Solving New Mexico’s Small Business Challenges

New Mexico Small Business Assistance Program

PERSPECTIVES 2007
We spent a year in the development stages of the handle before we had the opportunity to work with the NMSBA. With their help, we were able to create a better product in roughly 20% of the time, we are so lucky to have had the chance to work with the folks at the NMSBA, they gave our company the successes we now enjoy.

– Nate Zich, Co-owner, Brown La Salita
Dear Governor Richardson and New Mexico State Legislators,

We are pleased to share with you the 2007 Annual Report for the New Mexico Small Business Assistance Program.

The program achieved record results that benefited companies throughout New Mexico in this initial year of Los Alamos National Laboratory and Sandia National Laboratories working jointly. Laboratory staff shared their expertise and resources with 315 assistances to help 288 small businesses solve their technical challenges. The small businesses represented 22 counties across the state. The State of New Mexico and national laboratories invested nearly $2,650,000 to accelerate New Mexico's economic future.

The numbers only tell part of the story: chile farmers in southern New Mexico received assistance to destem chile in a more efficient and cost effective manner. Two young entrepreneurs in central New Mexico worked with Lab engineers to develop a more hygienic trash receptacle being used in area restaurants. Lab scientists are modeling watershed and river channel sediment transport to better understand the effects of saltcedar removal for water management strategies in the Middle Pecos Basin.

We truly appreciate your ongoing leadership in support of the New Mexico Small Business Assistance Program, and we look forward to collaborating with you during the coming year to strengthen our small businesses and to create economic wealth for the great State of New Mexico.

Sincerely,

Mariann Johnston
Los Alamos National Laboratory

Jackie Kerby Moore
Sandia National Laboratories
In 2000, the New Mexico Legislature established the New Mexico Small Business Assistance (NMSBA) Program to help small businesses throughout the state by providing technical support from Sandia National Laboratories (SNL). In 2007, the Legislature amended the program’s enabling legislation to expand the NMSBA Program and add Los Alamos National Laboratory (LANL) as a program partner.

The NMSBA Program has provided thousands of businesses expert guidance on technical issues. The program delivers a cost-effective means for economic development through business creation, sustainability, expansion, and workforce development. In the last 8 years, the NMSBA Program has assisted more than 2,077 small businesses with more than 2,179 projects.

NMSBA administers an annual economic impact survey with the program participants, conducted by Research and Polling. Since its inception, the NMSBA Program participants have created 495 jobs across the state. Small businesses also utilized assistance to decrease their operating costs by over $6,951,900 and increase their revenues by more than $11,969,700.

Additionally, nearly $5,462,870 has been invested in expansion efforts and purchases of local goods and services.

The Mission of the NMSBA Program is to have a statewide impact by solving small business critical challenges through customizing and leveraging national laboratory technical expertise and resources to:

- Enable New Mexico small business to access cutting edge technology
- Increase New Mexico small businesses’ technical sophistication and capabilities
- Share knowledge and resources between laboratory personnel and small businesses to address issues and develop real-world applications

The NMSBA Program is committed to achieve three strategic objectives:

- Solve small business critical challenges with national laboratory expertise and resources
- Influence New Mexico business development by building capacity, capabilities, and competencies
- Act as an advocate for small businesses through an entrepreneurial culture

**Table 1. Business Benefits from the NMSBA Program (2000-2006)**

<table>
<thead>
<tr>
<th></th>
<th>2000 - 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs Created/Retained</td>
<td>495</td>
</tr>
<tr>
<td>Mean Salary ($)</td>
<td>38,731</td>
</tr>
<tr>
<td>Increase in Revenue ($)</td>
<td>11,969,700</td>
</tr>
<tr>
<td>Decrease in Operating Costs ($)</td>
<td>6,951,900</td>
</tr>
<tr>
<td>Investment in NM Goods / Services ($)</td>
<td>5,462,870</td>
</tr>
</tbody>
</table>
New Mexico Small Business Assistance Program

Table 2. 2007 Project Tax Credit

<table>
<thead>
<tr>
<th></th>
<th>Rural</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Companies</td>
<td>Tax Credit</td>
<td>Companies</td>
</tr>
<tr>
<td>SNL</td>
<td>163</td>
<td>$1,812,071</td>
<td>99</td>
</tr>
<tr>
<td>LANL</td>
<td>24</td>
<td>$332,842</td>
<td>2</td>
</tr>
<tr>
<td>Both Laboratories</td>
<td>187</td>
<td>$2,144,913</td>
<td>101</td>
</tr>
</tbody>
</table>

As New Mexico's population continues to increase, so does its economic prosperity and the benefits that accompany economic growth. Small businesses are the engine that drives job creation in New Mexico. In 2007, there were 315 NMSBA projects that invested nearly $2.7 million in technical assistance for 288 New Mexico small businesses. Table 2 shows the breakdown of urban and rural companies assisted and the tax credit taken in 2007. The NMSBA Program has had a measurable state-wide impact spanning all regions of New Mexico. Both rural and urban businesses benefited from the program, with rural businesses accounting for 65% of the assistance provided. Since 2000, the NMSBA Program has helped businesses in 31 New Mexico counties.

Figure 1 illustrates the number of companies assisted by county for the life of the program. NMSBA has helped companies to reduce costs, hire new employees, and make businesses more profitable. This creates higher gross revenues and increases tax receipts for the state.

Figure 1. Number of Companies Assisted from 2000-2007
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, including software, manufacturing, mining, oil and gas, environmental, agricultural, information technology, and solar as well as other alternative energy source technologies.

“Small business assistance” also includes non-technical assistance related to expanding the New Mexico base of suppliers, business assistance in developing business systems to meet audit, reporting and quality assistance requirements, and other supplier development initiatives for individual small businesses. Figure 2 shows the breakdown of 2007 NMSBA assistance projects by technical area.

Assistance is used in the form of researcher hours valued up to $20,000 for businesses located in rural counties and $10,000 for businesses located in Bernalillo County. Total program funded assistance is capped at $2.4 million annually for each laboratory. The NMSBA Program provides assistance that is not available in the private sector at a reasonable cost. Furthermore, no equipment or cash can be given to a company.

Figure 2. NMSBA Assistance by Technical Area in 2007 (SNL and LANL)

- Manufacturing, 40%
- Water, 20%
- Energy, 8%
- Critical Infrastructure, 5%
- Business Systems Development, 4%
- Agriculture, 8%
- Other, 3%
- Oil & Gas, 2%
- Microelectronics, 2%
- IT & Software, 1%
- Materials, 7%
Small businesses can participate in the NMSBA Program through three different types of projects:

**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, and the majority of projects include: testing, design consultation, and access to special equipment or facilities. Requests for individual projects are accepted year round.

**Leverage Projects**

Leverage 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 leverage projects are reviewed once a year by the NMSBA Program and its advisory council.

**Contracted Projects**

The NMSBA Program is allowed per 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 to provide training and assistance in the areas of quality and lean manufacturing principles, and the University of New Mexico’s Anderson Schools of Management and Management of Technologies Program to provide technology road mapping and assessments.

### 3. REALIZING THE SUCCESS OF THE PROGRAM

The New Mexico Small Business Assistance Program has enabled small businesses in New Mexico to acquire essential knowledge and to flourish. Los Alamos National Laboratory and Sandia National Laboratories have provided small businesses access to cutting edge technology resources. Each small business uses the NMSBA Program’s assistance in a different way, but they all use it as a means to grow their business.

NMSBA enables small businesses to make products ready for commercial use, reach development goals, and increase profitability. Small businesses receive guidance and consulting in all business areas and are given suggestions on business alternatives taken from the laboratories technical expertise. Alternatively, some businesses are looking for performance and design optimization. The NMSBA Program’s ability to meet small business needs is exemplified by the high customer satisfaction ratings from New Mexico businesses, shown in Figure 3.

![Figure 3. 2007 Customer Satisfaction (SNL and LANL)](image-url)
The Small Business Impact

The following program participants exemplify the various ways NMSBA projects around the state are beneficial and critical for the success of the small business community.

Archeobotanical Services – Abiquiu

Project Overview

Archeobotanical Services conducts analyses to bring color to the black-and-white of human history. The assistance provided to Archeobotanical centered on the evaluation of archeological artifacts for the signatures that might be attributable to an intentionally fermented food product based on corn.

Economic Impact

Using the same techniques as in antiquity, Archeobotanical performed experiments which yielded data that could only be recovered by the special equipment at Sandia Labs. This data and the laboratory protocol developed to produce them promise to revolutionize archeological thinking about the use of fermented foods and beverages in antiquity. The benefits of fermented maize products, if re-introduced into native cuisine, have the potential to enrich the traditional diet of people living today.

The press reports of this fermentation study have generated interest from archeologists internationally who want to know if their samples might show evidence of fermentation. Archeobotanical Services will submit the research for publication in *Science, Nature, or the Proceedings of the National Academy of Science* in the next year, which will enhance Archeobotanical Services’ reputation and bring new projects to Sandia Labs.

Armed Response Team – Albuquerque

Project Overview:

Armed Response is a commercial security firm located in Albuquerque that provides security solutions for large exterior sites such as construction sites, secured vacant buildings, storage yards, etc. The technical challenge for Armed Response was to find perimeter security technologies for large areas that would be effective, practical, and economical. By incorporating the most up-to-date security approaches and increasing the effectiveness and scope of their business, the NMSBA Program assisted in developing innovative, cost effective solutions for economically difficult video transmission and power supply issues.

Economic Impact:

The NMSBA Program’s services saved Armed Response between $20,000 and $40,000 in research and development, reduced their experimental material needs and manpower, and decreased timeline for this project by at least 6 months. Some construction projects in New Mexico have seen as much as a several hundred thousand dollar decrease in theft because of this technology. Armed Response has also experienced an increase in total employment by 30% because of this new technology. Permanent full time positions have been added to assist in the growing need to keep theft and intrusions low and the best technicians and specialists out in the field.

The NMSBA Program provides a unique capability to businesses to have access to not 1, but 2 national laboratories’ expertise.

– Sig Silber, Super Cooled Liquid Cloud Water Inventory Program
**New Mexico Small Business Assistance Program**

**Brown La Salita – Albuquerque**

*Project Overview*

Brown La Salita formulated an idea for a handle attached to commercial-scale garbage can lid that gives the customers and employees the ability to reduce their exposure to the lid flap. John Brown and Nate Zich approached the NMSBA Program with a 3-D image file and rough models of their new product, the “Helping Handle.” The NMSBA Program’s technical team turned the computer model into a format that Sandia’s rapid prototype machine could interpret.

**Economic Impact**

SNL and LANL provided firm baselines for salinity and sedimentation in the water flowing through the Brantley Reservoir, which serves 25,000 acres of farmland. Farming accounts for nearly $15 million per year in gross receipts in the CID. Water deficiencies would decrease crop yields and damage the district’s economy. Without the NMSBA Program’s assistance, the CID would not have accurate baselines for salinity and sedimentation levels. Managing these levels extends the useful life of the dam. Economic benefits are very significant, as costs to replace the Brantley dam are estimated to be $500 million.

**Liste De Technologies – Los Lunas**

*Project Overview*

Liste de Technologies (Liste de) sells electronic testing and measuring instruments and systems for measurement of physical parameters. As part of its expansion and diversification plan, Liste de is in the process of starting a solar product testing and certification lab, which will be able to meet the demands of the aggressively growing solar industry by providing on-time testing and certification services. A Technological Assessment study by the University of New Mexico provided an internal audit benchmarking the company’s technological competencies, managerial capabilities, and provided a snapshot in time of their ability to provide value to a user community.

**Economic Impact**

The worked performed under this program enabled Liste de to identify more adequately their market and potential global competitiveness. With the help of the NMSBA Program, Liste de’s marketing development time was cut from 6 months, to 3 months. Liste de’s program will have a market edge by not carrying the current burden of 6 to 9 month waiting time for certification. Liste de plans to gross $5 million a year within 5 years.

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The innovative design of the Helping Handle prevents messy spills, saving time and money.
**New Mexico Chile Association – Doña Ana County and Luna County**

*Project Overview*

The New Mexico Chile Association (NMCA) is a non-profit organization composed of chile growers and producers who are fighting to ensure the $325 million, 4,000 full time employee and 10,000 part time employee chile industry remains and prospers in New Mexico. NMCA and the NMSBA Program focused on developing an automated chile destemming technology. Sandia’s primary responsibility was to construct sensor technology to allow for mechanical destemming.

*Economic Impact*

Almost all of processed green chile, some dried red chile, and cayenne peppers require pods to be destemmed for processing. Traditionally pods were destemmed in the field during hand picking. Availability of labor to perform this operation is diminishing on both sides of the US/Mexico border. Successful completion of this project will allow New Mexico processors to accept more readily available stemmed pods manually or machine harvested from both sides of the border. This will maintain the market for New Mexico growers and allow New Mexico processors to remain competitive in the global market.

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**Sunland, Inc. – Portales**

*Project Overview*

Working with dozens of growers and 147 full-time employees, Sunland takes great pride in every step of the process that brings Valencia peanuts to market.

In addition to processing raw, roasted, salted and unsalted peanuts, Sunland is the only manufacturer of peanut butter in the state of New Mexico. Using NMSBA Program resources, the New Mexico Manufacturing Extension Partnership (MEP) was able to provide Sunland, Inc. with a variety of solutions, including workshops to improve employee productivity and to learn the principles of lean manufacturing, which eliminates waste and increases profitability.

*Economic Impact*

One of Sunland’s most notable accomplishments as a result of their work with MEP has been the changes made in the peanut butter plant. Previously, it took up to two hours to change from one type of peanut butter and jar size to another. Now this process takes only 30 minutes. Productivity is increased by at least 5% and at least 3 hours of labor are saved each week. Employee seminars that increase productivity and im-

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The NMSBA Program provides small businesses with the tools for improving productivity and gain a competitive advantage in the marketplace.

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Automated chile destemming technology

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Sunland peanut plant in Portales, New Mexico
prove interaction with Sunland’s customers have also been important to Sunland. The NMSBA Program has helped Sunland Inc. to gain a competitive advantage in the marketplace.

**Super-Cooled Liquid Cloud Water Inventory—Santa Fe**

**Project Overview**
Given the recent drought and projections of a 400,000 acre-feet water deficit for New Mexico in 2040, several businesses are very concerned about the sustainability of available water into the future. The group is studying the opportunity for a liquid cloud water inventory in New Mexico, including both the technology and the benefits to the sponsors of this project, as well as exploring the use of this technology to increase precipitation in the state. The sponsors anticipate using the information and model to refine their business plans and see opportunities to provide services for a worldwide market that will be interested in developing similar information for their geographies.

**Economic Impact**
Sponsors see a yet unquantified business opportunity for themselves as well as refinements to their business plans which will enhance their business’ success. New Mexico will also benefit as the cost to offset aquifer depletion in New Mexico will likely exceed $250 million this year. The cost of cloud seeding is 1% of the cost of pumping water from an aquifer and does not have the same detrimental effects to the ecosystem.

This technology can save the state nearly $500 million by decreasing drought conditions, increasing land productivity, and continuing to provide for the people of New Mexico. The surveys will also help to predict the impact of climate change on winter snow water storage in mountainous areas, as well as having applications for aircraft safety de-icing, preparing for climate change, controlling fog at airports, suppressing damaging hail, decreasing fire probability, increasing natural irrigation, and recharging New Mexico’s aquifers.
4. FUTURE DIRECTION

The New Mexico State Legislature created NMSBA as an economic development tool that focuses on the backbone of the New Mexico economy, small business growth. Thanks to the legislators, the strong support from the Governor, and other advocates of business in New Mexico, the state is capturing the many benefits from the program. This partnership among the small business community, the State of New Mexico, Los Alamos National Laboratory, and Sandia National Laboratories has enabled business development, creation of high wage jobs, and increased tax revenues.

Since the integration of Los Alamos National Laboratory in the most recent program year, New Mexico is fortunate to have the expertise of two national laboratories supporting the small business community. In the coming program year, the NMSBA Program will continue to work to utilize fully the program at both laboratories and help small businesses meet their technical challenges.

It is important to the program that all New Mexico businesses have access to the world class technology located at the state’s two national laboratories. In 2007, nearly two thirds of all businesses were located in rural areas. The NMSBA Program will continue to provide high quality services to New Mexico small businesses.

APPENDIX 1. PROJECT LISTS

2007 Leverage Projects

<table>
<thead>
<tr>
<th>Lab</th>
<th>Project</th>
<th>Description</th>
<th>Business Participants</th>
<th>Counties</th>
<th>Technical Area</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNL</td>
<td>Algae to Biodiesel</td>
<td>Provide reference and resource information, assessment, evaluation, and recommendations for approaches, systems, and processes for using algae to produce bio-fuel and other co-products in conjunction with treatment of dairy wastewater.</td>
<td>Ag2Energy, LP; Dairy Producers of New Mexico; Nature's Dairy, Inc.; Par 5 Dairy; Pecos Valley Biomass; Three Amigos Dairy; Vaz Dairy</td>
<td>Chaves</td>
<td>Energy</td>
<td>$76,000</td>
</tr>
<tr>
<td>LANL / SNL</td>
<td>Angel Fire Wildfire Study</td>
<td>Conduct a collaborative study on wildfire potential in the Angel Fire community related to forest fuel density, topography, moisture content and weather factors. Determine high hazard areas and the effects of tree thinning to reduce fire potential. Provide information on biomass availability from thinning efforts.</td>
<td>Arthur Insurance; Bella Tierra of Angel Fire; Coldwell Banker; First National Bank of NM; Four Seasons Real Estate; Hacienda Club Real Estate; Monte Verde Realty, Inc; Mountain Sports; Prudential Angel Fire Real Estate</td>
<td>Colfax</td>
<td>Critical Infrastructure</td>
<td>$80,000 / $92,000</td>
</tr>
<tr>
<td>Project Title</td>
<td>Description</td>
<td>Participants</td>
<td>Location</td>
<td>Category</td>
<td>Funding</td>
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<tr>
<td>SNL Controlled Environment Agriculture for Water Conservation</td>
<td>Investigate and establish conditions for greenhouse forage production viability by conducting operational performance, forage product quality and suitability, and economic tradeoff assessments.</td>
<td>Continental Exchange Trust; Curtis &amp; Curtis; Gonzalez Dairy Inc.; Indio Hispano Youth Corps; Los Poblanos Organics, LLC; Ross Gardens; Soil Secrets LLC; Soilutions; SouthWest BioEnergy, LLC; Wilderness Flowers</td>
<td>Bernalillo</td>
<td>Agriculture</td>
<td>$96,000</td>
<td></td>
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<tr>
<td>SNL Desalination Technology for Coal Bed Methane (Natural Gas) Produced Water Treatment</td>
<td>Evaluate desalination of brackish produced water from coal bed natural gas wells and the possibility of using the desalinated water beneficially.</td>
<td>Biosphere Environmental Sciences and Technologies, LLC; Four Corners L &amp; B; McDonald Enterprises</td>
<td>Sandoval; San Juan</td>
<td>Water</td>
<td>$58,000</td>
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<tr>
<td>SNL Development of a Decision Support Model to Support a Regional Water Resource Plan</td>
<td>Identify data sources and begin development of conceptual water model for Lincoln County.</td>
<td>PowerPlus Car Wash; Ruidoso News; Seasons Nursery; State National Bank</td>
<td>Lincoln</td>
<td>Water</td>
<td>$55,000</td>
<td></td>
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<tr>
<td>SNL Hydraulic Testing and Analysis Technology Transfer</td>
<td>Increase the utilization of water well service providers in the data collection and hydraulic testing activities in the Upper Hondo imparting valuable experience in a hydrologically complex environment.</td>
<td>Bentle’s Water Well Svc Inc; Carriaga Machine; Eagle Creek Drilling; Fulfer Oil &amp; Cattle Co., LLC</td>
<td>Eddy; Lea</td>
<td>Water</td>
<td>$59,000</td>
<td></td>
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<tr>
<td>SNL Hydrogel Efficacy and Applications Project - Increasing Irrigation Efficiency by Improving Hydrodynamic Soil Properties</td>
<td>Fabricate and employ a variety of hydrogel soil conditioners, and then qualify their ability to improve soil hydrodynamic properties on crop fields.</td>
<td>Calvani Farms; Farmer’s Daughters, LLC; Guadalupe Carrasco; L. R. Hinojos</td>
<td>Eddy</td>
<td>Agriculture</td>
<td>$59,000</td>
<td></td>
</tr>
<tr>
<td>LANL Las Vegas Wildfire Fuels Management Study</td>
<td>Investigate the ramifications of various fuel management practices in the wild lands near Las Vegas, New Mexico through the use of the computational tools, HIGRAD/FRUTECH. Idealized and realistic simulations using fuel loads, topography, and representative winds from the Las Vegas Area will be used to provide critical information about the relationship between fuel loads/conditions and fire behavior in the area.</td>
<td>Barela Timber Management; Healthy Buildings</td>
<td>San Miguel; Santa Fe</td>
<td>Critical Infrastructure</td>
<td>$40,000</td>
<td></td>
</tr>
<tr>
<td>SNL New Mexico Chile Association Chile Destemming Project</td>
<td>Complete the testing and refinement of modified sensor system for use in chile destemming. Test and conduct evaluation and refinement of final lab sensor system.</td>
<td>Cervantes Enterprise; Diaz Farms; New Mexico Chile Products; Rancho La Frontera; W.R. Johnson &amp; Son</td>
<td>Luna</td>
<td>Agriculture</td>
<td>$53,000</td>
<td></td>
</tr>
</tbody>
</table>
SNL Quantitative Interpretation of Seismic Reflection Data for Subsurface Fluids via Full-Waveform Modeling

Full-waveform numerical modeling of seismic wavefields, utilizing SNL’s existing suite of 3D seismic wave propagation algorithms appropriate for acoustic, elastic, and poroelastic media. Quantitative interpretation and analysis of both field-recorded and synthetic seismic data, with the goal of inferring subsurface fluid distribution and properties.

Aspen Company LLC; Ch-4Net.com; GeoScience Technologies; Rio Magdalena Investment Corp; Sun Valley Energy; Triton Group

Chaves Oil & Gas $77,000

SNL Spatial Distribution of Hydraulic Parameter Estimates Salt Basin

Fill data gaps as identified by stakeholders and continue to review existing geological, hydrological, and geochemical data relating to the water-bearing units in the Salt Basin and assimilate the new information that is generated as a result of this investigation into the larger body of information.

George Rauch Ranch; Jones Ranch; Rauch Welding & Pump Supply; S/4 Ranch; Slash Triangle Ranch

Eddy; Otero Water $70,000

LANL/SNL Systems Approach to Watershed Management: Pecos River Riparian Zone

Develop a systems-level understanding of sedimentation risks associated with past, present, and potential future management practices of saltcedar control in the Pecos River riparian zone with the goal of developing strategies that prevent increases in sediment loading to the river system and accumulation in Brantley Reservoir.

Bar W Farms; C & R Landscaping; Craft Farms; Dane Williams Farms; Draper Brantley Jr Farms; Forrest Farms; Hayden Kimbley Farms; Johnny Reid Farms; Pardue Limited Co.; Reed Kimbley Farms

Eddy Water $55,000 / $105,000

SNL Text Mining for Organizations Supporting the Developmentally Disabled

Design a reusable and distributable system to form the infrastructure for text mining.

EASI Therapy & Diagnostic Services; iTeam Consulting, LLC; Meyners & Company, LLC; Nancy Bartley Behavior Therapy

Bernalillo; Eddy Information Technology & Software $44,000

SNL Water Quality and Quantity for Rio Nambe and Nambe Reservoir

Assess the effects of increased sedimentation within the Rio Nambe to the vitality of the Nambe Reservoir.

Gene Perez; Gloria Trujillo; Mirabal Farm; Povi Ovei Farms; Trujillo Farms

Santa Fe Water $81,000

2007 Co-sponsored Projects
(Collaborative projects of $20,000-30,000 worth of assistance)

<table>
<thead>
<tr>
<th>Lab</th>
<th>Project</th>
<th>Description</th>
<th>Business Participants</th>
<th>Counties</th>
<th>Technical Area</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNL</td>
<td>Altela</td>
<td>Optimize a desalination process using Sandia’s unique DEWIDS software specially developed for desalination applications.</td>
<td>Altela, Inc; Pacheco Trucking Inc; Sandia Storage &amp; Strut</td>
<td>Bernalillo</td>
<td>Manufacturing</td>
<td>$29,000</td>
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<tr>
<td>SNL</td>
<td>Arsenic Removal</td>
<td>Evaluate the feasibility of a SNL technology directed at removing arsenic from drinking water supplies with daily water usage of 20,000 gallons or less</td>
<td>Desert Plastics; Rodgers Water Well Co, Inc</td>
<td>Bernalillo</td>
<td>Water</td>
<td>$20,000</td>
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<tr>
<td>SNL</td>
<td>ColorRad</td>
<td>In relation to the ColorRad device prepare a chemical solution that is stable and will change color at preset radiation doses.</td>
<td>Caldera Pharmaceutical; Leo S. Gomez Consulting; Noel Savignac Consultants</td>
<td>Bernalillo, Los Alamos</td>
<td>Materials</td>
<td>$40,000</td>
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<tr>
<td>SNL</td>
<td>Consortium to Exploit Responsive Digital Media in Business Venues (RIB)</td>
<td>Facilitate experiments with human interface devices by writing glue software to integrate them into the platform; fabricate a second experimental system in Santa Fe; exercise one application.</td>
<td>Paradigmension; Redfish Group</td>
<td>Santa Fe</td>
<td>Other</td>
<td>$38,000</td>
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<tr>
<td>SNL</td>
<td>CuerVex Solar Power</td>
<td>Creation of a solar power interface and Computational Fluid dynamics (CFD) analysis and flow calculations.</td>
<td>Adam &amp; James Consulting; CuerVex; Performance Imports, Inc; Santa Fe Word Processing; Sierra Data Services</td>
<td>Bernalillo, Santa Fe</td>
<td>Energy</td>
<td>$19,000</td>
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<tr>
<td>SNL</td>
<td>Cumbres Toltec</td>
<td>Perform elemental analysis on several metal samples provided by requester in support of the Cumbres Toltec railroad</td>
<td>Ed &amp; Mikes Paint and Body</td>
<td>Rio Arriba</td>
<td>Critical Infrastructure</td>
<td>$6,000</td>
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<tr>
<td>LANL</td>
<td>Deep Brackish Water in the Espanola and Albuquerque Basins</td>
<td>Determine whether extensive deep, confined aquifers (those not in communication with overlying shallow, fresh-water aquifers) exist in the Espanola basin.</td>
<td>Dougherty Real Estate</td>
<td>Santa Fe</td>
<td>Water</td>
<td>$19,000</td>
</tr>
<tr>
<td>SNL</td>
<td>Geophysical Assessment of Geologic Controls on Groundwater Distribution, Recharge and Salinity in the Estancia Basin, East Central New Mexico</td>
<td>Characterize the groundwater resources of the Estancia Basin through the application of nSIGHTS, the MIATA laboratory, and electromagnetic imaging to assess the vulnerability of the potable water resources to water quality degradation as a result of brackish groundwater withdrawal.</td>
<td>Autrey Cattle Co.; Corbin Consulting, Inc.; Entranosa Water &amp; Wastewater Assoc.; Hawley Geomatters; Moonbeam Ranch; Osita Ranch; Schwebach’s LLC</td>
<td>Bernalillo, Santa Fe, Torrance</td>
<td>Water</td>
<td>$91,000</td>
</tr>
<tr>
<td>SNL</td>
<td>Last Chance</td>
<td>Explore the feasibility of applying micro-gravity geophysical techniques as a means to quantify the specific yield (storage) of groundwater systems.</td>
<td>Last Chance Water; Y Bar Ranch, LLC</td>
<td>Lincoln</td>
<td>Water</td>
<td>$26,000</td>
</tr>
<tr>
<td>SNL</td>
<td>Methane Detection</td>
<td>Test portable methane detection system.</td>
<td>International Metrics; International Metrics Consulting</td>
<td>San Juan</td>
<td>Manufacturing</td>
<td>$40,000</td>
</tr>
<tr>
<td>SNL</td>
<td>Northern New Mexico Biomass</td>
<td>Test various slush material from thinning at Sandia’s Thermal Test Complex to look at soot production and conversion efficiencies. This will help to determine what types of waste are useable for conversion.</td>
<td>Canon Forestry; Jefferson Natural Resources</td>
<td>Taos</td>
<td>Energy</td>
<td>$38,000</td>
</tr>
</tbody>
</table>
Perform experiments that will provide insight to the best combination of requester’s materials for protection from both small arms and projectile-producing explosives.

Focus on Proof of Principle in the development of a super-cooled liquid water inventory application over NM.

Review existing geological, hydrological, and geochemical data relating to the water-bearing units in the Upper Hondo Basin focusing on the area around the Rio Bonito watershed.

Assist qualified water utilities in their evaluation of water treatment technologies for compliance with new water quality standards. Also assist small water treatment technology businesses in improvement of innovative technologies.

Perform experiments that will provide insight to the best combination of requester’s materials for protection from both small arms and projectile-producing explosives.

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Assist qualified water utilities in their evaluation of water treatment technologies for compliance with new water quality standards. Also assist small water treatment technology businesses in improvement of innovative technologies.

2007 Individual Projects
(Listed by county, by technical area)

**Chaves**
Creative Pultrusions, Inc.  Manufacturing
Dean Baldwin Painting  Manufacturing
Frontier Door Manufacturing  Manufacturing
Impact Confections  Manufacturing
JGT HR Consulting  Manufacturing
Prudential Grieves Group  Manufacturing
Select Milk  Manufacturing
Ag Services Construction  Manufacturing

**Cibola**
Sunnyland Farms  Energy

**Colfax**
Stolar Research Inc.  Manufacturing
Dos Amigos Anglers  Water

**Curry**
Glenco  Manufacturing
Leslie Candy  Manufacturing
Mental Health Resources  Manufacturing
Mill & Elevator Supply  Manufacturing
Southwest Cheese  Manufacturing

**Dona Ana**
Chui Chai, LLC  Manufacturing
Acme Mills Company  Manufacturing

**Eddy**
Cetane Energy  Energy
MBAR Services  Energy
Apache Canyon Trading Post  Water
J and J Pipe and Supply LLC  Water
Jurva Farms  Water

**Lea**
RMS Foods  Manufacturing

**Lincoln**
Stirling Spencer Ranch  Water
Los Alamos
Affordable Alcohol Monitoring
Sci Tac, LLC
Research Applications, Corp.

McKinley
Blue Mountain Enterprise
High Desert Realty

Otero
Alfredo's Restaurant Equipment Co.
Arquin Corporation
Heart of the Desert Pistachios
M6 Management Corp
Waverly Duggar Ranch

Rio Arriba
Mike's Mini Mart
Archeobotanical Services

Roosevelt
Sunland Inc
BJ Polishing & Small Engine
Hampton Farms
J. D. Heiskell & Co
Southwest Canns

San Juan
CV Flooring Solutions
Herbert's Welding
Morningstar Minerals
San Juan Compression
Nott, Ltd.

San Miguel
Mike Garcia Company
Land Logic

Sandoval
Hemp Elegance
JSA Photonics

San Juan
Materials
Materials
Other
Manufacturing
Manufacturing
Manufacturing
Manufacturing
Manufacturing
Water
Critical Infrastructure
Other
Manufacturing
Manufacturing
Manufacturing
Manufacturing
Manufacturing
Business Systems Development
Manufacturing
Manufacturing
Other
Manufacturing
Business Systems Development
Energy
Business Systems Development

VawtPower Management Inc
AeroParts Manufacturing & Repair
ClingZ, Inc.
CWW Feed Store
Deluxe Engraving & Screen
Print Service, Inc
Loretto Vet Clinic
MB Oil Ltd Co.
Native Resources Inc
Product Without Limits
Thompson Engineering
Trail House Grocery Store
NMTL
Senspex Inc.
Santa Maria Resource Development
Gigglng Star LLC

Santa Fe
Falcon Industries
La Puerta Originals
WeckTech
Aipet
Deer Moon Rising
Southwest Archaeological Consultants
Gordon Construction

Taos
P & J Hospitalities dba Salsa del Salto
Private Label Select
Xylo Energy

Torrance
Sierra Blanca Brewing Company

Valencia
Liste De Technologies, LLC
El Salvador Fabrication & Design
Pro-Fab, Inc.
Calkins LHP Inc

2007 Urban Individual Projects
(Listed by county, alphabetical)

Bernalillo
3D Low RAD
Advanced Medical Optics
Advent Solar, Inc.
Aegis Technologies
Analytical Solutions, Inc
APM Bands
Applied Sciences Inc.
Armed Response Team
Artistic Tile & Granite
Aurora Publishing
Aztec Discount Supplies
Microelectronics
Manufacturing
Manufacturing
Business Systems Development
Microelectronics
Manufacturing
Microelectronics
Critical Infrastructure
Manufacturing
Manufacturing
Manufacturing

Azuelas, Inc.
Bio-Tec Environmental
Black Mesa Coffee
Bogue Machine Company
Brown La Salita
Castillo Group, LLC
Catalyst RP, Inc.
Century Sign Builders
Chamelions LTD
CIC Photonics
Computational Analysis
Concise Motion Systems

Manufacturing
Materials
Manufacturing
Manufacturing
Materials
Materials
Manufacturing
Materials
Materials
Business Systems Development
Materials
### APPENDIX 2.

#### 2007 NMSBA Program Projects by county

<table>
<thead>
<tr>
<th>County</th>
<th>SNL</th>
<th>LANL</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernalillo</td>
<td>99</td>
<td>2</td>
<td>101</td>
</tr>
<tr>
<td>Chaves</td>
<td>21</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Cibola</td>
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<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Colfax</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Curry</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Dona Ana</td>
<td>16</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Eddy</td>
<td>18</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Lea</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Lincoln</td>
<td>10</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Los Alamos</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Luna</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>McKinley</td>
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<td>2</td>
</tr>
<tr>
<td>Oterc</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Rio Arriba</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Roosevelt</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>San Juan</td>
<td>8</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>San Miguel</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Sandoval</td>
<td>16</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Santa Fe</td>
<td>19</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Taos</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Torrance</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Valencia</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>262</td>
<td>26</td>
<td>288</td>
</tr>
</tbody>
</table>
The 2007 NMSBA Advisory Council follows the NMSBA Program’s mission to have a statewide impact on small business critical challenges. All the council members bring their own expertise and resources to enable New Mexico small businesses to access cutting edge technology, to increase technical sophistication and capabilities, and to share knowledge and resources to address issues and develop real-world applications.

Jim Brockmann  
Stein and Brockmann, P.A.

Victor Chavez  
Sandia National Laboratories

David Griscom  
Regional Development Corporation (RDC)

Mariann Johnston  
Los Alamos National Laboratory

Terrence R. Kamm  
Kamm & McConnell

Jim Manatt  
Providence Technologies

J. Leonard (Lenny) Martinez  
Office of the Governor, State Capital Building

Kevin McMahon  
Sandia National Laboratories

Lillian Montoya-Rael  
Los Alamos National Laboratory

Jackie Kerby Moore  
Sandia Science and Technology Park

Vince Murphy  
Strategic & Learning Services, Inc.

Belinda Padilla  
Los Alamos National Laboratory

Bob Sachs  
Team Specialty Products

Carol Sanchez  
New Mexico Manufacturing Extension Partnership

Daniel Sanchez  
US DOE / NNSA Sandia Site Office

Craig Tynner  
Sandia National Laboratories