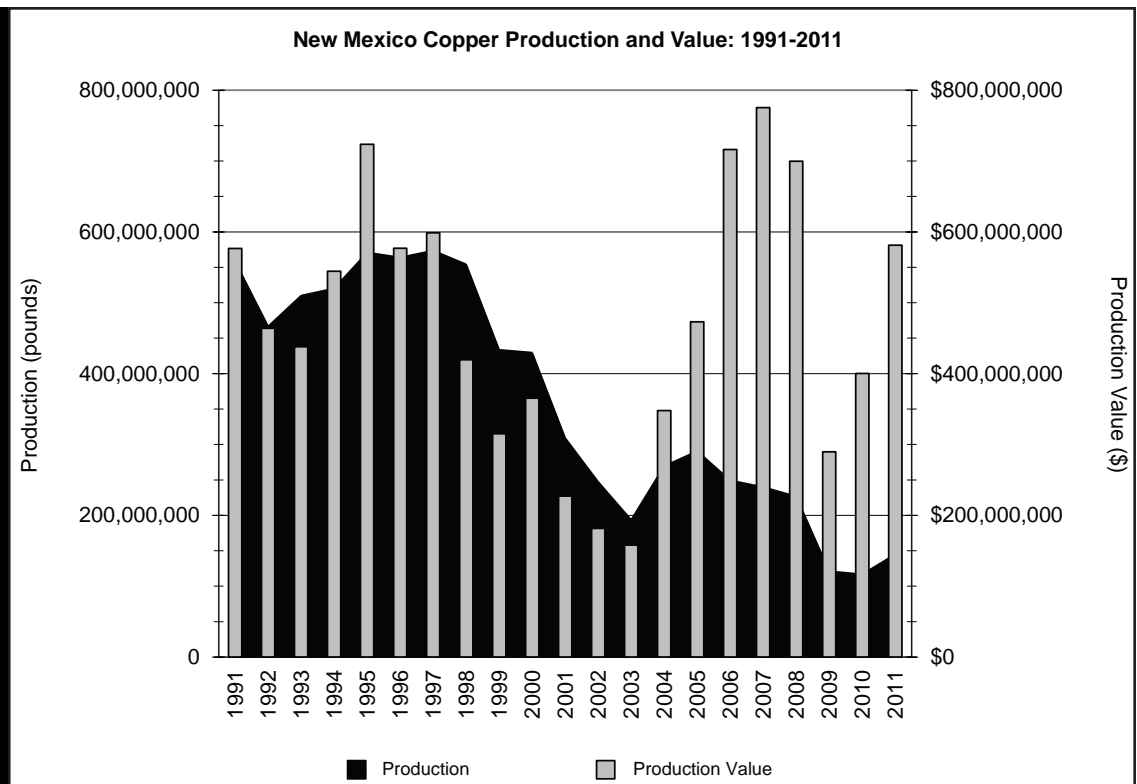


Figure 7



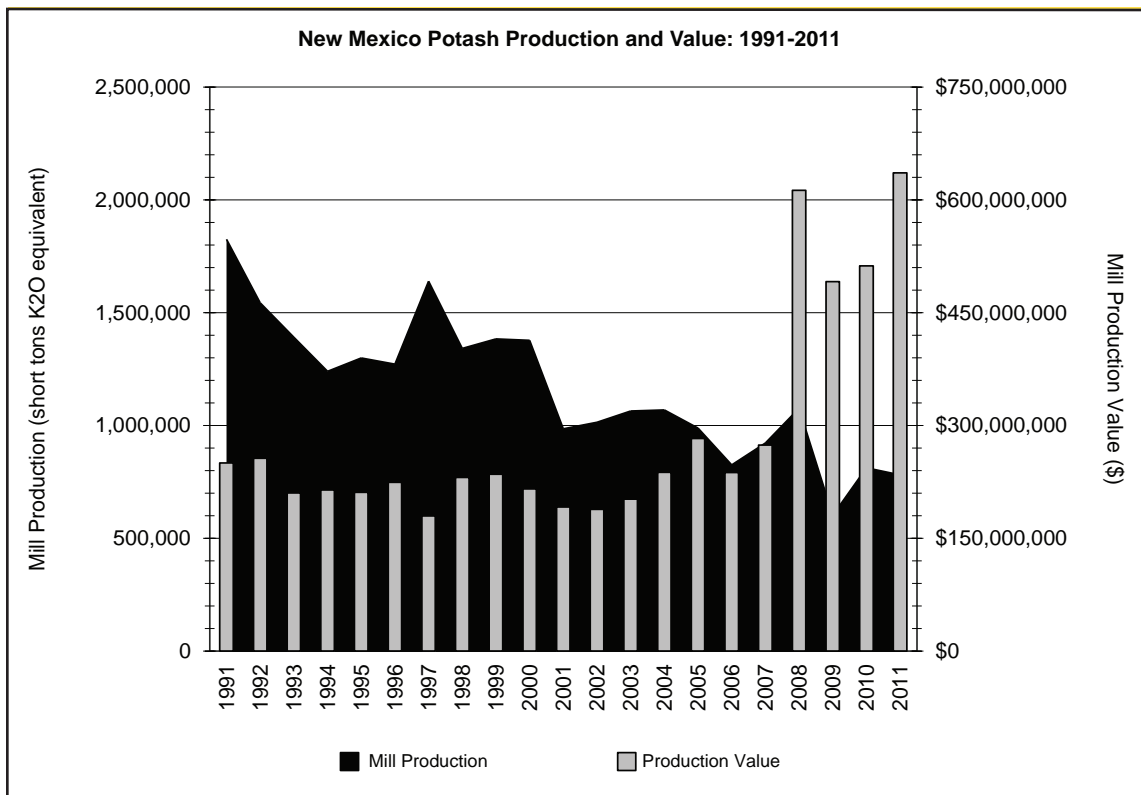


Figure 8

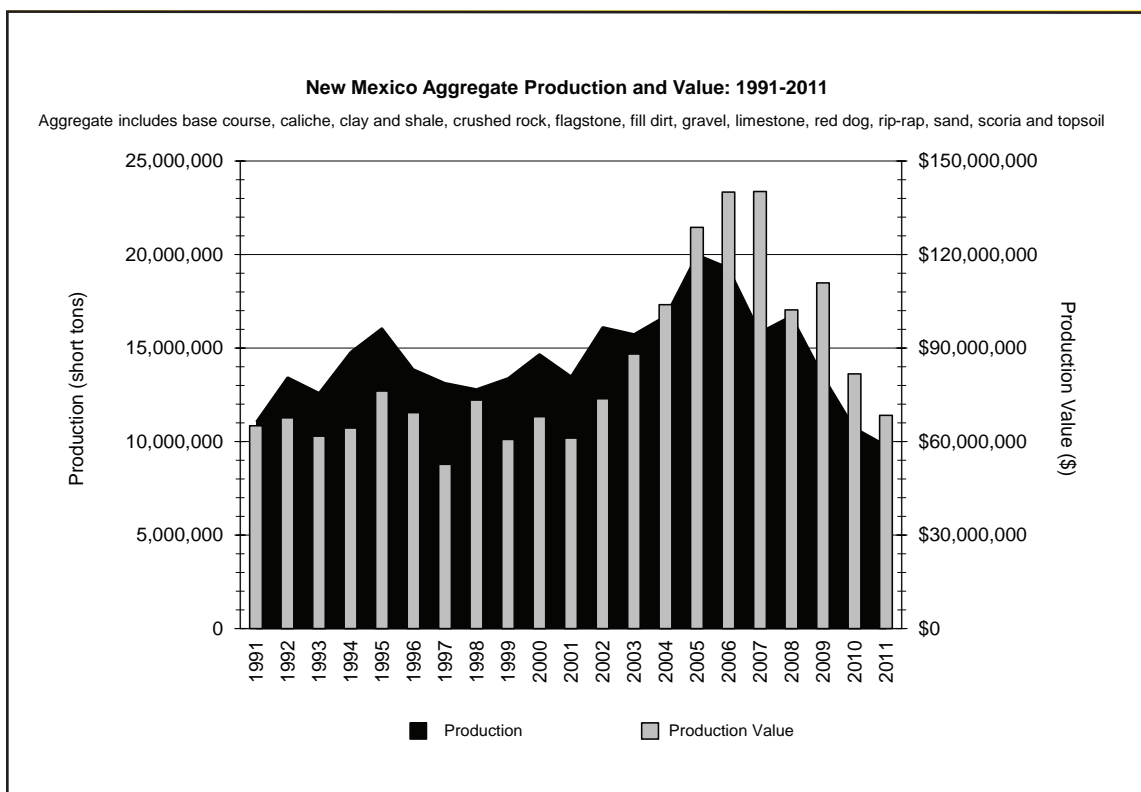


Figure 9

# **Oil Conservation Division**



## Oil Conservation Division

**MISSION:** The Oil Conservation Division (OCD) administers laws and rules related to the oil, gas and geothermal industry of New Mexico. The Oil and Gas Act, the Water Quality Act, and the Geothermal Resources Conservation Act authorize OCD to enforce primary statutory mandates.

**OVERVIEW:** OCD is organized into four district offices and five bureaus responsible for different aspects of regulating the oil and gas industry. The district offices issue drilling permits, inspect wells and associated facilities, respond to spills, investigate violations, and institute enforcement actions.

The Engineering Bureau processes administrative applications for exceptions to OCD rules and the staff serves as division-appointed hearing examiners for OCD hearings. The Environmental Bureau enforces environmental rules and programs in the oil and gas industry for the protection of New Mexico's fresh water, public health, and the environment. The Legal staff from Office of General Counsel provide legal advice and support, work with well operators to implement and manage Agreed Compliance Orders and participate in the formulation of OCD rules and proposed legislation. The Fiscal Bureau is responsible for collecting and dispersing monthly well production and injection data, information about wells, completions, spacing, pools, operators, inactive wells, and orphan wells. It also manages data systems including OCD's online electronic permitting and the OCD website. This bureau also tracks statistics and oversees the division's budget and procurement needs. The Administrative and Records Bureau provides administrative support, manages the plugging bond program, manages the hearing process and maintains records of cases and orders. It also manages and maintains OCD's online imaging database. The Oil Conservation Commission is a three-member commission that makes rules governing oil and gas production in New Mexico, conducts hearings on matters of significant interest, and hears appeals of examiner decisions.

OCD works with representatives from diverse groups to consistently enforce its rules and identify areas where rules can be improved. OCD is actively involved in nationwide federal, state, and industry organizations that share information on new technologies and discuss best practices on topical issues such as hydraulic fracturing and horizontal well drilling.

## Accomplishments

**PERFORMANCE:** Despite constraints on division resources, OCD succeeded in providing efficient and effective industry oversight during a recent 12-month period as evidenced by several measures of output. During the 2011 calendar year, OCD processed and issued 643 administrative orders and 176 hearing orders. The average turnaround time on administrative orders (those decisions of a rule compliance nature) was 19 days and the average turnaround time on hearing orders (decisions on issues requiring an evidentiary process) was 25 days. OCD permitting staff processed 1,857 applications for permission to drill during the calendar year and performed over 32,600 inspections of oil and gas wells and associated facilities.

**BRINE WELL MANAGEMENT:** Two brine well collapses caused OCD staff to formally evaluate all remaining brine wells in the state. New permit requirements were developed that coordinate with EPA requirements and should help ensure against failure of additional wells. A brine well in a commercial, transportation, and residential area is being closely monitored and a contract was authorized to help determine options for future resolution of the situation. OCD continues to work with the owner, the city, contractors and other governmental agencies to manage this risk and to prevent harm to humans and the environment.

**INACTIVE WELL MANAGEMENT:** OCD created a web application that shows each operator's inactive wells and allows the operator to project future inactive wells. If an operator has a certain number of inactive wells, based on the operator's total number of wells, some activities may or must be denied. A well can be removed from the inactive well list by producing or injecting; or being plugged, properly temporarily abandoned, or issued an agreed compliance order, which provides a schedule for reduction of the number of inactive wells.

**FINANCIAL ASSURANCE:** Additional financial assurance is required for wells that meet certain criteria for inactivity. These inactive well financial assurances and the blanket plugging bonds are forfeited by the well operator if the well must be plugged by the state due to the operator no longer being financially viable. The amount of the financial assurance is based on the depth and location of the well. Operators can use the OCD website to see when additional financial assurance might be, or already is, required for each well. OCD currently manages nearly \$60 million in well financial assurances.

**ELECTRONIC SYSTEMS LEADERSHIP:** OCD's web-based systems continue to be a critical resource to well operators, other government agencies, and the public. The imaging system encompasses over eight million pages of permits, orders, maps, tests, charts, diagrams, photographs, and supporting information via the web. The electronic permitting system allows well operators to create, validate, and submit applications for permits to drill, plats, sundry notices, tax incentives, operator change requests, operator name changes, drilling reports and production reports. The system has boosted OCD's productivity because the majority of information on the permits is now pre-validated, cannot be submitted if incomplete and does not require further keying of information into the OCD's systems.

In addition to the images, OCD delivers all information about wells, well production and injection, orders, financial assurance, well completions, fracturing fluid disclosure; perforations and violations through easy-to-use web-based applications updated instantly or daily. The OCD website has been updated so it is vibrant and more reflective of user needs.

**ONGOING REGULATORY ISSUES: NEW RULES** - A horizontal well rule allows the oil and gas industry to plan and manage horizontal wells more effectively so that New Mexico's resources are more efficiently produced and revenues in the form of severance taxes and royalties to the state are maximized. Project areas allow development of multiple spacing units when at least one lessee or owner in each tract agrees to the well, but subsequent wells in the project area must have approval of all working interests, or by hearing and OCD order;

A hydraulic fracturing fluid disclosure rule protects proprietary, trade secret, or confidential information, but still reports components and concentration of fluid chemicals used in well completion operations.

The Oil Conservation Commission is considering applications to amend the current "Pit Rule" to make it more efficient and streamlined.



Photo by: OCD Staff

Pump jack located in Lea County.



Well Head located in San Juan County.



Photo by: OCD Staff

**FUTURE RULE MAKING:** Development of a rule to regulate acid gas injection wells. A working group comprising representatives from industry, ranching, government, and academia is in the process of formulating a draft rule for presentation to the Commission. Current and future stakeholder groups for rule making will include academic experts for oil conservation on science-based rules.

**HIGHLIGHTED MANAGEMENT INITIATIVES:** Following are a few of OCD's ongoing activities:

- Replace equipment in all districts to streamline permit approvals;

- Revised discharge plan requirements to reflect state rules, thereby significantly reducing the number of facilities awaiting permit renewal;

- Re-evaluated annual requirements for injection wells to reflect current EPA and state rules;

- Standardized spill reporting in districts and developed a database of reports for the public and land managers;

Developed an online fracturing fluid disclosure reporting form compatible with the national program;

Coordinated with the State Land Office for release of surface improvement damage bonds only after OCD approval of site restoration;

Established deadlines for processing administrative applications and hearing orders;

Enhanced public access by posting online spill reports and Commission meeting minutes; and

Focused on continuous process improvement, enforcement of the regulations as they are written, and consistent decisions among districts.

## GOALS:

To create management processes that reflect balance, consistent application of rules, fair treatment of all stakeholders, and transparency in all actions;

To remove permit applications backlog; and

To increase staffing in the district offices to enhance application processing and well inspections.



## Data and Statistics

OVERVIEW: As of November 2012, there were 26,920 oil wells, 29,692 gas wells, 703 CO<sub>2</sub> wells, 3,786 enhanced recovery injection wells, and 808 salt water disposal wells. A total of 538 wells were plugged and the sites were remediated by either the well operators or through the Oil and Gas Reclamation Fund.

Total New Mexico oil production during 2011, including condensate, was 71.4 million barrels, an increase of nearly six million barrels over 2010's volume. New Mexico natural gas production during 2011 was 1.26 BCF (billion cubic feet).

### Oil Production by Year

|      | SE Crude   | SE Condensate | NW Crude  | NW Condensate | Total Oil  |
|------|------------|---------------|-----------|---------------|------------|
| 2007 | 51,815,683 | 4,853,897     | 1,001,659 | 1,525,193     | 59,196,513 |
| 2008 | 53,400,463 | 4,208,164     | 1,000,189 | 1,545,435     | 60,154,251 |
| 2009 | 54,653,004 | 4,003,455     | 970,188   | 1,525,218     | 61,151,865 |
| 2010 | 59,518,738 | 3,340,343     | 898,664   | 1,398,325     | 65,156,070 |
| 2011 | 66,089,976 | 2,801,108     | 1,108,528 | 1,416,669     | 71,416,281 |

Volumes are adjusted to reflect amended production reports  
Source: Oil Conservation Division as of October 29, 2012

Table 1

### Natural Gas Production by Year

|      | SE Casinghead | SE Dry Gas  | NW Casinghead | NW Dry Gas  | Total Natural Gas *<br>(Includes NE) | Coalseam Gas<br>(Included in Total) |
|------|---------------|-------------|---------------|-------------|--------------------------------------|-------------------------------------|
| 2007 | 214,275,520   | 305,838,580 | 11,784,436    | 978,300,538 | 1,536,193,407                        | 507,689,197                         |
| 2008 | 201,688,479   | 293,999,114 | 11,465,742    | 939,795,019 | 1,473,215,950                        | 476,556,124                         |
| 2009 | 206,969,193   | 248,200,791 | 10,877,847    | 905,126,182 | 1,397,298,399                        | 449,700,644                         |
| 2010 | 217,596,551   | 213,713,205 | 10,341,033    | 844,314,375 | 1,312,174,215                        | 407,179,660                         |
| 2011 | 236,847,466   | 173,892,806 | 10,555,965    | 814,609,314 | 1,262,523,816                        | 379,061,181                         |

Volumes are adjusted to reflect amended production reports filed with the Oil Conservation Division  
\*Totals include gas produced in northeast New Mexico, which is not displayed in a separate column  
Source: Oil Conservation Division as of October 29, 2012

Table 2

### 2011 Oil and Gas Production by County

| Rank         | Oil (Barrels) | Rank         | Gas (Thousand<br>Cubic Feet,<br>MCF) |
|--------------|---------------|--------------|--------------------------------------|
| 1 Lea        | 33,419,157    | 1 San Juan   | 480,256,343                          |
| 2 Eddy       | 33,332,036    | 2 Rio Arriba | 342,673,973                          |
| 3 Chaves     | 1,905,142     | 3 Lea        | 169,748,701                          |
| 4 Rio Arriba | 1,172,836     | 4 Eddy       | 154,328,589                          |
| 5 San Juan   | 1,251,752     | 5 Colfax     | 26,541,065                           |
| 6 Roosevelt  | 234,749       | 6 Chaves     | 20,433,714                           |
| 7 Sandoval   | 69,558        | 7 Roosevelt  | 2,341,790                            |
| 8 McKinley   | 31,054        | 8 Sandoval   | 2,007,726                            |
|              |               | 9 McKinley   | 227,237                              |
|              |               | 10 Guadalupe | 77,200                               |
| Total:       | 71,416,284    |              | 1,198,636,338                        |

Source: Oil Conservation Division as of October 29, 2012

Table 3

### Wells Drilled and Completed by Year by Well Type First Reported Completion per Well

|      | Gas   | Oil   | Other | Total |
|------|-------|-------|-------|-------|
| 2007 | 1,035 | 640   | 49    | 1,724 |
| 2008 | 856   | 855   | 82    | 1,793 |
| 2009 | 454   | 720   | 86    | 1,260 |
| 2010 | 258   | 932   | 89    | 1,279 |
| 2011 | 246   | 1,148 | 95    | 1,489 |

Source: Oil Conservation Division as of October 30, 2012

Table 4

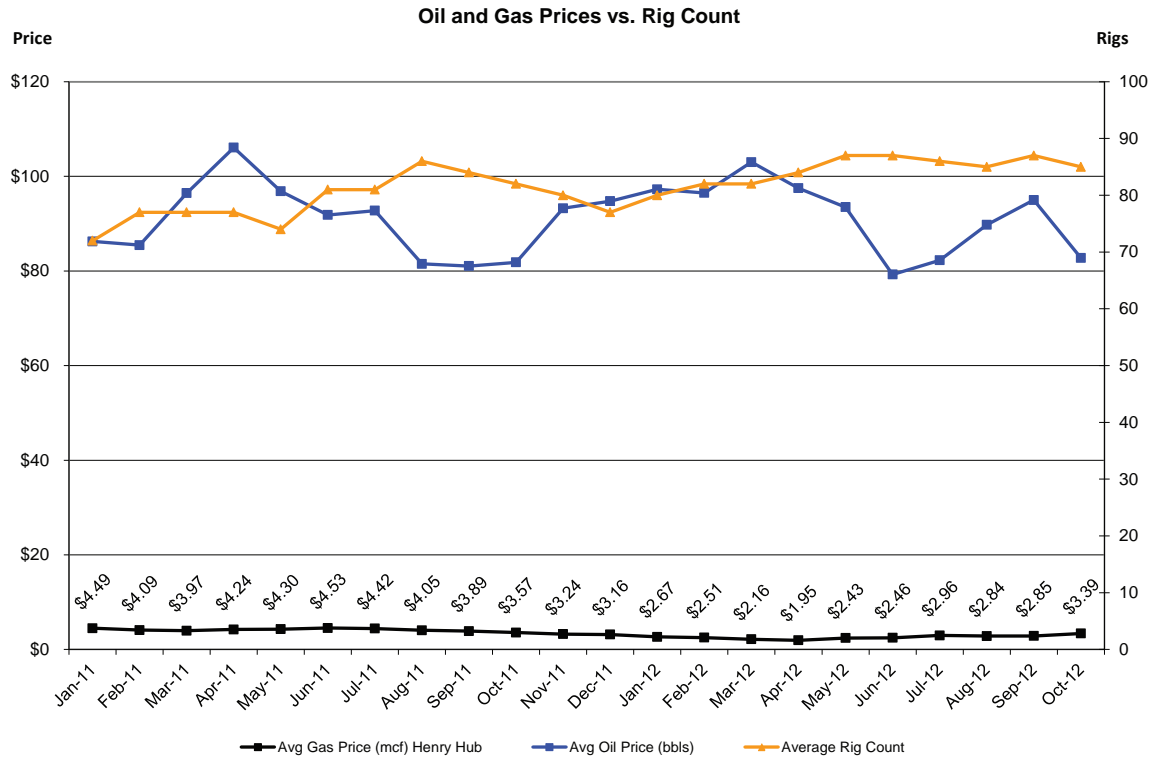


Figure 1

### 2011 Oil Production by Land Type

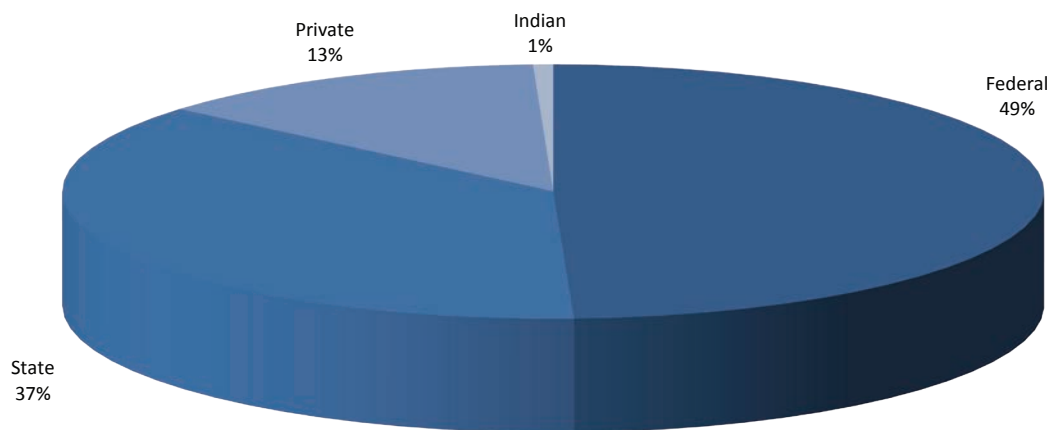


Figure 2



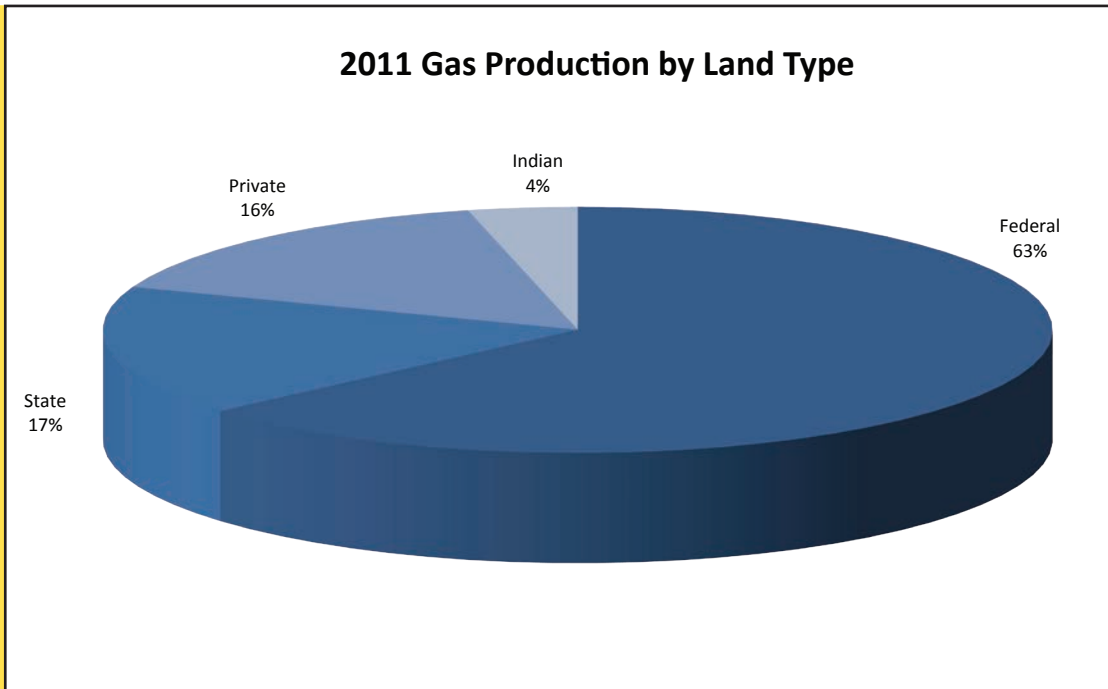


Figure 3

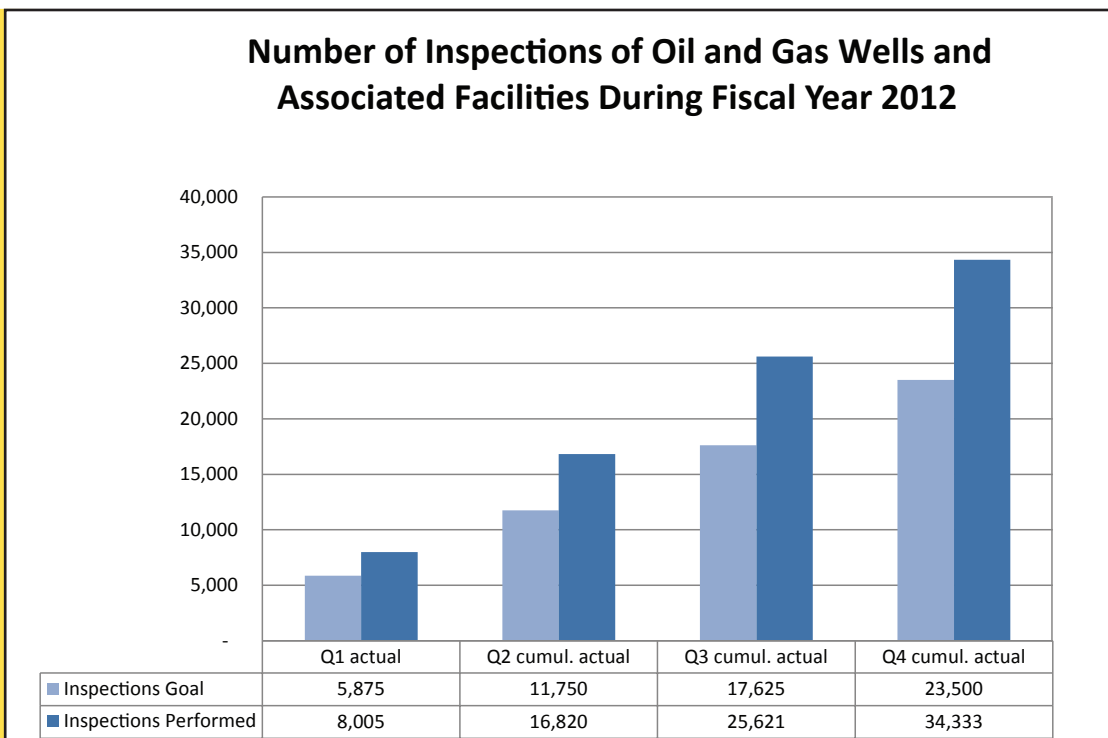


Figure 4



# State Parks Division



## State Parks Division

**OVERVIEW:** The State Parks Division (State Parks) oversees New Mexico's 35 parks that offer a great diversity of natural and cultural resources, providing recreational and educational opportunities for 4.2 million visitors in 2012.

**HISTORY:** State Parks was founded in 1933 in conjunction with the Civilian Conservation Corps efforts during the Great Depression. The State Parks system began with five parks and, today, there are 35 parks encompassing 19 lakes and 196,677 acres of land and water.

**MISSION:** Protect and enhance natural and cultural resources, provide first-class recreational and education facilities and opportunities, and promote public safety to benefit and enrich the lives of visitors.

State Parks is committed to this mission, employing professional, dedicated staff to ensure that parks are cared for and preserved to the highest professional standards. State Parks programs provide safe, fun, and educational experiences - and a visit to a state park is a true value.

State Parks is creatively addressing the challenges of drought, fire, and the overall economy, which caused some park seasonal closures, a drop in revenue and staff reductions. In order to address issues of revenue generation, staffing support, and visitation increases, State Parks has developed a comprehensive Strategic Operations and Sustainability Plan.

## Accomplishments

**VISITATION AND REVENUE:** A total of 69 percent of State Parks' budget is supported by self-generated revenue and 31 percent is general fund. Visitation and revenue were impacted in fiscal year 2012 by drought, wild fires, and seasonal park closures. Visitation totaled 4,218,251, camping fees totaled \$2,449,635, day use fees totaled \$1,324,570, and concession fees totaled \$356,125.

Overall park revenue was down in fiscal year 2012, day use fees decreased by \$80,549, camping revenue decreased by \$189,110, and park concession fees increased by \$13,148. Taxpayers directly supported State Parks through Personal Income Tax Check-offs. A total of \$23,665 in revenue was realized in 2012 for the Kids 'n Parks transportation grant program and the Vietnam Veterans Memorial State Park fund.

**LAW ENFORCEMENT AND BOATING SAFETY PROGRAM:** State Parks is dedicated to achieving compliance with parks and recreation management laws. The Law Enforcement Program provides responsive visitor services, resolution of conflicts within park jurisdiction, and promotion of natural and cultural resource protection. State Parks currently employs 63 of 96 park officer positions. These officers partner with local communities, visitors, and other agencies to develop and sustain the diverse environments in New Mexico's parks while balancing the demand for recreation with best management practices.

State Parks operates and manages the majority of all recreational boating areas in New Mexico. Thus, marine law enforcement efforts ensure safe and memorable experiences for boaters. State Parks also manages the Boat Access Improvements and Maintenance Program to provide boaters with good launching, docking, and parking facilities at all its properties.

The Law Enforcement and Boating Safety Program constantly faces new challenges including resource threats, new laws to administer and enforce, new guidelines to follow, or other public safety issues. In order to meet these challenges, park officers receive the most current, professional training and they continually strive to improve cooperation with the public, coworkers and other agencies.

New Mexico's lakes and rivers offer exciting and memorable experiences for visitors seeking recreational boating opportunities. State Parks employs highly trained and equipped officers to patrol state waters and enforce the provisions of the New Mexico Boat Act. These officers also provide educational programs

regarding operator and equipment requirements, navigation, and boating hazards. They stress the importance of wearing life jackets and sober boating.

Boating safety classes are available in many locations throughout the state and school-aged children receive boating and water safety presentations. In fiscal year 2012, over 900 students successfully passed a boating safety course. Boating safety courses are available via the Internet, marine enforcement officers, and volunteer instructors.

The goal for State Parks is zero boating-related injuries and fatalities each year. Unfortunately, boating accidents and fatalities continue to underscore the need for better-educated boat operators. Partnerships with local, county, state, and federal agencies are critical and the Boating Safety Program receives a great deal of support from the U.S. Coast Guard Auxiliary.

#### Boating Safety Class.



Photo by: State Parks Division

**CAPITAL IMPROVEMENTS:** State Parks strives to improve park infrastructure to offer better visitor facilities and services, streamline park operations, increase revenue, and save money. State Parks completed numerous capital projects in 2012 to improve visitor experiences and provide reliable infrastructure, including the following key projects:

A new visitor center and administrative building was completed at Cimarron Canyon State Park. Hazard trees were removed from the area and new landscaping was installed around the building site.

Photo by: State Parks Division



Cimarron Canyon State Park Visitor Center.

New equipment sheds at the main entrance to Elephant Butte Lake State Park were completed, along with a new entrance sign. At the Dam Site, electrical and water line improvements were undertaken and the historic building that houses the restaurant was renovated, including a new roof and HVAC system.

At Navajo Lake State Park, accessibility improvements were completed at Texas Hole, along the San Juan River, and Francis Canyon was closed to vehicle traffic to protect the area from environmental damage caused by unregulated use by campers. Repairs were also made to the Sims lift station.

The visitor center at Ute Lake State Park was expanded providing more office space and helping meet administrative needs.

A new group shelter was installed at Mesilla Valley Bosque State Park, providing a much needed shaded area for outdoor educational activities.

Comfort stations were renovated and improved for accessibility at Percha, Caballo, Oliver Lee, and City of Rocks State parks.

The new visitor center and maintenance facility at Cerrillos Hills State Park was completed and a grand opening was held.

Campground improvements were undertaken at Coyote Creek State Park to address erosion and flooding issues, including relocation of several campsites and roadway grading and stabilization. A new water storage tank was also installed.

An ADA-compliant (Americans with Disabilities Act) fishing pier and walkway were installed at Eagle Nest Lake State Park.

Construction began on an expansion of the visitor center at Brantley Lake State Park.

The design for a new reptile house for Living Desert Zoo and Gardens was completed. The project was put out to bid with funding provided by a generous donation from a local benefactor's estate. To provide better accessibility to the new reptile house, construction began in 2012 on a concrete pathway from the visitor center to the nocturnal exhibit. Once the reptile house is complete in 2013, the accessible pathway will be extended from the nocturnal exhibit to the new building.



In addition to these projects, State Parks continued to install photovoltaic systems on park facilities statewide. These systems provide power to offset ever-rising electric utility rates and allow State Parks to redirect savings to other operational needs. New systems were installed and put into use at: Cerrillos Hills, Rio Grande Nature Center, Ute Lake, Clayton Lake, Pancho Villa, and Oliver Lee Memorial State Parks, and the State Parks Warehouse in Santa Fe. These improvements resulted in significant savings in energy costs system-wide. Further energy efficiency measures included the installation of new LED lighting at: Living Desert Zoo and Gardens, Conchas Lake, Rio Grande Nature Center, Pancho Villa, City of Rocks, Mesilla Valley Bosque, and Vietnam Veterans Memorial State Parks.



Photo by: State Parks Division

**EDUCATION PROGRAM:** State Parks is dedicated to providing quality interpretive experiences and, despite budget shortfalls, has maintained a high degree of interpretive and educational programming for visitors. Creative staff provided programs that exceeded performance-based budget measures, and a total of 3,962 programs were delivered to 59,252 attendees. Eight full-time interpreters and other employees who received interpretive training helped complete these programs. Special interpretive events were also very popular, and a total of 16,419 interpretive events were held.

The Statewide Outdoor Classroom Program has also been successful, providing students with curriculum-based outdoor experiences. The program has been heavily funded by taxpayers through the Kids 'n Parks Personal Income Tax Check-off for transportation grants to parks. Since 2007, State Parks has provided 119,329 outdoor classroom experiences for kids statewide, and in fiscal year 2012, various state parks were visited by 1,066 classes and 18,615 students. Teacher trainings are critical and five training sessions equipped 137 teachers to utilize outdoor classroom curriculum guides.



Photo by: State Parks Division

Evaluating the program and capturing teacher participation was undertaken and, on a 10-point scale, teachers gave the program a 9.4 rating for their overall experience and 9.3 for meeting goals and objectives. As a teacher from Mesa Elementary School in Shiprock said about her class's trip to Navajo Lake State Park: "Even though this lake is around 2 hours away, none of our Navajo students had ever been there or seen a lake that large... The park staff was more than helpful to make our trip a unique experience, many will remember their entire lives."

Partnerships are critical. State Parks has partnered with the Bosque Ecosystems Monitoring Project to undertake natural resources monitoring at Mesilla Valley Bosque State Park. Through this

partnership, the Bosque Ecosystems Monitoring Project paid the salary of an educational intern for the park, bolstering park staffing and augmenting park programs. Also, a partnership with Audubon New Mexico has been critical in reaching multiple classes in southern and eastern New Mexico.

The discovery pond,  
Rio Grande Nature  
Center State Park.

**PARK RESOURCE PROTECTION:** State Parks is charged with preserving the unique cultural and natural resources within the park system. Three staff members ensure that all park projects are in compliance with state and federal resource laws. The staff reviewed 30 park projects in fiscal year 2012 and many of these projects required inventory, research, and reporting. Resource staff successfully coordinated with partner and regulatory agencies, which is critical to the compliance process.

In addition to legal compliance, State Parks continued important natural resource protection projects. Through partnerships with the U.S. Army Corps of Engineers, Audubon New Mexico, the U.S. Fish and Wildlife Service, and other entities, significant wetland restoration projects were advanced at Bottomless Lakes State Park, Mesilla Valley Bosque State Park and at the Broad Canyon track north of Leasburg Dam State Park. State Parks also partnered with the New Mexico Department of Transportation and the Department of Game and Fish to complete a wetland mitigation project at Eagle Nest Lake State Park.

After the devastating Track Fire at Sugarite Canyon State Park in 2011, regional and field staff, partner agencies, and local volunteers continued to assess the damage to natural resources and implement activities aimed at restoring the critical watershed functions within the park. In one restoration project, over 5,000 trees were planted in some of the hardest hit areas to help control erosion and provide wildlife habitat.

Several 2012 cultural resource projects were noteworthy. State Parks helps coordinate the New Mexico SiteWatch Program which recruits volunteers to monitor sensitive archaeological sites. State Parks helped coordinate two statewide site steward trainings and helped organize the annual SiteWatch conference in Albuquerque.

Resource staff has been heavily involved in partnerships. The State Parks archaeologist has been a leader in the multi-agency Galisteo Basin Archaeological Sites Protection Act Working Group. This group has supported and will continue to support educational programs, new exhibits, and Native American consultation at Cerrillos Hills State Park.

**VOLUNTEERS AND FRIENDS:** State Parks has long been augmented through the support of its dedicated volunteers. Volunteers are valuable members of the State Parks team and an essential component of park operations. Not only do the volunteers assist staff and enhance visitors' experiences, they also bring the parks and their communities together.

In fiscal year 2012, more than 3,000 volunteers contributed over 300,000 hours to park operations. The value of these hours translates to 145 full-time employees and is worth over \$4.5 million in labor cost savings.

State Parks currently has 21 park support groups (friends) who also provide service support for the parks. Group members help to staff visitor centers, operate gift shops, complete park projects, and raise funds to help supplement park budgets. In fiscal year 2012, two new support groups signed cooperative agreements with State Parks and EMNRD and two more agreements with existing friends groups were renewed.

Friends of Oasis  
State Park  
Volunteer's Award.



Photo by: State Parks Division

The number of volunteer hours contributed each year has plateaued at just over 300,000 hours since 2009. Volunteers are vital to the future health of State Parks. Much of fiscal year 2012 was spent laying plans to grow the program to help meet parks' increasing needs, particularly through a new Volunteer Policy and Volunteer Program Operations Manual.

**RECREATIONAL TRAILS PROGRAM:** This federal assistance program is made possible through the U.S. Department of Transportation's Federal Highway Administration. The Recreational Trails Program (RTP) has provided up to 80 percent of project funds to develop, improve, and maintain trails and trail-related facilities.

In 2012, one staff member was responsible for administering the federal grant programs and works with the Governor-appointed RTP Advisory Board, which provides advice and support for the program. During 2012, the RTP staff worked with the RTP Advisory Board to update, reformat and rewrite the RTP application process.

Although the ability to award federal funds statewide for this program has been reduced in 2012, RTP grants were awarded to: the U.S. Forest Service for signs for approximately 300 miles of Off-Highway Vehicle (OHV) trails in the Cibola National Forest; and to the Department of Game and Fish to purchase electric motorcycles to monitor and log OHV trail opportunities, and for the Route 66 State OHV Park, the first state-sponsored OHV training facility.

In addition, over \$1 million was awarded to two statewide State Park projects—one to maintain, rehabilitate and construct trails in 15 state parks; and one to upgrade, maintain, and develop 30 miles of trails, update signage, and address accessibility issues in 13 state parks. A phase of this project is replacing and widening the main path at Living Desert Zoo and Garden State Park to bring it into ADA compliance.

Critical projects completed by State Parks also include: four trails at Heron Lake State Park, the West Lakeshore Trail at Elephant Butte Lake State Park, trails along the north and south banks of the San Juan River at Navajo Lake State Park, the Nature Trail at Ute Lake State Park, the Leasburg Dam State Park Mogollon Trail project, and the Viewpoint Loop Trail at Villanueva State Park.

State Parks will continue to make progress on statewide trail efforts in the coming year to include assessment and rehabilitation of trails at Sugarite Canyon State Park after the devastating Track Fire, trail assessment at Cerrillos Hills State Park, development of a major trail system at City of Rocks State Park, ADA-compliant improvements at Mesilla Valley Bosque State Park and statewide mapping and signage projects.

The Land and Water Conservation Fund Program is managed by State Parks. This federal assistance program is made possible through the U.S. National Park Service. The program provides funds for authorized federal assistance to states in planning, acquisition, and development of needed outdoor recreational land and water areas and facilities. This translates to about \$350,000 per year for the statewide program in New Mexico. State Parks will use the annual allotments to: undertake major renovations of the comfort station facilities at Rockhound, Pancho Villa, and Oasis State Parks as well as park renovations at Bluewater Lake State Park.



**STATE PARKS MARKETING PROGRAM:** A new State Park brochure was unveiled in 2012 along with two trail specific brochures--one each for Elephant Butte Lake State Park and Heron Lake State Park. The statewide brochure focused on promoting 35 state parks in a regional format. Internationally accepted icons used in the brochure allow the various state parks to communicate their five most popular activities. This develops "top of mind awareness" within that region and encourages visitors to expand their stays.

A new website was created for EMNRD and State Parks had a dedicated committee to create its new look. This website is now live and is receiving good reviews. Also, State Parks has begun to use social media such as Facebook, Twitter, and Pinterest to reach new audiences.

State Parks marketed "signature events" in 2012, including new programs featuring star parties, festivals, guided walks, and fishing derbies. Many of these events served as fundraisers for local non-profits as well as for State Parks, enhancing community relations. One such event, the 50th Anniversary of Oasis State Park, was co-sponsored by the Friends of Oasis State Park. Marketing for "signature events" included advertising in local papers, on radio and television stations, and through the use of posters.

State Parks continued its partnership with the New Mexico State Tourism Department in 2012, which funded publications and television broadcasts in New Mexico and west Texas. State Parks is also partnering on the "New Mexico True" campaign and will collaborate with Tourism on website and social media opportunities.

Several Centennial events were organized and proved very popular including Cerrillos Hills State Park's Grand Opening and dedication of the "Centennial Room." State Parks was also a co-sponsor of the Heritage Preservation Division's Centennial Poster.

An event to celebrate the state's Centennial and the Centennial of the Girl Scouts was held at Hyde Memorial State Park. Governor Susana Martinez was a keynote speaker at the event and State Parks and the Girl Scouts co-marketed and provided exhibits and great hands-on activities.

Triathlons were very popular in 2012 and a total of seven were held across the state from Sumner Lake State Park to Elephant Butte Lake State Park drawing over 1,500 attendees.

The Marketing Program continued sending out the popular "E card," which has been picked up by partners and circulated to an estimated 15,000 e-mail accounts. State Parks' main marketing theme, appealing to the current economic climate and the popularity of "stay-cations" (vacations close to home), continued with the advertising campaign of Short Trips... Long Memories. The inclusion of "Your Best Recreation Value Close to Home" remained as a strong positioning statement as well.



State Park Brochure.



Governor Martinez at Hyde Memorial State Park Girl Scout Centennial event.



Special Event Posters.

# Energy, Minerals and Natural Resources

## Department



Photo by: Lauren Aguilar

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- 69-11-3 (1933, as amended through 1989)
- 69-25A-10 (1979)
- 69-26-1 (1933, as amended through 1989)
- 69-26-2 (1933, as amended through 1989)
- 69-26-3 (1933, as amended through 1989)
- 70-2-12 (1978, as amended through 2004)

For more information on the Energy, Minerals and Natural Resources Department visit:  
[www.emnrd.state.nm.us](http://www.emnrd.state.nm.us)

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