

Solving New Mexico's Small Business Challenges

PERSPECTIVES

2008



2008 PERSPECTIVES





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We've updated our website and now you can apply for the program directly online at

www.NMSBAprogram.org



WELCOME

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*“It is the purpose of the Laboratory Partnership with Small Business Tax Credit Act to bring the technology and expertise of the national laboratories to small businesses in New Mexico to promote economic development in the state, with an emphasis in rural areas.”*

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Dear Governor Richardson and New Mexico State Legislators,

We are pleased to share with you the 2008 Annual Report for the New Mexico Small Business Assistance (NMSBA) Program.

In a year in which the economic downturn dominated the headlines, the NMSBA Program provided a spark of innovation and success for many New Mexico small businesses. The State of New Mexico along with Los Alamos National Laboratory and Sandia National Laboratories invested nearly \$3,317,000 to accelerate business growth. Los Alamos National Laboratory and Sandia National Laboratories staff shared their expertise and resources with 286 New Mexico small businesses to solve their technical challenges. These small businesses were located in 25 counties throughout the state. More than two thirds were located in rural areas.

The impacts of the NMSBA assistance projects helped many of our New Mexico small businesses weather the current economic times. A historic door refurbishing company in northern NM learned new efficient manufacturing techniques to maintain a gross profit margin of 49% even with a 10% decrease in sales. A copper wire manufacturing company in southern NM implemented results from a power usage assessment to reduce operation costs by more than five thousand dollars a month. High tech companies in the film and energy industries used the NMSBA Program to reduce product development time in order to bring new technologies to the market faster. This increased their customer base and potential for investment.

As you review this report, you will find that the Laboratory Partnership with Small Business Tax Credit Act has been critical for many NM small businesses to grow and prosper. Thank you for your continued support of the NMSBA Program, the partnership with the State of New Mexico, our national laboratories and the small business community in promoting economic development throughout New Mexico.

Sincerely,

A handwritten signature in black ink, appearing to read "Mariann Johnston".

Mariann Johnston
Los Alamos National Laboratory

A handwritten signature in black ink, appearing to read "Jackie Kerby Moore".

Jackie Kerby Moore
Sandia National Laboratories



PROGRAM INFORMATION

Purpose

In 2000, the New Mexico Legislature created the Laboratory Partnership with Small Business Tax Credit Act, for the purpose of **“bringing the technology and expertise of the national laboratories to small businesses in New Mexico to promote economic development in the state, with an emphasis on rural areas.”** This Act established the New Mexico Small Business Assistance (NMSBA) Program to help small businesses throughout the state by providing technical support from Los Alamos National Laboratory (LANL) and Sandia National Laboratories (SNL). The program delivers a cost-effective means for economic development through business creation, sustainability, expansion and workforce development. Over the last 9 years, the NMSBA Program has assisted 1,455 small businesses with 2,476 projects.

The NMSBA Program has a statewide impact by:

- Enabling New Mexico small businesses to access cutting edge technology;
- Increasing New Mexico small businesses’ technical sophistication and capabilities; and
- Sharing knowledge and resources between laboratory personnel and small businesses to address issues and develop real-world applications.

The NMSBA Program is committed to:

- Solving small businesses’ critical challenges with national laboratory expertise and resources;
- Influencing New Mexico business development by building capacity, capabilities, and competencies; and
- Acting as an advocate for small businesses through an entrepreneurial culture.

Description

The Laboratory Partnership with Small Business Tax Credit Act defines small business assistance as “assistance rendered by a national laboratory related to the transfer of technology [and] non-technical assistance related to expanding the New Mexico base of suppliers.”

The New Mexico Small Business Assistance Program has helped small businesses in New Mexico to acquire essential knowledge and flourish. NMSBA enables small businesses to make products ready for commercial use, reach development goals, and increase profitability. Small businesses receive guidance and consulting on business alternatives taken from the laboratories’ technical expertise to improve business performance and product/service optimization. Each

small business uses the NMSBA Program's assistance in a different way, but they all use it as a means to grow or maintain their business.

Assistance is provided in the form of lab staff hours valued at up to \$20,000 per calendar year for businesses located in rural counties and \$10,000 for businesses located in an urban county (Bernalillo County). The total amount of assistance is capped at \$2.4 million annually for each laboratory. The assistance that the NMSBA Program provides cannot be available in the private sector at a reasonable cost. Furthermore, no equipment or cash can be given to a company.

Types of Small Business Assistance

Individual Projects

Individual projects involve a single New Mexico for-profit small business. Projects address challenges specific to the business that can be solved with national laboratory expertise and resources. Technical assistance challenges are wide ranging. The majority

of projects include testing, design consultation and access to special equipment or facilities. Requests for individual projects are accepted by the NMSBA Program year round until funding is exhausted.

Leveraged Projects

Leveraged projects allow a group of small businesses that share technical challenges to collectively request assistance with issues that are too large or complex to solve through an individual project. Proposals for leveraged projects are reviewed once a year by the NMSBA Program and its advisory council.

Contracted Projects

The NMSBA Program is allowed by its enabling legislation to contract with entities that have the capability to provide small business assistance services that are not available in the private sector at a reasonable cost. Current contracts include the New Mexico Manufacturing Extension Partnership (MEP) to provide training and assistance in the areas of quality and lean manufacturing principles, and the Management of Technology Program at the University of New Mexico Anderson Schools of Management.



FUTURE DIRECTION



A Thriving Partnership

The New Mexico Small Business Assistance Program is an innovative economic development tool that focuses on the backbone of the New Mexico economy, small business growth. NMSBA aims to meet the full intent of the New Mexico State Legislature when they had the vision and fortitude to enact the Laboratory Partnership with Small Business Tax Credit to assist with small business development, the creation of high wage jobs and increased tax revenues. In the next year, Los Alamos and Sandia National Laboratories are striving to fully utilize the tax credit in application of unique expertise and resources to solve NM small business needs.

The NMSBA Program has served small businesses in all corners of the state, with over 65% of the assistance projects being in the rural areas of New Mexico. A concerted effort is being made to expand NMSBA services in the under-served counties mostly located on the eastern and western borders of the

state. The program sees opportunities in the energy and agricultural industries to better serve these communities.

It is important to ensure the program makes it possible for New Mexico small businesses to access the world class technologies and science of the national laboratories. NMSBA is determined to provide high quality services that address the small business challenges and creatively apply unique solutions. The basis for the success of a small business assistance project is the understanding of the small business issue and developing a relationship among the small business, laboratory staff and the NMSBA Program.

As the NMSBA Program moves forward, the management and staff of the Program optimistically look to the future and the continuation of this thriving partnership between New Mexico's small businesses, the State of New Mexico, and Los Alamos and Sandia National Laboratories.

“The New Mexico Small Business Assistance Program and the work they do for small businesses in this state is integral to the success of many business owners. I truly believe that small business is the hub in the wheel of economic development for our state, and I strongly encourage the growth and development of small business, because there is nothing small about the number of people they employ and the revenues they create.”

Fred Mondragon

Cabinet Secretary for Economic Development, State of New Mexico



SUCCESS STORY



POWERED BY

Pixel
STRINGS™

Cinnafilm

“The Labs know how important small businesses are to New Mexico. Their strength and heritage gave my small business a leg up.”

Cinnafilm is a software company located in Albuquerque that focuses on unlimited format conversions and synthesized film simulation for the professional video and film post-production industry. Cinnafilm specializes in advanced methods and techniques for leveraging graphics cards to perform highly complex video processing tasks. Cinnafilm’s methods require that a variety of complex analyses be performed accurately – especially in the realm of rendering color in computerized images. To be useful in the film industry, color variations in these images need to be convertible among different digital formats while retaining the color accuracy in the finished product.

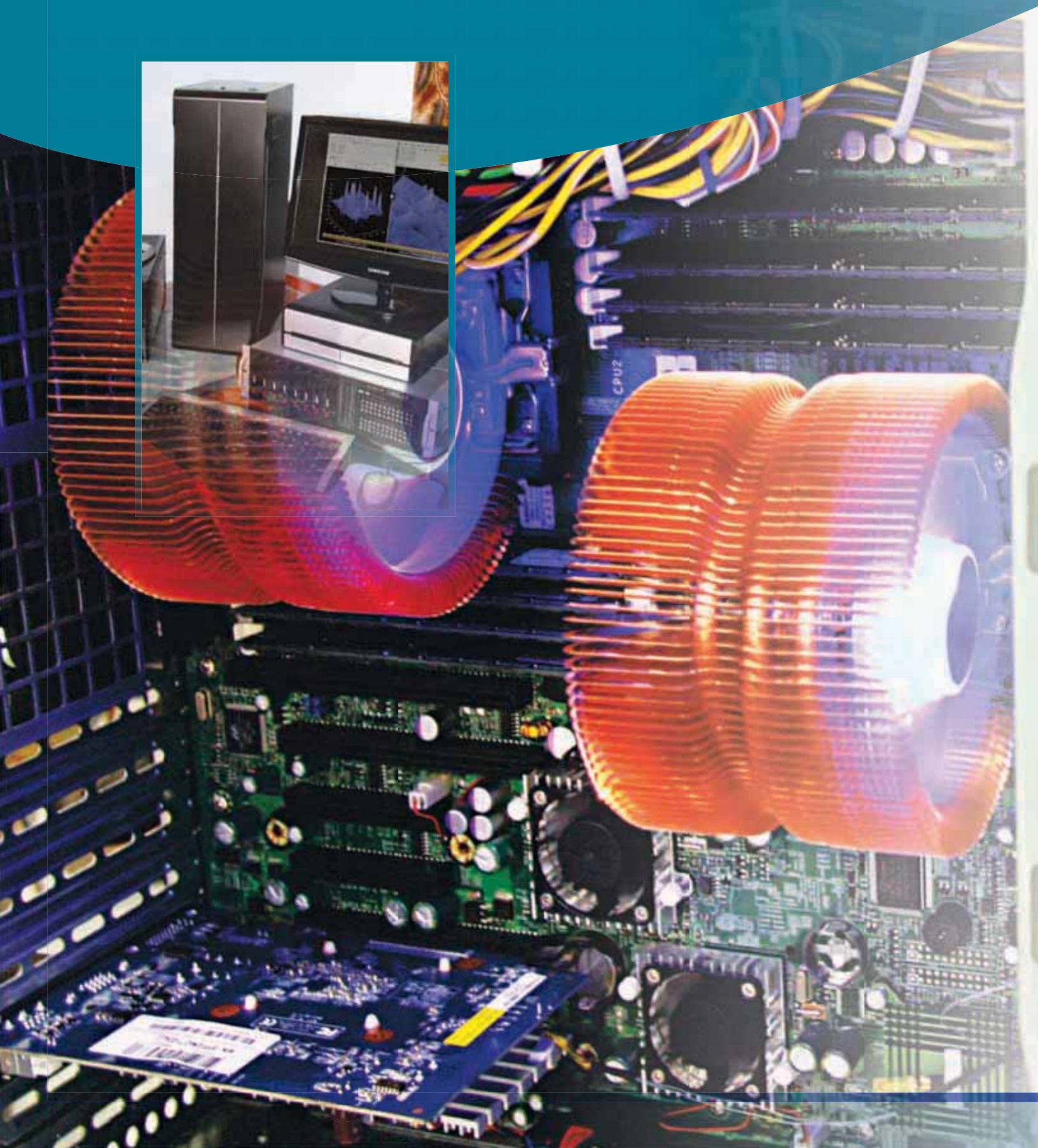
Richard Strelitz (LANL) is a mathematician in the Computer, Computational and Statistical Sciences Division. His knowledge of data transfer enabled the development of a method to convert normal red-green-blue (RGB) color rendering systems into hue saturation and intensity schemes. Richard used an off-the-shelf system to create a work flow process that allows Cinnafilm to maintain color accuracy in converting images among different digital formats. The method also allows for technical experimentation with color validation.

Thanks to this assistance from NMSBA, Cinnafilm showcased their product at the National Association of Broadcasters annual conference and gained quality exposure from a targeted audience. LANL was able to provide Cinnafilm three weeks of additional analysis before the conference to help validate their color analysis tools.



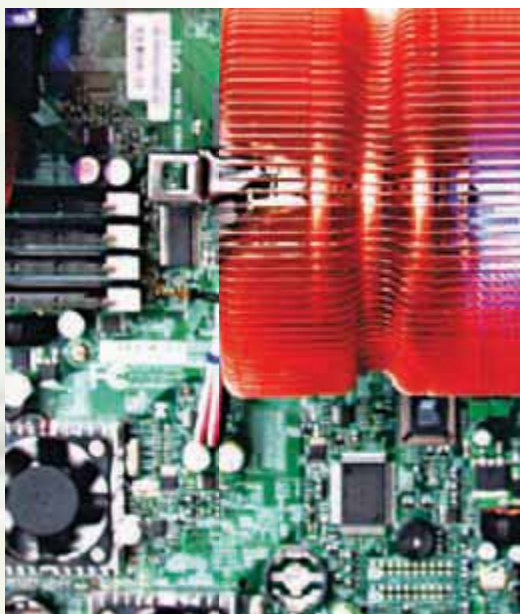


SUCCESS STORY



Creative Consultants

Creative Consultants is an information technology firm located in Albuquerque that produces energy-efficient computing equipment. The company is developing hybrid computing systems that utilize both central processing units (CPUs) and graphics cards. Creative Consultants' products are up to 50% more energy efficient than comparable computer hardware produced by the firm's competitors.



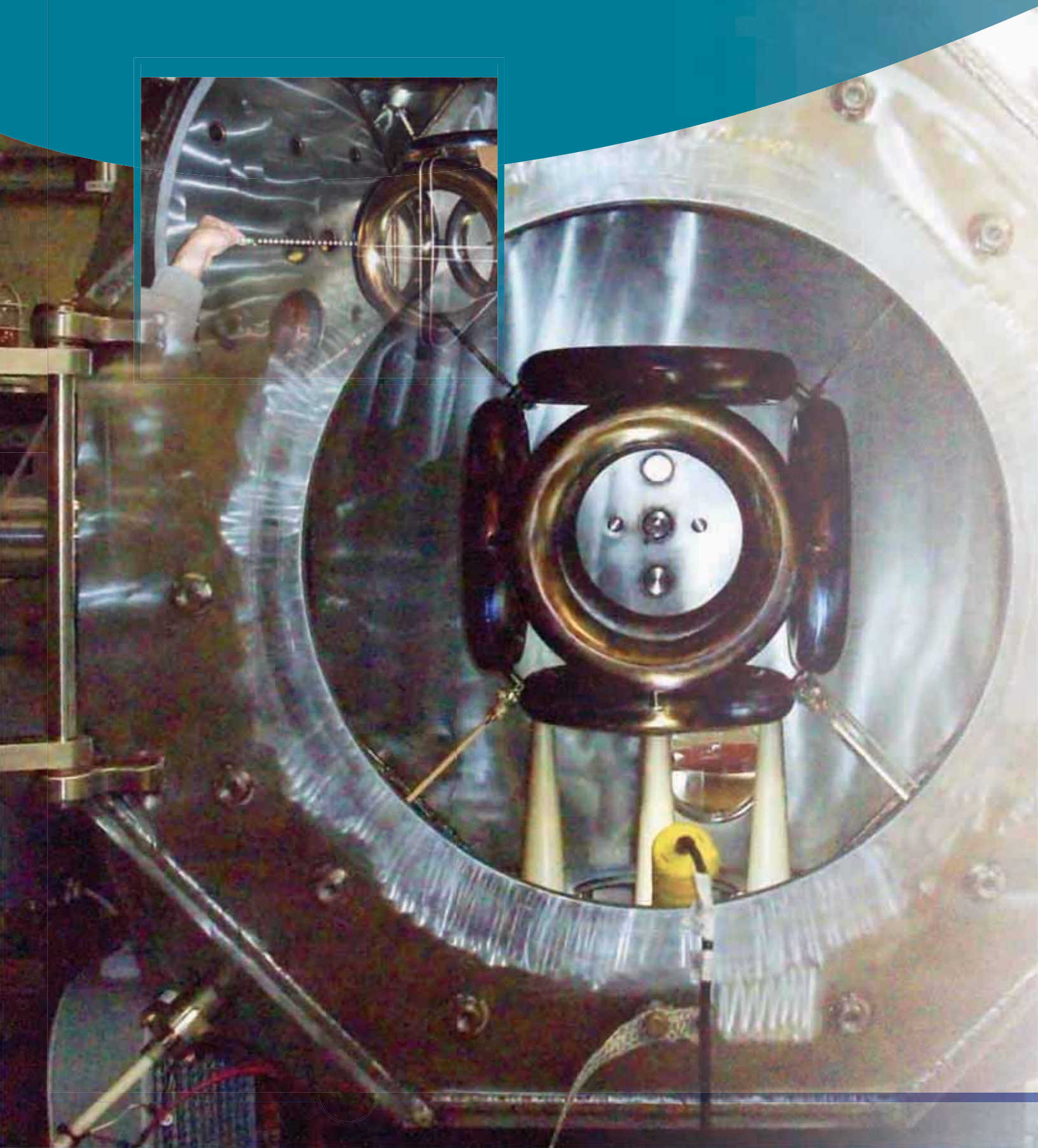
Creative Consultants needed to identify and target a specific customer base of early technology users that would be receptive to their energy-efficient computers. The NMSBA Program, through the Management of Technology program at the University of New Mexico Anderson Schools of Management, researched markets for these computing systems to better understand buying behavior of potential end users for these products. Heba Almasri, a student of Professor Sul Kassicieh, worked with Creative Consultants to identify early adopters and proposed effective methods to communicate with them.

Heba used a market identification technique to improve the company's commercialization efforts. She demonstrated that the early adopter segment of users for these products represents 5-10% of total computer sales. A targeted message was created for these users that differentiates Creative Consultants' products from more-established products already in the market.

“Assistance from the NMSBA Program gave us the competitive edge we needed to communicate with our market and let us focus on the technology side of our business.”



SUCCESS STORY



Energy Matter Conversion Corporation

“The NMSBA Program helped us to access LANL’s sophisticated science and technology expertise, which is normally out of reach for a small technology company.”

Energy Matter Conversion Corporation (EMC²) is a research and development company that is working toward the creation of radiation-free and cost-effective fusion power. If successful, the company will create a fusion power system that would dramatically change the face of power generation worldwide.

EMC² had reached an impasse in their design caused by a device failure in which the plasma arced and lost confinement. This flaw happened so quickly the company needed specialized equipment and expertise to diagnose the issue and maintain the timeliness of their development plans.

Glen Wurden (LANL), Fusion Energy Sciences Program Manager, is an experimental plasma physicist and team leader of the magnetic fusion experimental team. Dr. Wurden’s unique expertise in analysis identified the problem. He used high speed cameras to photograph the fusion reaction and capture images that allowed them to visualize the dynamics of the device failure. He also applied light monitors and a spectrometer to identify impurities that were interfering in the fusion reaction.

The NMSBA Program helped to save EMC² six months to a year in their development cycle by identifying the technical flaw in only two weeks. Identification of the problem saved the company nearly 30% of their annual budget. The cost savings will enable EMC² to hire two more employees and continue with plans to add five more jobs next year. The NMSBA Program has kept a valuable project from stalling. EMC² is moving forward on plans to construct a \$30 million dollar prototype.





SUCCESS STORY



Ffhoenix Cuivre

Ffhoenix Cuivre is a copper fabrication and insulating business located in Santa Teresa that supplies bare, tin-plated, and insulated conductors to the automotive, consumer appliance, telecommunications, industrial, and medical industries in North and Central America.

Frequent power interruptions and high power rates prevented Ffhoenix Cuivre from meeting production deadlines and maintaining competitive pricing.

Loren Toole (LANL) and his team from Energy and Infrastructure Analysis performed an analysis of the major equipment within the plant, the plant's power demand, and daily power use patterns. The team used advanced modeling techniques to identify modifications in manufacturing processes that would lower peak demand and raise average demand. As a result, Ffhoenix Cuivre qualified for lower electricity rates. The team also identified retrofits for some equipment that could be financed through an energy service company.

Ffhoenix Cuivre benefited from an independent, scientific assessment of their power problem. By



implementing the first action item in the LANL team's report to change power use patterns, Ffhoenix Cuivre has saved \$5,000 per month in energy costs. As they incorporate the other action items detailed by the LANL team, the company anticipates potential savings of \$40,000 per month in electricity costs and up to \$60,000 per year in maintenance costs. Ffhoenix Cuivre and other businesses co-located in the Santa Teresa technology park have requested additional assistance to address power blips that cause plant shutdowns.

“The improvement actions provided were down-to-earth and business conscious, not relying on ‘Star Wars’ technology, out-of-reach investments, or impractical changes to our operations.”



PROGRAM METRICS

Value of Program Assistances for 2008

The NMSBA Program assists New Mexico companies with laboratory staff hours valued at up to \$20,000 per calendar year for businesses located in rural counties and \$10,000 for businesses located in an urban county (Bernalillo County). The total amount of assistance is capped at \$2.4 million annually for each laboratory. Program assistance data is shown in Figure 1.

Figure 1. Amount of Assistance Provided to Companies in NM

	Rural 2008	Urban 2008	Total 2008	2000 thru 2008
Both Laboratories (\$)	2,773,405	543,462	3,316,867	16,398,044
Los Alamos National Laboratory (\$)	845,678	79,142	924,820	1,272,933
Sandia National Laboratories (\$)	1,927,727	464,320	2,392,047	15,125,111

Participating Companies

New Mexico businesses receive guidance and consulting on business alternatives taken from the laboratories' technical expertise to improve business performance and product/service optimization. The number of businesses that participated in the NMSBA Program in 2008 are shown on Figure 2.

Figure 2. Small Businesses that Received Assistance in 2008

	Rural	Urban	Total
Both Laboratories	186	100	286
Los Alamos National Laboratory	51	11	62
Sandia National Laboratories	135	89	224

Served 25 of 33 counties in 2008

Number of Assistances

The New Mexico Small Business Assistance Program has helped businesses throughout New Mexico to solve their technical challenges and to help contribute to their individual successes. Since the program's inception, the NMSBA Program has helped hundreds of New Mexico businesses with technical expertise from New Mexico's national laboratories. Figure 3 below shows a summary of the volume of assistances.

Figure 3. Small Businesses that Received Assistance from 2000 to 2008

	Rural	Urban	Total
Small businesses that have received assistance	923	532	1455
Assistances provided by program	1588	888	2476

Served 32 of 33 counties during life of the program (DeBaca not served yet)

Making a Positive Economic Impact

To measure its impact, NMSBA administers an annual economic impact survey with the program participants. The survey is conducted by Research & Polling, Inc., a third party contractor. Since the beginning of the Program, participating businesses have created 568 jobs in New Mexico. Small businesses also utilized assistance to decrease their operating costs by over \$7,561,900 and increase their revenues by more than \$12,572,700. Additionally, nearly \$5,750,870 has been invested in expansion efforts and purchases of local goods and services.

Last year, the program created 73 jobs across the state, with a mean salary of \$43,451. Small business participants increased their revenue by \$603,000 in 2007 while decreasing their operating costs by \$610,000. Increased revenues and reduced costs result in improved profitability for these businesses and enhances tax receipts for the State of New Mexico. Statewide economic impacts are shown in Figure 4.

Figure 4. Economic Impact for Small Businesses from NMSBA Projects

	2000 - 2007*	2007*
Jobs Created/Retained	568	73
Mean Salary (\$)	39,406	43,451
Increase in Revenue (\$)	12,572,700	603,000
Decrease in Operating Costs (\$)	7,561,900	610,000
Investment in NM Goods / Services (\$)	5,750,870	288,000

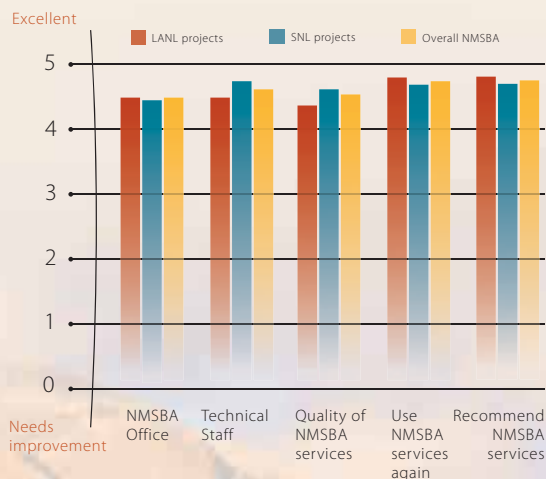
*Surveys are performed six months to one year after completion

Number of Companies Assisted 2000 - 2008



Customer Satisfaction

Each year, the NMSBA Program surveys participating businesses to learn of their satisfaction with the program. The graph below shows Customer Satisfaction results for the 2008 program year.





SUCCESS STORY



Four Corners Leveraged Project

Biosphere Environmental Science and Technologies with McDonald Enterprises, Inc., Hands on Safety Service, Intermountain Painting

Biosphere Environmental Science and Technologies (B.E.S.T.) operates several projects related to water supply and water use systems. While designing a reverse osmosis system to desalinate water produced from oil and gas production operations, B.E.S.T. found that chemicals and minerals from the produced water reduced the effectiveness of the filtration membranes within the reverse osmosis system. The company needed a pretreatment system to increase the life of these membranes.

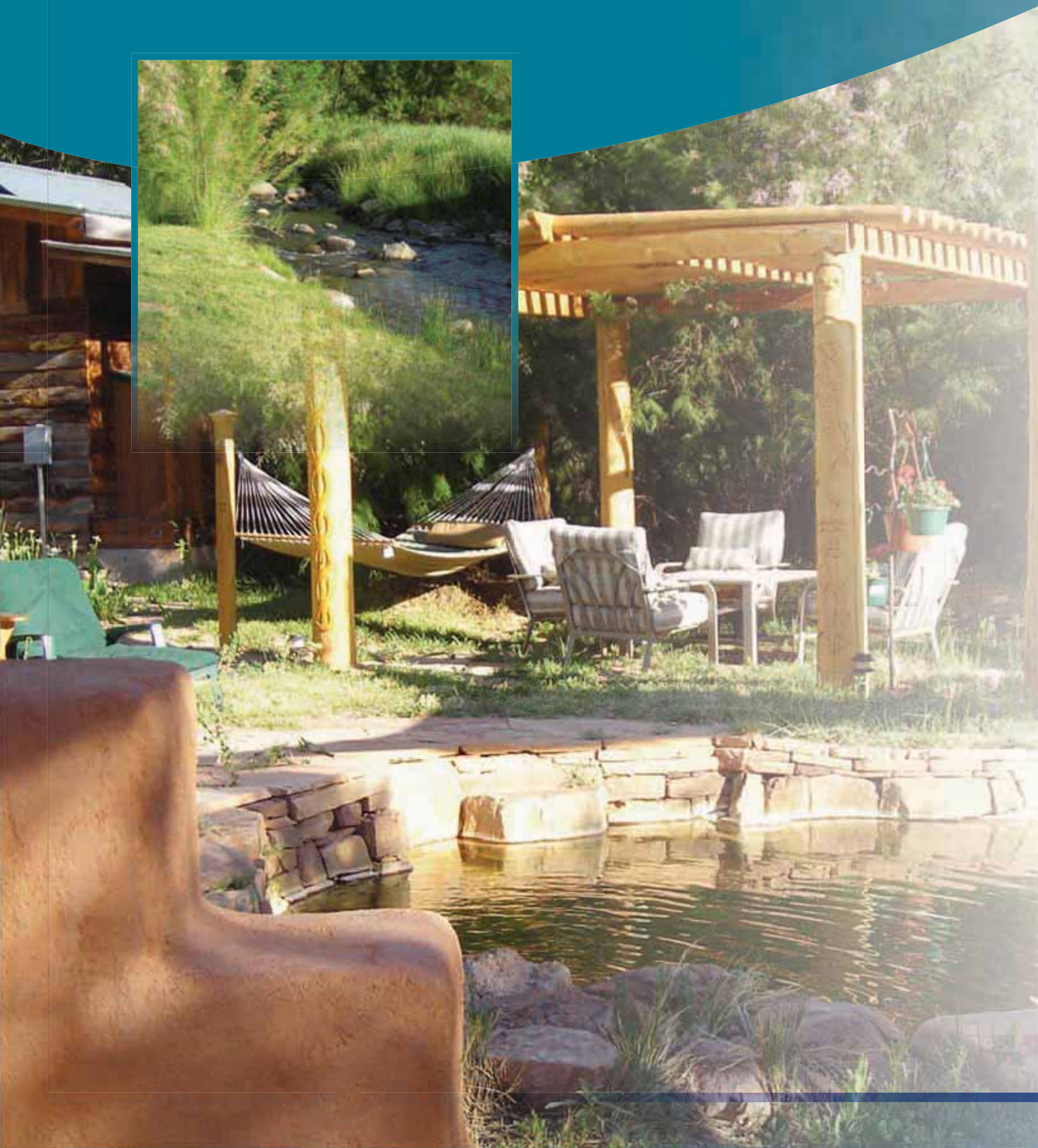
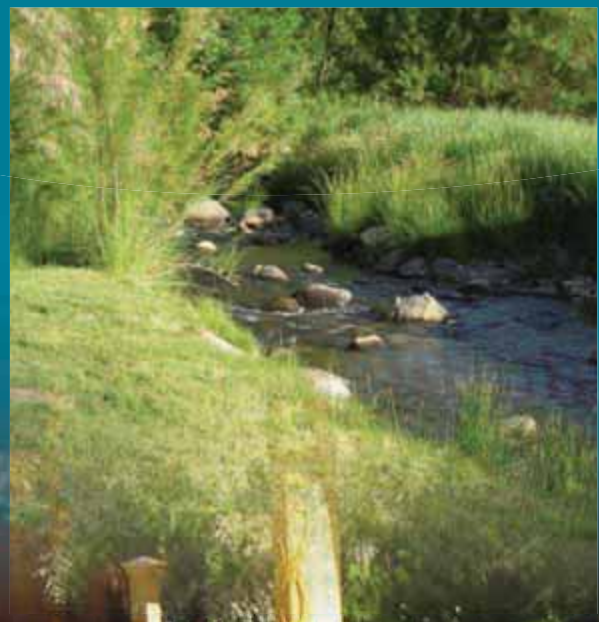
Allan Sattler (SNL), a project leader, and Malynda Cappelle (SNL), an engineer, work in geosciences with “produced water” from oil field and natural gas production operations. They teamed with B.E.S.T. and other companies to test the performance of a new pretreatment and reverse osmosis system for untreated produced water. A ConocoPhillips location on Bureau of Land Management property near Farmington served as a test site for the system.

There is a huge potential market for desalination of produced water in New Mexico and throughout the world. The oil and gas industry pays from \$1 to \$5 per barrel (or more) to transport and dispose of produced water, because it currently cannot be disposed of on the ground at production sites. Over 3 billion barrels of produced water are generated from production sites each year in the Rocky Mountain region. Almost one-third is from New Mexico. The system designed with the help of the NMSBA Program would reduce costs to \$3-10 per thousand gallons to treat the produced water. Currently, New Mexico State University is testing and evaluating the use of treated produced water for re-vegetating well sites with native plants. This reduces the disposal of the water while assisting natural vegetation.

“The NMSBA Program and Sandia National Laboratories have allowed what was once just an idea, to develop into reality...”



SUCCESS STORY



Giggling Springs

“We have other great ideas that we will continue to pursue and are immensely grateful for the opportunity to work with the NMSBA Program.”

Located along the Jemez River, Giggling Springs is an outdoor mineral water pool fed by hot water from an underground geothermal spring. Giggling Springs spa is used for therapeutic soaking and relaxation. The company has gone to great lengths to preserve its natural hot spring and look for new ways to reduce its carbon footprint while controlling costs. Giggling Springs approached the NMSBA Program to investigate a heating system for both its buildings and therapeutic pool using geothermal energy from its native hot spring.

Giggling Springs' geothermal water maintains a temperature of 130° F, while most existing heat exchange systems operate efficiently at much higher water temperatures, typically above 180° F. An additional difficulty was being able to capture enough heat for both the therapeutic pool and the cabins. Rich Jepsen (SNL), a specialist in fluid and thermo dynamics, calculated the amount of energy available for use from the geothermal water and proposed a heat exchange system and cabin heating units for Giggling Springs that could operate effectively at the lower water temperature while leaving sufficient heat in the system

for the therapeutic pool. This new heating system also allowed Giggling Springs to reduce the need for supplemental heating by directing the geothermal heat preferentially to the most frequently used cabins.

Giggling Springs saw an immediate decrease in energy costs and became much less dependent on other energy sources to operate. In February, propane costs were reduced from \$2,500 to \$800. As a result of new cost savings and an increase in customers, Giggling Springs hopes to add two more people to its workforce.





SUCCESS STORY



La Puerta Originals

La Puerta Originals salvages one-of-a-kind doors and woodwork from countries not practicing historic preservation. The company imports and refurbishes these treasures to use as custom pieces in new homes. The company's sustainability focus is to preserve wood that would usually be destroyed. After moving to their new location in Santa Fe County, La Puerta wanted to expand its business and increase productivity but did not want to lose its hand-crafted originality to mass production or machine-made processes.

The New Mexico Manufacturing Extension Partnership (MEP) team provided training in Lean Manufacturing Principles to La Puerta's production, sales, and design staff. La Puerta's staff used New Mexico MEP's process to create Value Stream Maps to improve their overall manufacturing processes. They brought Lean methods to La Puerta's Spanish speaking employees and specialized training for managers. These changes resulted in faster production times and improved capacity, without compromising La Puerta's commitment to sustainability and original craftsmanship.

To date, La Puerta's lean transformation efforts have led to \$1.2 million in retained sales, \$315,000 in new

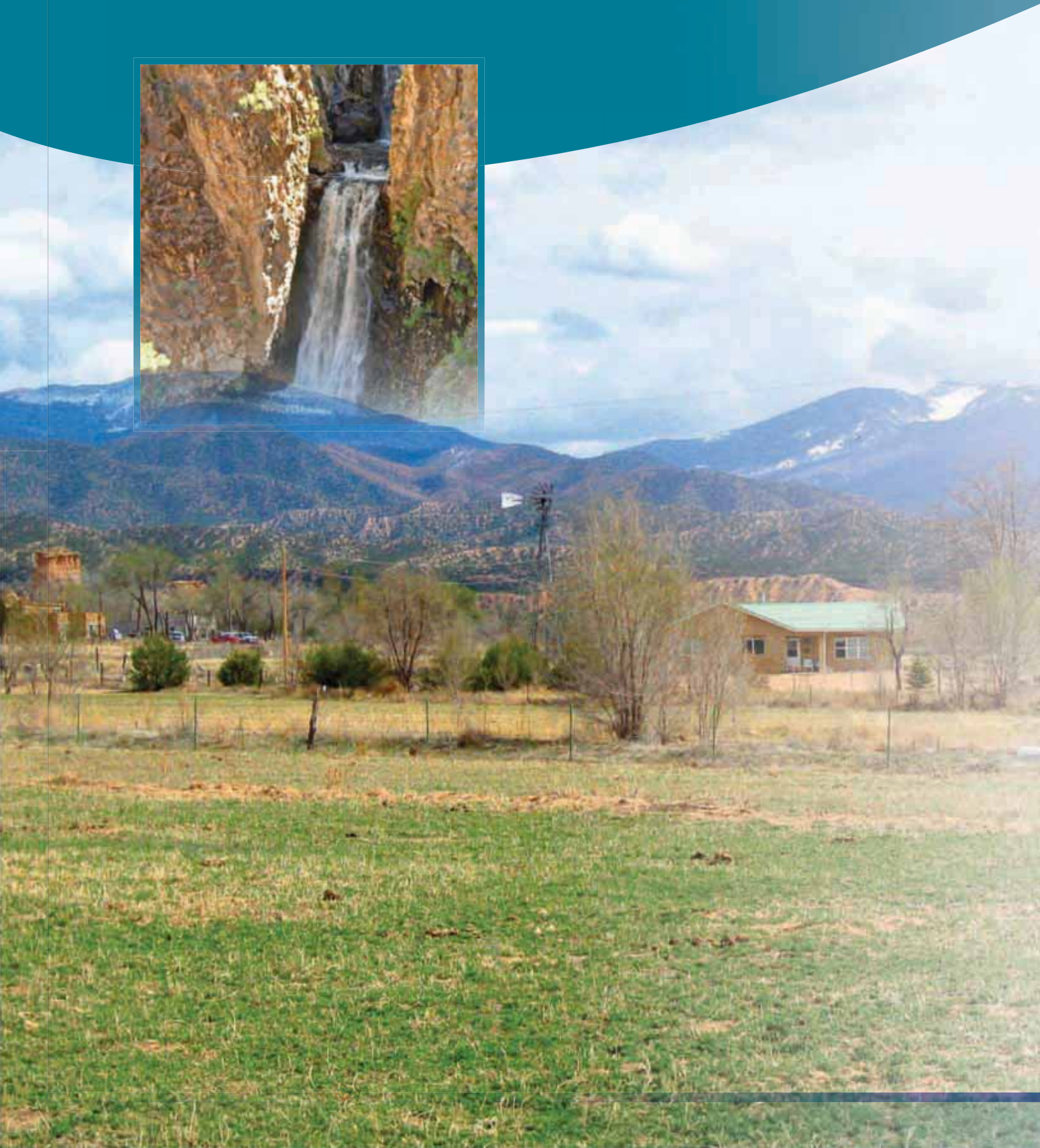


investments, \$425,000 in cost savings, 10 new jobs, and 10 retained jobs. With the economic downturn and a slow-down in new home construction, there has been a decreased need for raw materials. La Puerta's new efficient manufacturing techniques from MEP and the NMSBA Program enabled the company to maintain a gross profit margin of 49% even with a 10% decrease in sales.

“As a result of the NMSBA Program, we increased our efficiency and our gross profit margin by implementing MEP’s Lean Manufacturing techniques.”



SUCCESS STORY



Rio Nambé Leveraged Project

Mirabal Farms with Povi Ovei Farms, Rose Trujillo, Gloria Trujillo

“The model will help us identify the most cost-effective and efficient management and infrastructure investments for water conservation.”

Farmers in Northern New Mexico’s Rio Grande valley irrigate their crops using surface water from streams. Much of the water is regulated by the centuries-old acequia system that controls the amount and time that water is available to users. As the Governor of Nambé Pueblo and a farmer, Ernest Mirabal understands the water management challenges that farmers face, including controlling costs and using water without wasting or under-using individual allotments.

Because of the complexity of Nambé Pueblo’s acequia system, it is very difficult to predict how management decisions or investments in irrigation infrastructure would impact water conservation and irrigation efficiency. The pueblo farmers approached the NMSBA Program asking for a method to help make water management decisions and understand the long term sustainability of their water supply under a variety of population growth scenarios.

Jim Brainard (SNL) worked with the Nambé Pueblo to build a comprehensive computer model for system-

wide water management. The new model includes all agricultural, residential, and commercial uses. Users can easily change variables to analyze the potential impacts of management or infrastructure decisions on the system. For example, users can evaluate the water savings from improvements in application of water to fields versus making improvements to the main ditch. The model also allows users to do forecasting of future water demand based on estimates for population growth and expansion of commercial and industrial water use.

Using the model to develop management strategies presents significant potential water savings for the farmers at Nambé Pueblo. The model will help the farmers identify the most cost-effective and efficient management and infrastructure investments for water conservation. Information from the model can also be used to file for an agricultural water conservation tax credit offered by the State of New Mexico. The credit would help offset the costs of making improvements in infrastructure or water management methods.



2008 PROJECT LISTS



Leveraged Projects

Lab	Project	Description	Business Participants	Counties	Funding
SNL	Algae to Biofuel	Sandia National Laboratories assessed and tested algal biofuel production system using dairy effluent water.	Ag2Energy LP; Dairy Producers of New Mexico (DPNM); Natures Dairy, Inc.; & Three Amigos Dairy	Chaves	\$80,000
LANL / SNL	AltelaRain Water Desalination Technology Optimization	Sandia National Laboratories and Los Alamos National Laboratory worked to optimize the design and performance of Altela, Inc.'s patented AltelaRainSM technology for water desalination and decontamination.	Altela, Inc.; Four Corners Supply; Harrelson Murphy, LLC; Harwood Consulting PC; M M Fabrication, LLC; Merillatt Industries, Inc.; & WPL, LLC	Bernalillo, Dona Ana, San Juan, Santa Fe	\$40,000 / \$80,000
LANL / SNL	Angel Fire Wildfire Study	Sandia National Laboratories and Los Alamos National Laboratory implemented a combustion model using Advanced Simulation and Computing (ASC) Integrated Code (IC) Sierra Mechanics (SM) suite to model wildfires.	Arthur Insurance; Bella Tierra of Angel Fire; Coldwell Banker Sutton Trujillo Group; Four Seasons Real Estate; Mountain Sports; Northern New Mexico Securities; Prudential Angel Fire Real Estate; & Southern Rocky Builder	Colfax	\$70,000 / \$70,000
SNL	Arsenic Removal from Small New Mexico Drinking Water Supplies	Sandia National Laboratories demonstrated the removal of arsenic to below the new drinking water standard from a drinking water supply in a small water system in New Mexico.	AMMRE Association Management; Burak Consulting; Desert Plastics; Dwyer Engineering; Pocagua Consulting; & Rodgers Water Well Co., Inc.	Bernalillo	\$60,000
LANL / SNL	Cimarron Watershed Study	Los Alamos National Laboratory and Sandia National Laboratories conducted studies on two reaches of the watershed in which fisheries were in need of maintenance or development.	Cimarroncita Ranch; Dos Amigos Anglers; & High Country Anglers	Colfax	\$20,000 / \$40,000

Lab	Project	Description	Business Participants	Counties	Funding
SNL	Concrete Masonry Unit (CMU) Tests	Sandia National Laboratories tested Concrete Masonry Unit (CMU) wall panels built following the construction methods proposed by Arquin Corporation against a control set of wall panels built following traditional construction techniques to test the effectiveness of the proposed construction method.	Anderson Refrigeration; Arquin Corp; Bar M Construction; & Casa Del Sol Enterprises	Otero	\$70,000
SNL	Desalination Technology for Coal Bed Methane (Natural Gas) Produced Water (Four Corners)	Sandia National Laboratories collaborated with the small businesses, NMSU, and USDA to improve the performance and continue testing of a salt water disposal pilot facility that desalinates brackish water created during the natural gas production process.	Biosphere Environmental Science & Technology (B.E.S.T.); Hands on Safety Service; Intermountain Painting, Inc.; & McDonald Enterprises	San Juan	\$70,000
SNL	Development of a Decision Support Model to Support a Regional Water Resource Plan	Sandia National Laboratories completed the water supply side module of a systems dynamics based decision support model that will assist local area water resource planners to improve water-resource reliability and to better understand water usage and growth	Grindstone Graphics & Mkt; Jennie Dorgan Real Estate; Seasons Nursery	Lincoln	\$60,000
LANL / SNL	Development of Sediment Management Strategies for Santa Cruz Reservoir	Los Alamos National Laboratory and Sandia National Laboratories continued to identify and quantify sources of sediment to the Santa Cruz reservoir and develop strategies to manage sediment loads in the river and reservoir.	Charlie Esquibel Traditional Woodwork; Galeria Ortega Inc.; Joseph Merhege; Kenny Salazar Orchard; Ortega's Weaving Shop; Rancho de Chimayo; & Santa Cruz Farm	Rio Arriba, Santa Fe	\$70,000 / \$50,000
SNL	Hydrogeological Assessment of Geologic Controls on Groundwater Distribution, Recharge and Salinity in the Estancia Basin	Sandia National Laboratories provided further characterization of the Estancia Basin to better understand the effects of water usage and recharge in an area where the economy is based largely on irrigated agriculture.	Autrey Cattle Co.; Entranosa Water and Wastewater Assoc.; Green Ranch, LLC.; & Osita Ranch	Bernalillo, Santa Fe, Torrance	\$70,000



Lab	Project	Description	Business Participants	Counties	Funding
SNL	Hydrogeological Characterization to Develop a Spatial Distribution of Hydraulic Parameters in the Salt Basin	Sandia National Laboratories conducted hydraulic tests in wells strategically placed in order to provide a spatial distribution of hydraulic parameters representative of Last Chance Water Company properties.	George Rauch Ranch; Last Chance Water Company; Rauch Welding & Pump Supply; & Waverly Duggar Ranch	Eddy, Lincoln, Santa Fe	\$70,000
LANL	Las Vegas Wildfire Fuels Management Study	Los Alamos National Laboratory began creating a model that quantifies the impacts of thinning patterns and strategies on wildfire behavior.	Barela Timber Management Company; Healthy Buildings Wood Chip Block, LLC; & Old Wood, LLC	San Miguel, Santa Fe	\$60,000
SNL	NM Chile Association - Chile Destemming Project	During first half of the year, Sandia National Laboratories enhanced the destem cut location system to improve bad cut rejection. The project was redirected mid year to support new roller destemmer with stem detection in output stream.	Cervantes Enterprises; Rancho La Frontera; & W. R. Johnson & Son	Dona Ana, Luna	\$60,000
LANL	Optimization of Pond Growth Conditions and Development of Oil Separation Protocol for Production of Biodiesel from Microalgae	Los Alamos National Laboratory evaluated cost-effective methods to grow algae and maximize lipid content for use as a renewable feedstock for producing biodiesel.	Cetane Energy, LLC; Forrest Tire Co.; Hall Machine & Welding Co., Inc.; MBAR Services; Murrill Electric, LLC; Palomino Fiberglass; & Resource Management, Inc.	Eddy	\$120,000
SNL	Quantitative Interpretation of Seismic Reflection Data for Subsurface Fluids via Full-Waveform Modeling	Sandia National Laboratories engaged in theoretical development, numerical implementation, and source code optimization of an algorithm for simulating three-dimensional seismic wave propagation.	Focus Energy Corporation; GeoScience Technologies; HEYCO Energy Group; Providence Technologies Inc.; Sage Service Group LLC; Sierra Oil & Gas Inc.; & Sun Valley Energy Inc.	Chaves	\$70,000
LANL / SNL	Rural Water Treatment and Remediation Removal of Arsenic and Uranium	Los Alamos National Laboratory and Sandia National Laboratories assisted mining services companies and environmental engineering companies evaluate remediation approaches for compliance with water quality standards as an effort to demonstrate that mining operations will not contaminate drinking water sources over the long term.	Daniel B. Stephens & Associates, Inc.; Geochemical; Good Water Company; Hydro Resources, Inc.; Hydrosience Assoc., Inc.; & Stewart Brothers Drilling Company	Sandoval, Santa Fe, Socorro	\$50,000 / \$60,000
LANL / SNL	Super Cooled Liquid Water (SLW) Inventory Project	Los Alamos National Laboratory and Sandia National Laboratories tested Moderate resolution Imaging Spectroradiometer (MODIS) satellite retrievals of cloud liquid water by comparing surface-based remotes sensing measurements from the Department of Energy's Atmospheric Radiation Measurement site.	Chapman Realty; Communico Inc.; Conscious Health; Paynes Nurseries & Greenhouse; Sierra Aviation LLC; & Sunland Nursery	Santa Fe	\$80,000 / \$40,000

Lab	Project	Description	Business Participants	Counties	Funding
LANL / SNL	Systems Approach to Watershed Management: Sedimentation within the Pecos River Riparian Zone	Los Alamos National Laboratory and Sandia National Laboratories continued development of a systems-level understanding of sedimentation risks associated with past, present, and potential future management practices of salt-cedar control in the Pecos River riparian zone.	Bar W Farms; Dane Williams; Forrest Farms; Jerry Calvani Farms; MJW Farms Inc.; Oscar F. Vasquez; Pardue Limited Co.	Eddy	\$70,000 / \$70,000
SNL	Water Quality and Quantity for Rio Nambe and Nambe Reservoir	Sandia National Laboratories refined and completed the System Dynamics Water Resource Management Model developed for the Nambe Pueblo to aid in the understanding of long term sustainability of their water supply.	Gloria Trujillo; Mirabal Farm; Povi Ovei Farms; & Rose Trujillo	Santa Fe	\$65,000





Rural Individual Projects

Chaves

Fatman's Beef Jerky
Rich Glo Products
Robert McKelvey

Cibola

Mt Taylor Machine, LLC
Mt Taylor Millwork
Mt Taylor Mustangs

Colfax

Sauble Ranch Company

Dona Ana

Chui Chai, LLC
DA, Inc.
Ffhoenix Cuivre, LLC
Glaz-Tech Industries
Green Chip
Merry Weather Foam, Inc.
Monarch Litho, Inc.
Nantal, Inc.
PTS Office Systems, Inc.
Rogers Foam Corporation

Eddy

Dean Calvani Farms
Guadalupe Carrasco
Jones Farms
Jurva Farms
L. R. Hinojos
Ralph McDonald

Hidalgo

Vance Lee

Lea

Enrichment Technology

Lincoln

Alto Weed Control
Bar W Ranch
Church Mountain Ranch
Equibest Equestrian Center

Los Alamos

Caldera Pharmaceuticals, Inc.
eQsolaris
Neptune & Company, Inc.
Sci Tac, LLC
Sun Enerjy

Luna

Compass Components
Mimbres Valley Development
Solitaire of Deming, LLC

McKinley

Cabinets Southwest
Navajo Spirit Southwestern Wear
Silver Linings, Inc.

Otero

Affordable Alcohol Monitoring
Services
Audio Circuit Tester
Eagle Ranch / Heart of the Desert
Pistachios
Maximinos
S/4 Ranch

Quay

H & T Drilling, Inc.

Rio Arriba

Archeobotanical Services

Roosevelt

Southwest Cannery, Inc.
Sunland, Inc.

San Juan

Atomi Corporation
Bruner Enterprises
Castillo Clear Water, LLC
Clean Can Technology
Cunningham Homes, LLC
Fire Safe Homes
International Metrics Company
International Metrics Consulting
Morningstar Minerals
PESCO, Inc.
San Juan Compression, Inc.

San Miguel

Franken Oil & Distributing
Hayes Plumbing and Heating
Roadrunner Biodiesel

Sandoval

Advanced Composite Structures, LLC
Aero Mechanical Industries, Inc.
Berglund Engineering
Cochiti Community Development
Corporation
Giggling Springs
HyCell Energy
HydraTech of New Mexico
Insight Lighting
JSA Photonics

Materials, Inc.
Santa Maria Resource
Development Corporation
Seed International, Inc.
Varistream TV
Zeta Core USA, LLC

Santa Fe

Arrakis Corporation
Clean AIR Systems
Earth Systems Sciences, LLC
Energy Matter Conversion
Corporation
Gordon Construction
L & L Portables
La Puerta Originals
Mar Oil & Gas Corporation
Redfish Group
STAR Cryoelectronics
Wilderness Flowers
Wood Design

Taos

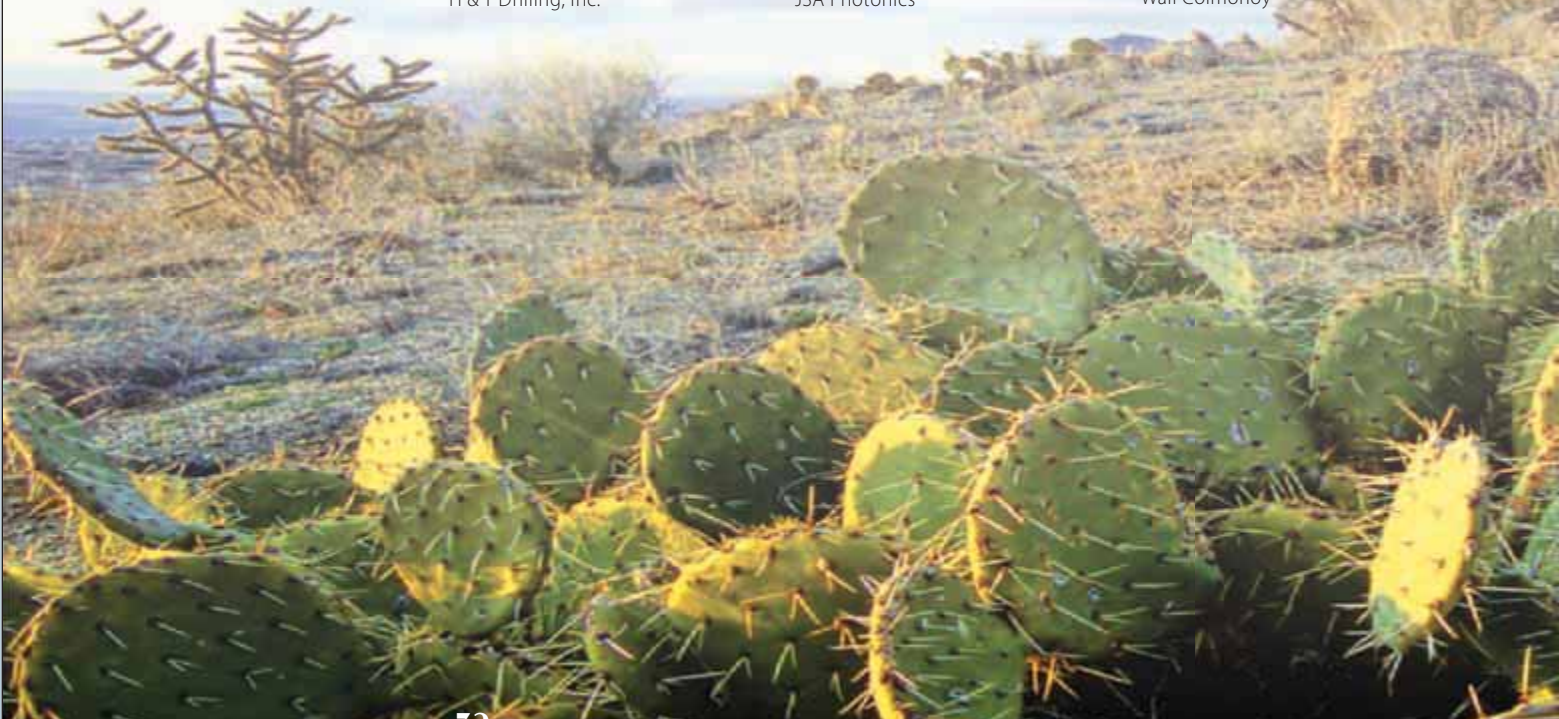
Canon Forestry
Pica Services, LLC
Thermasun

Union

Emery Welding Service & Supply,
Inc.
High Plains Product

Valencia

Soil Secrets
Trees that Please
Wall Colmonoy



Urban Individual Projects

Bernalillo County

A. S. Horner, Inc.
Academy Corporation
Adelante Development Center
Adherent Technologies, Inc.
Advanced Medical Optics, Inc.
Advanced Network Management, Inc.
Advent Solar, Inc.
Alliance Technologies
Applied Sciences Laboratory, Inc.
Applied Technology Associates
Aquatic Consultants, Inc.
Artistic Tile & Granite (Fabrication)
AUI, Inc.
Aurora Publishing, LLC
Aztec Discount Supplies
Believe
Bell Group, The
Bi Ra Systems
Big J Enterprises
Birdblaster of New Mexico
Black Mesa Coffee
Blackbird Pies

Blur to Focus Productions
Brainwaves, LLC (aka Akaysha Tang, LLC)
Brown La Salita
Brown Subway
CIC Photonics, Inc.
Cinnafilm, Inc.
Creative Consultants, LLC
Crimson Cardinal LLC
Dakota West, Inc.
Davis Kitchens
Defiant Technologies
Desert Paper & Envelope
Dion's
Dr. Stan's Lighting
E. M. Optomechanical, Inc.
EASi Therapy & Diagnostic Services
Eco-Dynamic Wind Solutions, LLC
EMCORE Corporation
EMCORE Photovoltaics Corporation
Ernest Thompson Furniture
EWS, Inc. (Electronic Workmanship Standards)
Garrett Smith Ltd

Golf Greens Fore U
Green Egg, The
High Desert Forge
Highway Supply, LLC
Hospital Services Corporation
Incitor, LLC
InnovASIC, Inc.
iTEAM Consulting, LLC
Keers Remediation, Inc.
Keith Creations, Inc.
Leather Wranglers
Leo S Gomez Consulting
Levigator, LLC
Linac Systems, LLC
Management Sciences, Inc.
Maroland, LLC
Nextek Mobility Corporation
Noel Savignac Consultants
OGB Architectural Millworks
Painted Desert Industries
Pan American Fixtures Co.
Precision Solar Technologies, Inc.
Pristine Cleaners
Ramblin Wood

RediRipe, LLC
Relios, Inc.
Riccobene Masonry Company
Richmond Products, Inc.
Rio Grande
Roadrunner Pedi Cab
Roadway Electric Company
Rocky Mountain Stone Co.
Sagebrush Technology, Inc.
Sandia Office Supply
Skolnik Technical Training Institute
Soaring Eagle Institute
Southwest Bio Fuels, LLC
Southwest Firebird Inc
Southwest Firebird Manufacturing
SWS Technologies
TEAM Technologies
TH Chem, Inc.
Toma Alliance Group of NM, LLC
Unirac, Inc.
Vibrant Corporation
Water Lady, Inc
Windsor Foods
Ztech Instruments



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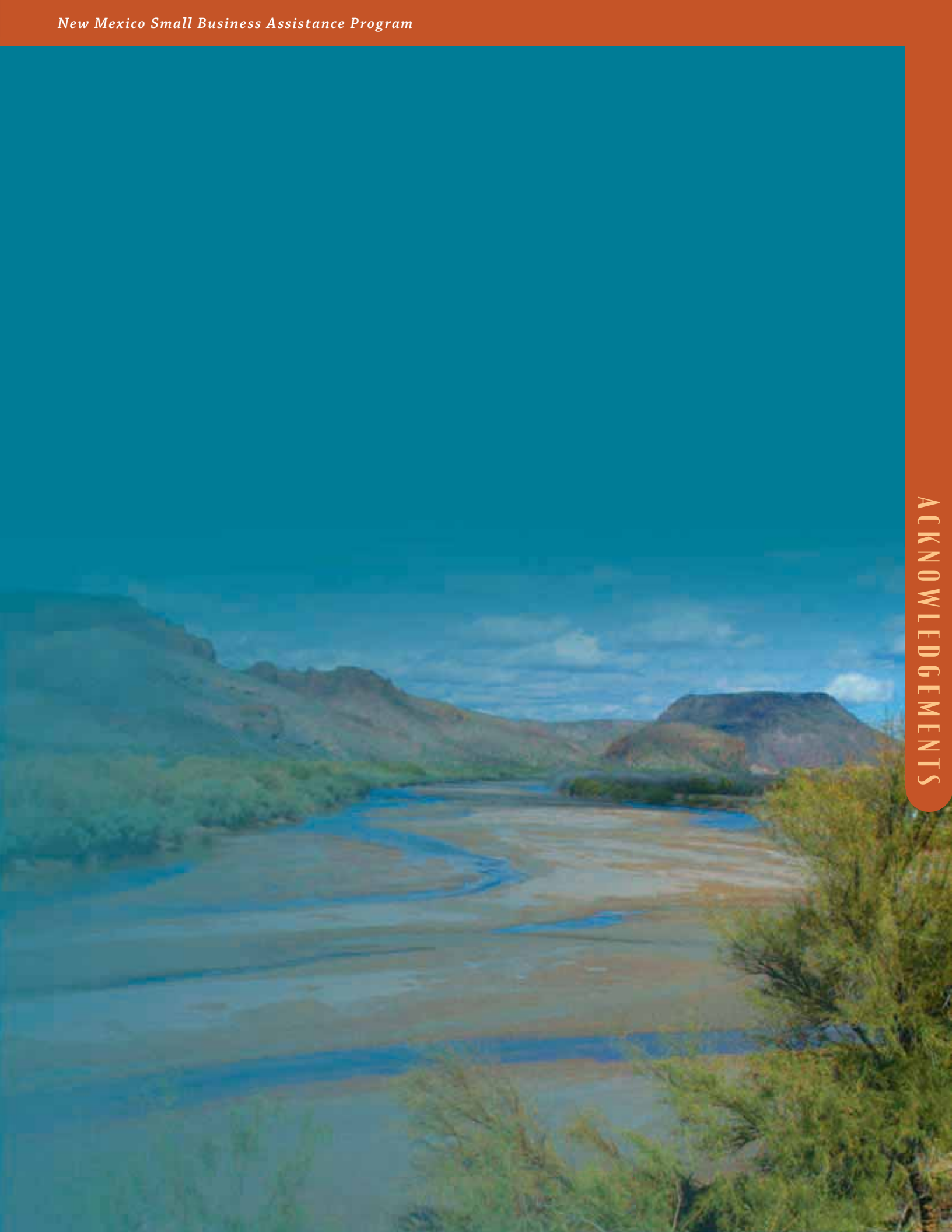
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NMSBA

Los Alamos National Laboratory
Sandia National Laboratories

Solving New Mexico's Small Business Challenges



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