





New Mexico Energy, Minerals and Natural Resources Department ANNUAL REPORT





Photo by: Christopher T. Martinez

Energy, Minerals and Natural Resources Department

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



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Cabinet Secretary



Energy, Minerals and Natural Resources Department

A Message from Cabinet Secretary Jon Goldstein

The New Mexico Energy, Minerals and Natural Resources Department is committed to the wise management of New Mexico's natural heritage for the benefit of our state's diverse peoples and future generations. This requires a commitment to protect and carefully manage our resources while fostering a diverse and reliable supply of energy.

Our tough economic times only make this job more important. New Mexico's future sustainable economic development is based upon keeping our state a healthy and attractive place to raise families and a state that continues to attract visitors and businesses.

The department works to position New Mexico as a national leader in energy and natural resource management to ensure a sustainable environmental and economic future. The department has four main areas of focus:

The development of reliable supplies of energy, and energy efficient technologies and practices, with a balanced approach toward conserving both renewable and non-renewable resources;

Ensuring the protection of the environment and responsible reclamation of land and resources affected by mineral extraction;

Growing healthy, sustainable forests and managing them for a variety of users and ecologically sound uses; and

Improving the state park system so that it protects New Mexico's natural, cultural and recreational resources for posterity and contributes to a sustainable economy statewide.



Governor Bill Richardson

This past year has seen change in the department. Jim Noel joined the agency as Deputy Cabinet Secretary in June 2009, and Reese Fullerton moved to the State Personnel Office. Since January 1, 2010, I have been proud to continue the progressive efforts begun by former Secretary Joanna Prukop concerning public lands management, regulation of the oil and gas and mining industries, clean energy development, enhancing state parks, expanding land conservation and wildlife habitat protection initiatives, and addressing forest and watershed health. This agenda will grow and develop in the year ahead as we continue to lead Governor Richardson's efforts of recreating New Mexico as the "Clean Energy State."

I hope you will enjoy Energy, Minerals and Natural Resources Annual Report, which includes our 2009 accomplishments and our latest available data and statistics.



Organization

Charts



Energy, Minerals and Natural Resources Department



Cabinet Secretary Jon Goldstein Administrative Information Public Information Support Technology Office Deputy Officer Executive Assistant Manager Jodi McGinnis Porter Secretary Joe Montaño Brenda Weimer Jim Noel Youth Conservation General Special Assistant For Waste Isolation Corps Counsel Renewable Energy Pilot Program Coordinator Executive Director Bill Brancard Craig O'Hare Anne deLaine W. Clark Wendy Kent

Energy Conservation and Management Division



Fernando Martinez

Division Director



Energy Conservation and Management Division

A Message from Division Director Fernando Martinez

The Energy Conservation and Management Division (ECMD) is committed to help ensure that New Mexico continues to be a national leader as the "Clean Energy State" and to help its citizens enjoy the benefits of clean energy in their daily lives. Effective clean energy programs are vital for greater energy security and increased conservation and efficiency across all sectors of our state's economy.

ECMD manages and puts into practice the state's clean energy programs that reduce energy use and increase clean energy supplies to achieve these goals. Our programs - renewable energy, energy efficiency and conservation, and efficient transportation and clean fuels - support measures to reduce electricity costs, work toward reducing greenhouse gas emissions while conserving water, and encourage new ways to make conventional energy sources cleaner. Successful implementation of these programs protects and conserves our state's natural resources and environment. Our report provides specific information about program successes in 2009.

The passage and implementation of the American Recovery and Reinvestment Act of 2009 brought about important changes to a U.S. Department of Energy program overseen by ECMD and added new ones. The State Energy Program, in existence for decades, experienced vastly increased funding of \$31.8 million; the Energy Efficiency and Conservation Block Grant program was introduced and funded with \$20 million, \$9.6 million of which is managed by our division; oversight of the new State Energy Efficient Appliance Rebate Program was assigned to our office along with \$1.9 million in funding; the new Energy Assurance Program received \$382,000. In addition to our "usual" programs, these enhanced and new programs increased our workload immensely. To help us effectively manage the multitude of new projects, seven additional staff members were approved for our division for the duration of the Recovery Act programs.

The opportunities for energy efficiency, energy conservation, and jobs retained and created made possible by the various Recovery Act programs are far reaching and will have significant impacts on our citizens, state agencies, city and county governments, universities and schools, and tribes and pueblos for years to come. Although final results won't be fully known until projects are completed and energy savings are tracked and reported, some projects already underway are reporting immediate dramatic energy and cost savings. More information follows in the pages of this report.

We are working toward more reliable supplies of energy and energy efficient technologies and practices that will lead to greater economic and environmental sustainability for New Mexico. Please join us in these efforts as each of us can and must help make a difference in our energy future. Visit our website at www.CleanEnergyNM.org for complete information or call us for assistance.



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 clean energy program. This is accomplished by managing and administering various plans that reduce energy use, including the Renewable Energy Program, the Energy Efficiency in Buildings Program, and the Clean Fuels and Efficient Transportation Program. These programs encourage new ways to make traditional energy sources cleaner and reduce the amount of climate-changing greenhouse gases they produce.

With the American Recovery and Reinvestment Act of 2009 (Recovery Act) came several new ECMD-managed programs and increased funding for an existing program, all funded through the U.S. Department of Energy (DOE). The State Energy Program, in existence for years with annual funding of several hundred thousand dollars, was boosted with \$31.8 million dollars for clean energy projects. The new Energy Efficiency and Conservation Block Grant Program was funded with \$9.6 million under ECMD's oversight. The new State Energy Efficient Appliance Rebate Program received \$1.9 million and is under development. The Energy Assurance Planning Program was funded with \$382,070.

The division continued its outreach efforts around the state in support of its programs and in helping to educate the public and local governments about opportunities made available through the Recovery Act. Through funding from DOE and in collaboration with staff, an award-winning contractor spearheaded other outreach projects, including print ads and articles, movie theater ads, public service announcements and new educational materials for our State Fair displays. Our always-available website – www.CleanEnergyNM.org – serves as a major avenue for outreach and education.

Accomplishments

RENEWABLE ENERGY PROGRAM: This program promotes the development and production of solar, wind, biomass and geothermal energy to help lessen our dependence on fossil fuels and foreign oil. The Clean Energy Projects and Energy Innovation Fund programs, as well as a variety of tax credits, provide incentives to advance the use of these renewable resources. These incentives, combined with data collection, studies and research, all play pivotal roles in demonstrating the viability of renewable energy

SOLAR: Blessed with an abundance of sunshine, New Mexico ranks second in the nation in solar energy production potential. Advancements in the state's solar energy production are possible thanks to a strong state leadership willing to focus on solutions that provide incentives for citizens, businesses and schools.

Homeowners, businesses and agricultural entities that install solar photovoltaic or solar heating systems are eligible for New Mexico's Solar Market Development Tax Credit benefits. Up to \$5 million in state government tax credit support is available annually through 2016. Since its inception in 2006, \$18 million has been invested in solar installations; of that, \$3.1 million in state solar credits was used to leverage \$2.3 million in federal tax credits. Seven hundred (700) solar systems producing 1.2 megawatts and generating 22.3 million BTUs per day have been installed. Solar projects with which our division was involved this year include:

RECOVERY ACT (federal funding)

Solar Schools: With \$10 million in funding from Governor Richardson's discretionary Recovery Act fund, a program for solar electric systems at public schools statewide was initiated and will receive technical assistance from ECMD staff.

CLEAN ENERGY PROJECTS (state and recipient funding)

Eagle Nest State Park Visitor Center: A 4.8-kilowatt system was installed at the building.

Oliver Lee State Park Visitor Center: A 6-kilowatt solar photovoltaic electric power system was installed.

Jemez Pueblo: A 4-megawatt solar photovoltaic power plant will generate and sell commercial electric power; the planning and design phases of this project are nearing completion.

City of Belen: Three 3-kilowatt dish Stirling engine solar systems are up and running in the parking lot of the Belen City Hall. With efficient lighting installed throughout the building, nearly half of the remaining electricity needs are now met by the solar systems.

Mid-Region Council of Governments: ECMD provided funds to implement a photovoltaic solar system at the South Capitol train station in Santa Fe. This grid-tied solar system generates approximately 85 percent of the electricity required to power station lighting and communications. Visitors to the Rail Runner Express website – nmrailrunner.com – can view real-time energy production data for this system.



A photovoltaic solar system at the South Capitol train station in Santa Fe.

ENERGY INNOVATION FUND (state and private funding)

University of New Mexico and SkyFuel: The prototype of an advanced parabolic trough receiver that has been optimized to improve performance, resulting in more economical solar thermal electricity generation, is set for testing early next year at Sandia Labs' test facility.

New Mexico State University (NMSU), HelioDynamics, and City of Albuquerque: A solar combined heat and power system will demonstrate commercial-scale solar cooling that reduces both peak electricity demand and water usage for the rental car facility at the Albuquerque International Sunport.



Also this year, ECMD approved an application for the Renewable Energy Production Tax Credit for a 30-megawatt solar photovoltaic power plant near Raton that will be constructed in 2010.

WIND: New Mexico now has a total of 596 megawatts of installed wind capacity at six active wind farms. ECMD supports wind energy development through an active outreach program, wind resource data collection and dissemination, and by administering the State's Renewable Energy Production Tax Credit program.

A new wind project, High Lonesome Mesa, was built south of Willard in Torrance County on private ranch lands. The High Lonesome wind farm became operational in July, with 100 megawatts of power production capacity produced by 40 wind turbines, each with a 2.5-megawatt capacity. With the commissioning of this project, a report by the American Wind Energy Association ranked New Mexico as the state with the fifth highest growth rate in wind energy capacity from July to September.

Albuquerque International Sunport Combined Heating and Cooling project at the car rental facility. The New Mexico Wind Energy Working Group met in both Santa Fe and Roswell this year with 30 active participants attending meetings. Participants are stakeholders in New Mexico wind power, such as government (local, state, and federal) agencies, utilities, cooperatives, developers, grass-roots and non-profit organizations, land owner associations, farmers, ranchers, tribal organizations, and environmental organizations. The group's objectives are to promote environmental protection, boost economic development within the state through the use of wind energy, and foster the increased use of wind-generated electricity by the energy generators and consumers of New Mexico. Additional outreach actions by ECMD staff included a roundtable public television appearance, conference speaking events, and numerous interviews with media outlets.

ECMD continues to operate a 100-meter-tall meteorological tower on New Mexico's eastern plains to collect wind resource data. This long-term wind speed data, provided freely to the public, helps spur the development of New Mexico wind farms.

New Mexico's 596 megawatts of installed wind capacity are generated at six wind farms:

New Mexico Wind Energy Center (204 megawatts), northeast of Ft. Sumner in De Baca and Quay Counties

High Lonesome Mesa Wind Project (100 megawatts), south of Willard in Torrance County

Caprock Wind Ranch (80 megawatts), south of San Jon in Quay County

San Juan Mesa Wind Project (120 megawatts), west of Elida in Roosevelt County

Aragonne Mesa Wind Project (90 megawatts), west of Santa Rosa in Guadalupe County

Llano Estacado Wind Ranch (2 megawatts), near Texico in Curry County

BIOMASS: Agricultural waste, forest thinnings and algae have the potential to provide affordable renewable energy while reducing environmental hazards and taking advantage of New Mexico's unique landscape.

New Mexico dairies produce more than 1.1 million tons of manure annually. The potential exists for converting that manure into energy, thus reducing waste, avoiding groundwater contamination and mitigating greenhouse gas emissions. The energy, produced as methane gas, would power an engine/generator. ECMD provided assistance to Pecos Valley Biomass Cooperative, a group of dairymen pooling resources to tackle collection and management of dairy waste. Efforts are underway to determine the highest-value use of the energy produced – whether as pipeline quality gas, engine fuel or electricity. As the cost of fossil fuel-based fertilizer rapidly rises, dairymen are also looking to the digested manure solids as an environmentally-benign, nutrient-rich alternative that will help reduce air and water pollution problems associated with dairy waste. The thrust of the Coop's message is low-carbon milk.

Forest thinnings reduce wildfire danger and promote healthy forests, while also providing a fuel resource for biomass boilers. Through leveraged federal funding secured by ECMD, a biomass boiler system was installed at the Ft. Bayard Medical Center in Ft. Bayard. The 150-horsepower solid-fuel boiler system is fueled by woody biomass residuals (screened wood chips) from forest restoration and community fire protection projects. The Ft. Bayard steam plant promotes and encourages the use of wood as a renewable, sustainable fuel source to provide heat for large facilities such as the hospital. This project supports hazardous fuels removal from New Mexico forests and watersheds and promotes viable commercial uses of woody biomass material. The costs for design, purchase and installation of the system, including wood storage, automated handling, combustor and boiler, totaled \$1.5 million.



New Mexico's open spaces and ample sunshine offer an excellent setting for developing an algae-to-energy industry. ECMD, through the Energy Innovation Fund, supported the City of Carlsbad and NMSU in two algae-to-biofuels projects. The City of Carlsbad Algae Biodiesel Project's primary purpose was to produce biodiesel on a commercial scale using brackish water. The project has been expanded to increase algae production and harvesting using land and resources that do not compete with food production.

GEOTHERMAL: ECMD serves as the state liaison to the DOE geothermal program and coordinates the New Mexico Geothermal Energy Working Group (which met in Socorro in May to discuss technical aspects of ground source heat pump systems, direct use and geothermal for electricity production). Our division disseminates information on geothermal resources, development and

incentives, and monitors geothermal development activities to promote environmental and economic sustainability for New Mexico and its citizens.

Originally used in spas and resorts and now in greenhouses, New Mexico's geothermal resources have been commercially-used for decades. With the passage of legislation in the 2009 legislative session, the New Mexico Geothermal Tax Credit will be available for the 2010 tax year for applications utilizing a broader range of direct use developments for water and space heating (e.g., a residential heat pump system can qualify for a personal income tax credit of 30 percent of the system cost).

The Energy Information Administration reports that, in 2007 (latest available data), total geothermal energy consumed in New Mexico equaled 732 billion BTU. The majority of this consumption is from direct use within the industrial sector.

ENERGY EFFICIENCY IN BUILDINGS PROGRAM: Green is the future of New Mexico. Green jobs, green industries, and green buildings are in the news on a regular basis. The groundwork New Mexico laid for the state's green future with its Lead By Example initiative, progressive tax incentives, and green professionals education assistance programs has positioned us as a leader among states. The square footage of energy-efficient green buildings continues to rise. In addition to over 300,000 square feet of public buildings that are pursuing LEED° certification at the Silver or Gold level, the private sector has more than twice that under construction or completed in the commercial arena. Designed to meet the 2030 challenge, these buildings will reduce fossil fuel-based energy consumption by half that of the current building stock.

Since the inception of the Sustainable Building Tax Credit (certifying homes under the LEED[®] for Homes or Build Green New Mexico rating systems), close to 200 homes have been built throughout the state that use at least 40 percent less energy than a new home built to today's building code. The homes comprise over 400,000 square feet and are estimated to save over five billion BTUs of energy every year. This includes homes built as part of the Moving Toward Zero Energy Homes Program that actually produce as much energy as they consume – for a true net zero energy consumption. Developments are underway in Rio Rancho and Farmington that will dramatically expand the number of zero energy homes in the coming years.

a blomass boller system was installed at the Ft. Bayard Medical Center in Ft. Bayard, NM. ECMD supported this extraordinary growth of energy efficient green building through expanded educational opportunities. In addition to numerous presentations, articles, and media interviews to expand awareness, ECMD launched a new self-paced Tool Kit that provides building professionals a wealth of information about underlying green principles and hands-on assistance in designing and constructing green building projects. ECMD's continued collaboration with the U.S. Green Building Council New Mexico Chapter and other like-minded educational organizations plays a critical role in spreading the expertise and realizing the full impact of a new way of building.

That green building is becoming accepted in the industry is evidenced in the adoption of the 2009 International Energy Conservation Code that ECMD is driving with the Construction Industries Division of the Regulation and Licensing Department. Designers and contractors are working together to raise the bar for energy conservation in all new buildings in the state.

Following up on energy audits performed on Department of Cultural Affairs (DCA) facilities, ECMD received certification by the New Mexico Finance Authority of the DCA audit results. The Authority subsequently entered into the first Clean Energy Revenue Bond contract with DCA to pay for the recommended energy savings activities. DCA is issuing a Request For Proposals to contract with a firm to perform the improvements. ECMD continues to respond to schools and other state agencies expressing interest in the program.

ECMD chairs the High Performance (HiP) Schools Task Force, which oversees \$3 million allocated to new schools and to renovating existing public schools to increase building energy efficiency by 50 percent. The task force continues to monitor projects to assure the goals are pursued and the results are used to justify legislation that would require the same increase in energy efficiency for any public building receiving legislative funding.

CLEAN FUELS AND EFFICIENT TRANSPORTATION PROGRAM: This

program helps New Mexicans save money by promoting public transportation and domestically-produced fuels such as biodiesel and New Mexico-produced natural gas and liquefied petroleum gas to help reduce our dependence on imported fossil fuels. The program also supports ride-sharing and multi-modal programs, as well as the implementation and use of renewable fuels such as biodiesel and ethanol, and electricity for vehicles.

ECMD provided funds for the City of Santa Fe's Parking Division to purchase two electric vehicles for use in daily parking enforcement patrols. A photovoltaic solar project funded by ECMD at Albuquerque Sunport will produce power for electric vehicles used at the airport.

ECMD has supported biofuels stations in Santa Fe and compressed natural gas (CNG) fueling stations and fleets in Las Vegas, Santa Fe, Albuquerque and Socorro with funds and technical assistance. Our program works closely with Land of Enchantment Clean Cities Coalition to promote efficient transportation, advanced power-train technologies and cleaner-burning alternative and renewable fuels.

Through grants from Clean Energy and State Energy projects funds, ECMD has established a biodiesel refueling station at the New Mexico Department of Transportation's Roswell/District 2 facility to comply with the Biodiesel Fuel Standards Act passed by the legislature in 2007. The Act states that, beginning in July 2010, all diesel fuel sold to state agencies, political subdivisions of the state and public schools for motor vehicles operated on streets and highways shall contain five percent biodiesel. In 2012, all diesel fuel sold statewide for highway use shall contain at least five percent biodiesel.

New Mexico has nine CNG public or private fueling stations that support school and transit bus fleets in Santa Fe and Albuquerque, as well as public and private passenger car and light truck fleets in Santa Fe, Albuquerque, Las Vegas, Socorro and Las Cruces. The benefits of CNG compared to gasoline or diesel fuel, aside from a 15 to 40 percent per gallon fuel savings, are reduced smog and greenhouse gas emissions.

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AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009 PROGRAMS

STATE ENERGY PROGRAM: The existent State Energy Program received \$31.8 million in additional funding this year through the Recovery Act. Eligible entities received awards for projects that will achieve the following goals: increase energy efficiency to reduce energy costs and consumption for consumers, businesses, and government; reduce reliance on imported energy; improve the reliability of electricity and fuel supply and the delivery of energy services; and reduce the impact of energy production and use on the environment.

| AWARD WINNER | CITY/COUNTY | PROJECT | AWARD |
|--|---------------------------------------|---|--------------|
| University of New Mexico | Albuquerque/Bernalillo | Energy efficient lighting | \$230,000 |
| NMSU Grants Campus | Grants/Cibola | Energy upgrades | \$491,557 |
| Fort Sumner Municipal Schools | Fort Sumner/De Baca | Energy efficient lighting and HVAC | \$500,000 |
| Lordsburg Municipal Schools | Lordsburg/Hidalgo | Lighting replacements at five school buildings | \$171,500 |
| Lovington Municipal Schools | Lovington/Lea | Energy efficient lighting | \$116,000 |
| Jemez Pueblo | Jemez/Sandoval | Biomass heating system for Walatowa Visitor Center | \$99,990 |
| Institute of American Indian Arts | Santa Fe/Santa Fe | Insulation upgrades | \$434,660 |
| Magdalena Municipal School District | Magdalena/Socorro | Solar thermal collector and storage systems | \$119,800 |
| Rio Metro Regional Transit District | Belen/Valencia Bernalillo/Sandoval | Solar-powered shade parking structures, bike lockers | \$492,600 |
| Dexter Consolidated Schools | Dexter/Chavez | Energy efficient lighting in four school districts | \$139,406 |
| Dexter Consolidated Schools | Dexter/Chavez | Lighting controls project | \$360,593 |
| Silver City Consolidated School District | Silver City/Grant | Insulated roofs, solar hot water, energy management system | \$357,500 |
| Clovis Municipal Schools | Clovis/Curry | LED office lighting | \$76,925 |
| Clovis Community College | Clovis/Curry | Lighting and cooling system replacement | \$119,104 |
| Jicarilla Apache Nation | Dulce/Rio Arriba | Geothermal heating and cooling, solar array, waste-oil burner | \$350,000 |
| Northern New Mexico College | El Rito/Rio Arriba | Heating system replacement | \$495,500 |
| Northern New Mexico College | Espanola/Rio Arriba | Repair existing solar systems | \$456,775 |
| San Juan College | Farmington/San Juan | Solar power system, energy efficiency replacements, workforce/wind generation training, community education | \$475,000 |
| Roy Municipal Schools | Roy/Harding | Energy efficiency measures | \$177,000 |
| State Fair Commission | Albuquerque/Bernalillo | Expo NM parking lot LED lighting | \$71,500 |
| State Fair Commission | Albuquerque/Bernalillo | Tingley Coliseum LED light replacement | \$266,315 |
| University of New Mexico | Albuquerque/Bernalillo | Solar system upgrades | \$128,000 |
| Cloudcroft Schools | Cloudcroft/Otero | Energy efficient lighting | \$150,000 |
| New Mexico School for the Blind and Visually Impaired | Alamogordo/Otero | HVAC, energy efficient lighting and building envelope improvements | \$235,000 |
| New Mexico Department of Cultural Affairs | Santa Fe/Santa Fe | Window and HVAC replacement for Museum of International Folk Art | \$500,000 |
| New Mexico Department of Information Technology | Statewide | Reduce state employee travel through web- based collaboration technologies | \$230,000 |
| New Mexico General Services Department | Statewide | Lighting, insulation, HVAC upgrades | \$12,000,000 |
| New Mexico Department of Transportation | Statewide | LED traffic signal lighting replacement | \$5,000,000 |
| Total | | | \$24,244,725 |

ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT

PROGRAM: With \$9.6 million under ECMD oversight, this new Recovery Act program aims to help local governments implement strategies to reduce both fossil fuel emissions and total energy use. The program emphasizes a community-based approach to help meet energy and climate protection goals.

| AWARD WINNER | PROJECT | AWARD |
|---|---|-------------|
| City of Lordsburg | Increase Civic Center energy efficiency | \$186,834 |
| Los Alamos County | Solar thermal project | \$103,000 |
| City of Tucumcari | City Hall efficient lighting | \$52,000 |
| City of Espanola | Geothermal heating system | \$451,680 |
| City of Santa Fe | Seven city buildings efficiency upgrades | \$500,000 |
| Town of Taos | Solar electric on Town Hall; audit town-owned buildings | \$490,490 |
| Bernalillo County | Audit and upgrade efficiency of county buildings | \$500,000 |
| City of Clovis | Civic Center 55-kW solar system | \$500,000 |
| Village of Grady | 50-kW wind turbine and senior center PV installation | \$431,908 |
| City of Las Cruces | Convention Center green grid, with solar electric and small wind turbine | \$495,330 |
| Hidalgo County | Audit and upgrade efficiency of county buildings; residential and commercial housing outreach; and recycling program | |
| Quay County | County courthouse energy efficiency measures | \$347,320 |
| Union County | County courthouse energy efficiency measures | \$500,000 |
| Mora County | County courthouse energy efficiency measures | \$500,000 |
| Town of Clayton | Audit and upgrade efficiency of town and school buildings; green workforce training | \$434,600 |
| City of Bloomfield | Energy efficiency upgrades | \$397,000 |
| Santa Fe County | County facilities energy audit; GIS for efficient routing of county vehicles; and countywide LED street light replacements | \$475,520 |
| Town of Silver City | Office of Sustainability for Silver City and Grant County | \$341,298 |
| Town of Edgewood | Two 50-kW wind turbines for municipal electricity | \$430,000 |
| City of Deming | Solar-charged LED street lights | \$50,000 |
| Environment Department, Solid Waste Bureau | New recycling programs in underserved rural areas | |
| Total | | \$8,109,186 |

STATE ENERGY EFFICIENT APPLIANCE REBATE PROGRAM:

In another new Recovery Act program, ECMD plans to have the State Energy Efficient Appliance Rebate Program implemented by April 2010 with \$1.9 million. As now designed, the program will offer rebates of \$200 on new

ENERGY STAR clothes washers, gas furnaces, and refrigerators. ECMD is finalizing New Mexico's plan with DOE.

ENERGY ASSURANCE PLANNING PROGRAM:

Through Recovery Act funding of \$382,070 for this new program, ECMD will contract with a firm on a project that will increase New Mexico's capacity to respond to energy emergencies and update the state's Energy Emergency Plan with those changes. The plan will incorporate emerging energy efficiency and renewable energy technologies, including digital "smart grid" technology for electric energy supply systems.



Removal of incandescent traffic signal lamps and installation of light emitting diodes.

CLEAN ENERGY LEGISLATION ADOPTED IN 2009:

HB 375 Certain Geothermal Heat Pump Tax Credits: Establishes a 30 percent income tax credit for groundcoupled heat pump systems up to a maximum credit of \$9,000 per system. EMNRD certifies the systems and is limited to certifying no more than \$2 million per year in tax credits.

HB 572 Solar Energy Improvement Special Assessment Act: Allows for counties to adopt "solar energy improvement special assessments" that can be used to finance solar energy improvements (photovoltaic and solar thermal) to a home or business. The special assessment is used to pay the loan on the improvement and stays with the property at time of sale of the home or commercial property.

HB 622 Green Jobs Act: Authorizes the establishment of a "Green Jobs Fund" and directs the Higher Education Department to "develop a plan for the development of green jobs training programs...." The Green Jobs Fund will consist of funds received pursuant to the federal Green Jobs Act of 2007 and other sources.

SB 237 Renewable Energy Tax Credit: Amends the existing Advanced Energy Tax Credit statute to make the six percent (of project development costs) credit more "accessible" to renewable energy developers – personal and corporate income taxes are added as types of taxes that can be used toward the credit and the carry forward period is extended from five to ten years. Geothermal and solar photovoltaic systems are added to the types of advanced energy technologies that qualify for the credit.

SB 257 Solar Market Development Tax Credit: The existing New Mexico solar tax credit is a combined federal and state tax credit of 30 percent. The federal government recently amended the federal tax credit to a full 30 percent without the previous \$2,000 tax credit per system cap. SB 257 establishes a simple ten percent state solar tax credit that is in addition to the now unrestricted federal 30 percent credit.

SB 288 Higher Education Alternative Energy Program Awards: Creates the Higher Education New Energy Development Fund for universities and colleges to develop programs in alternative energy and energy efficiency. The appropriation was removed from the bill.

SB 291 Sustainable Building Tax Credit Provisions: Amends the existing tax credit to: 1) clarify that manufactured and modular homes installed on a permanent pad qualify for the credit (even if manufactured out-of-state); 2) adds new Build Green New Mexico residential levels; 3) allows EMNRD to categorize multi-family dwellings as "commercial" if the annual aggregate residential cap has been reached in a given year; and 4) allows non-profit organizations (such as affordable housing builders) to take the credit via transferability.

SB 318 Green Jobs Development Training Funds: Allows the Industrial Training Board to spend up to \$1 million of development training funds for the development of training in green industries.

SB 647 Renewable Energy Financing District Act: Permits cities and counties to form "Renewable Energy Financing Districts" in order to facilitate the funding of renewable energy improvements (including solar, wind, and geothermal heat pump systems). This would allow local governments (and homeowners who need to finance their renewable energy improvement) to take advantage of zero interest, tax free federal "Qualified Energy Conservation Bonds." The bonds are paid off via a special tax assessment for the renewable energy improvement.



Data and Statistics

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 megawatts, over 70 percent of which is located at two coal-fired plants near Farmington: the Four Corners and San Juan Generating stations. California and Arizona utilities own approximately 68 percent of these two plants.



Approximately one-third of the electricity generated in New Mexico is consumed in other states. Total electrical generation for the past several years is shown in Figure 1. Electricity generated in 2007 (latest data available) was 3.5 percent lower than in 2006. In 2007 electricity generation in New Mexico was 77 percent from coal, 19 percent from natural gas, 3.9 percent from wind and 0.5 percent from hydro.

There are three investor-owned utilities in New Mexico, serving approximately 71 percent of the state's customers (Figure 2). 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 eight percent of the state's electric customers.



As of 2007, the number of New Mexico customers buying electricity and the price paid per kilowatt-hour 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 4.6 percent in the residential sector, 2.0 percent in the commercial sector, and 14.8 percent in the industrial sector over the four-year period of 2004 through 2007. As of 2007, New Mexico's prices compared to U.S. prices were: 15.1 percent lower in the residential sector, 21 percent lower in the commercial sector, and 12.5 percent lower in the industrial sector.

ENERGY CONSUMPTION: Total New Mexico energy consumption was 845.5 trillion British Thermal Units (tBTU) in 2007. Most of the energy consumed in the state comes from coal (296.1 tBTU), followed by petroleum (284.8 tBTU), and natural gas (240.3 tBTU) resources. In 2007, renewable energy contributed 2.9 percent or 24.3 tBTU (Figure 3).



Of New Mexico's net energy consumption (based on 2007 data), the industrial sector consumed the most energy at 35.4 percent (251.9 tBTU), followed by the transportation sector 30.9 percent (219.6 tBTU), the commercial sector 17.6 percent (124.9 tBTU) and the residential sector 16.1 percent (114.3 tBTU). In 2007, New Mexico's residential and commercial sectors consumed less energy out of total consumption compared to the nation, while the state transportation and industrial sectors consumed more energy compared to the U.S. as a whole (Figure 4).



RENEWABLE ENERGY CONSUMPTION: Total New Mexico renewable energy consumption was 24.3 tBTU in 2007. Of that amount, wind accounted for 56.8 percent (13.8 tBTU), and biomass 23.5 percent (5.7 tBTU). Other renewables such as hydroelectric, ethanol, solar and geothermal accounted for 19.8 percent (4.8 tBTU) (Figure 3). Wind continues to grow as the major renewable energy used in the state, whereas nationally wind is the third largest renewable resource after biomass and hydropower.

ENERGY EXPENDITURES: New Mexico's 2007 primary source energy expenditures were \$7.17 billion. Most expenditures were for petroleum at \$5.54 billion (77 percent). Natural gas expenditures were \$1.08 billion (15 percent), coal \$530 million (7.4 percent), and renewable energy \$25.5 million (0.4 percent, all biomass). For other renewable energy forms – wind, solar, hydroelectric and geothermal – there were no fuel expenditures. Coal-fired power generation in-state retail electricity sales were \$1.62 billion.



Forestry Division



Arthur "Butch" Blazer

State Forester



Forestry Division

A Message from New Mexico State Forester Arthur "Butch" Blazer

As we near the end of the first decade of the new century, we face some daunting challenges when it comes to addressing the needs of our forested lands. The New Mexico State Forestry Division is joining our local, state, tribal and federal partners in supporting an "all-lands" approach that recognizes the value of all trees – rural and urban, public and private. While the division's focus will always be on state and private lands, we understand that forest threats and public benefits cross boundaries, especially in New Mexico, where land ownership is so widely diverse.

It's our feeling that these issues are best addressed through integrated partnerships that will open markets, allow resource professionals to share best practices more efficiently and create a better avenue for the sharing of information on all levels.

What began several years ago with the New Mexico Forest and Watershed Health Plan will continue with this all-lands approach. We will continue to develop our working relationships with our federal partners, such as the Forest Service, Natural Resources Conservation Service, Bureau of Indian Affairs, and the Bureau of Land Management, as well with the 22 tribes located in our state. These relationships will help us focus policies and resources on elevating healthy working forests as a strategic economic and environmental priority. With these partners, we will be able to invest in continued market development, State Forestry cooperative programs and landowner assistance programs that will provide an essential foundation for successful all-lands outcomes.

In addition to our responsibilities regarding wildfire suppression on state and private land, New Mexico State Forestry provides essential infrastructure that includes identifying and providing technical and financial assistance to landowners, developing and administering best management practices programs and forest practices regulations and the implementation of conservation programs.

In our report this year, you will learn about our Community Forest and Conservation Seedling programs that also help us foster partnerships that expand the recognized value of trees on a public and private level.

The Forestry Division staff continues to be tireless champions of our goal of proper forest and watershed health in New Mexico and we are definitely seeing success come from this work. I hope you will enjoy reading about our successes and how we work for all New Mexicans and all-lands across our beautiful state.

We invite you to visit our website, www.nmforestry.com, for more information about our many important programs.



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Forestry Division

MISSION: The 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 assists New Mexico communities by evaluating those most at risk to wildfire and insect infestation by developing appropriate management programs and implementing mitigation projects. Assistance is also provided 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 works to develop the forest products industry (e.g., landscaping, construction, woody biomass) that use thinning by-products. In addition, Forestry oversees an inmate work camp which utilizes trained minimum-security inmate crews for work on conservation projects and wildland fire suppression.

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

The New Mexico Forest and Watershed Health Office works to improve our forests' health and shares informational materials. It serves as a central contact point for local, state, federal and tribal activities working to improve enhanced wildlife habitat, reduced susceptibility to pathogens and wildfire, improved water quality and reduced wildfire risk to communities.

Landowners and communities receive assistance with: fire prevention planning; forest management; urban and community tree development and management; low-cost seedlings for individuals; larger community projects through the Forest Re-Leaf and other urban forestry programs; conservation easements through the Forest Legacy Program; and numerous educational presentations on these topics.

Accomplishments

Forestry had the honor of hosting the National Association of State Foresters Annual Meeting in 2009. State foresters from the continental U.S. and its territories and protectorates gathered to discuss current issues facing forest and watershed health. They shared best practices in land treatments and collaboration with local, state, federal and tribal agencies, and non-governmental organizations.

FOREST AND WATERSHED HEALTH: Forestry continued its efforts to address areas that have traditionally presented a barrier to proper treatment and land management of private lands in New Mexico through the implementation of the New Mexico Forest and Watershed Health Plan. Implementation occurs through support for local on-the-ground efforts, state-level strategic planning and coordination, and state-level management and administration.

Staff from Forestry's district offices as well as its Forest and Watershed Health Office, working closely with

interagency partners, assisted community groups and non-governmental organizations in drafting land management plans, project design, funding identification for restoration/management projects, and outreach/education activities.

Forestry kicked off its "Know Your Watershed" campaign designed to promote healthy forests, and support conservation and restoration efforts. The campaign includes radio and television ads, written materials, roadside signs, and an exhibit at the Smokey Bear Historical Park in Capitan, New Mexico.

HIGHLIGHTS FROM THE DIVISION'S DISTRICT OFFICES

BERNALILLO DISTRICT – Cibola, McKinley, Valencia, Bernalillo, Sandoval, Torrance, Los Alamos and Santa Fe counties: The Bernalillo District, established in 1983 in west-central New Mexico, covers 6.6 million acres comprising 160,000 acres of commercial forest, 1.54 million acres of piñon-juniper and bosque woodland, and 4.9 million acres of non-forested watershed.

In 2009, the Bernalillo District assisted landowners and fire departments by providing field visits, written management plans, design- and cost-sharing of forest conservation practices such as thinning and tree planting projects, workshops on forest and watershed health, and fire training. This district also reviews commercial harvesting activity on private lands to assure compliance with state harvesting regulations.

In 2009, more than 140 wildland fires that burned approximately 2,500 acres occurred on state and private lands within the district.

The Bernalillo District is home to the New Mexico Forest and Watershed Health Office in Albuquerque and Forestry's Inmate Work Camp in Los Lunas.

CAPITAN DISTRICT – Chaves, De Baca, Eddy, Lea, Lincoln, Otero and Roosevelt counties: Due to the dry winter, the Capitan District experienced another busy fire season with 350 incidents that involved 203,453 acres and threatened 126 structures. Capitan District Forester Eddie Tudor leads the Pecos Zone Type III Incident Management Team, which was dispatched to five fires all partially on state and private lands. It is estimated the team saved \$2.5 million by assisting initial attack resources, and efficiently suppressing the fires without the need to escalate them to Type I or Type II incidents. Types I and II wildfires are much larger than Type III and usually threaten communities, requiring large amounts of costly resources.

Workshops for local forest industry entrepreneurs to increase business opportunities were developed. Some of the topics included wood biomass utilization, grant funding opportunities and business plan development.

Approximately \$1.2 million of federal and State Trust Board (STB) funding was used for defensible space and hazardous fuels treatment around multiple communities at risk within Lincoln and Otero counties.

CHAMA DISTRICT – Rio Arriba, San Juan and western Taos counties: The Chama District office, established in 1959, encompasses 357,000 acres of private commercial forestland and 88,000 acres of state and private non-commercial forestland.

The District's primary focus is working with landowners to help them responsibly manage their forest resources and protect them from wildfire. The District also works on many cross-border projects with state and federal agencies in Colorado that impact forest and watershed health in both states.

CIMARRON DISTRICT – Colfax, eastern Taos, and Union counties: The Cimarron District includes approximately 5.6 million acres of land, 60 percent either state- or privately-owned. The district staff works with many large landowners on building stewardship plans to address forest overcrowding and how to dispose of or utilize the large volume of woody biomass created by land treatment such as harvesting or thinning.

LAS VEGAS DISTRICT – Curry, Guadalupe, Harding, Mora, San Miguel and Quay counties: Due to population growth in wildland urban interface areas, emergency responders face increasing challenges with road access, house numbering and firefighting. In order to deal with these challenges, the Las Vegas District Office spent much of 2009 developing a wildland urban interface working group comprising non-government organizations, local residents, and local, state and federal agencies. The Las Vegas District Wildland Interface Working Group (Working Group) works to identify at risk values and resources taking into consideration such factors as public safety, local economics, real estate, aesthetics and wildlife habitat. Additionally, the Working Group acts as a forum to share information regarding public awareness of fire risk and proper land care for forest health and fire management.

The collaborative efforts within the Working Group have resulted in receipt of several Wildland Urban Interface and Hazardous Fuels Reduction grants. Additional collaboration with the Tierra y Montes Soil & Water Conservation District of Las Vegas and the Western Mora Soil & Water Conservation District achieved the treatment of several hundred acres through thinning and harvesting.

The Las Vegas District also worked with the local USDA Natural Resources Conservation Service to acquire a Cooperative Conservation Partnership Grant of \$500,000 for forest thinning projects in the Gallinas and Tecolote watersheds near Las Vegas. Public meetings were held within the district to encourage landowner participation in the thinning projects.

SOCORRO DISTRICT – Catron, Doña Ana, Grant, Hidalgo, Luna, Sierra and Socorro counties: The Socorro District encompasses 8,784,232 acres of state and private land.

In addition to fire suppression and working with landowners by providing technical assistance in forest management, this district is deeply involved with community organizations and collaborations with other government agencies.

A primary player in the "Save Our Bosque Taskforce," the Socorro District participated in the protection and restoration of the Rio Grande Bosque in Socorro County. This includes the care and upkeep of 17 Rio Grande riverside parks, the Socorro Nature Area, multiple landowner assistance projects and invasive species control projects.

BIOMASS UTILIZATION: Forestry partnered with the EMNRD Energy Conservation and Management Division to coordinate the installation of a woody biomass boiler system at the Ft. Bayard Medical Center in Ft. Bayard, New Mexico. The 150-horsepower boiler system is fueled by woody biomass residuals (screened wood chips) from forest restoration and community fire protection projects demonstrating the use of wood as a sustainable fuel source to provide heat for large facilities such as the hospital. The project supports hazardous fuels removal from New Mexico forests and watersheds and promotes commercial use of woody biomass material. The costs for design, purchase and installation of the system including wood storage, automated handling, combustor and boiler totaled \$1.5 million.

Forestry, with the State of Arizona, administers the Southwest Sustainable Forest Partnership (Partnership). The Partnership was created to develop value-added products from small diameter ponderosa pine and other underutilized coniferous species in New Mexico and Arizona. Formerly, these small diameter species were characterized as being of a lower grade than other forest resources and as having little economic value.

The Partnership's goal is to develop an environmentally and economically sustainable forest and wood products industry utilizing small diameter materials removed during forest thinning and restoration treatments. The Partnership is dedicated to addressing the ecological, economic and social effects of creating sustainable community-and tribal-based forest and wood products enterprises in the Southwest.

FIRE PLANNING TASK FORCE: The Forestry-led New Mexico Fire Planning Task Force (Task Force) facilitates the creation and implementation of Community Wildfire Protection Plans (CWPPs).

CWPPs act as guides for wildfire prevention and preparedness for a single community or even an entire county. The plans identify hazardous fuels treatment areas and recommend measures to improve building codes for protection against wildfire and are developed collaboratively between community residents, community leaders and government agencies. Forestry provides consultation and follow-up training for the community leaders generating the plans.

The Communities at Risk Assessment Plan identifies areas most vulnerable to wildfire. During 2009, the Partnership added 16 new communities to the list bringing the total number of at risk communities to 557. Two hundred and seventy-two (272) communities are rated at high risk, 192 at moderate risk and 93 at low risk of wildland fire. The Partnership approved four new CWPPs and the first update to a previously published plan. There are now 57 completed CWPPs statewide.

FIRE MANAGEMENT: Wildland fire in grassy, high desert fuel types continued to dominate fire statistics on state and private land in 2009. During a fire season that began in January and continued through an abbreviated period of seasonal moisture, 712 fires burned approximately 337,731 acres on state and private land. Human-caused fires continued to be the leading cause of this type of wildfire.

Most 2009 fires burned fewer than ten acres. Notable exceptions were: the lightning-caused Pasco Fire burned 93,029 acres in Hidalgo County; the Cato and Four Mile fires charred 55,080 and 29,952 acres, respectively, in Chaves County; and, on May 15, 2009, three separate fires in Lincoln County combined to burn 37,563 acres. The majority of these fires burned in remote, rural areas that posed little threat to communities.

RESOURCE REHABILITATION AND PROTECTION: The New Mexico Forest Legacy Program acquired three perpetual conservation easements on a total of 4,018 acres of private forested land in Catron, Sandoval, and Rio Arriba counties. One conservation easement was donated to Forestry and the other two were purchased by bargain sale with \$50,000 of state funding and almost \$1.2 million in federal grants. Forestry received and processed 31 Assessment Applications for the Land Conservation Incentive Act Tax Credit Program; 28 applications were approved by the Natural Lands Protection Committee to move on to the Application Certification phase, and three were rejected. Currently, 18 applications are with the New Mexico Department of Taxation and Revenue's Property Appraisal Review Division awaiting final certification for a tax credit. To date, eight applications were approved and certification letters were issued to those applicants awarding more than \$1.9 million in tax credits on a total appraised land value of over \$5.5 million.

New Land Conservation Incentive Act guidelines for water rights, mineral reports, and phasing donations were written and are posted on Forestry's website: www.nmforestry.com.

Forestry, in partnership with other state and federal agencies and non-government organizations, embarked on a new Forest Inventory and Analysis (FIA) to assess the forests of New Mexico and project how they are likely to appear in 10 to 50 years and to evaluate current forest management practices for long term sustainability. The inventory will gather data on the species, size and health of trees on federal, state, tribal and private lands. The analysis will identify and evaluate trends in growth, mortality, harvesting, and utilization of timber and other forest products. The inventory and analysis are expected to take two years. Preliminary results will be published in 2012.

PUBLIC OUTREACH: Forestry continues to collaborate with local, state and federal agencies to promote wildfire awareness and prevention. As part of its public information campaign, Forestry developed a wide range of radio, television and roadside billboard advertising to make state residents and visitors more aware of fire danger. Forestry disseminates awareness information at many public and community events. The most notable of this year's events was the sixty-fifth anniversary of the Smokey Bear Forest Fire Prevention Program. The celebration featured the Friends of Smokey Bear hot air balloon and was held at the Anderson Abruzzo International Balloon Museum in Albuquerque.

Forestry promotes teen and young adult awareness of the importance of forest and watershed health through cosponsoring the New Mexico Envirothon, New Mexico Forestry Camp, Project Learning Tree and Future Farmers of America programs. The New Mexico Envirothon is a hands-on environmental problem-solving competition for high school-aged students. Participating teams complete training and testing in forestry, soils and land use, aquatic ecology, wildlife, and current environmental issues. The New Mexico Forestry Camp, an annual weeklong overnight camp in the Jemez Mountains, puts teenagers in an outdoor learning setting, teaching them the basics of forestry while providing a fun camping environment. Project Learning Tree (co-chaired by Forestry and the USDA Forest Service) sponsors teachers' training courses on how to work forest and watershed issues into their existing curriculum. Forestry staff members assist Future Farmers of America chapters in several communities by training teachers and students in forestry, and participating in regional water fairs and environmental competitions.

Forestry's Public Relations Coordinator acts as the State Fire Information Officer providing New Mexico wildfire information to the public and statewide media.

ADDITIONAL ACCOMPLISHMENTS: In 2009, Forestry:

Provided resource management technical assistance and development for 110 forest stewardship and treatment plans affecting approximately 19,050 acres of state and private land. Treatments included fuels reduction, erosion control, reforestation and wildlife habitat improvement.

Provided wildland fire training to more than 1,160 municipal, state, federal and tribal volunteer firefighters. Wildfire investigation training was provided to several dozen law enforcement officers statewide.

Distributed 159,140 seedlings through the Conservation Seedling Program and through sales at the New Mexico State Fair and the New Mexico Agriculture Expo.

Supervised crews from the Los Lunas Inmate Work Camp that worked on 48 different local, state and federal projects. These crews performed 7,000 man-days of work on those projects. Crews trained in wildland firefighting were assigned to numerous wildland fires. Crews trained in land management and treatment proved vital to the rehabilitation of thousands of forested acres in the Manzano Mountains devastated by wildfires.

Published and distributed *Plan Smart* – *Rethinking Green: A Leadership Toolkit for New Mexico's Communities,* a new guidebook for community leaders to help them maximize the benefits of trees in their cities and towns and to help them get residents involved in community forestry programs.

Helped sponsor the planting of 28,517 trees through community events and programs, in partnership with Tree New Mexico.

Responded to 205 calls for law enforcement assistance; conducted 45 criminal investigations for wildfire, timber theft and damage, littering and trespass; issued six criminal citations; and helped with the conviction of two offenders.



Data and Statistics

In 2009, Forestry's Conservation Seedling Program distributed 159,140 seedlings (Figure 1) to landowners throughout the state. Fall and spring distribution periods proved popular.



2008/2009 RE-LEAF GRANTS

The New Mexico Forest Re-Leaf Program, operated by Forestry, awarded more than \$27,000 in grant funding to Alamogordo, Tucumcari, Lordsburg Municipal School District, Nacimiento Medical Foundation and the Aztec Youth Academy in Las Cruces (Figure 2). The Re-Leaf program provides funding to communities for tree planting, educational outreach, windbreak establishment, and general beautification. Re-Leaf grants are funded completely through corporate and private donations. Since 1990, more than \$530,000 has been distributed to New Mexico



communities for tree planting.

2009 FIRE MAP

Wildland fire in grassy, high desert fuel types continued to dominate fire statistics on state and private land in 2009. During a fire season that began in January and continued through an abbreviated period of seasonal moisture, 712 fires burned approximately 337,731 acres on state and private land (Figure 3).





Mining and Minerals Division



Bill Brancard

Acting Division Director



Mining and Minerals Division

A Message from Division Director Bill Brancard

The Mining and Minerals Division (MMD) seeks to serve the public by ensuring the responsible use and reclamation of land impacted by mining. We encourage innovative approaches to mine reclamation and promote the involvement of the public in mining issues.

2009 brought more rewards and challenges in the areas of mining and reclamation. For the fourth consecutive year, the value of mineral production in New Mexico set a record in 2008. The value of mineral production topped \$2.3 billion, an increase of 90 percent in the past five years. In those five years, we have also seen an increase each year in employment and payroll for the New Mexico mineral industry.

Considerable progress continues in the reclamation of coal and hard rock mines in New Mexico, conducted both by the industry and by our agency. New Mexico companies received awards for their successful reclamation work. These included recognition of San Juan Coal Company with a national award by the U.S. Department of the Interior for innovative reclamation at the La Plata Mine, and the recognition of St. Cloud Mining Company and Rangeland Hands, Inc. which received departmental awards for their reclamation work at abandoned coal mines near Raton.

Challenges persist in the areas of uranium mine permitting and abandoned uranium mine reclamation. Despite the global economic downturn, New Mexico saw increased interest in exploration and mining permits for uranium. Near the end of 2009, MMD received the first formal permit application for a new uranium mine located north of Grants.

MMD has been working for several years to develop a database of abandoned uranium mines in New Mexico, and continues to conduct fieldwork projects to characterize and assess those mines that have never been reclaimed. In the past year, we have worked with a number of other state, federal and tribal agencies that are now interested in helping address abandoned uranium mine legacy issues.



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: New Mexico remains a leading mining state with significant production of coal, copper, potash and molybdenum. MMD personnel utilize state and federal laws that regulate the registration, operation and reclamation of active coal and non-coal "hard rock" mining facilities and provide for the dissemination of valuable data regarding the economic impact of mining activities in New Mexico. MMD also provides services to safeguard inactive mine sites and reclaim abandoned mine sites to ensure that they are not a hazard to the public.

The Abandoned Mine Land Program works across the state to identify dangerous abandoned mine areas and to abate the hazards. MMD estimates there are more than 15,000 mine hazards scattered throughout New Mexico that remain un-reclaimed. The New Mexico Abandoned Mine Land Program has closed more than 4,500 hazardous mine openings over the past 21 years.

Coal has a long history in New Mexico, having been mined since the mid-1800s as a source for production of heat and energy, and it remains a leading mineral commodity in New Mexico. The demonstrated coal reserve base in New Mexico is 4.65 billion tons, or about one percent of the national reserves. The Coal Mine Reclamation Program oversees over 86,000 acres of permitted mine lands and over \$293 million in financial assurance bonds.

Gold, silver, copper, molybdenum, perlite and uranium comprise the majority of the minerals covered by the New Mexico Mining Act of 1993, which provides for the reclamation of all extraction and exploration activities conducted at hard rock mines. The Mining Act Reclamation Program oversees almost 400 mining and exploration projects and over \$602 million in financial assurance bonds.

In these increasingly uncertain economic times, decision-makers throughout New Mexico benefit from the valuable statistical and trend information on the mineral industry and mineral resources in New Mexico compiled and disseminated through the Mine Registration, Reporting and Safeguarding Program. This program provides comprehensive public outreach not only on the mineral resources but also on mining activities, legislation, and MMD activities related to the mineral extraction industry.

Accomplishments

MINE RECLAMATION: New Mexico is a leader in effective mine reclamation and one of the reclamation projects overseen by division staff was recently recognized at the national level. The La Plata Mine received a national award for exemplary coal mine reclamation from the Department of Interior's Office of Surface Mining Reclamation and Enforcement. Since 1986, the Office of Surface Mining has presented awards to coal mine operators who have completed exemplary reclamation. The objective of the active mine reclamation awards is to showcase the nation's highest achievement in environmentally sound surface mining and land reclamation and to encourage the exchange of successful reclamation techniques.

Located in northwest New Mexico, San Juan Coal Company's reclamation efforts at the La Plata Mine provide for both long-term stability and topographic diversity using a geomorphic reclamation design. The goal of geomorphic

reclamation is to create functional landforms and natural systems that are stable and virtually indistinguishable from the surrounding natural terrain ensuring long-term, maintenance-free reclamation. Geomorphic principles involve contouring reclaimed surfaces and simulating natural drainage configurations. Application of the principles takes into account the creation of landforms together with the processes by which those landforms would be created naturally over time. Soil, slope and weather are all considered. These landforms, including stream meanders and curvilinear, concave slope profiles, persist in nature because they are the most stable landforms. Landform shaping and grading plans were based on computer-generated topographical designs. The resulting landscape blends with the surrounding terrain. After a 200-year storm event in summer 2006, all of the constructed drainage channels were stable with no major erosion. No repair work has been necessary.

St. Cloud Mining and Rangeland Hands, Inc. each received the 2009 Excellence in Reclamation Awards. St. Cloud Mining Company of Truth or Consequences was presented an award for restoring a degraded stream to functionality and beauty at an abandoned coal mine site in Yankee Canyon. The Yankee Mine Reclamation Project is located approximately eight miles northeast of Raton in Colfax County on private and state trust lands. Coal was mined in the area from the 1920s to 1971 for domestic use. Decades after abandonment, the coal waste, also called gob, remained bare of vegetation and a local stream experienced significant down-cutting that resulted in a deeply incised channel with near vertical banks. St. Cloud restored natural meanders to the incised channel and planted over 8,000 native shrub and tree seedlings in the reclaimed areas.

Rangeland Hands, Inc. of Santa Fe was recognized for its work in preventing further unraveling at, and building resiliency into, a restored stream at an abandoned coal mine site in Yankee Canyon. Erosion and head-cutting along the reconstructed stream was observed after initial construction. Rangeland Hands analyzed the causes of head-cutting and designed and installed remedial measures that widened the stream channel and flood plain. The remedial work has stabilized the channel bottom.

MMD also approved an \$8 million bonding requirement reduction for the Freeport-McMoRan Tyrone copper mine, located in the Silver City area of Grant County. The mine completed reclamation work on closed tailings impoundments. At the No. 2 tailings impoundment, 495 acres of tailings plus 159 acres of additional disturbance were reclaimed. Construction included regrading and sloping the top surface of the impoundment into three drainage channels and grading the side slopes. To achieve the required surface slopes, cover depth ranges from 2 to 12 feet on the top of the impoundment and 2 to 16 feet on the side slopes.

URANIUM: MMD continues to see increased activity in uranium permitting. Since January 2006, the Mining Act Reclamation Program has received 30 uranium exploration applications: 12 have been approved, 13 have been denied or withdrawn, three are pending and two are on hold. Earlier this year, MMD issued a regular exploration permit under Part 4 of the Mining Act Rules. This permit represents the first major uranium exploration permit issued by MMD since the adoption of the New Mexico Mining Act of 1993, and the first major regular exploration permit issued for any commodity since July 1996. Two companies have also submitted new uranium mine permit applications under Part 6 of the Mining Act Rules. Processing these permits is expected to generate significant interest from the public and other groups.

MMD staff continues its review of several pending minimal impact uranium exploration applications in McKinley, Cibola and Catron counties. Mining Act Reclamtion Program permit leads and MMD management have initiated tribal consultations with all of the affected tribal entities to receive their input and concerns about these projects.

In addition to new uranium exploration and mining projects, MMD continues to work on permits for reclamation at existing uranium mines. MMD approved reclamation plans for two closed uranium mines in the Grants Mineral

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Belt: the Section 27 Mine and JJ No. 1/L-Bar Mine. The Section 27 Mine is located in McKinley County, 35 miles north of Grants, in the Ambrosia Lake District. The inactive underground uranium mine includes about nine acres of surface disturbance that require reclamation including two mine shafts, three vent holes, and a number of noneconomic ore piles, waste rock piles and topsoil stockpiles. The reclamation plan will include the sealing of the shafts and vent holes, encapsulation of non-economic ore piles, regrading and covering old rock piles with three feet of topsoil, followed by revegetation with native plants, and addressing radiation hazards at the mine site.

The JJ No.1/L-Bar is located in Cibola County, 3.5 miles southeast of Seboyeta, on the Cebolleta Land Grant. Most of the mine was reclaimed in 1986-87; however, 11 vent shafts remained. Final reclamation of the mine will involve the closure of the 11 vent shafts, regrading, topsoil application and revegetation to permanently stabilize the surface and eliminate any potential hazards to humans or wildlife.

COAL ASH: Coal combustion byproducts (CCBs), more commonly known as coal ash collectively, are produced when coal is burned, primarily by electrical generating facilities. Nearly all CCBs contain soluble and insoluble salts, including lead, mercury, arsenic and other metals. The disposal of coal ash busrt into the headlines this year by a coal ash spill in eastern Tennessee that some experts have referred to as one of the largest environmental disasters of its kind in the United States, and prompted a close review of coal ash disposal practices.

In New Mexico, coal ash is buried at San Juan Mine. Unlike the incident in Tennessee, however, the ash buried at the San Juan Mine is deposited dry, not in a wet flowable slurry. Coal ash is used as fill to achieve final surface topography and to seal exposed coal to prevent coal seam fires. MMD has required the San Juan Mine to provide detailed analysis of constituent properties of the coal ash along with an ash disposal plan, including baseline data on geology and hydrology as well as backfilling and grading, ground water monitoring, and leachate studies of the coal ash.

As part of a comprehensive review process, MMD has developed several shape-files detailing the history of ash disposal at the San Juan Mine for inclusion in the coal geographic information system (GIS). A shape-file is a GIS data-set used to represent a set of geographic features such as roads, mines and boundaries. San Juan Coal Company has submitted a yearly update of the ash disposal areas in its annual report, providing ash disposal information for 1985 to the present. The Coal Program's historic records were searched for maps, inspection reports and other documents to identify ash disposal prior to 1985. These information maps and reports were scanned and geo-referenced. Areas used for pre-1985 ash disposal were digitized and added to the GIS. This was combined with tabular data of groundwater monitoring well locations and associated water quality data to provide a pre-1985 view of ash disposal and water quality.

Maps created from these data will serve as a basis for selecting long-term monitoring site locations. Monitoring wells will be located based on a combination of hydrological factors such as water flow, river diversion and alluvial deposits in the area. MMD is working closely with the mine operators, land owners, other state agencies and environmental groups to ensure ash disposal does not result in contamination of the environment.


Data and Statistics

MINERAL RESOURCES OVERVIEW: Over \$2.3 billion worth of minerals were extracted in New Mexico during 2008, exceeding the prior record of \$2.2 billion set in 2007 (Table 1 and Figure 1). New Mexico remains a leading U.S. mineral producer, ranking first in potash, perlite and zeolite; third in copper; sixth in molybdenum; and twelfth in coal production. The principal minerals, in descending order of value, are copper, coal, potash and molybdenum. According to the U.S. Geological Survey, New Mexico ranked fourteenth in 2008 when ranking states by the production value of non-energy minerals. Our state produces 2.5 percent of the total U.S. nonenergy minerals production value.

| Mineral | Production ¹ | Production Rank ² | | Production Value \$ | Employment ³ | Reclamation Employment ⁴ | | Payroll \$ ⁵ | | Revenue Ge | nerated \$ 6 |
|--|---|--|---|---|---|---|--|---|--|---|----------------------------------|
| | | | | | | | | | | State | Federal |
| Coal | 25,751,868 | 12 | \$ | 662,697,319 | 1,729 | 136 | \$ | 116,377,056 | \$ | 33,061,571 | \$6,859,34 |
| Copper | 226,738,082 | 3 | \$ | 699,665,170 | 1,970 | 244 | \$ | 67,549,648 | \$ | 6,413,291 | - |
| Gold | 6,997 | - | \$ | 6,095,087 | 44 | 4 | \$ | 128,500 | \$ | 43,467 | - |
| Industrial Minerals 7 | 2,108,801 | - | \$ | 157,840,649 | 506 | 27 | \$ | 20,607,996 | \$ | 1,039,539 | \$58,27 |
| Aggregates 8 | 16,740,148 | - | \$ | 102,273,471 | 960 | 76 | \$ | 27,962,271 | \$ | 1,435,837 | - |
| Other Metals | 46,858 | - | \$ | 646,734 | 0 | 0 | \$ | - | | - | - |
| Molybdenum | 4,370,536 | 6 | \$ | 114,567,202 | 528 | 20 | \$ | 22,572,083 | | - | - |
| Potash 9 | 1,076,759 | 1 | \$ | 612,745,114 | 1,399 | 24 | \$ | 80,309,807 | \$ | 4,678,592 | \$4,530,22 |
| Silver | 206,913 | - | \$ | 3,103,695 | 2 | 2 | \$ | 5,335 | \$ | 25,072 | - |
| Uranium ¹⁰ | - | - | \$ | - | 62 | 52 | \$ | 2,382,039 | \$ | 204,448 | - |
| TOTAL | | | \$ | 2,359,634,440 | 7,200 | 585 | \$ | 337,894,735 | \$ | 46,901,817 | \$11,447,84 |
| ¹ Production for coal, in ² Production rank is bas | dustrial minerals, agg | regates, other me | etals a | ind potash is repo | rted in short tons; co | Source | e: Mir ım in | ning and Mineral pounds; and gold | s Div d and | ision, unless o silver in troy or | therwise notec unces. |
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Table 1

In 2008 copper remained New Mexico's leading commodity for production value, and coal remained the leading commodity for revenue generation and payroll (Figure 2). Potash set a record production value of \$612.7 million. In response to the economic downturn in the fall of 2008, the quantity of minerals produced decreased from 2007 levels for all commodities except aggregates. Production and production values are expected to decrease further in 2009 and 2010 in response to the decreased mineral commodity demand and financial market instability.





Mineral industry payroll exceeded \$337.8 million in 2008, a 7.2 percent increase over 2007 (Figure 3). Copper remained the largest employer in New Mexico's mining industry, followed by coal and potash. The total number of employees in the mining industry topped 7,200, up 4.1 percent from 2007. Direct employment rose 5.6 percent to 5,689 employees. Reclamation employment increased 15.1 percent to a record 585 workers. Contract employment reversed its recent upwards trend in 2008, decreasing 1.4 percent to 1,461 (Figure 4). Employment figures decreased in 2009. Many mining companies suspended contract workers and reduced the number of direct employees in early 2009 in response to the plummeting commodity prices of fall 2008. While commodity prices had rebounded by December 2009, many mines remained on reduced production schedules that required fewer workers.





New Mexico mining companies spent \$198.9 million on capital improvements and equipment in 2008, a 33 percent increase from 2007 spending.

There were 207 registered active mining operations in New Mexico in 2008. These operations included five coal mines; three potash mines, five potash refineries and two potash compaction plants; one molybdenum mine and one molybdenum mill; two copper mines, one copper concentrator and two solvent extraction/electro-winning (SX/ EW) plants; 20 industrial mineral mines and 13 industrial mineral mills; and 152 stone and aggregate operations (Figure 5).







New Mexico's main coal reserves are located in the San Juan Basin (San Juan, McKinley and Cibola counties) and the Raton Basin (Colfax County). Smaller coalfields are dispersed throughout the state. Five mines produced coal in New Mexico during calendar year 2008. Four surface coal mines were active: BHP Billiton's Navajo, Chevron Mining's McKinley North and Peabody Natural Resources' Lee Ranch and El Segundo mines. BHP Billiton's San Juan Mine is the only active underground mine in the state.

On June 20, 2008, Peabody Natural Resources initiated coal shipments from New Mexico's newest coal mine, the El Segundo Mine, located approximately 35 miles north of Milan along State Road 509 in McKinley County. Stripping operations at the mine commenced in May 2008. The mine is forecast to produce 102 million short tons of coal over the next 30 years. Peabody says it spent about \$70 million developing the new mine.

In 2009 Chevron Mining Inc. announced it would stop producing coal at the McKinley Mine and focus solely on reclamation efforts. The McKinley Mine was the first large strip mine opened in New Mexico; over 178 million tons of coal have been mined at the site since 1962. McKinley operates under two mining permits: a federal permit for the North area from the Office of Surface Mining and a state permit for the South area through the MMD. The North permit area is on the Navajo Nation, the South permit area includes Navajo allotment, federal, state and private lands. Active mining operations in the McKinley South permit area ceased in 2007; operations in the McKinley North permit area ceased in December 2009. The workforce was significantly reduced upon completion of coal mining as work shifted to reclamation activities.

In 2008 direct coal employment increased 5.4 percent to 1,729 workers and the number of contract employees increased 3.0 percent to 240 workers. Coal reclamation activities involved 136 employees (direct and contract). Coal employment is expected to decrease in 2009 and 2010 due to the closure of the McKinley Mine. Some of the employment losses may be offset by the addition of miners as El Segundo reaches full operational capacity.

The primary customers for New Mexico's coal are coal-fired power plants in the Four Corners region. Both BHP operations provide coal to mine-mouth power plants: the San Juan Mine feeds PNM's San Juan Generating Station in Waterflow, and the Navajo Mine feeds Arizona Public Service Company's Four Corners Generating Plant in Fruitland. Coal from the McKinley Mine is shipped via rail to Arizona Public Service Company's Cholla Power Plant

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in Joseph City, Arizona. The Lee Ranch and El Segundo mines provide coal to Tri-State Generation & Transmission Association's Escalante Generating Station in Prewitt, New Mexico. Lee Ranch and El Segundo also ship coal to the Western Fuels Association and Tucson Electric Power, Arizona Public Service, Arizona Electric Power Cooperative and Catalyst Paper.

The proposed 1,500-megawatt Desert Rock Generating Plant, located on Navajo Nation land near Farmington, is currently in the planning and permitting process. The power plant is designed without carbon capture or carbon sequestration technology. The draft Environmental Impact Statement for Desert Rock was completed in 2007, and the final air permit was issued in July 2008 by the U.S. Environmental Protection Agency (USEPA). In 2009 the USEPA appeals board withdrew a portion of the air permit for the proposed plant and sent it back to USEPA Region 9 for reconsideration. Region 9 intends to prepare a new statement addressing the issue of whether the permit should contain an emissions limit for carbon dioxide.

The Coal Mine Reclamation Program focuses on promoting successful and innovative approaches to reclaiming areas disturbed by coal mining. Earthmoving at BHP Billiton's La Plata Mine was completed in December 2008 after six years of geomorphic design and construction work. La Plata revegetation activities continued into spring 2009. The U.S. Department of Interior recognized BHP Billiton with a 2009 Excellence in Surface Coal Mining Reclamation Award for its geomorphic reclamation efforts. Geomorphic reclamation projects are also ongoing at the McKinley and San Juan mines. Chevron continues to perform maintenance projects at its York Canyon Complex mines in Colfax County.

COPPER: For the first time since 2002, New Mexico experienced a decrease in production quantity and value in the copper mining sector. New Mexico ranks third in domestic copper production after Arizona and Utah. New Mexico-produced copper is used in the manufacture of electrical components and wire. In 2008 copper production decreased 5.4 percent to 226.7 million pounds (Figure 7). Copper production value fell to \$699.6 million, a 9.8 percent decrease from the \$775.3 million record high of 2007.



ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Freeport-McMoRan Copper and Gold Inc. subsidiaries produce copper and byproduct metals at two mines in Grant County in southwest New Mexico: the Chino and Tyrone mines. The Chino Mine consists of the Santa Rita open pit, the 43,000 ton-per-day Ivanhoe Concentrator and a 150-million ton-per-day SX/EW plant. Freeport is working to permit Section No. 2 New Unit, of a new 35-acre waste rock pile, to facilitate future pit mining at Chino. The Tyrone Mine consists of a SX/EW plant and large open pit operations.

The two other Freeport-McMoRan copper operations in New Mexico are both on standby status. The Continental Mine, on standby since 1999, includes a 20-acre tailings pond that contains magnetite recovered during the milling process by previous operators. Freeport has been reducing the pond volume by selling magnetite to offsite buyers. Freeport-McMoRan submitted an application in November 2007 to renew the standby status of its fourth New Mexico property, the Little Rock Mine.

Copper continued to be the largest employer in the New Mexico mining industry in 2008. While copper employment increased 8.9 percent to 1,970 workers, payroll decreased 14.9 percent to \$67.5 million. Reclamation employment in the copper sector increased 34.0 percent due to ongoing reclamation projects at Tyrone, Chino and Continental mines.

The decrease in copper payroll can be attributed to the declining copper spot prices and resulting mine layoffs in fall 2008. Copper spot prices tumbled from \$3.63 per pound in September 2008 to \$2.23 in October to \$1.69 in November to \$1.49 in December. Due to the falling prices, Freeport-McMoRan announced layoffs of 95 people at Chino and 36 at Tyrone in November 2008. A month later, Freeport-McMoRan announced it would suspend open pit mining and concentrator activities at Chino, while continuing copper production from its SX-EW plant. The Chino mining suspension resulted in the layoff of an additional 600 workers in February 2009. Freeport also reduced mining at Tyrone by 50 percent. The last layoff of this magnitude at New Mexican copper operations occurred in 2001-2002, when then-owner Phelps Dodge laid off approximately 400 workers from the Chino Mine and 250 from the Hurley smelter.

Because of mine suspensions and closures, copper supplies decreased as production stalled. The copper market tightened and prices have begun to recover in 2009, rising to \$2.75 per pound in fall 2009.

Reclamation activities have continued at the copper mines during the economic downturn. Freeport-McMoRan completed engineering designs and work plans for the reclamation of the majority of the inactive tailings impoundments at the Chino Mine. Grading on the old tailings began in June 2008; reclamation of the tailings is scheduled to be completed in the summer of 2011. Freeport has been approved to extend the Groundhog No. 5 Stockpile reclamation completion date from 2009 to 2011. Reclamation activities at Tyrone have focused on the grading, cover and drainage reclamation work at the Nos. 1, 1A, 1X and 2 tailing impoundments.

In 2008 there were two copper exploration projects permitted by the Mining Act Reclamation Program in Grant County: Galway Resources' Lone Mountain Project and New Mexico General Minerals' Gold Lake Project. New Mexico Copper Company applied for an exploration permit for the Copper Flat Exploration Project in November 2009.

MOLYBDENUM: New Mexico remains a major producer of molybdenum, ranking sixth in domestic molybdenum production. The state's primary molybdenum producer is Chevron Mining Company's Questa Mine and Mill in Taos County. The Questa operation, an underground gravity block cave mine, produces molybdenite concentrate (MoS₂) and is one of three primary-producing molybdenum mines in the U.S. Molybdenum is also produced as a by-product of copper production at Freeport-McMoRan operations in Grant County.

New Mexico molybdenum production decreased 14.7 percent to 4.3 million pounds and production value dropped to \$114.5 million, a 17.0 percent decrease from 2007's record high. Molybdenum is used primarily in the manufacture of hardened steel and other alloys. Continued high levels of steel production and consumption in the Pacific Rim created a stable demand for molybdenum until the economic downturn in fall 2008. The 2008 decrease in production quantity and value can be attributed to falling molybdenum prices and demand. Molybdenum prices averaged a record high of \$33 per pound until September 2008. Prices dropped rapidly to a low of \$9 per pound in December 2008. The price of molybdenum increased to \$13.95 a pound in fall 2009.

Molybdenum-related employment increased 28.1 percent to 528, payroll increased 9.6 percent to \$22.5 million, and reclamation employment decreased 20.0 percent to 20 employees in 2008. The employment trends did not continue into 2009: on February 10, Chevron Mining announced that it had terminated 75 contract workers due to declining molybdenum prices. A little over a week later, Chevron announced it was laying off half of the Questa workforce – approximately 227 people. The 90-year-old mine did not close and has continued operations with 185 employees.

Chevron is currently revising the Questa Mine Closeout Plan, a particularly involved process because of the need to coordinate reclamation plans with the EPA's Remedial Investigation and Feasibility Study, conducted under the Comprehensive Environmental Response, Compensation, and Liability Act. Chevron is investigating developing some of the waste rock areas as solar brownfield projects.

In 2008 Galway Resources had an active molybdenum exploration project at Victorio Mountain in Luna County. After drilling six holes totaling 13,000 feet in 2007, Galway completed a 12-hole drilling program totaling 25,000 feet in 2008. Galway has completed a resource estimation, scoping study and preliminary economic assessment based on the exploration data.

POTASH: Potash is a mined salt containing water-soluble potassium. Potash is used as a crop fertilizer and helps regulate plants' physiological functions and protects crops from drought, disease, parasites and cold weather. The Carlsbad potash district represents two percent of worldwide potash production and more than three-quarters of all domestic potash production. Both sylvite (KCl) and langbeinite (K2Mg4(SO4)4) are mined by underground methods in Carlsbad. New Mexico-produced sylvite is used primarily as an agricultural fertilizer, animal feed supplement, drilling mud additive, de-icing ingredient and water softener regenerant. Langbeinite products have high potassium, magnesium and sulfur contents and are marketed as a special-use fertilizer to chloride sensitive crops such as tobacco, citrus fruits, vegetables and palm trees. Farmers in nearby states use most of the New Mexico-produced potash; approximately 25 percent is exported to Central and South America, the Caribbean and Asia.

New Mexico ranks first in the nation in potash production. The 2008 production value set a new record of \$612.7 million, a 123.7 percent increase (Figure 8). Potash mill production increased 16.7 percent to 1.0 million short tons K₂O equivalent. Potash production and value increased as a result of rising consumption and pricing. Potash consumption has increased since 2004 as world crop and animal feed production have increased, especially in Brazil, China and India. High oil prices increased fertilizer demand by spurring ethanol and biodiesel production.

As a result of increasing demand and tight supply, potash prices increased rapidly in 2008, rising from \$200 per short ton in 2007 to \$357 per short ton in January 2008 to \$800 per short ton in December 2008. Langbeinite prices per short ton increased from \$171 in January 2008 to \$356 per short ton in December 2008.

The higher pricing and increased production trends did not extend into 2009. Potash demand and prices fell at the end of 2008 and continued to decrease through 2009. Beginning in the third quarter of 2008, the global financial crisis resulted in rapid declines in the price of corn and several other crops. Lower agricultural commodity prices,



volatile material costs and the uncertainty of agricultural revenue potential due to the economy caused farmers to delay their fertilization decisions heading into the 2009 planting season. This uncertainty led to a declining demand for all fertilizers as farmers waited to see how the commodity markets would unfold prior to making their 2009 planting decisions. Many farmers delayed fertilizer delivery into spring 2009, leading to high potash inventory at the mines.

Two companies operate three mines, five refineries and two compaction plants in Eddy and Lea counties in southeastern New Mexico. Intrepid Potash, Inc. operates the Intrepid East, Intrepid West and Intrepid North facilities. The East facility consists of an underground mine, a sylvite/langbeinite refinery and a compaction plant. The West facility includes an underground mine and a sylvite refinery. The North facility houses a compaction plant. Intrepid held an initial public offering of common stock on April 25, 2008. The second New Mexico potash producer, Mosaic Potash Carlsbad, Inc., operates an underground mine, a sylvite refinery, a langbeinite refinery and a compaction plant.

Potash overtook aggregate as the third largest employer in the New Mexico mining industry in 2008. Potash employment reached 1,399 workers in 2008, an increase of 20.2 percent. Payroll rose 31.8 percent to \$80.3 million. Reclamation employment in the potash sector reached a record high of 24 employees due to the reclamation of the old U.S. Potash Company facility by Mosaic Potash Carlsbad. The decision to demolish the refinery and warehouses at the old U.S. Potash facility was based on liability issues associated with frequent trespassers on the property. The U.S. Potash refinery was the first to produce refined commercial potash in the Carlsbad district in September 1932; the property will be returned to its natural vegetative state after the demolition and clean-up.

Employment trends did not extend into 2009. Intrepid Potash, citing sales slowdowns, reduced its contract work force in December 2008. Intrepid also temporarily shut facilities in Carlsbad in February and March 2009. The Intrepid West and North Carlsbad facilities closed for two weeks in February 2009, followed by a two-week shutdown at the East facility. During the shutdowns, Intrepid conducted maintenance and continued its capital projects. Intrepid reduced operations after the shutdowns while it waited for inventory levels to decrease.

Intrepid Potash is working to open parts of the old Eddy Potash Mine, idle since 1999, as a solution mine. Intrepid projects the HB Solar Solution Mine project will annually produce 150,000 to 200,000 tons of potash over a 28-

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year mine life. The reopened mine is projected to add 44 full-time jobs. In May 2008 Intrepid submitted a mine Plan of Operations to the Bureau of Land Management (BLM). In January 2009 the BLM determined that an Environmental Impact Statement (EIS) will be required to evaluate the environmental impacts of the proposed solution mine. It is expected to take two years to complete the EIS. Potash production should start approximately one year after regulatory approvals are obtained from the BLM and New Mexico Environment Department. Intrepid estimates that the total costs of designing, permitting and constructing the solution mine will total approximately \$95 to \$115 million.

Intrepid Potash, Inc. is also preparing a feasibility and design study for reopening the North Mine, idle since 1982.

URANIUM: New Mexico has experienced a significant increase in uranium exploration activity in the past four years. According to the Energy Information Administration, New Mexico ranks second, behind Wyoming, in domestic uranium reserves with 341 million pounds of U₃O₈ at \$50 per pound. Rising market prices have led to renewed interest in uranium production. Spot prices rose from a low of \$6.50 per pound in 2000 to \$35.50 per pound in December 2009. Since January 2006, 30 uranium exploration applications have been submitted to MMD. As of December 2009, 12 applications have been approved, three are pending, two are on hold and 13 have been denied or withdrawn (Table 2 and Figure 9).

| Approved Applications | | | | |
|-------------------------------|----------------------------------|---------------------------------------|--------------------|------------------------------------|
| Project Name | Operator | Surface Ownership | Number of Holes | Drilling Completion |
| Ambrosia Lake | Neutron Energy | State | 6 | summer 2007 |
| Armijo | Grants Ridge Joint Venture | Bureau of Land Management, Private | 215 | 2010 |
| Elizabeth | Neutron Energy, Inc. | Private | 28 | summer 2010 |
| F-33 | Grants Ridge Joint Venture | Bureau of Land Management | 23 | 2010 |
| La Jara Mesa | Laramide Resources | U.S. Forest Service | 10 | fall 2006, winter 2007 |
| Lily | Uranium Company of New Mexico | Bureau of Land Management | 10 | fall 2007 |
| Marquez Canyon | Neutron Energy | Private | 44 | 2010 |
| Riley | Max Resources | U.S. Forest Service | 14 | spring 2007 |
| Riley No. 2 | Max Resources | U.S. Forest Service, Private | 5 | summer 2008 |
| Roca Honda | Strathmore Mineral Resources | State | 4 | summer & fall 2007, spring 2008 |
| Section 13 ISR | Uranium Resources, Inc. | Private | 10 | 2010 |
| Treeline | Western Energy Development | Private | 6 | summer 2006 |
| Project Name | Operator | Surface Ownership | Number of Holes | |
| Cebolleta Exploration Project | Neutron Energy | Private | 84 | |
| Baca | Red Basin LLC | U.S. Forest Service | 25 | |
| White Mesa | Red Basin LLC | U.S. Forest Service | 25 | |
| On Hold Applications | | | | |
| Project Name | Operator | Surface Ownership | Number of Holes | |
| Deer Claims | Vane Minerals PLC | U.S. Forest Service | 25 | |
| Eric No. 1 | Bob March | U.S. Forest Service | 2 | |
| Denied. Withdrawn and Enfo | rcement Applications | | | |
| Project Name | Operator | Surface Ownership | = | |
| Church Rock | Strathmore Resources (US) Ltd. | Bureau of Land Management | = | |
| Crownpoint | Quincy Energy | Indian Trust | _ | |
| DD No. 1 | Todd D. Sterk, Rampart Resources | Private | _ | |
| Hosta Butte Section 3 | Quincy Energy | Indian Trust | _ | |
| La Jara Mesa Extension | Urex Energy Corp. | U.S. Forest Service | _ | |
| North Zia | Cibola Exploration Inc. | U.S. Forest Service | | |
| Roca Honda Section 10 | Roca Honda Resources, LLC | U.S. Forest Service | | |
| Roca Honda Sections 5, 9,10 | Roca Honda Resources, LLC | U.S. Forest Service | _ | |
| San Mateo Mesa | United Energy | U.S. Forest Service | | |
| Section 11 | Southwest Resources | Private | | |
| Section 12 | Southwest Resources | Private | _ | |
| Treeline II | Western Energy Development | U.S. Forest Service | _ | |
| Treeline III | Western Energy Development | Private | _ | |

Table 2



Uranium recovery in New Mexico ceased in December 2002. There are four uranium mine operations permitted by the Mining Act Reclamation Program in the state: Rio Grande Resources' Mt. Taylor Mine, United Nuclear Corporation's Section 27 Mine, Rio Tinto Energy's JJ No. 1/L-Bar Mine and Rio Algom's Old Stope mining properties. The Mt. Taylor Mine, a flooded underground mine in Cibola County, remains on standby status and must amend its permits with MMD and New Mexico Environment Department before mining can commence. The Section 27, JJ No. 1 and Old Stope mines are closed and undergoing reclamation.

Two new conventional uranium mines are under development in New Mexico: Strathmore Resources' Roca Honda Mine and Laramide Resources' La Jara Mesa Mine. The proposed Roca Honda Mine is located in McKinley County on two sections of land within the Cibola National Forest and one section of state trust land. Strathmore has submitted both the Sampling and Analysis Plan and the Permit Application Package to MMD. Strathmore must also submit a formal mine plan application to the U.S. Forest Service, which will be handled through the Forest Service Environmental Impact Statement (EIS) process.

The proposed La Jara Mesa Mine is located in Cibola County on Cibola National Forest land on the edge of the Mt. Taylor Traditional Cultural Property. Laramide Resources has submitted a permit application to the U.S. Forest Service for the proposed mine, which will be handled through the Forest Service EIS process. Laramide Resources has also initiated the permitting process with MMD by submitting a Sampling and Analysis Plan.

While uranium mining companies are eager to move forward, several significant obstacles lay in the path of largescale uranium development in the near future. First, all of New Mexico's uranium mills have been demolished and new milling infrastructure is needed. Second, the Navajo Nation, which overlays a major portion of the Grants

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Mineral Belt uranium deposits in New Mexico, declared a moratorium on uranium production on Navajo Indian Country in April 2005. Third, the New Mexico Cultural Properties Review Committee approved the emergency listing of Mount Taylor on the State Historic Registry as a Traditional Cultural Property in June 2008. A year later, the Cultural Properties Review Committee voted unanimously to make the listing permanent. The protected area includes about 344,000 acres.

Currently, uranium mining activity in New Mexico focuses on the reclamation of the mines and mills left over from the boom years. The Rio Algom's Ambrosia Lake Mill, United Nuclear Corporation's Church Rock Mill and the Homestake's Milan Mill are all undergoing reclamation. Rio Algom finished reclamation at the Old Stope leach properties and is awaiting the12-year final bond release. In October 2009, both United Nuclear Corporation and Rio Tinto Energy received final reclamation permit approval for the Section 27 and the Sohio JJ No. 1 mines. Both companies have also provided financial assurance to the state for the cost of the reclamation. Final reclamation of the JJ No. 1 Mine will involve the closure of 11 vent shafts, regrading, topsoil application and revegetation. Rio Tinto began reclamation during 2010. Reclamation work will include sealing the shafts and vent holes, encapsulating non-economic ore piles, regrading and covering old rock piles, revegetation with native plants and addressing radiation hazards at the mine site. United Nuclear Corporation continues working toward approval of closeout and reclamation plans, as required by the New Mexico Mining Act, for the St. Anthony Mine.

HRI Energy continues to pursue permitting and licensing from the Nuclear Regulatory Commission and EPA to mine uranium by in-situ leach at locations in Church Rock and Crownpoint. These permits are the subject of pending litigation regarding the determination of Indian country before the Tenth Circuit Court of Appeals.

In 2009, Louisiana Energy Services completed construction and began operations of its gas centrifuge uranium enrichment plant in Lea County. The plant received its first shipment of uranium in February 2009, making the plant an official nuclear site. The Nuclear Regulatory Commission license authorizes Louisiana Energy to enrich uranium up to five percent of the fissile isotope uranium-235 for use in the manufacture of nuclear fuel for commercial power plants. Approximately 250 workers are employed at the plant.

GOLD, SILVER AND OTHER METALS: The only gold and silver currently produced in New Mexico is a byproduct of copper processing at Freeport-McMoRan copper operations in Grant County. Production and production value of these commodities peaked in the 1980s and has steadily declined since that time.

Gold production in 2008 decreased 19.0 percent to 6,997 troy ounces, although production value increased 1.2 percent to \$6.0 million. Silver production fell 10.2 percent to 206,913 troy ounces; production value increased 0.4 percent to \$3.1 million. According to U.S. Geological Society, New Mexico was one of the top ten domestic producers of gold and silver in 2008.

LAC Minerals continues to perform reclamation and groundwater remediation work at the closed Cunningham Hill Gold Mine, located in the Ortiz Mountains in Santa Fe County.

In 2006, Santa Fe Gold Corporation, formerly Azco Mining Company, purchased the Summit Mine in Grant County and the Lordsburg Banner Mill in Hidalgo County. Santa Fe Gold Corporation is currently working to revise the mill permit to allow for the resumption of flotation milling, construction of a tailings impoundment and discharge of tailings. The San Lorenzo Claims permit in Socorro County is still under development to mine for gold. Two new minimal impact gold and silver mine permits in Grant County were approved in 2009: the Groom and Billali mines. Production has not started at these mines.

Two new gold mines had Mining Act permit applications under review in 2008 and 2009: the Orogrande Placer Gold Mine in Otero County and the Northstar Mine in Rio Arriba County. In 2009 four minimal impact permit applications for gold and silver mines in Sierra County were submitted for the Smugglers, Franklin, Baxter/Badger Claim, and Harding mines.

Exploration for gold, silver and other precious metals continues in New Mexico. From 2008 to 2009 there were 12 active Mining Act Reclamation Program permits for precious and base metal exploration projects in Catron, Grant, Hidalgo, Lincoln and Sierra counties. Eight metal exploration project permits in Catron, Hidalgo, Lincoln, Santa Fe and Socorro counties are pending as of December 2009. In addition, three bertrandite exploration permits are pending in Socorro County.

INDUSTRIAL MINERALS: Industrial mineral production value fell 17.9 percent to \$157.8 million in 2008 (Figure 10). Industrial mineral production remained steady at 2.1 million short tons, employment decreased 1.0 percent to 506 workers and payroll remained at \$20.6 million. Reclamation employment rose 42.7 percent to 57 workers. The decrease in production value is related to decreased demand for construction-related materials like gypsum wallboard, Portland cement and scoria/pumice masonry blocks.

Industrial mineral resources are widely dispersed across the state. In New Mexico, the more commonly mined industrial mineral resources include gypsum, perlite, salt, limestone, dimension stone, humate, pumice and zeolite. In 2008, there were 20 mines and 13 mills producing industrial minerals in the state. Table 3 details location, employment and the production rank for industrial mineral commodities in the state.

Two new industrial mineral mines commenced operations in 2009. The Alley Gypsum Mine, located on Bureau of Land Management land in Dona Ana County, began mining gypsum for use as an agricultural amendment in November 2008. In Sandoval County, Urban Trucking and Excavating began mining pumice in April 2008.

CR Minerals Corporation moved its pumice milling operations to the Pueblo of Ohkay Owingeh after closing the old Santa Fe mill in 2007.

Copar Pumice Company ceased pumice production at



Figure10

| Commodity | Production Rank ¹ | County | Employment ² | Reclamation Employment ³ |
|---|--|---|-------------------------|--|
| Clay ⁴ | - | Bernalillo, Doña Ana | 3 | 0 |
| Dimension Stone 4 | - | Valencia | 31 | 0 |
| Gypsum | 12 | Bernalillo, Doña Ana, Sandoval | 127 | 2 |
| Humate | - | Sandoval, San Juan, McKinley | 32 | 2 |
| Limestone/Portland cement 4 | - | Bernalillo | 113 | 1 |
| Mica | - | Taos | 11 | 11 |
| Perlite | 1 | Socorro, Taos | 63 | 2 |
| Pumice | 3 | Bernalillo, Sandoval, Santa Fe, Rio Arriba | 20 | 7 |
| Salt | 11 | Eddy | 80 | 0 |
| Silica | - | Grant, Santa Fe | 2 | 0 |
| Zeolite | 1 | Sierra | 24 | 2 |
| TOTAL | | | 506 | 27 |
| ¹ Source: USGS 2007 Rankin ² Includes both direct and con ³ Reclamation employment is ⁴ Location and employment is | g tract employe included in th for mill only. | ees. e employment number. Mine employment included in aggregates. | | |
|) | | | | Table 2 |

the El Cajete Mine in late 2007 upon expiration of its mining permit from the U.S. Forest Service. The mine was reclaimed in summer and fall 2009. Pumice processing at Copar's Espanola and San Ysidro plants was also halted.

New Mexico remains the leading state for the production of perlite and zeolite and is one of the main producers of pumice. Zeolite is produced at St. Cloud's Zeolite Mine and Greg Richards' Coyote Cliff No. 1 Mine. Active perlite operations include Dicaperl Minerals' El Grande and Socorro properties, and Harborlite's Agua facilities. Pumice operations include CR Minerals' Rocky Mountain Mine and Ohkay Owingeh Mill; Urban Trucking and Excavating's Cochiti Pumice Pit; and Utility Block's U.S. Forest Service Mine. Humate mines

include Rammsco's Eagle Mesa Mine; Horizon Ag-Products' San Luis Mine; Mesa Verde Resources' Star Lake Mine and San Ysidro Mill; Menefee Mining's Star Lake Mine and Menefee Mill; and U-Mate International's U-Mate Mine. Active salt operations include United Salt's Lake Mine and Carlsbad plant; and New Mexico Salt & Minerals' Carlsbad operations. Brick and masonry block are produced at American Eagle Brick Company's Eagle mill; Crego Block's Albuquerque block plant; Hoffman Enterprises' Kinney Brick mill; and Utility Block's Albuquerque mill. Gypsum mines and processing facilities include Eagle Materials' White Mesa gypsum mine and Albuquerque and Bernalillo wallboard plants; Alley Mining's Alley Mine; and Schneider Welding's Keystone No. 1 Mine. Other major industrial mineral properties in New Mexico include: GCC Rio Grande's Tijeras cement plant; New Mexico Travertine's Belen plant; Oro Blanco's Silver Silica Mine; and Preece Enterprises' Rainbow Mine.

During 2008 and 2009, the Mining Act Reclamation Program oversaw one exploration permit for specimen fluorspar in Socorro County, one exploration permit for turquoise in Grant County and three exploration permits for humate in McKinley County.

STONE AND AGGREGATE: Stone and aggregate, which includes sand and gravel, is a subset of industrial minerals. Construction sand and gravel is one of the most accessible natural resources and a major basic raw material.

The number of active aggregate and stone mines decreased by 25 percent in 2008 to 152 active operations. The number of stone and aggregate mines on standby status doubled to 38 operations.

Stone and aggregate production value decreased to \$102.2 million, a 27.0 percent drop from the 2007 record high. Production quantity remained stable at 16.7 million short tons (Figure 11). While employment decreased 20.0 percent to 960 workers, payroll increased 38.0 percent to \$27.9 million in 2008. Reclamation employment decreased to 76 workers. Table 4 details the production and production value of the different stone and aggregate commodities produced in the state. Aggregates are a high volume/low unit price commodity and track the local economy they are not tied to the global markets. Despite the low unit value of its products, the construction sand and gravel industry is a major contributor to, and an indicator of, economic wellbeing and growth. New Mexico aggregate production began to decline in 2006 and is expected to remain



depressed through 2010. Aggregate production and consumption for residential and commercial construction decreased in 2008 as the number of building permits decreased and the credit market to fund construction tightened. With funding shortfalls for highways and road construction, the infrastructure sector is expected to experience decreased demand for aggregates in the next several years.

Increased rail traffic and the construction of dual rail lines in southern New Mexico by Union Pacific Railroad have led to increased demand for railroad ballast and rail bed materials. In 2008 Union Pacific began construction of a

new terminal facility near Santa Teresa and the New Mexico Department of Transportation extended Rail Runner service between Albuquerque and Santa Fe. The start of Spaceport America construction in 2009 has increased aggregate demand in Sierra County. It remains to be seen if infrastructure and road projects funded by the American Recovery and Reinvestment Act of 2009 will bolster aggregate demand.

The aggregate industry continues to move operations and place new operations away from densely populated centers, where zoning, environmental and land development regulations discourage sand and gravel operations. Consequently, shortages of construction sand and gravel in urban and industrialized areas are expected to increase, as are transportation costs associated with sand and gravel commodities. Increasingly, sand and gravel operations are being included in master zoning and planning documents for regional areas.

| Commodity | Production (short tons) | Value (\$) |
|------------------------|----------------------------|---------------------|
| Base Course | 2,757,349 | \$ 18,721,351.79 |
| Caliche | 38,678 | \$ 98,727.86 |
| Clay & Shale | withheld | withheld |
| Crushed Rock | 5,358,868 | \$ 29,955,391.29 |
| Fill Dirt | 458,750 | \$ 1,498,539.73 |
| Flag & Dimension Stone | 31,078 | \$ 609,897.45 |
| Gemstone | withheld | withheld |
| Gravel | 4,134,086 | \$ 25,450,669.63 |
| Limestone | 750,223 | \$ 1,466,657.00 |
| Other | 1,026,916 | \$ 6,214,337.12 |
| Red Dog | withheld | withheld |
| Riprap | 106,370 | \$ 2,196,213.85 |
| Sand | 1,752,035 | \$ 13,701,301.08 |
| Scoria | 286,411 | \$ 2,133,950.56 |
| Top Soil | 5,009 | \$ 56,245.10 |
| Travertine | withheld | withheld |
| TOTAL | 16,740,148 | \$ 102,273,471 |

Table 4



Oil Conservation Division



Mark Fesmire, PE

Acting Division Director



Oil Conservation Division

A Message from Division Director Mark Fesmire

The Oil Conservation Division (OCD) is committed to the prevention of future contamination of New Mexico's water and soil from oil and gas operations, and to the identification and remediation of historical conditions caused by oil and gas operations that have damaged our state's resources.

To accomplish this, the division manages permits for drilling and operational activities; conducts hearings to resolve disputes among stakeholders and to proceed with enforcement actions; and inspects wells and associated facilities to ensure that activities do not result in the waste of oil, gas and geothermal resources while protecting human health and the environment. We also identify and remediate historical conditions caused by oil and gas operations where the condition represents a threat to the water or soil resources of the state.

An example of our work in these areas involves the assessment of the state's brine wells in light of two collapses in recent years. A brine well in a commercial, transportation and residential area was recognized as a candidate for a catastrophic collapse. The division worked with the owner, the city and many governmental agencies to monitor the site and to proactively manage the prevention of harm to humans and the environment. We will continue to participate in this joint project until a successful resolution is achieved.

We also continually review our rules to ensure that well operators who comply with the rules can achieve environmental success on a fair playing field with their competitors. Recent rule changes include an enhancement to the "pit rule" to grandfather in certain types of tanks to minimize conversion costs to the industry. A rule to protect the unique cultural wealth and scarce water resources of the Galisteo Basin was also recently adopted.

We have reduced our staff during these difficult economic times while providing easier access to far more information. Our web-based Well Search application provides instant details on over 100,000 wells including well production, construction, history, violations, all document images and more.

2010 will bring more successful partnerships, more opportunities to share our knowledge and to learn, and more streamlined processes.



Oil Conservation Division

MISSION: The Oil Conservation Division (OCD) administers laws and regulations relating 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 the division to enforce primary statutory mandates.

PROGRAMS: The division 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 and Geological Services Bureau processes administrative applications for exceptions to OCD rules and the staff serves as division-appointed hearing examiners for OCD hearings. The Environmental Bureau develops and enforces environmental regulations and programs in the oil and gas industry for the protection of New Mexico's environment. The Legal Bureau provides legal advice and support, works with well operators to implement and manage Agreed Compliance Orders and participates in the formulation of OCD rules and proposed legislation. The Automation and Records Bureau is responsible for collecting and dispersing monthly well production and injection data, and information about wells including completions, spacing, pools, operators, and inactive and orphan wells. It also manages data systems including OCD Online Electronic Permitting and OCD Online Imaging as well as the OCD website. This bureau also tracks statistics and oversees the division's budget and procurement needs. The Administrative Bureau provides administrative support for the division, manages the plugging bond program, manages the hearing process and maintains records of cases and orders. The Oil Conservation Commission is a three-member commission that makes rules governing oil and gas production in New Mexico.



The division works with representatives from diverse groups to consistently enforce its regulations and identify areas where regulations can be improved. OCD is actively involved in nationwide federal, state and industry organizations that share information on new technologies and discuss best practices and success stories in areas such as web-based deliverables, carbon sequestration, beneficial uses of produced water and the protection of ground water.

OCD employees also participate in and lead committees involved in the development of municipal oil and gas regulations, oil and gas workplace safety programs, youth seminars and emergency response planning.

Partial backfilling operations of sinkhole formed by a brine well cavern collapse north of Loco Hills at the Loco Hills Water Disposal facility. Since this photo was taken, the operator has completed the backfill procedure. Note the car for scale.

Accomplishments

BRINE WELL MANAGEMENT: Two brine well collapses in recent years caused the division to formally evaluate all remaining brine wells in the state. This evaluation identified one brine well in a commercial, transportation and residential area that was at risk for a catastrophic collapse. The division 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.

ENFORCEMENT: TThe

enforcement team identified ten common compliance issues and published a list of basic requirements for well operators in New Mexico. The enforcement team implemented a program to review these requirements with each new well operator as they register to operate wells. Acknowledgment of the ten basic requirements is now also part of the process of transferring wells between operators. The division manages over \$30 million in inactive well additional financial assurances which is available to plug the wells if needed.

The division's web-based enforcement tools continue to provide daily notification to the well operators and the public regarding division orders, well inactivity, inactive wells requiring additional financial assurance and operatorship. The division's enforcement staff continues



to work with well operators to ensure compliance through inspections, meetings, agreed compliance orders and hearings.

POTENTIAL DRILLING ACTIVITY IN THE GALISTEO BASIN: A rule to protect the unique nature of the Galisteo Basin was recently adopted by the Oil Conservation Commission.ns in Santa Fe County and the Galisteo Basin.

INACTIVE WELL MANAGEMENT: The division expanded inactive well management to include wells that have only produced water in the past twelve months for wells whose water production does not contribute to the extraction of oil and gas.

Theodolite: Robotic laser theodolite used by OCD and the Eddy County to measure surface subsidence above the I&W brine well cavern in Carlsbad. This instrument is used to determine the amount of subsidence at the site. **RULE ENHANCEMENT:** The pit rule was revised to grandfather in certain types of tanks to minimize conversion costs to the industry.

PARTNERSHIP WITH NEW MEXICO INSTITUTE OF MINING AND

TECHNOLOGY: New Mexico Tech and the Oil Conservation Division continue to partner on a project to streamline the gathering of information supporting the location of new pits in areas that will not impact the state's ground water.

ELECTRONIC SYSTEMS LEADERSHIP: The division's web-based systems continue to be a valuable resource to the well operators, other government agencies and to the public. In 2009 the division partnered with the Information Technology Bureau to deliver the Well Search application, which quickly and easily delivers almost all data the division has about each well including its history, production, violations, orders, status and key dates, as well as a link to all document images for that well. The electronic permitting system also continues to be a popular, quick and reliable system to record, validate and approve permits and filings.

APPLICATIONS FOR PERMITS TO DRILL: The division approved slightly more permits for new wells to be drilled in 2008 than in 2007, a total of 2,350.

PARTNERSHIP WITH THE BUREAU OF LAND MANAGEMENT:

The division and Bureau of Land Management (BLM) staff and management The division and BLM staff and management increased and formalized their meetings in 2009 to include topics such as joint pursuit of compliance issues, sharing of findings related to permitting and violations, performance of joint inspections and activities related to well pluggings.



Data and Statistics

OVERVIEW: In 2008, the natural gas produced and sold in New Mexico accounted for close to 7 percent of the country's production and almost 7 percent of the country's dry natural gas reserves. Almost one-third of the produced gas is coalbed methane; New Mexico produces 23 percent of the nation's coalbed methane.

New Mexico's 2008 crude oil production was 3.3 percent of the total US production and its reserves were 3.4 percent of the country's total reserves. The source of this nationwide information is the U. S. Energy Information Administration of the Department of Energy.

As of December, 2009, there were 23,464 active oil producing wells, 28,504 active gas producing wells, 612 active C02 producing wells, 3,779 active enhanced recovery injection wells and 719 active salt water disposal wells.

Oil and gas prices rose steadily through 2008 until June, when they began falling significantly each month. Oil prices began to rise again in March, 2009. As of December 23, 2009, West Texas Intermediate Crude oil prices were \$72.47 per barrel and gas prices were \$5.782 per MMBtu (Million British Thermal Units) Henry Hub.

Total New Mexico crude oil production in 2008, including condensate, was 60.2 million barrels, an increase of almost 1 million barrels over 2007. New Mexico natural gas production in 2008 was 1,459 BCF (billion cubic feet).

| Nev | w Mexico State | Revenues fron | n Oil and Gas | Production | |
|--|-----------------------------|-----------------------------|-----------------------------|------------------------------------|-----------------------------|
| State General Fund: | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
| Oil and Gas Emergency School Tax ¹ Oil and Gas Conservation Tax ¹ | \$380,901,701 17,821,567 | \$483,240,216 22,564,448 | \$420,254,277 19,915,703 | \$557,668,091 27,052,097 | \$370,353,954 18,259,523 |
| Natural Gas Processors Tax ¹ | 21,727,404 | 26,841,174 | 35,627,328 | 30,617,748 | 40,341,003 |
| State Land Office Rents, Bonuses, ta^{2} | 434, 153,453 | 52 605 562 | 50 400 672 | 45 006 740 | 46 012 600 |
| Total – General Fund Revenue | 42,044,343 896,648,468 | 1,141,882,013 | 1,027,330,495 | 45,256,745 1,224,756,217 | 983,095,640 |
| Severance Tax Permanent and Bonding Fund: | | | | | |
| Oil and Gas Severance Tax ¹ | 389,927,942 | 488,952,323 | 425,403,323 | 567,447,973 | 378,141,950 |
| Land Grant Permanent Fund: State Land Office Royalties ² | 312,251,910 | 405,343,063 | 390,449,484 | 459,916,308 | 459,576,769 |
| Grand Total of All Funds | 1,598,828,320 | 2,036,177,400 | 1,843,183,302 | 2,252,120,498 | 1,820,814,359 |

(1) Source: New Mexico Taxation and Revenue Department: Tax Analysis, Research and Statistics Office. Note: For FY 2004 - 2008, the data reported are actual audited figures that were distributed to the General Fund. FY 2009 data are preliminary, unaudited numbers.

(2) Source: State Land Office

Table 1

Oil Production by Year *

| | | | Oil Product | tion * | |
|------|------------|---------------|-------------|---------------|------------|
| | SE Crude | SE Condensate | NW Crude | NW Condensate | Total Oil |
| 2004 | 55,135,938 | 6,686,070 | 1,069,263 | 1,623,954 | 64,515,225 |
| 2005 | 52,997,328 | 5,321,813 | 1,045,069 | 1,561,223 | 60,925,433 |
| 2006 | 51,981,753 | 4,827,559 | 1,006,902 | 1,620,445 | 59,436,659 |
| 2007 | 52,272,517 | 4,405,212 | 1,004,410 | 1,533,608 | 59,215,747 |
| 2008 | 53,809,556 | 3,824,612 | 1,004,315 | 1,542,940 | 60,181,423 |

*Volumes are adjusted to reflect amended production reports filed with the Oil Conservation Division.

Source: Oil Conservation Division as of November 24, 2009

Table 2

Natural Gas Production *

| | | | | | Total Natural Gas | (Included in |
|------|---------------|-------------|---------------|---------------|-------------------|--------------|
| | SE Casinghead | SE Dry Gas | NW Casinghead | NW Dry Gas | ** (Includes NE) | Total) |
| 2004 | 227,412,549 | 339,345,993 | 13,190,302 | 1,011,476,688 | 1,610,935,640 | 504,514,373 |
| 2005 | 225,623,804 | 325,754,110 | 12,580,044 | 1,003,142,845 | 1,591,854,260 | 519,710,276 |
| 2006 | 226,248,997 | 316,926,911 | 12,771,289 | 1,006,593,870 | 1,588,940,041 | 524,556,731 |
| 2007 | 216,199,871 | 304,021,966 | 12,044,893 | 967,710,728 | 1,525,971,791 | 497,869,749 |
| 2008 | 203,706,457 | 292,041,554 | 11,588,269 | 925,316,506 | 1,458,905,506 | 462,176,166 |

*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 November 24, 2009

Table 3

Coalseam Gas





2008 Oil and Gas Prodcution by County

| | | | Gas (Thousand |
|------------|----------------------------|---------------------------------|------------------|
| | Oil (Barrels) | Rank | Cubic Feet, MCF) |
| Lea | 34,267,690 | 1 San Juan | 562,435,942 |
| Eddy | 22,438,983 | 2 Rio Arriba | 373,172,459 |
| Rio Arriba | 1,240,911 | 3 Eddy | 250,845,206 |
| San Juan | 1,166,777 | 4 Lea | 211,861,156 |
| Chaves | 647,015 | 5 Chaves | 30,612,770 |
| Roosevelt | 280,480 | 6 Colfax | 26,267,596 |
| Sandoval | 111,358 | 7 Roosevelt | 2,407,318 |
| McKinley | 28,209 | 8 Sandoval | 1,267,856 |
| | | 9 McKinley | 35,203 |
| Total | 60,181,423 | | 1,458,905,506 |
| | | | |
| | Source: Oil Conservation D | vivision as of November 24, 200 |)9 |

Table 4

| | Gas | Oil | Other | Tota |
|------|-------|-----|-------|-------|
| 2004 | 1,210 | 570 | 66 | 1,846 |
| 2005 | 1,300 | 624 | 72 | 1,996 |
| 2006 | 1,268 | 805 | 56 | 2,129 |
| 2007 | 1,039 | 629 | 37 | 1,705 |
| 2008 | 848 | 857 | 47 | 1,752 |







State Parks Division



David J. Simon

Division Director



State Parks Division

A Message from State Parks Division Director David Simon

In these difficult times, New Mexico State Parks continues to offer the best recreation value, close to home, and the parks reconfirmed their crucial role in the Land of Enchantment's quality of life. As people stretched their leisure dollar and took more "staycations," State Park visitation was up 12 percent over calendar year 2008. Incredibly dedicated State Park employees remained committed to their resource protection mission and to serving the public. In fact, 98 percent of park visitors reported being satisfied with their visit.

Our achievements this year have been many, including the grand opening of our new "ultra-green" visitor center at Eagle Nest Lake State Park; the formal opening of Cerrillos Hills State Park; and the start of a major wetlands restoration project along the Pecos River at Bottomless Lakes State Park. The Outdoor Classroom Program celebrated its third year by surpassing 70,000 in student participation and received "A" grades from teachers.

And through it all, the state parks themselves abide. The seasons changed; water flowed in rivers and rose in lakes; the desert bloomed; mountains turned golden in the fall and white in winter. Beauty abounded. As always, we thank you, the community—for your steadfast faith in and support for parks—and for your patronage, your support, and your input as we constantly seek to improve, changing as necessary to meet the challenges necessary to protect and care for our parkland.

The economy cycles and it will cycle back to prosperity. Budgets rise and fall. Through it all, the parks abide.



State Parks Division

MISSION: To protect and enhance natural and cultural resources, provide recreational facilities and opportunities, and promote public safety and education to benefit and enrich the lives of our visitors.

HISTORY: New Mexico State Parks (Parks) was founded in 1933 in conjunction with the Civilian Conservation Corps efforts during the Great Depression. Today, there are 35 parks encompassing 19 lakes and 184,094.acres of land.

Accomplishments

New Mexico's state parks offer spectacular scenery, outstanding land- and water-based recreational areas, and provide educational programs for visitors of all ages. In 2009, for the fifth consecutive year, more than 4 million visitors enjoyed one of our parks.

Thanks to Governor Bill Richardson and New Mexico legislators, Parks has funding for programs that promote outdoor education, improve and expand park facilities and enhance local communities.

Navajo Lake State Park Marine Officer Shanna Reed teaches a young boater how to properly fit and wear a lifejacket.

VISITATION, REVENUE, AND IMPROVING VALUE FOR PARK

VISITORS: New Mexico's state parks welcomed 4.5 million visitors in 2009. Self-generated revenue from entrance and camping fees totaled over \$3.9 million – an increase of two percent in revenue over 2008. State Park entrance, camping and boating fees remained stable throughout 2009. Camping fees have not changed since 1998 and boat registration fees have not increased since 1984.

Photo by: New Mexico State Parks Division



Park's operating budget decreased by about \$380,000 compared to 2008.

BOATING SAFETY AND EDUCATION: Parks manages

the Recreational Boating Safety and Education Program on navigable waters across the state in accordance with the New Mexico Boat Act. The program's goal is to minimize boating-related accidents and have zero boating-related fatalities. In 2009 there was one boatingrelated fatality within a state park. Our boating safety program reached 1,633 students and reaches more students each year through online education and instructor-led courses. **FACILITY IMPROVEMENTS:** Parks strives to improve facilities by: upgrading campgrounds and water/wastewater systems; repairing and renovating park buildings, roads and historic structures; addressing safety issues; expanding boat access and boat ramps; improving access for disabled visitors; and enhancing interpretive exhibits.

Eagle Nest Lake State Park's visitor center and campground were completed in 2009 at a cost of about \$1.4 million and \$250,000, respectively. The visitor center's 3,770 square-foot complex houses administrative offices, interpretive exhibits, a classroom/multi-purpose room and a pavilion overlooking the lake. Design features such as straw bale construction with extensive insulation, natural day lighting, natural ventilation cooling, passive solar heating, a solar photovoltaic array and vertical wind turbine combine to create a structure that produces as much energy as it uses – a "net zero energy" building. The 1.2 kilowatt vertical axis wind turbine is quieter and more bird-friendly than the more common horizontal axis turbines. Parks has applied to the U.S. Green Building Council for LEED® (Leadership in Energy and Environmental Design) certification for the building. The 19-unit campground offers dry camping with community water and a vault toilet. Parks was able to save on labor costs by using its own in-house construction crew for the project. Landscaping of the visitor center is underway at a cost of \$220,000 and features native xeric plants and runoff irrigation.



The \$855,000 Vietnam Veterans Memorial Visitor Center renovation began in June 2009. This project is part of Phase II renovations to the memorial to upgrade the park's facilities and educational exhibits to national standards. Improvements to the visitor center include reconfigured interior space to accommodate new interpretive exhibits, a new veteran's research room, a conference room, a curation and storage space for the memorial's artifacts and a new gift shop. An interpretive master plan was developed for the park with extensive input from veterans' groups and other key stakeholders for the memorial. The new exhibits will be museum-quality and will help the park achieve its goal of promoting remembrance, healing, honor and education. In addition, park staff offices will be improved and three new rooms and a garage space will be added. Other improvements include leak repairs and new plumbing fixtures.

A \$515,000 paving project at Heron Lake State Park began in May 2009. Areas to be repaved include: the access road to the La Laja campground, boat ramp and parking lot; the access road to the Willow Creek boat ramp and parking lot; and the Heron Lake visitor center's parking lot. The need for these important investments was exacerbated by two recent severe winters and the effects of frequent freezing and thawing.

Ribbon cutting at Eagle Nest Lake State Park's Visitor Center. Parks purchased Broad Canyon land for \$1.6 million, partially funded by a \$400,000 donation from the Trust for Public Lands. The purchase will permanently protect 783 acres of land along a critical stretch of the Rio Grande in Selden Canyon. The land is immediately adjacent to NM 185 about 15 miles north of Las Cruces and contains two of New Mexico's most rare and threatened habitats: wetlands and riparian forest. The land provides access to grazing leases on an additional 4,830 acres of Chihuahuan Desert grasslands owned by the Bureau of Land Management and the New Mexico State Land Office, which Parks will lease and manage for wildlife habitat and recreation. The Selden Canyon property also sits astride the projected route of the Rio Grande Trail, a proposed multi-use trail along the river through New Mexico. The property will advance Parks' long-range vision of ecosystem restoration, expanded education and recreation opportunities.

Bottomless Lakes State Park completed the first phase of a \$2 million, 40-acre wetland restoration project, which was a cooperative venture with the U.S. Army Corps of Engineers. The project will revitalize a previously degraded wetland in the park, prevent flooding of historic structures, and facilitate spring flow from Lea Lake to the restored wetlands and the adjacent Pecos River. The goal is to improve ecosystem health by removing salt cedar and other invasive species and prevent flooding of historic structures such as the Lea Lake pavilion and tower, constructed by the Civilian Conservation Corps in the 1930s. Significantly increased flow into Lea Lake from subsurface artesian springs caused flooding in the park in recent years, creating both the need and the opportunity for this multi-faceted project.

Several 2009 projects at Elephant Butte Lake State Park include: \$200,000 to install underground utilities at the Dam Site; \$500,000 to construct a new access road into the park; and a \$440,000 new administrative facility. Parks also installed a \$60,000 photovoltaic power system at Oliver Lee State Park and purchased 474 acres of land at Sugarite Canyon State Park for \$1.42 million.

RECREATIONAL TRAILS: The Recreational Trails Program awarded eight trail project grants in 2009 to various organizations totaling almost \$1,600,000. The funding supports development of 9.5 miles of new trail and maintenance or restoration of over 90 miles of existing trails.

Projects include restoration and upgrades to 60 miles of trail in the Cedro Peak area of the Cibola National Forest for use by motorized vehicle enthusiasts and three miles of urban pedestrian trail in Truth or Consequences – part of the Healing Waters Trail initiative.

Another visionary trails project is the Rio Grande Trail. Parks completed a 12-mile section of the trail at Elephant Butte Lake State Park and intends to complete another four-mile trail section in the park in 2010. The Mid-Region Council of Governments, with funding from the Legislature, successfully negotiated the placement of a section of the trail in the Rio Rancho area.

Finally, the Town of Mesilla was awarded a \$15,000 planning contract to work with partners throughout the county to develop a final alignment and design for the trail. Construction of the Elephant Butte and Rio Rancho segments is planned for 2010, given the availability of funding.

DEDICATED STAFF, INCREDIBLE FRIENDS: Parks has begun building a partnership with the AmeriCorps Corporation to further expand its Outdoor Classroom Program initiative and to help address staff shortages caused by the hiring freeze. Parks was awarded a \$10,000 planning grant for 2009 through the New Mexico Commission for Community Volunteerism, which manages AmeriCorps programs in New Mexico. The grant money was used to hire a temporary employee at Mesilla Valley Bosque State Park, who helped cover employee shortages and offered outdoor classroom programs. As a result, the park offered 118 additional interpretive programs - an increase of 95 percent over the previous year. This successful venture served as a pilot project for future

partnerships with AmeriCorps to help Parks weather the current hiring freeze and budget restraints.

MARKETING: This

year's advertising campaign of Short Trips...Long Memories was developed to appeal to the current economic climate and the popularity of "stay-cations."

An ambitious effort to market state parks through electronic means was initiated this year, part of Parks' effort to go green. The result was over 8,000 new and current visitors receiving timely events via e-mail each week.

Our marketing "call to action" drove our audience to Parks' website, resulting in a 150-percent increase



in website hits. The marketing focused on activities for all ages rather than a generic state park message. Advertising on New Mexico and Texas radio and local television stations also helped increase Parks' revenue. More than 90 park events included star parties, festivals, guided walks, live concerts, triathlons, boat races and fishing derbies across the state.

Parks will host the Annual Conference of the National Association of State Park Directors in 2010. The groundwork for creating a successful conference was put into place.

Elk spotted at Heron Lake State Park.

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New Mexico Radioactive Waste Consultation Task Force - WIPP Transportation Safety Program

Anne deLain W. Clark

Coordinator



New Mexico Radioactive Waste Consultation Task Force - WIPP Transportation Safety Program

MISSION: To represent the interests of the state of New Mexico regarding the safe and uneventful transportation of nuclear waste through the state.

PROGRAMS: Under the Energy, Minerals and Natural Resources Department's leadership, and through the New Mexico Radioactive Waste Consultation Task Force, six other state agencies collaborate on the Waste Isolation Pilot Project (WIPP) Transportation Safety Program: 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.

The task force coordinator, through the WIPP Working Group, manages and implements the WIPP Transportation Safety Program. The WIPP Working Group comprises operations management staff in each of the participating agencies. 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 point of origin or at the New Mexico ports of entry.

Accomplishments

In federal fiscal year 2009, the WIPP Transportation Safety Program:

Maintained 17 joint powers agreements with city and county fire departments along WIPP routes to support ongoing training and equipment maintenance related to radioactive and hazardous materials emergency response

Provided new and recalibrated radiological emergency response equipment to 34 New Mexico communities

Trained more than 500 emergency responders in 29 New Mexico communities

Facilitated the approval by the State Transportation Commission of an emergency route change for WIPP shipments entering the state on US 285 from the south

Inspected (from July 1, 2008 through June 30, 2009) 794 radioactive waste shipments heading for WIPP. Seventy percent of those shipments received Commercial Vehicle Safety Alliance Level VI inspections. Radiological surveys were performed on 100% of those shipments.



Youth Conservation Corps



Wendy Kent

Executive Director



Youth Conservation Corps

A Message from Youth Conservation Corps Executive Director Wendy Kent

The Youth Conservation Corps (YCC) Commission believes the YCC Act, the program's vision, mission, goals and policies provides the "best practices" for organizing youth corps. The program has the flexibility to allow each community to design projects that meet their needs and the needs of their young people. This is so important in a state like New Mexico where there is such a wide range of cultures and a disparity of employment and educational opportunities between rural and urban communities. Even in our urban areas there are youth who have little support structure, financial and/or emotional. YCC projects not only provide an opportunity to earn a living wage for New Mexico's youth, Corps members are also provided the opportunity to learn on-the-job skills such as work ethics, technical skills and employability skills. Corps members are also provided classes in conflict resolution, appreciating diversity, drug use prevention, positive behaviors and many other topics. The skills learned will help them be more successful in their professional and personal lives.

Statutory Authority: Sections 9-5B-1 through 9-5B-11 NMSA 1978.

Agency Strategic Directions

The Commission continues to stress the importance of leveraging funding and services through partnerships with the; Public Education Department, Children, Youth and Families Department, State Land Office, non-profit organizations, Federal agencies, State agencies and our many project sponsors. The Commission is also committed to providing opportunities for our Corps members to earn credit hours (academic, community service and service learning) towards graduation either from high school or an institution of higher education. In some cases, Corps members may even earn concurrent credit hours.

YCC projects provide young people opportunities that they may not get elsewhere. The skills, experiences, and educational opportunities provided by YCC will truly endure throughout the lifetime of many a Corps member; in a strong work ethic, good citizenship, and hope and a vision for the future. The Commission and staff are committed to providing the highest degree of customer service to our Corps members and Project Sponsors so that New Mexico will reap the benefits of a well trained workforce.



Youth Conservation Corps

The Youth Conservation Corps (YCC) Commission believes the YCC Act, the program's vision, mission, goals and policies provide the "best practices" for organizing youth corps. New Mexico has such a diverse culture and the YCC program provides the flexibility to allow each community to design projects that meet specific community needs. The YCC Commission and staff are committed to providing the highest degree of customer service to our Corps members and project sponsors.

THE PURPOSE OF YCC: The YCC Act [9-5B-1 to 9-5B-11 NMSA 1978] provides a process to employ young persons in public projects that conserve New Mexico's natural resources and provide community benefits of lasting value. New Mexico will benefit by having its natural and urban environments improved and enhanced and its youth instilled with an appreciation of natural resources, cooperation, hard work and accomplishment.

VISION: YCC members contribute to the quality of life for all people of New Mexico.

MISSION: Promote the education, success and well-being of the youth in our communities and provide community benefits of lasting value through the conservation and enhancement of New Mexico's natural resources.

GOALS: Together we strive for healthy natural resources and lasting community benefits; instilling values of hard work and accomplishments; and promotion of education and training.

VALUES: We strive to be responsible stewards of the state's resources and positive role models for New Mexico's youth

FUNDING CRITERIA: An application should meet certain criteria to be considered for funding, as follows:

A comprehensive work plan including the quality of the plan, reasonableness of the schedule, the priority for hiring youth, and the project's compliance with the conservation and community service objectives as set forth in the YCC Act;

The level of educational curriculum that will enhance academic skills including the opportunity to earn high school or college credit hours toward graduation, the opportunity to have new learning experiences relevant to the workplace, and the opportunities the project provides in the development of skills, discipline and good work habits;

A complete project cost estimate that illustrates the commitment to hire youth as demonstrated by dollars to be spent on Corps member wages, the quality and reasonableness of cost estimates which includes the sponsor's ability to contribute the necessary financial and human resources to the project; and

The project's ability to provide visible benefits with a lasting value to the communities and citizens of New Mexico.


GRANT AWARD PROCESS AND HISTORY OF FUNDING: The Grant Award Process and History of Funding: The nine-member commission has a legislative responsibility to provide a process

to employ young people in public projects that conserve New Mexico's natural resources and provide community benefits of lasting value. Funding for YCC comes from 10 percent of the revenue obtained through the Governmental Gross Receipts Tax Collections.

Over 700 requests for proposals (RFP's) are sent out to local government agencies, school districts, federal agencies, state agencies, Native American tribes and non-profit organizations. In addition, at least ten legal advertisements requesting proposals are published in various newspapers around the state. To be more equitable, applications are placed in two categories; urban and rural. The YCC Commission identifies each category based on the Department of Economic Development's determination of Metropolitan Statistical Areas (MSAs).



Rural communities compete with each other and the same holds true for the urban communities.

The funding is equally distributed between the two categories:

Urban projects are located in Bernalillo, Sandoval, Valencia, Dona Anã, Los Alamos, Santa Fe, and San Juan counties; and

Rural projects are located in all other counties.

The commission reviews the applications, scores and ranks them, then awards grants based on the criteria above.

Grants are awarded until the contractual line item budget has been depleted. The commission feels this process results in the most equitable distribution of funds to New Mexico communities, meets the procurement code and can be defended if challenged. The RFP process has been established by the legislature and the Department of Finance and Administration; and has been accepted by the public as a fair means to distribute tax dollars.

The charts below show that there have been more funding requests than budget. This demonstrates how New Mexico communities value the YCC program.

HISTORY OF CORPS MEMBER EMPLOYMENT: YCC continues to serve New

Mexico youth and communities with a commitment to youth development, natural resources conservation, community service and education. Since 1992, over 8,900 youth between the ages of 14 to 25 have been employed in 601 projects. Funding for these 601 projects totals over \$33 million. Projects in 2009 range from; zoo improvements in Clovis, Roswell and Edgewood, salt cedar removal at Acoma Pueblo, an ADA compliant urban park trail in Silver City, preservation and restoration of a historic adobe structure in Bernalillo, soil erosion mitigation in arroyos in San Juan county, park improvements in Tucumcari and hundreds of miles of new and improved trails on publicly owned land.



Based on the YCC Act, the commission has used its authority to design a system they feel addresses the needs of New Mexico's youth and communities. The focus of the program has always been on providing the greatest number of youth the ability to have a positive work experience. New Mexico benefits by having its natural and urban environments improved and enhanced and its youth instilled with an appreciation of natural resources, cooperation, hard work and accomplishment. The commission believes the YCC Act, rules, policies and systems can be used as a model for other youth employment programs. YCC demonstrates the "best practices" to enable employment organizations to set high standards and implement effective programs with positive results.

EDUCATION AND YCC: Education is an important part of every YCC project. Project sponsors are encouraged to create a training plan that is specific for the needs of the young people in the community. It is hard to categorize educational experiences but in relation to YCC the commission identifies three. One category is "life skills". Topics covered in this category would be; healthy life-styles, conflict resolution, sexual harassment and drug use prevention, parenting classes, and financial readiness. Another general category is "on-the-job training." These topics would be; teamwork, work ethics and safety, job preparedness, tool use, trail construction, building construction, public speaking, landscaping, public art and other skills related to work projects. The third category is for more "formal" education such as; CPR/First Aid certification, CLD licensure, for-credit classes such as community service, service learning, STEM (science, technology, engineering and math) classes and other for-credit classes.

To get the "formal" trainings in place, partnerships are developed with local school districts and colleges so that curriculum (based on New Mexico Public Education Department's Benchmarks and Standards) can be developed. During the last legislative session, school districts are required to offer electives in community service to their students. YCC is the perfect venue for getting these electives and we will be working with project sponsors and school districts to facilitate the development of benchmarks and standards that will enable our corps members an opportunity to earn these electives.

The charts below demonstrate how some YCC members are taking advantage of the opportunity provided to them.

*Not all 2009 projects have been completed as of 11/12/09 so these numbers may change.

CASH BONUSES AND TUITION VOUCHERS: The YCC Act provides for corps members who have served in YCC for twelve months in a forty-eight month period to earn either a \$500 cash bonus

or a \$1,500 tuition voucher. rom 1995 to June 2009, \$162,800.00 has been distributed to 207 Corps members. The educational tuition voucher is valid for two years. If the corps member receives a satisfactory employment evaluation and it is determined that the corps member's employment was completed in less than twelve months due to circumstances beyond his/her control, the corps member may be authorized a partial cash bonus or tuition voucher.



Energy, Minerals and Natural Resources

Department



Data and Statistics: Collected and published pursuant to the authority of the New Mexico Energy, Minerals and Natural Resources Department:

NMSA 1978, Sections 69-5-7 (1933, as amended through 1989) 69-11-1 (1933, as amended through 1989) 69-11-2 (1933, as amended through 1989) 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 1996)

For more information on the Energy, Minerals and Natural Resources Department visit: www.emnrd.state.nm.us

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Energy, Minerals and Natural Resources Department

