

# **HIGHER EDUCATION DEPARTMENT**

## **NEW MEXICO STATE UNIVERSITY SYSTEM FY24 BUDGET NON-I&G BUDGET REQUESTS**

September 15, 2022



# New Mexico State University Non-I&G Requests for FY24

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**NMSU System FY24 Non-I&G Funding Request  
EXECUTIVE SUMMARY**

The Office of Government and Community Relations is requesting the approval of the Non-Instruction and General budget requests for Fiscal Year 24. The request includes funding for the agricultural programs (Agricultural Experiment Station [constitutional], Cooperative Extension Service [statutory], and Department of Agriculture [constitutional]), Athletics, Educational Television and Research and Public Service Projects (RPSPs) for the NMSU System. This is a yearly process which requires the Board of Regents approval prior to submission to the Higher Education Department. The requests have been reviewed by the University System Budget Committee and Chancellor Arvizu.

For FY24, we are requesting \$76.6 million, an increase of \$12.5 million or 20% over FY23 funding. This request includes \$49.6 million for the agricultural programs (a \$2.8M or 6% increase), \$8.2 million for Athletics (a \$2.25M or 38% increase), and \$1.3 million for Educational Television (a \$125K or 11% increase). Main Campus Research and Public Service Projects are seeking \$14.5 million for FY24, an increase of \$5.1M or 54%, with branch campuses requesting \$3 million, an increase of \$2.25M from the previous fiscal year.

Noteworthy are the various new RPSPs funded in Fiscal Year 2023 (6 programs total) as well as the new proposals for Fiscal Year 24 (5 programs). If all proposed programs receive FY 24 funding, NMSU’s RPSP offerings will increase from 21 to 32. On Main Campus, 9 RPSPs are requesting flat funding and 10 an expansion, while at the branch campuses, the numbers are 3 and 1, respectively. The below table summarizes this information.

Program	FY22	FY23	FY24 Request	\$ Change	% Change
Agricultural Entities (AES, CES, NMDA)	40,960.2	46,791.1	49,601.1	2,810.0	6%
Athletics	4,192.7	5,951.7	8,201.7	2,250.0	38%
Educational TV	976.0	1,174.2	1,299.2	125.0	11%
<b>Total Non-USBC</b>	<b>46,128.9</b>	<b>53,917.0</b>	<b>59,102.0</b>	<b>5,185.0</b>	<b>10%</b>
<b>Main Campus Research &amp; Public Service</b>					
Flat Funding/Continuing (8)	2,177.7	2,943.1	2,943.1	-	0%
Expansion (10)	4,943.1	6,445.8	10,037.9	3,592.1	56%
New (3)	-	-	1,521.1	1,521.1	100%
<b>Subtotal RPSP (Main)</b>	<b>7,120.8</b>	<b>9,388.9</b>	<b>14,502.1</b>	<b>5,113.2</b>	<b>54%</b>
<b>Branch Campus Research &amp; Public Service</b>					
Flat Funding/Continuing (3)	324.6	474.6	474.6	-	0%
Expansion (1)	275.9	275.9	1,028.9	753.0	273%
New (2)	-	-	1,499.7	1,499.7	100%
<b>Total RPSP Branch</b>	<b>600.5</b>	<b>750.5</b>	<b>3,003.2</b>	<b>2,252.7</b>	<b>300%</b>
<b>Total Non-I&amp;G</b>					
	<b>53,850.2</b>	<b>64,056.4</b>	<b>76,607.3</b>	<b>12,550.9</b>	<b>20%</b>

**New Mexico State University System**  
**FY24 Non-I&G Funding Requests**  
 \$ in thousands

Program	FY22	FY23	FY24 Request	\$ Change	% Change
<b>Agricultural Entities</b>					
Agricultural Experiment Station (AES)	14,968.7	17,462.0	18,227.0	765.0	4.4%
Cooperative Extension Service (CES)	13,585.3	15,095.6	15,665.6	570.0	3.8%
Department of Agriculture	12,406.2	14,233.5	15,708.5	1,475.0	10.4%
<b>Total Agriculture</b>	<b>40,960.2</b>	<b>46,791.1</b>	<b>49,601.1</b>	<b>2,810.0</b>	<b>6.0%</b>
<b>Athletics</b>	4,192.7	5,951.7	8,201.7	2,250.0	37.8%
<b>Educational Television</b>	976.0	1,174.2	1,299.2	125.0	10.6%
<b>Main Research &amp; Public Service</b>					NA
Nurse Expansion	846.2	946.2	1,981.2	1,035.0	109.4%
College Assistance Migrant Program	290.4	297.9	297.9	-	0.0%
Water Resources Research Institute	1,045.1	1,141.3	1,341.3	200.0	17.5%
Nurse Anesthesiology (New FY24)	-	-	627.1	627.1	NA
Mental Health Nurse Practitioner	940.0	940.0	1,315.0	375.0	39.9%
Arrowhead Center for Business Dev.	325.0	355.1	555.1	200.0	56.3%
Autism Program	563.8	730.9	1,087.5	356.6	48.8%
Space Tech Comm. (New FY23)	-	50.0	350.0	300.0	600.0%
Prod. Water Con. (New FY23)	-	130.0	500.0	370.0	284.6%
Sunspot Solar Observatory	354.2	367.5	400.0	32.5	8.8%
Alliance for Teach. & Learning Adv.	144.6	211.4	211.4	-	0.0%
Hypersonics (New FY24)	-	-	594.0	594.0	NA
Manufacturing Sector Dev. Prgrm.	624.4	647.8	947.8	300.0	46.3%
STEM Alliance for Minority Part.	294.4	357.9	357.9	-	0.0%
Indian Resources Development	256.8	265.9	265.9	-	0.0%
CREES (New FY24)	-	-	300.0	300.0	NA
STEM K-12 Pipeline (New FY23)	-	100.0	100.0	-	0.0%
Prep. Ntve. Tchrs. for Tmrw. (New FY23)	-	200.0	200.0	-	0.0%
Anna Age Eight Institute	1,202.4	2,077.0	2,500.0	423.0	20.4%
Sustainable Ag Center of Excellence	233.5	320.0	320.0	-	0.0%
Teacher Pipeline Init. (New FY23)	-	250.0	250.0	-	0.0%
<b>Total RPSP Main</b>	<b>7,120.8</b>	<b>9,388.9</b>	<b>14,502.1</b>	<b>5,113.2</b>	<b>54.5%</b>
<b>Branch Research &amp; Public Service</b>					
DACC- Ed. Program (New FY24)	-	-	494.0	494.0	NA
DACC- Nurse Expansion	275.9	275.9	1,028.9	753.0	272.9%
DACC- Respiratory Ther. (New FY24)	-	-	1,005.7	1,005.7	NA
DACC- Dental Hygiene Program	279.0	329.0	329.0	-	0.0%
Grants- Veteran's Center	45.6	45.6	45.6	-	0.0%
Grants- Tribal Initiatives (New FY23)	-	100.0	100.0	-	0.0%
<b>Total RPSP Branch</b>	<b>600.5</b>	<b>750.5</b>	<b>3,003.2</b>	<b>2,252.7</b>	<b>300.2%</b>
<b>Total NON I&amp;G</b>	<b>53,850.2</b>	<b>64,056.4</b>	<b>76,607.3</b>	<b>12,550.9</b>	<b>19.6%</b>

**NEW MEXICO STATE UNIVERSITY SYSTEM**  
**FY24 Non-I&G Recurring Program Requests Descriptions**  
 \$ in thousands

Priority	PROJECT/DESCRIPTION	FY 2023 Appropriation	FY 2024 Request	\$ Change
<b>AGRICULTURAL PROGRAMS</b>				
1	<p><b>Agricultural Experiment Station:</b> The Agricultural Experiment Station (AES) System is the research arm of the College of Agricultural, Consumer, and Environmental Sciences at New Mexico State University. It is a Constitutional/Statutory program in NM Constitution Article XII, Section 11: State educational institutions. The AES System consists of scientists on the main campus and at agricultural science and research centers throughout New Mexico. The science centers support fundamental and applied research under New Mexico's varied environmental conditions to meet the agricultural and natural resource management needs of communities in every part of the state. The increase will fund four critical systems-level positions (Forest Tree Eco-physiologist, Climate Smart Agricultural, Hydrology and Water Resources, and Interactive Renewable Energy and Agricultural Natural Resources Assistant Professors). These positions will be housed at Mora, Farmington, Artesia and Corona Agricultural Science Centers and will provide critical research in forestry, climate research and renewable energy.</p>	17,462.0	18,227.0	765.0
1	<p><b>Cooperative Extension Service:</b> The Cooperative Extension Service (CES) mission is to provide the citizens of New Mexico with practical, research based knowledge and programs that improve their quality of life. CES has faculty members in all 33 counties and many tribal areas in New Mexico. Every year, extension faculty reach over 500,000 New Mexicans (approximately 1/3 of the state's population) who benefit from CES educational programs that extend the knowledge of the land-grant university system. Statewide per year, over 20,000 youth annually develop life skills through 4-H programs, 10,000 New Mexico youth receive enhanced curriculum through 4-H school enrichment programs, over 200,000 New Mexicans are impacted by the Extension Family and Consumer Sciences and Rural Health programs, and thousands of New Mexicans access agricultural information through community classes and workshops. The requested increase will fund four critical positions: Water Conservation, 4-H Steam, Agricultural Policy, and Extension Energy specialists. These positions tie to research positions being requested by AES and will provide the outreach to communities on water conservation, STEAM programs for youth, policy interpretation, and alternative energy use applications.</p>	15,095.6	15,665.6	570.0
1	<p><b>New Mexico Department of Agriculture (NMDA):</b> NMDA is a constitutional agency organized under the Board of Regents of New Mexico State University (NMSU), created under Article XV Section 1 [Department of agriculture]. NMDA and NMSU have a unique relationship that allows programs to be developed and administered to serve the needs of the agriculture industry in New Mexico. NMDA promotes food protection, a uniform and fair market place, and global marketing and economic development; supports beneficial use of natural resources; and works cooperatively with public and private sector entities. NMDA is a producer-consumer service and regulatory department and is responsible for enforcement of a multitude of statutes ranging from petroleum inspections, pesticide licensing and compliance as well as dairy inspections. The recurring expansion request of \$1,075,000 includes funding to address compensation management and regulatory requirement increases within the Veterinary Diagnostic Services and Standard and Consumer Services divisions.</p>	14,233.5	15,708.5	1,475.0
<b>ATHLETICS</b>				
1	<p><b>Athletics:</b> NMSU Intercollegiate Athletics strives to be a premier Football Bowl Subdivision (Division 1) athletics program. As team members, student-athletes are provided a platform to grow as leaders, team players, and responsible and successful community members. Being a part of Division One FBS athletics provides vast opportunities and enhances the overall quality of the collegiate experience. The impact goes beyond football, benefitting all 15 other NMSU athletics teams. NMSU Athletics continues to manage its financial situation. In doing so, the department has maintained its commitment to provide operating funds to its 16 sponsored sports. However, the cost of doing business has increased and these higher costs are being passed on from our vendors, resulting in fewer resources for our teams. Travel, student housing and meals, athletic supplies and equipment, medical services and insurance, have continued to be the areas of greater need. NMSU teams must travel via airplane to most competition sites whereas other universities' athletics programs are within driving distance to competitions. These increased costs, along with our geographic location have continued to place a strain on our coaches and staff and have been consistent major challenges in managing costs. Part of recruiting and commitment to our student-athletes is the level of competition we provide them. Maintaining appropriate funding is necessary to allow the programs the opportunity to continue to meet obligations and provide a positive, safe and well-rounded experience for the students participating as athletes.</p>	5,951.7	8,201.7	2,250.0

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<b>EDUCATIONAL TELEVISION</b>				
1	<p><b>Educational Television:</b> KRWG-TV provides educational television services to southern New Mexico. Our coverage area is equivalent to the size of West Virginia, roughly 25,000 square miles, most rural. In response to the pandemic, KRWG re-tooled our entire operation to provide the region with at-home learning support for k-12 students resulting in over 1,400 hours of educational programming. While slightly modified, these efforts are still ongoing. In addition, we support NMSU student success by partnering with CMI and Journalism to provide meaningful experiential learning opportunities that result in post-graduation employment. The expansion request will provide the required resources to ensure KRWG meets the needs of our region by producing relevant, impactful content. The request will enhance our pre-k outreach and heighten member support resulting in more student employment opportunities.</p>	1,174.2	1,299.2	125.0
<b>RESEARCH AND PUBLIC SERVICE PROJECTS - MAIN CAMPUS</b>				
1	<p><b>NMSU Main Nurse Expansion:</b> The NMSU School of Nursing provides New Mexico hospitals and clinical agencies with highly trained new nursing graduates. With 75% of NMSU Bachelor of Science in Nursing (BSN) graduates staying in New Mexico in 2021, the NMSU BSN program is a critical part of the solution to the state's critical nursing workforce needs. Graduating qualified nurses during a pandemic is especially important, as nurses are the vital link between the patient and the rest of the health care team. The NMSU nursing program collaborates with its higher education partners across the state to deliver a common curriculum that allows nursing students to easily move from community college to university level courses. RPSP funding supports initiatives to meet a critical state-wide demand for baccalaureate-prepared RNs. The FY24 increase in nurse expansion funding of \$1.035M will be used for faculty and professional salaries to support enrollment growth, market-based salary adjustments, 16 undergraduate nursing tutors, professional development, recruitment and marketing, standardized testing fees, faculty for Pre-Nursing Freshman seminars and additional modules in the SON's student management system.</p> <p>*** Please be aware that NMSU received \$1.3 million for FY23 and were instructed by the HED to fold any recurring expenses from this request into the Nurse Expansion request for FY24.</p>	946.2	1,981.2	1,035.0
2	<p><b>College Assistance Migrant Program:</b> The NMSU College Assistance Migrant Program (CAMP) specifically serves the educational needs of eligible U.S. citizen and permanent resident farming, dairy and ranch workers from across New Mexico. NMSU CAMP recruits and retains economically disadvantaged students until their graduation, and provides them with professional preparedness training and student leadership opportunities. CAMP students are underrepresented, first generation college students (mainly Hispanic and Pell Grant recipients [99%]). Students major across all disciplines and majors at NMSU, and freshmen are specifically exposed to several NMSU STEM based programs to generate scientific interest and STEM majors. At CAMP, students receive outreach, mentoring, stipends, leadership orientations, preparedness courses, research experiences, and job readiness opportunities when funding is possible. State RPSP funding continues to be critical for leveraging federal funds to NMSU.</p>	297.9	297.9	0.0
3	<p><b>Water Resources Research Institute:</b> Since its creation in 1963, NM WRRI has been the state's nucleus for coordinating water resources research among university faculty statewide. NM WRRI will continue to work to provide new tools for addressing New Mexico's myriad water problems. Recurring funding in recent years has allowed for the development of powerful new tools to account for existing water in New Mexico, including the Statewide Water Assessment, the New Mexico Dynamic Statewide Water Budget (NMDSWB) model, and the Community Hydrology Program that funds research on NM surface water-groundwater interactions in communities of the Upper Rio Grande, Central New Mexico, the Lower Rio Grande, and other critical sites. NM WRRI is requesting expansion funding of \$200,000 to increase the Community Hydrology Program, which funds field water budget equipment and faculty and graduate student research on NM surface water-groundwater interactions in communities across New Mexico. The additional funding will also help WRRI utilize data from weather stations to provide integrated community resilient monitoring and research.</p>	1,141.3	1,341.3	200.0

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4	<p><b>Nurse Anesthesiology:</b> The New Mexico State University (NMSU) School of Nursing is proposing to develop and launch a new Doctor of Nursing Practice (DNP) degree concentration in Nurse Anesthesiology with a focus on rural health and health disparities in New Mexico. Graduates will be qualified to take the national certification exam administered by the National Boards of Certification and Recertification of Nurse Anesthetists to become a certified registered nurse anesthetist (CRNA). To become a (CRNA), students complete a three-year program with rigorous didactic courses and over 2500 hours of supervised clinical training. New Mexico's hospitals have a critical need for anesthesia providers due to nation-wide shortages and difficulty recruiting providers, especially to rural healthcare centers. The goal is to admit 24 students annually starting in August 2023 and the first cohort will graduate in May 2026. Obtaining RPSF funding for the Nurse Anesthesiology will facilitate program start up and will reduce the cost of tuition for New Mexico nurses seeking to become a CRNA. Specifically, the funding will support salaries and fringe for two nurse anesthesiology faculty and one staff member, anesthesia task trainers, and stipends for 20 students.</p>	0.0	627.1	627.1
5	<p><b>NMSU Mental Health Nurse Practitioner:</b> RPSF funding supports the NMSU psychiatric mental health nurse practitioner (PMHNP) program, which is delivered in a distance education format to nurses throughout the State of New Mexico. This program supports initiatives to meet a critical state-wide demand for highly trained mental health care providers. The 3-year Doctor of Nursing Practice (DNP) graduate degree program prepares nurses to take a national certification exam that will allow them to provide comprehensive mental health services, including mental health evaluation, diagnosis and treatment, as well as providing psychotherapy/counseling. Certified PMHNPs have legal authority to prescribe psychoactive medications and the adjunctive pharmacological agents that ameliorate side effects of these medications. The PMHNP program is offered through distance education, which allows students to remain in their communities, practicing as a nurse while earning their DNP degree. RPSF funding provides critical support and career advancement opportunities to students from rural and medically underserved communities in New Mexico. Expansion funding will allow the School of Nursing to offer stipends to all New Mexico residents in the PMHNP DNP and post-graduate certificate programs. This stipend will cover 80% of tuition and textbooks and will be used as a program recruitment tool.</p>	940.0	1,315.0	375.0
6	<p><b>Arrowhead Center for Business Development:</b> The Arrowhead Center for Business Development supports NMSU's economic development mission to enhance innovation and entrepreneurship, creating economic opportunities in NM. Arrowhead builds statewide capacity by providing individuals and businesses with the knowledge, skills, and resources to start, grow and scale businesses. This capacity-building leads to favorable outcomes: new businesses and jobs, new products, the commercialization of novel technologies, increased investment, increased entrepreneurial skills (enhancing employability), and strategic public-private partnerships. Arrowhead's RPSF budget is allocated to personnel and other expenses in support of assistance to businesses across the state, technology commercialization, student entrepreneurship and business creation, and development of public-private partnerships for investment in NM. Personnel budget includes staff and student salaries and fringe. The expansion request of \$200,000 provides support for the Agriculture Venture Center, a business accelerator that will provide resources and connections for entrepreneurs seeking to launch or expand agriculture/food-based ventures. Clients would gain access to market and feasibility research, business acceleration programming, assistance with federal funding, capital investment, etc. The funding will cover FTE, travel and program support.</p>	355.1	555.1	200.0
7	<p><b>Autism Diagnostic Center -</b> The NMSU Autism Diagnostic Center will broaden the reach of services for children with Autism Spectrum Disorder (ASD) and their families in New Mexico. The program will provide diagnostic services in the second most densely populated county in southern New Mexico (Dona Ana pop 215,579) and neighboring counties. In addition, this program will reduce the current backlog for diagnostic services statewide. The ADC will increase diagnostic capacity within the state by providing timely diagnosis for children suspected of having ASD. Diagnostic evaluations facilitate timely access to intervention services that lead to meaningful outcomes and improve the quality of life. This program will also increase the number of Speech-Language Pathologists (SLP), Social Workers, and psychologists, specifically trained to meet the needs of children with ASD. The expansion request will allow the hiring of additional clinical personnel. The center currently does not have a needed full-time occupational therapist and is in need of a full-time, bilingual-licensed social worker. These two positions are critical for assessment of children and follow-up referrals and support following assessment. The increase of \$356,000 will also allow the ADC to maintain current staffing and account for the raises applied across the state.</p>	730.9	1,087.5	356.6

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8	<p><b>Space Technology Commercialization:</b> The global space economy is estimated to grow over 400% in the next 20 years to above \$2.5T annually. The State of New Mexico is uniquely positioned to become a leader in commercial space by leveraging relationships with New Space New Mexico, Spaceport America, New Mexico's National Laboratories, the growing space industry, and the space/aerospace research programs at New Mexico State University (NMSU). The Commercial Space New Mexico would serve as a center to promote space activities. The center will drive space innovation and commercialization by developing partnerships with the space industry and growing an exceptional engineering/scientific workforce to support the growing needs of the space industry. 68% of the \$350,000 request is an investment in human capital, including \$30K for faculty summer salaries, \$61K for a postdoc, \$76K to support three to four graduate students, and \$70K to support 15 undergraduates. The funding will enable the center to pursue matching funds for student projects and internships.</p>	50.0	350.0	300.0
9	<p><b>Produced Water Consortium:</b> The New Mexico Produced Water Consortium is leading the way on collaborative produced water research in the United States. The state funds would support faculty, staff, postdoc, graduate students, and undergraduate students' research on produced water testing, water quality analysis, risks and toxicity assessment, and social-economic-environmental evaluation for fit-for-purpose applications. The expected outcomes of the NMPWRC's activities directly benefit New Mexico by supporting fresh water sustainability, environmental and public health, economic development, energy security, as well as workforce development of next generation of professionals in the water and energy sectors. NMPWRC is requesting recurring funding of \$500,000, which includes a \$370,000 expansion request to support faculty, postdoctoral researchers, staff, graduate research assistants, and undergraduates salary and fringe; continue ongoing research and updates on the social, economic, and environmental assessment of produced water reuse applications; and to fund faculty and student water research with required water treatment equipment, chemicals, materials, and supplies. The \$370,000 expansion request will support the characterization of physical, chemical, and biological water quality parameters; conduct whole effluent toxicity tests and risks assessment; coordinate data acquisition to obtain, process, synthesize, and deliver data.</p>	130.0	500.0	370.0
10	<p><b>Sunspot Solar Observatory</b> - The goal of this RPSP is to continue to promote NMSU and the State of NM to lead a consortium in operating the solar astronomical research facilities at Sunspot, Otero County. This operation has annual expenditures of \$1.2M in New Mexico, strengthens the state's role as a leader in astronomical and geospace research, enhances PhD student recruitment for NMSU, improves a popular astronomical education and public outreach site, and retains high-paid jobs in Otero County. NMSU leads the consortium for the benefit of New Mexico in areas of scientific research of critical national importance, student training and education, advanced instrumentation, economic impacts to the state, and public outreach. In FY24, we will continue to lead efforts to employ observatory staff, provide graduate student training and enrich our public outreach program, and work with NSF to secure a long term future for the site. The observatory also contributes to tourism in the area. Due to the interest in astronomy, the Sunspot Astronomy and Visitor Center attracts about 15,000 visitors a year. The additional \$32.5K will provide for 0.25 FTE to integrate a new observation feature into the Visitor's Center in order to expand our education for NMSU students, opportunities for more school visits, and extra open houses and special events for the public.</p>	367.5	400.0	32.5
11	<p><b>Alliance for Teaching and Learning Advancement:</b> The Alliance for the Advancement of Teaching and Learning focuses on two major initiatives: Educators Rising and the Southwest Outreach Academic Research (SOAR) Evaluation and Policy Center. Educators Rising, established in 2015, is a "Grow Your Own" teacher pipeline program that supports high school students interested in education careers. The program is recognized by the U.S. Department of Education, the New Mexico Activities Association, and the NMPED as a Career Technical Student Organization (CTSO). The SOAR Evaluation and Policy Center, established in 2016, employs staff and graduate research assistants who work with NMSU Outreach programs and several departments across campus and organizations all over the state, to close the outreach-research gap through serving as evaluators on sponsored projects in K-12, higher education, and workforce development. SOAR also puts out the Annual Educator Vacancy Report, which is utilized by several groups statewide.</p>	211.4	211.4	0.0

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Priority	PROJECT/DESCRIPTION	FY 2023 Appropriation	FY 2024 Request	\$ Change
12	<p><b>Hypersonics:</b> The State of New Mexico has an extensive, well-documented, and rich history in aerospace engineering. The aerospace industry is rapidly expanding across the nation as near-earth space utilization increases and geopolitical security concerns grow. Hypersonics is a significant core discipline in space exploration and defense. This project provides crucially needed support for expanding the New Mexico State University hypersonics research and workforce development initiatives that are under the umbrella of an emerging Hypersonics Research Center (HypRC). NMSU has the only aerospace degree conferring program in NM. NMSU and Sandia National Labs have recently created a Hypersonics Roadmap that encourages substantial engagement. The Center will support and accelerate growth of aerospace research and economic activity in the State, and attract outside high-tech industry, both of which will lead to the creation of new high-income jobs, national coverage, and revenue. The project support of \$594,000 will support one FT faculty, one postdoctoral research associate, two graduate students, and necessary supplies for hypersonics research.</p>	0.0	594.0	594.0
13	<p><b>Manufacturing Sector Development Program:</b> New Mexico is home to a growing manufacturing base driven by shifts in the global supply chain and the emergence of entrepreneurial and business start-ups. NMSU's College of Engineering is focused on filling the manufacturing skills gap through the Aggie Innovation Space (AIS) by: 1. Fostering partnerships with industry by leveraging AIS expertise and resources to expand their capabilities and to meet their workforce needs; 2. Increasing economic development and job retention by assisting manufacturing and related services businesses through pollution prevention and energy efficiency assessment services 3. Engaging all stakeholders – students, faculty, industry, and entrepreneurs. To prepare engineers for the manufacturing workforce, the college has expanded its focus on experiential learning, student engagement, industry outreach activities, and integration of engineering disciplines. The AIS houses modern equipment in open workspaces to support these efforts. The AIS has expanded its manufacturing-based activities which has provided unique learning, research, and entrepreneurship opportunities for students and faculty. The \$300,000 expansion request will be used to support additional technical staff and students in the AIS to support on-demand manufacturing courses available to the public and students and professional staff to support delivery of pollution prevention and energy efficiency assessment services to New Mexico businesses. The latter services and those indicated under item #2 meet a local need, with 12-14 requests from local businesses in small communities pending and additional 15 potential assessments being referred by the New Mexico Environmental Department (NMED) for consideration. Further, these services and expertise closely align with current efforts within NMED to encourage "compliance assistance" resources for the NM business community.</p>	647.8	947.8	300.0
14	<p><b>STEM Alliance for Minority Participation:</b> STEM AMP is a statewide National Science Foundation (NSF) organization that serves underrepresented students in STEM. State funding provides critically important leverage for securing federal dollars to expand support for student interventions and stipends that focus on high impact practices of undergraduate research and intensive faculty mentoring, both in 2-year and 4-year partner institutions. STEM AMP also provides transfer-related experiences and stipends that encourage the community college student to progress to and remain in university to achieve the B.S. STEM degree; and to gain experience, confidence, and self-efficacy by attending and presenting at national and statewide conferences, including STEM AMP's annual Student Research Conference. STEM AMP collaborates with 13 alliance partners, including the Lead Institution, NMSU, and six other New Mexico university institutions and six New Mexico community colleges.</p>	357.9	357.9	0.0
15	<p><b>Indian Resources Development (IRD):</b> Indian Resources Development (IRD) is a statewide program whose mission is to assist tribal youth in New Mexico in becoming professional agriculturalists, business people, engineers, resource managers, and scientists prepared to contribute to the effective development and management of tribal resources in their own culturally-appropriate manner. IRD offers educational and professional development opportunities for Native American high school and college students; and supports Tribal Nations in developing their own technical and managerial expertise in agriculture, natural resources, engineering, energy, and business. IRD emphasizes collaborations and network building that promote self-directed and self-sustaining economic development and management of resources by Tribal Nations in New Mexico.</p>	265.9	265.9	0.0
16	<p><b>Center for Research and Education with Equity in STEM (CREES):</b> The proposed Center for Research and Education with Equity in STEM (CREES) will serve as an interdisciplinary, cross-sectoral enterprise for faculty, staff, students, and community organizations to advance common interests in STEM teaching and learning through research, capacity-building, and public service. A key objective of CREES is the creation of a diverse, inclusive, and equitable community that fosters a shared commitment to scholarly teaching and learning to effectively broaden and scale participation in STEM through building a connected and networked K-16 educational ecosystem. As a statewide resource for capacity-building, social economic mobility, and social justice, CREES will develop transformative strategies for STEM teaching and learning that can be scaled and replicated for long-term sustainability and integrated impact on K-16 student success. The \$300,000 request will support a program director, faculty support, additional salaries, travel, supplies, expenses, and equipment, and subcontracting for research.</p>	0.0	300.0	300.0

**NEW MEXICO STATE UNIVERSITY SYSTEM**  
**FY24 Non-I&G Recurring Program Requests Descriptions**  
 \$ in thousands

Priority	PROJECT/DESCRIPTION	FY 2023 Appropriation	FY 2024 Request	\$ Change
17	<p><b>STEM K-12 Pipeline:</b> This new program sits within the Institute for Excellence in Math/Science Education in the College of HEST to improve STEM learning for teachers and students in grades K-12 and prepare students with the knowledge and skills necessary for success in post-secondary education and careers in high-need STEM fields. The funds will support K-12 students who have historically been under-served by our education system. Hispanic and Native American students and students experiencing poverty are disproportionately less likely to pursue STEM careers due to a lack of opportunity, access, and resources to STEM experiences. In alignment with the Martinez and Yazzie v. NM lawsuit, the STEM K-12 Pipeline Program is committed to providing students with rigorous and culturally relevant STEM and career exploration experiences that prepare them to make informed decisions about their post-secondary pathways, connect them with resources that will help them success and complete post-secondary courses, and be prepared to enter a competitive workforce. The requested funding will support salaries for STEM Specialists to implement the STEM/Career Exploration program and factors in fringe. Remaining funding is for travel and support for the program.</p>	100.0	100.0	0.0
18	<p><b>Preparing Native Teachers for Tomorrow (Tribal Education):</b>This project is designed to increase the number of American Indian students majoring in teacher preparation programs. Further, the project is designed to support, retain and graduate a higher percentage of American Indian students majoring in teacher preparation in order to provide a well prepared teacher education pipeline for New Mexico. The initial budget is designed to add necessary staff, support curricular redesign and recruit the first cohort of participants. NMSU is contributing \$3,000 in year one and \$40,000 in year two to directly support American Indian students with laptops and vouchers. Operating expenses will allow for travel to recruit Native American students and prepare recruitment material as well as support office supplies for employees. NMSU will also provide office space for the two employees.</p>	200.0	200.0	0.0
19	<p><b>Anne Age Eight Institute:</b> The Anna Age Eight Institute (AAEI) was funded by the state legislature in 2019, and was established for the data-driven prevention of childhood trauma and maltreatment by ensuring that 100% of residents have access to 10 vital surviving and thriving services. The institute's far-reaching goal is ensuring that our children, students, and families are safe and thriving. To achieve this AAEI is using a data-driven process focused on building the capacity of local government, non-governmental agencies, and the business sector to provide the ten vital surviving and thriving services that community members need to strengthen health, safety, and resilience (the five survival services are: medical care, behavioral health care, food, housing, and transportation).</p>	2,077.0	2,500.0	423.0
20	<p><b>Center of Excellence in Sustainable Food and Agricultural Systems (CESFAS):</b> The Center, established in 2019 by New Mexico's governor and legislature, is a critical component in New Mexico's ability to build and sustain a viable food and agricultural system to grow the state's economy and feed the population without comprising resources for future generations. Increasing the state's value-added processing industry is a key goal of CESFAS, along with developing a sustainable food supply chain and reduction/elimination of food deserts occurring in the state. The budget partially supports one faculty position, roadmap team development and processes, and industry stakeholders' internships and transdisciplinary assistantships for graduate and undergraduate students. Roadmap teams consist of CESFAS-affiliated faculty from ACES, NMSU's Colleges of Engineering, Business, Health, Education, and Social Transformation, and Arts and Sciences. Roadmap teams and CESFAS leadership work directly with AES and CES to take critical issues faced by New Mexico agricultural producers and identify possible solutions or research focuses to directly support NM citizens. The funds also support increased and continued outreach for New Mexico producers.</p>	320.0	320.0	0.0
21	<p><b>Teacher Pipeline Initiative:</b> The New Mexico Teacher Pipeline Initiative's main objective is to significantly reduce the number of teacher vacancies in high-needs areas throughout the state through targeted efforts in recruitment, preparation, and retention. The RPSP will focus on three program tracts, recruitment, preparation, and retention and the aims will be met by partnering with school districts and community organizations throughout southern New Mexico and West Texas. Funding will support faculty salaries, staff, graduate research assistants, professional salaries, and other expenses for operations tied to recruitment, preparation and retention.</p>	250.0	250.0	0.0

**NEW MEXICO STATE UNIVERSITY SYSTEM**  
**FY24 Non-I&G Recurring Program Requests Descriptions**  
 \$ in thousands

Priority	PROJECT/DESCRIPTION	FY 2023 Appropriation	FY 2024 Request	\$ Change
<b>RESEARCH AND PUBLIC SERVICE PROJECTS - DONA ANA CAMPUS</b>				
1	<p><b>NMSU-DACC Education Development Program Faculty and Retainment Project:</b> The DACC Education Program Faculty Development and Retainment Project focuses on the following goals, thus addressing aspects of New Mexico's current educational needs: faculty retainment; faculty development; and development of pre-teacher candidates. A portion of the funding would be used to attract and retain highly qualified educators at DACC in order to maintain a high-quality Education Department that prepares highly sought after pre-teacher candidates. Additional funding would be for faculty development in response to the Yazzie-Martinez decision and would involve trainings, conferences and finding best practices that respond to the decision. Lastly, the funding would add 3 HyFlex mobile carts with laptops, webcams, tripods, etc. which will help prepare teachers for the online and virtual components of the education world.</p>	0.0	494.0	494.0
2	<p><b>NMSU-DACC Nurse Expansion:</b> The mission of the nursing program is to provide educational preparation opportunities for a diverse group of students in response to community health care and nursing workforce needs. RPSP funding ensures faculty and students have the tools and resources such as appropriate levels of professional development, equipment, and supplies to support our instructional requirements. Over 60% of students enrolled at DACC meet the federal standards for classification as low income. The FY24 budget will allow for three new full-time faculty positions, one full-time pre-nursing advisor, and continued professional development opportunities for faculty and staff as well as support expansion efforts for the Espina Campus, the new Sunland Park Center, and simulation programs at DACC. The budget will help the program meet accreditation status for the new center by ACEN which is scheduled for fall 2023, and help progress the simulation program to meet continuing approval status with the NMBON. The budget will continue to help replace equipment, update software for equipment, purchase new software and equipment for Sunland Park Center.</p>	275.9	1,028.9	753.0
3	<p><b>NMSU-DACC Respiratory Therapy Program:</b> This budget is solely for the implementation of Phase 1 of the proposed expansion project. The people of Dona Ana Country in Sunland Park are over 40 miles from the base Respiratory Care Program. By expanding the program to Sunland Park, we can increase the enrollment of graduates who stay in New Mexico for employment and contribute to New Mexico. Expanding requires hiring three faculty at the rank of Assistant, Associate, or Professor and benefits. Furthermore, for parity with the nursing program, the faculty would be compensated and incentivized for teaching in Sunland Park through a differential payment and signing bonus to commit to staying a minimum of two years with the program. Additionally, to recruit new faculty, we would provide relocation fees. The budget also includes support for faculty development so that they may keep up to date on the best practices in respiratory therapy care. Support for students is also critical, particularly when inflation and the cost of fuel have become cost-prohibitive for our students; we have included gas vouchers for our students to be able to commute to the various clinical locations in the state as well as in El Paso, Texas. In addition to faculty, teaching equipment is necessary and required by our accrediting body to have an equitable lab available to students in any satellite location. It should be noted that this would be a one-time cost and the maintenance and replacement costs associated with maintaining the lab up to standard will be requested through the Carl Perkins funding opportunities at the college.</p>	0.0	1,005.7	1,005.7
4	<p><b>NMSU-DACC Dental Hygiene Program:</b> The program prepares students to practice entry-level dental hygiene in private dental offices, hospitals, and public health agencies. As part of their academic and clinical education, dental hygiene students are exposed to different areas of patient care techniques and management skills while working in the clinical environment and during experiential learning activities. The clinical practice is necessary to provide students with the skills necessary to take national and state board examinations, but it also allows the students to provide preventative dental hygiene services to the public in general. The dental hygiene clinical program requirements call for students to practice across a spectrum of patient categories, disease and difficulty levels. Because it is difficult for the clinic to maintain a pool of patients to meet all the requirements students need, students are left to recruit patients to meet those requirements, who in turn must pay for their services out of pocket. While services are offered at a reduced cost to the patients, it is often a barrier for patients who cannot afford them.</p>	329.0	329.0	0.0

**NEW MEXICO STATE UNIVERSITY SYSTEM**  
**FY24 Non-I&G Recurring Program Requests Descriptions**  
 \$ in thousands

Priority	PROJECT/DESCRIPTION	FY 2023 Appropriation	FY 2024 Request	\$ Change
<b>RESEARCH AND PUBLIC SERVICE PROJECTS - GRANTS CAMPUS</b>				
1	<p><b>Student Veteran Service Center</b> - The Student Veteran Resource Center (SVRC) provides a centrally located, easily accessible, and veteran-centered location on the NMSU Grants campus for students receiving VA Benefits to receive dedicated academic and student support, as well as other VA related services. The primary project objective is to increase head count enrollment for full-time and part-time enrollment for students receiving VA Benefits.</p>	45.6	45.6	0.0
1	<p><b>Tribal Initiatives</b>- New Mexico State University Grants enrolled 411 Native American students during the 2021-2022 academic year representing about 35% of the student body. During this this time period, there were 28 Native American students pursuing either an Associate or Certificate degree in Education or Early Childhood. This enrollment accounts for 28% of the enrollment in the Education and Early Childhood programs. While these data appear promising, the critical issue rests in the completion and transfer rates for Native American students pursuing a Bachelor degree in teaching. These funds, available for the first time in FY 23, will be used to establish promising practices to support the recruitment, retention, and completion of Native American students who are pursuing an Associate or Certificate degree. Funds will support an outreach specialist, professional tutors, travel, supplies and fringe.</p>	100.0	100.0	0.0
<b>Grand Total</b>		<b>64,056.4</b>	<b>76,607.3</b>	<b>12,550.9</b>

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**

**Research & Public Service Project (RPSP) and other Funding Requests**

**FY 2024**

**Print, sign, and submit packet to NMHED per instructions by 9/15/22**

**Institution:** New Mexico State University

**Primary Contact** Name and Title: Clayton Abbey, Director of State Government Relations

**Phone:** 505-239-8821

**Email:** cabbey@nmsu.edu

**Governing Board Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

<b>Institutional Rank (priority)</b>	<b>Program/Project Title</b>	<b>Request in FY 24</b>	<b>New Program (X)</b>
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	<b>AGRICULTURAL ENTITIES</b>		
1	Agricultural Experiment Station (AES)	\$ 18,227.0	
1	Cooperative Extension Service (CES)	\$ 15,665.6	
1	Department of Agriculture	\$ 15,708.5	
1	<b>Athletics</b>	\$ 8,201.7	
1	<b>Educational Television</b>	\$ 1,299.2	
	<b>RESEARCH AND PUBLIC MAIN</b>		
1	College Assistance Migrant Program	\$ 297.9	
2	Water Resources Research Institute	\$ 1,341.3	
3	Nurse Anesthesiology	\$ 627.1	X
4	Mental Health Nurse Practitioner	\$ 1,315.0	
5	Arrowhead Center for Business	\$ 555.1	
6	Autism Program	\$ 1,087.5	
7	Nurse Expansion	\$ 1,981.2	
8	Space Tech Commercialization	\$ 350.0	
9	Produced Water Consortium	\$ 500.0	
10	Sunspot Solar Observatory	\$ 400.0	
11	Alliance for Teaching & Learning Advancement	\$ 211.4	
12	Hypersonics	\$ 594.0	X
13	Manufacturing Sector Development Program	\$ 947.8	
14	STEM Alliance for Minority Participation	\$ 357.9	
15	Indian Resources Development	\$ 265.9	
16	Center for Research and Education with Equity in STEM (CREES)	\$ 300.0	X
17	STEM K-12 Pipeline	\$ 100.0	
18	Preparing Native Teachers for Tomorrow (Tribal Education)	\$ 200.0	
19	Anna Age 8 Institute	\$ 2,500.0	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**

**Research & Public Service Project (RPSP) and other Funding Requests**

**FY 2024**

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**Institution:** New Mexico State University

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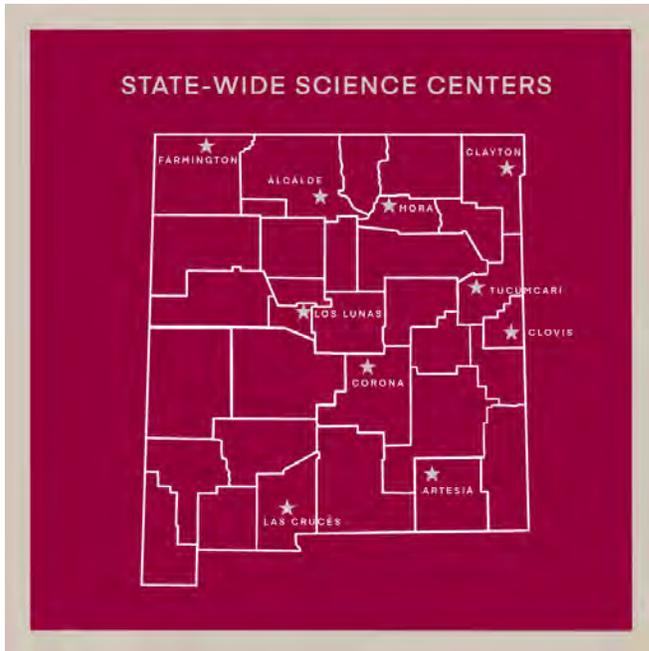
**Governing Board Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

<b>Institutional Rank (priority)</b>	<b>Program/Project Title</b>	<b>Request in FY 24</b>	<b>New Program (X)</b>
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20	Sustainable Ag Center of Excellence	\$ 320.0	
21	Teacher Pipeline Initiative	\$ 250.0	
	<b>RESEARCH AND PUBLIC BRANCH</b>		
	<b>Dona Ana</b>		
1	Dona Ana- Education Development Prgm Faculty and Retainment Proj.	\$ 494.0	X
2	Dona Ana- Nurse Expansion	\$ 1,028.9	
3	Dona Ana- Respiratory Therapy	\$ 1,005.7	X
4	Dona Ana- Dental Hygiene Program	\$ 329.0	
	<b>Grants</b>		
1	Grants- Veteran's Center	\$ 45.6	
1	Grants- Tribal Initiatives	\$ 100.0	
<b>Total Funding Request</b>		<b>\$ 76,607.30</b>	<b>5</b>

Current Appropriation: \$17,462,000  
FY 24 Request: \$18,227,000  
Change: \$765,000

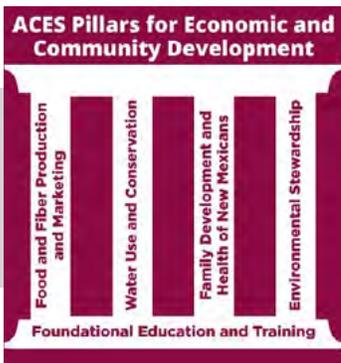
**Mission:** NMSU's Agricultural Experiment Station (AES) is the principal research unit of the College of Agricultural, Consumer, and Environmental Sciences. The AES system supports fundamental and applied science and technology research to benefit New Mexico's citizens in the economic, social, and cultural aspects of agriculture, natural resource management, and family issues. The AES system consists of scientists who work on NMSU's main campus and at off-campus Agricultural Science Centers (ASCs) around the state.



### AES is requesting a budget increase to fund four faculty positions:

- **Forest Tree Ecophysiology Assc. Professor:** Housed at the J.T. Harrington Forestry Research Center at Mora, this position will focus on tree ecophysiology to help solve the challenges of identifying forest species and tree production systems suitable for drought and fire-prone forest ecosystems. This research position will operate from a systems perspective on the integral responses of woody plants to naturally occurring and modified environmental factors such as radiation, temperature, precipitation, and carbon dioxide.
- **Climate Smart Agriculture Assc. Professor:** Housed at the Farmington ASC, this position will develop a research program focused on climate-smart agriculture by increasing agricultural productivity and incomes, adapting and building resilience to climate change, and reducing or removing greenhouse gas emissions from agriculture. This position will interact with scientists and researchers at various ASCs around the state to develop and demonstrate Climate Smart Ag practices suitable for our water-limited environment and applicable to different sectors including crop production, rangeland, forestry, and urban horticulture.
- **Hydrology and Water Resources Assc. Professor:** Housed at the Artesia ASC, this position will focus on efficient irrigation practices and management of critical water resources. Using knowledge of water science and hydrology, this position will develop alternative water resources used for irrigation in New Mexico agriculture. Research will address drought-, heat-, and salt-tolerant crops that will thrive in arid and semi-arid environments, practices used to grow them and identify and evaluate alternative water resources.
- **Integrated Renewable Energy and Agricultural Natural Resources Assc. Professor:** Housed at the Corona Range and Livestock Research Center, this position will focus on integrating the broad field of clean renewable energy into a cohesive research program that would allow producers to better understand land/energy potential. This position will take a strategic approach to building the agricultural energy portfolio and capitalize on emerging initiatives, such as agrivoltaics and public-private partnerships on wind and solar energy. This scientist will interact with all ASCs and other university and state entities to seek opportunities in renewable energy research.

The research efforts in AES provide a major source of hands-on learning opportunities for undergraduate students while addressing the needs of the agricultural communities throughout the state. As water scarcity and the need for renewable natural resources have increased over the past decade, AES has been ahead of the curve in responding to this need.



The College of Agricultural, Consumer, and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.

## Research Impacts

- NMSU's AES forest and fire research program provided managers and stakeholders with a demonstration area that was supported with over 10 years of data showing how thinning and burning treatments build forest resilience to insects, disease, and wildfire.
- Recently, NM's cattle and calves accounted for 40.5% of all livestock total cash receipts of \$2.45 billion – a significant source of income for the state and its ranchers. Drought can impact ranchers' net return. But the impacts were not clearly quantified. Ranch net return data was combined with a new drought monitoring tool to quantify drought impacts on ranch income. NMSU AES findings indicated that the net return of a ranch can increase (or decrease) by \$62.29, \$60.51, and \$64.07 per head if drought increases (or decreases) by one unit in all, large, and medium ranch sizes, respectively.
- Knowing the current weather can make or break our careful planning. The NMSU AES current weather monitoring network provides real-time data for the state. Each station measures air temperature, winds, humidity, solar radiation, and precipitation every 5-minutes. Data from the ZiaMet network is being used by farmers for crop irrigation and planting dates. Ranchers regularly use weather data for estimating the intensity of drought. This data is also used by the National Weather Service for improving weather forecasts during critical times such as fires, floods, winter storms, high winds, and dust storms.



## Sustainability Initiatives



### Creation of New Mexico Reforestation Center (NMRC)

John T. Harrington Forestry Research Center at Mora has the largest forest nursery and seed bank in the southwestern US with a growing capacity of 300,000 seedlings per year using over 35 different native tree species. Additionally, the research program at the research center is one of only five programs in the United States dedicated to investigating the entire "reforestation pipeline" (from seed to nursery to tree planting), especially as it relates to post-fire reforestation.



### Corona Energy Initiatives—Wind Turbines and Commercial-Scale 2mw Solar Array with Battery Storage

39 wind turbines are in full operation at NMSU's Corona Range and Livestock Research Center (CRLRC) as part of Pattern Energy's Western Spirit Transmission area project. Additionally, we are investigating opportunities for a public/private partnership to develop a solar array that benefits central NM renewable energy needs within proximity to the wind farm.

## Ongoing Research

- Agricultural water use efficiency
- Carbon Management
- Climate Change
- Cattle genetics to improve grazing
- Improve forage quality/ range management
- Endangered/ sensitive species management
- Food safety and nutrition
- Improved crop selection
- Product development and value-added agricultural products
- Reforestation
- Soil-borne disease prevention
- Sustainable natural resources
- Water quality and treatment

**AES scientists develop research programs that respond to key needs identified by advisory committees and local stakeholders. Agricultural Science Centers, located strategically throughout the state, provide research results that sustain and support New Mexico's diverse environmental farms, ranches, forests, and communities.**

[aces.nmsu.edu/aes](https://aces.nmsu.edu/aes) • (575) 646-3125

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Agricultural Experiment Station

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$18,227,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$17,462,000

Type of Project (X for Type)			
Research <input checked="" type="checkbox"/>	Public Service <input type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	133
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**2. Project Description / Executive Summary:**

The Agricultural Experiment Station (AES) is the principal research unit of ACES. The AES system consists of scientists who work on facilities at the NMSU main campus in eight academic/research departments and at 12 agricultural science and research centers throughout the state. The AES system supports fundamental and applied science and technology research to benefit New Mexico’s citizens in the economic, social, and cultural aspects of agriculture, natural resource management, and family issues. The AES is a Constitutional/Statutory program in NM Constitution Article XII, Section 11: State educational institutions. AES was defined and created by the federal Hatch Act (1887) to research problems and find solutions to improve the lives and livelihoods of NM citizens. AES scientists develop research programs that address key needs identified by advisory committees and local stakeholders. Each Agricultural Science Center (ASC) responds to specific research needs under New Mexico’s varied geographical and environmental conditions. These research efforts sustain and support New Mexico’s diverse environment, farms, ranches, forests, and rural and urban communities.

**Expansion Justification:**  
AES is requesting an increase of \$765,000 recurring funds. This increase would cover four faculty positions to increase research efforts across the AES system. These faculty positions would supporting the following efforts:

## 2. Project Description / Executive Summary:

- **Forest Tree Ecophysiology Assc. Professor:** Housed at the J.T. Harrington Forestry Research Center at Mora, this position will focus on tree ecophysiology to help solve the challenges of identifying forest species and tree production systems suitable for drought and fire-prone forest ecosystems. This research position will operate from a systems perspective on the integral responses of woody plants to naturally occurring and modified environmental factors such as radiation, temperature, precipitation, and carbon dioxide.
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## 3. Budget Narrative (Overview only – Relates to separate Budget Form)

State appropriations constitutes approximately 40% of the overall AES budget. The state's investment in AES is matched more than 1:1 through federal appropriations, grants and contracts, and sales. The AES budget is diverse and nearly 70% of the total budget is used for faculty and staff salaries on the main campus or at one of the 12 Agricultural Science Centers. All funding for basic operations for ASCs comes from the state budget. These funds also assist in supporting graduate and undergraduate students that are training to enter the workforce and become the next generation of agricultural researchers.

## 4. Program Mission (include population served, other demographic info):

The Agricultural Experiment Station (AES) system supports fundamental and applied science and technology research to benefit New Mexico's citizens in the economic, social, and cultural aspects of agriculture, natural resource management, and of family issues.

As the core component of New Mexico's land-grant institution, New Mexico State University (NMSU), the College of Agricultural, Consumer, and Environmental Sciences contributes to the well-being of New Mexico's citizens and economic

#### **4. Program Mission (include population served, other demographic info):**

vitality of the state. The AES maintains connections with agriculture, home, economics, rural and urban industry leaders, members of state and federal agencies, and the general public through state, county, departmental, and commodity advisory committees that help guide research and extension programs. AES is committed to conduct fundamental, applied, and mission-oriented research and to disseminate the results to the public.

#### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

AES research efforts are driven by the mission of New Mexico State University's College of Agricultural, Consumer, and Environmental Sciences (ACES) to improve the lives of New Mexicans, the nation, and the world through research, teaching, and extension. Research programs focus on four identified critical issues within the state that have a global impact—these have been identified as ACES Pillars that guide research focus: 1) Food and Fiber Production and Marketing, including value-added products; 2) Water Use and Conservation; 3) Family Development and Health of New Mexicans; 4) Environmental Stewardship, including the sustainable management of natural resources. In addition to these critical issues, AES targets emerging areas of research in response to the needs of stakeholders as new agricultural challenges arise.

Current research projects related to Food and Fiber Production and Marketing and value-added products:

- Addressing the production, protection, and marketing of plant and animal products involving ways to improve the health and well-being of humans and animals
- Soil-borne disease prevention in agricultural crops
- Management of cattle behavior and genetic selection to improve grazing outcomes
- Water and nitrogen management in crops
- Improved forage quality and range-management strategies in semi-arid climates

Current research projects related to Water Use and Conservation:

- Establishing the Water and Community Collaboration Lab (WCC-Lab) to address the complex issues of water supply and usage with feasible strategies for restorative and sustainable water management
- Water Economics and Policy which includes demographics and water demand, irrigation economics and water policy, natural resources and environmental policy, regional economic modeling, and sustainable economic development
- Water quality and treatment: Desalination, organic waste management, water quality hydrology, energy-positive water treatment/ remediation technology, water borne-diseases and community health, and produced water treatment
- Agricultural Water Use Efficiency: Revegetation with produced/waste-water, acequia irrigation systems, runoff and erosion, micro-irrigation and water management, plant physiology, and water stress and water-efficient crops

Current research projects related Family Development and Health of New Mexicans

- AES researchers focus on human behavior, child and adolescent development, human nutrition and food science, and family resource management, all of which impact human health. AES research has a focus on human nutrition and wellness aimed at keeping people from getting sick and identifying preventive medicine programs, related to biomedical research work.
- Food Safety and best practices for safe food handling
- Product development and value-added products for New Mexico producers
- As a collaborative partner with New Mexico Cooperative Extension Service (CES), AES has a focus on human behavior, child and adolescent development, human nutrition and food science, and family resource management, all of which impact human health. AES research has a focus on human nutrition and wellness aimed at keeping people from getting sick and identifying preventive medicine programs, related to biomedical research initiatives.

Current research projects related to Environmental Stewardship, including sustainable management of natural resources

- Carbon management and soil health in arid and semi-arid environments
- Reforestation
- Endangered and sensitive species habitat management
- Renewable energy in agriculture, including wind and solar energy

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

In addition to the on-going research throughout the year, AES has the following ongoing initiatives. Each of these initiatives ties into the goal of creating an industry of sustainable agriculture in New Mexico.

**Forestry Research Efforts at J.T. Harrington Research Center at Mora:** The JTH Forestry Research Center in Mora is the largest producer of forest nursery seedlings in the southwest, with a capacity for up to 300,000 seedlings per year. With a devastating fire season impacting New Mexico, this center was threatened by the Calf Canyon/Hermits Peak fire (the largest wildfire in New Mexico's history). AES leadership and Research Center staff, in collaboration with EMNRD, were able to temporarily relocate 90,000 seedlings and the entire seed bank. The center has since moved the seed bank and all seedlings back to the Mora research facility and is proceeding with forestry research. The research at this center is critical to reforestation efforts in New Mexico and across the Southwest.

**Renewable Energy and Sustainable Agriculture:** In January 2022, 39 wind turbines were moved into full operation at the Corona Range and Livestock Research Center (CRLRC) as part of Pattern Energy's Western Spirit Transmission area project, which consists of 377 turbines (total of 1,050 megawatts). This is an important step forward in public/private partnerships to develop a solar array that benefits central NM renewable energy needs. These efforts complement the outreach programming in renewable energy at the Southwest Center for Rangeland Sustainability.

**ZiaMet Mesonet Expansion:** In FY23, the approved expansion of the ZiaMet weather station network across New Mexico will continue (state and federal funds). With this expansion, there will be a total of 215 weather stations across the state that will provide real-time data. Data from these stations is used by farmers for crop irrigation, crop planting, and determining optimal conditions for pesticide applications. The data will also help support gaps in National Weather Service data, which often leave out parts of rural New Mexico.

**Carbon (C) Management and Soil Health in Arid and Semi-Arid Environments:** This initiative is engaging farmers, ranchers, and minority and Native American communities on carbon management and soil health research, outreach, and extension activities. The impacts include improving knowledge of carbon sequestration and soil health in arid and semi-arid regions, enhancing climate resilience in the Southwest, and developing climate change mitigation practices applicable to 40% of the globe (arid and semi-arid regions of the world). The Clovis ASC serves as the hub for carbon management and soil health activities for the AES, while the Los Lunas, Mora, and Corona Research Centers are also involved in the initial stages of this project.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

AES is a constitutional and statutory program supporting the agricultural and community needs of New Mexicans. The mission and breadth of personnel and facilities make a state-wide impact a natural result of research programs. The research efforts of AES provide hands-on learning opportunities for undergraduate and graduate students while focusing on the needs of agricultural producers throughout the state. Additionally, AES conducts research addressing real-world problems designed to increase economic and community development. As water scarcity and the need for renewable natural resources have increased over the past decade, AES has been ahead of the curve researching to respond to this need.

An overall summary of the AES impact for 2021 based on a review of research impact statements can be summarized as "Operating on the premises of innovative, sustainable agri-environmental involvement while incorporating risk and crisis mitigation strategies amidst the COVID-19 pandemic."

The 2021 AES impact review took impact statements from each AES research and summarized them into the categories of the ACES critical issues (pillars) that are used to guide research. The following is a breakdown of where the impacts are found:

- 50.5% Food and Fiber Production and Marketing (including value-added products)
- 11% Water Use and Conservation
- 5.5% Family Development and Health of New Mexicans
- 11.5% Environmental Stewardship
- 5% Foundational Education and Training
- 16.5% Emerging research growth opportunities

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

AES researchers have been successful in leveraging state funding to help secure grants and contract awards from federal, state, and private sources. Federal appropriations for FY21 were \$2,506,909 and AES researchers secured \$8,992,010 in grants and contract funding. In addition, AES receives donation and in-kind contributions that facilitate research but are not considered part of the overall budget. For multiple years, AES scientists has for every state dollar have leveraged over \$1 in grant funding.

**9. Accomplishment/ Highlights (bullet form)**

- The U.S. foreign-born population is nearly 45 million. Today, immigration accounts for more than one-third of the U.S. population growth. The U.S. has been described as a “melting pot” or a “salad bowl” that represents various ever-changing cultures, including “foodways” or habits. Increased diversity and changes in foodways provide new opportunities for agricultural stakeholders. Research related to spicy pepper consumption, including New Mexico’s iconic chile pepper industry, is providing insights into consumer preferences, demand, and behavior. Better understanding this demand will allow the industry to capitalize on changes and grow the state’s \$52 million industry.  
*Jay Lillywhite* (Agricultural Economics and Ag Business Department)
- Significant brackish groundwater (BGW) reserves in the southwestern U.S. can lessen agriculture’s dependence on the declining freshwater supplies. Salinity increases beneficial secondary metabolites in traditional crops; thus, we are evaluating BGW irrigation on the growth and secondary metabolism of three native halophytes, *Lepidium alyssoides*, *Atriplex canescens*, and *A. lentiformis*. Thus far, salinity up to 8 dS/m has not increased total phenolics in these species, with results at higher salinity pending. The results of the 2-year project will aid greenhouse and nursery growers seeking salt-tolerant crops, provide a value-added use of brine concentrate, and strengthen water conservation efforts.  
*Geno Picchioni* (Plant and Environmental Sciences Department)
- There is little data on how agricultural producers were affected by the pandemic. ASC Alcalde researchers collaborated with public health researchers to conduct a cross-section survey of certified organic operators/producers, assessing COVID-19 prevalence and preventative behaviors. The infection rate among producers was 6.4%. Women reported more use of prevention methods. Farms of ≥50 certified organic acres reported less use of prevention methods. Study results can inform public health interventions and policies as well as general Extension programming for farmer audiences. To our knowledge, this is the first study reporting on effects of COVID on certified organic producers.  
*Steve Guldán* (Alcalde Agricultural Science Center/ Plant and Environmental Sciences Department)
- Contemporary food systems are prone to a wide range of failures. Even before COVID-19 exposed their fragility, we faced myriad challenges. These challenges can be managed by engineering resilient food networks. To do so, the Appreciative Inquiry and Community Capitals Summit will convene stakeholders to (1) create a shared vision of resilient food systems; (2) seed the formation of new food networks; and (3) rally participants to action. In collaboration with support from USDA and NSF, we have established national partners and will host the joint conference with ACES and the College of Engineering in June 2022.  
*Shannon Norris* (Agriculture Extension and Education Department)
- Soil is foundational to the sustainability of New Mexican societies. Managing soil for social and natural ecosystems requires knowledge of baseline soil properties and conditions. We have pioneered methods to produce relevant soil information rapidly and accurately in the field using a

**9. Accomplishment/ Highlights (bullet form)**

geographic information systems approach. This research is foundational for federal and state land managers, agricultural producers, private ranchers, and foresters by providing the information necessary to assess site-specific land management decisions such as grazing intensity, brush management, or livestock rates.

*Colby Brungard* (Plant and Environmental Sciences Department)

- In 2019, New Mexico’s cattle and calves accounted for 40.5% of all livestock total cash receipts of \$2.45 billion—a significant source of income for the state and its ranchers. Drought can impact ranchers’ net return. But the impacts were not clearly quantified. Ranch net return data were combined with a new drought monitoring tool to quantify drought impacts on ranch income. Our findings indicated that the net return of a ranch can increase (or decrease) by \$62.29, \$60.51, and \$64.07 per head if drought increases (or decreases) by one unit in all, large, and medium ranch sizes, respectively.

*Hatim Geli* (Animal and Range Sciences Department)

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**FY24 Request**

**RPSP Title:** Agricultural Experiment Station (AES)  
**Contact Name:** Leslie Edgar  
**Contact Email:** [ledgar@nmsu.edu](mailto:ledgar@nmsu.edu)

**\$18,227,000**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:**

AES will develop and enhance experiential learning, service learning and research experiences that engage students and contribute to the development of essential skills

RPSP Objective 1.3 - Develop a culture of "Aggie Life" reflected by high student engagement through participation and learning in co-curricular experiences.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Provide experiential research learning opportunities for students	317	301	300	300	300	300	300	300	300	300	AES provides undergraduate and graduate student learning opportunities with hands-on training for employment.

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:**

AES continues to broaden research and creativity activity by responding to local and global challenges. AES develops sustainable research programs in energy, food, agriculture, and water to serve as drivers for economic development throughout New Mexico.

RPSP Objective 2.1: Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education; 2.2: Intentionally grow humanities, social sciences and creative arts to achieve a comprehensive excellence in research and creative activity; 2.3: Amplify impact of research findings by addressing local needs that align with global challenges.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Proposals (value of submitted proposals)	61,217,815	57,866,957	44,537,928	45,000,000	50,000,000	55,000,000	58,000,000	73,000,000	60,000,000	50,000,000	AES continues to seek external funding and is successful in matching the state's investment in AES 1:1.
2	Researchers (FTE)	175	195	190	190	200	205	210	200	200	190	This reflects research faculty and staff within AES. Some vacant positions went unfilled for more than 2 years and those positions are now eliminated.
3	Research Funding (\$ awarded)	16,750,654	22,406,737	8,992,010	10,000,000	16,000,000	16,000,000	17,000,000		15,000,000	15,000,000	AES faculty actively seek external funds to assist in responding to agricultural stakeholder challenges in NM.
4	Publications (AES pubs and journal articles)	263	284	269	230	110	175	180	190	190	200	226 academic journals published; 43 professional journals published

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**FY24 Request**

**RPSP Title:** Agricultural Experiment Station (AES)  
**Contact Name:** Leslie Edgar  
**Contact Email:** [ledgar@nmsu.edu](mailto:ledgar@nmsu.edu)

**\$18,227,000**

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal:**

AES will promote NMSU ACES research strengths to current and prospective private sector partners. AES will leverage outreach activity to increase agricultural knowledge of stakeholders throughout New Mexico.

Objective 3.4: Develop an integrated process for private sector engagement, Enhance culture of private sector engagement, Develop a marketing campaign to promote NMSU as a resource for ground-breaking research, development of emerging technologies, and qualified students from diverse backgrounds.; 3.5 Leverage CES and other system wide programs to expand economic development and outreach.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Commercial Engagement	0	0	0	2	4	3	3	3	3	3	With changes occurring at the level of how land is managed at each ASC, this increases opportunity for commercial engagement and research expansion.
2	Community Engagement (ASC field days)	6	9	12	5	10	10	10	10	12	12	Each of the 12 ASCs offered a field day in 2021, in addition, other more individualized events are hosted at ASCs throughout the year (those are not included in this number).
3	Community Engagement (Advisory Board meetings)	11	7	9	10	10	14	14	14	14	10	9 advisory board meetings were held at each of the ASCs that have active advisory committees.

**NMSU LEADS 2025 Goal: 4 - Build a Robust University System**

**RPSP Goal:**

AES will build a strategic alignment with the NMSU Foundation to raise, manage, and steward private resources in support of AES, including the off-campus agricultural science centers. AES will also continue to cultivate the faculty and staff experience at NMSU by supporting faculty and staff through professional development and programs that support holistic well-being.

RPSP Objective 4.2: Cultivate faculty and staff experience through fair-market value and support for professional development programs. 4.5: Build endowments to support long-term research needs of the AES system. Integrate alumni engagement across AES system.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	Gift Revenue (Private gifts, grants & contracts) for Research	622,177	709,809	724,717	700,000	NA*	650,000	650,000	630,000	725,000	725,000	This amount does not include in-kind contributions (equipment, feed, medicine, seed, chemicals).

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Agricultural Experiment Station Total: **\$ 18,227,000.00**

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments			
<b>Revenue and Transfers</b>							
<b>Beginning Fund Balance</b>	\$ 3,470,864.00	\$ (696,455.00)	\$ 2,774,409.00				
<b>Appropriations</b>							
Federal	\$ 2,200,000.00	\$ -	\$ 2,200,000.00				
State plus Tobacco Settlement Fund	\$ 17,082,000.00	\$ 1,145,000.00	\$ 18,227,000.00	SB1 incl 380K as part of FY23 Beg Bal and was budgeted in FY22. The total recurring base, including SB1 is 17,462,000, so the FY24 increase is \$765,000. The EMNRD pass thru of 80K was not included.			
Local		\$ -	\$ -				
<b>Total Appropriations</b>	\$ 19,282,000.00	\$ 1,145,000.00	\$ 20,427,000.00				
<b>Grants and Contracts</b>							
Federal	\$ 14,515,050.00	\$ -	\$ 14,515,050.00				
State	\$ 125,000.00	\$ -	\$ 125,000.00				
Local		\$ -					
<b>Total Grants and Contracts</b>	\$ 14,640,050.00	\$ -	\$ 14,640,050.00				
<b>Private Gifts, Grants and Contracts</b>	\$ 2,200,000.00	\$ -	\$ 2,200,000.00				
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -					
<b>Tuition and Fees</b>		\$ -					
<b>Endowment</b>		\$ -					
<b>Sales and Services</b>	\$ 2,900,000.00	\$ -	\$ 2,900,000.00				
<b>Other Sources - Detail in Comments</b>		\$ -					
<b>Total Revenues</b>	\$ 39,022,050.00	\$ 1,145,000.00	\$ 40,167,050.00				
<b>Transfers (to) from</b>							
Instruction and General	\$ 1,746,083.00	\$ -	\$ 1,746,083.00				
Student Social and Cultural		\$ -					
Research		\$ -					
Public Service	\$ 212,172.00	\$ -	\$ 212,172.00				
Internal Service		\$ -					
Student Aid		\$ -					
Auxiliary Enterprises		\$ -					
Athletics		\$ -					
Independent Operations	\$ 415,688.00	\$ -	\$ 415,688.00				
Capital Outlay	\$ (1,000,000.00)	\$ -	\$ (1,000,000.00)				
Renewal and Replacement		\$ -					
<b>Total Transfers</b>	\$ 1,373,943.00	\$ -	\$ 1,373,943.00				
<b>Expenses</b>							
	FY23 FTE		Change FTE	\$ -	FY24 FTE		
Faculty Salaries	84.13	\$ 7,286,950.00	4.00	\$ 556,363.00	88.13	\$ 7,843,313.00	adding 4 faculty fte
Professional Salaries	95.95	\$ 6,030,535.00	0.00	\$ -	95.94	\$ 6,030,535.00	
Other Staff Salaries	82.91	\$ 2,830,870.00	0.00	\$ -	82.91	\$ 2,830,870.00	
Student Salaries (GA/TA)	87.13	\$ 3,016,050.00	0.00	\$ -	87.13	\$ 3,016,050.00	
Other Salaries	2.79	\$ 95,000.00	0.00	\$ -	2.78	\$ 95,000.00	
<b>Total All Salaries</b>	352.91	\$ 19,259,405.00	4.00	\$ 556,363.00	356.89	\$ 19,815,768.00	
Fringe Benefits		\$ 5,915,433.00		\$ 208,637.00		\$ 6,124,070.00	
Travel		\$ 850,000.00		\$ -		\$ 850,000.00	
Utilities		\$ 271,000.00		\$ -		\$ 271,000.00	
Institutional Support Charges		\$ 777,000.00		\$ -		\$ 777,000.00	
Plant Operation and Maintenance Charges		\$ 19,610.00		\$ -		\$ 19,610.00	
Supplies and Expenses		\$ 14,000,000.00		\$ -		\$ 14,000,000.00	
Equipment				\$ -			
Other Expenditures				\$ 380,000.00		\$ 380,000.00	Weather Station Recurring added to FY22
<b>Total Expenditures</b>	352.91	\$ 41,092,448.00	4.00	\$ 1,145,000.00	356.89	\$ 42,237,448.00	
<b>Ending Fund Balance</b>		\$ 2,774,409.00		\$ (696,455.00)		\$ 2,077,954.00	

# Cooperative Extension Service

FY 23 ACTUAL: \$15,095,600  
FY 24 REQUEST: \$15,665,400  
CHANGE: \$570,000



The Cooperative Extension Service is requesting an increase of \$570,000 to fund a Water Conservation Specialist, a 4-H STEAM Specialist, an Agricultural Policy Specialist, and an Energy Specialist. The Water Conservation Specialist will educate homeowners and agriculture producers on water conservation. The 4-H STEAM Specialist will provide experimental learning opportunities for youth across the state. The Agricultural Policy Specialist will interpret federal, state and county statutes and policy regarding water management, the environment and estate planning. The Energy Specialist will work statewide on alternative energy uses for home and farm and demonstrate application of new technologies.

## SELECTED PROGRAM RESULTS, ACCOMPLISHMENTS AND IMPACTS

### FOOD AND FIBER PRODUCTION AND MARKETING

*Focusing on several key areas that support the growth and improvement of plant and animal agricultural products in New Mexico, CES faculty and staff foster technological innovation to enhance competitiveness and security of New Mexico agriculture, and increase value-added in the state. Extension educators work with farmers and ranchers to help improve livestock, safety, production and profitability.*

- There are over 8,500 self-identified Native American producers in New Mexico with a total of 100 producers from the Southern and Northern Pueblos. NMSU CES Pueblo Extension in collaboration with community leaders provided education and technical assistance in the areas of range management, soil health, and beef genetic selection to 155 producers. As a result, Pueblo leadership supports efforts to increase their tribal food sovereignty, promote positive stewardship of the land, teach their youth about their cultures and language, and to educate their members to return to their communities to lead and strengthen their Han-Nu (Keres word for "the people").
- The New Mexico beef industry contributes 900 million dollars to the gross state product annually. Drought is a significant risk to this economically important industry. Optimizing genetics and animal efficiency can help minimize losses due to drought. The Tucumcari Bull Test has doubled its capacity in efficiency testing bulls since 2015, reaching over 1000 producers from 5 states. The average value of bulls sold through the Tucumcari Bull Test has increased by \$500.00 per animal, improving the profitability of New Mexico purebred cattle producers. The genetic selection seminars coupled with The Tucumcari Bull Test has improved the profitability of New Mexico purebred cattle producers.
- Aquaponics is a sustainable food production system that provides fresh locally grown produce and fish, creating access to nutritious food and providing greater food security, an issue in many areas of New Mexico that experience food deserts. In response to a growing demand for information and training about aquaponics, NMSU Cooperative Extension Office and Santa Fe Community College's Controlled Environment Agriculture Program developed a four-part online seminar concentrated on the types of systems, fish culture, plant culture, pest management, water quality, and food safety. A total of 110 program participants attended the webinars, 99% agreed the information presented in the series increased their knowledge of aquaponics, 86% plan to build or improve their aquaponics system. Aquaculture permits issued in New Mexico (an indirect indicator of growing interest in aquaponics) increased by 100% from 2020 to 2021.

### FAMILY AND HEALTH OF NEW MEXICANS

*The family is the fundamental institution of society. CES develops educational programs in mental health wellness, human nutrition, food science, and family resource management. Extension programs on human nutrition and wellness are aimed at keeping people from becoming ill and are likely considered "preventive medicine" programs.*

- It is estimated that over 12% of adults in New Mexico have diagnosed diabetes, 53,000 have undiagnosed diabetes, and 36% have prediabetes. Diabetes and prediabetes cost an estimated \$2 billion in NM each year. Individuals and families affected by diabetes regularly struggle with diet modifications that would help manage health. Access to nutrition and diabetes professionals is limited, particularly among those without health insurance and those living in rural NM. Kitchen Creations, a diabetes cooking school, includes up to 12 hours of group nutrition and cooking education led by Registered Dietitian Nutritionists, Diabetes Care and Education Specialists, and Extension Agents. The Kitchen Creation program attracted 235 adults in 19 cooking schools, with potential cost savings of over \$282,000. Overall, 99% of participants reported understanding the strategies to plan and prepare healthy meals.

## MISSION

The mission of NMSU's Cooperative Extension Service (CES) is to deliver practical, research-based knowledge and programs that improve New Mexicans' quality of life. A part of NMSU's College of Agricultural, Consumer and Environmental Sciences, CES is a unique federal, state, and county partnership.

## AT A GLANCE

### By the numbers

- CES has staff in all 33 counties and many tribal areas in New Mexico.
- CES reaches more than 500,000 members of our communities.
- CES partners with more than 10,000 volunteers to deliver statewide programming.
- CES collaborates with over 1000 organizations, state and federal agencies, and other universities.

## Programming Focus

- Agriculture
- Child and Family Development
- Economic and Community Development
- Environmental Stewardship
- Human Nutrition



**BE BOLD.** Shape the Future.  
**College of Agricultural, Consumer and Environmental Sciences**  
Cooperative Extension Service

## SELECTED PROGRAM RESULTS, ACCOMPLISHMENTS AND IMPACTS

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- Many New Mexico schools and institutionalized residences have limited access to nutritious, high quality, fresh produce. To address part of this issue, the New Mexico State Legislature has funded the NM Farm to School and Farm to Institution program, reimbursing schools, and institutions for purchasing New Mexico grown fresh fruits and vegetables. In addition, farmers were required to attend food safety training and conduct risk assessments. NMSU CES developed a three-pronged approach to assisting local farmers. A total of 125 farmers completed produce and food safety training. Approximately 90 producers and food hubs submitted food safety plans. In 2019-2020, 64 producers and food hubs sold to schools and institutions totaling \$1.2 million in sales. Of those sales, \$450,000 was reimbursed to schools. This program has been recognized by Whole Foods, various CO-OP Markets, and grocery stores who are purchasing NM grown produce from farmers who participated in food safety training and develop plans for market.

### ENVIRONMENTAL STEWARDSHIP

***Rural and urban human activities affect land, water, and air. CES is committed to furthering our understanding, using science-based knowledge, of human impacts on the environment and supporting environmentally-sound agricultural and natural resource practices.***

- Every year, devastating wildfires burn across the United States. At the same time, a growing number of New Mexicans are living where wildfires are a real risk. Understanding fires will continue to happen, NMSU CES assists the community in protecting homes and neighborhoods while keeping families safe. The "Learning to Live with Fire" program attracted 134 homeowners, volunteer fire fighters, home association members, and employees from county, state, and federal government agencies. Ten months after the program, participants responding to the follow up survey reported (89%) developing immediate evacuation plans. In addition, 94% of participants safeguarded their property from wildfire. The "Learning to Live with Fire" program has encouraged community members to thin dead, low hand branches, add water cubes to property, participate in fire wise forest clearing, and developing a guide to accomplish goals to protect their families and property.

### WATER CONSERVATION

***Water is the most limiting resource for New Mexico. All aspects of water use affect agricultural efficiency, profitability, and human health. Water management will become more critical as water demands for urbanization and industrialization increase.***

- In a recent study published in "Nature Climate Change," climate scientists found the last two decades in the Southwest were the driest period in at least 1,200 years. As a result of the prolonged drought in New Mexico, the environment, economic stability, or health of many New Mexicans has been negatively impacted. NMSU CES partnered with the New Mexico Bureau of Geology & Mineral Resources to provide a six-week online community education program focused on best practices with a goal of increasing knowledge and use of water conserving techniques. Offering collaborative solutions to 178 New Mexicans, trainings on current research and issues in New Mexicans were reported to be relevant (96%). Moreover, 85% of participants reported they would change their practice to save water. This collaborative partnership promotes water conservation education and water efficiency solutions to families, individuals from industry, and the commercial sector.

### YOUTH DEVELOPMENT

***The New Mexico 4-H Youth Development program has provided young people opportunities to develop leadership, citizenship, and life skills so they can give back to their communities in meaningful ways. Extension educators enhance curricula on interdisciplinary aspects of STEM and STEM-based skills, create seamless pathways from PK-12 to higher education, increase engagement of underrepresented populations in STEM education and increase the number of STEM skilled individuals entering the workforce.***

- Childhood obesity has a significant impact on health care costs, quality of life, and may also result in the inability to produce a well-educated and prepared workforce. Poor nutrition and limited physical activity are risk factors for chronic diseases and play a role in a student's ability to learn, thereby affecting scholastic success. To address this critical issue, NMSU CES agents and local teachers promoted Healthy Habits, an eight-hour educational program emphasizing nutrition, physical activity, and mental health awareness. Reaching 583 youth in four local schools, to achieve program sustainability and reach underserved youth, CES agents trained teen leaders to serve as Health Ambassadors. After participating in the Healthy Habits program, youth participants reported knowing how to keep a cooking area clean to stop the spread of germs (81%), reported they could use knives safely (87%), and 74% could follow a recipe. Regarding drinking water and exercising, 80% reported being aware of water intake and exercise per day.
- The 4-H STEAM Innovator program is a virtual learning series for youth interested in Science, Technology, Engineering, Art, and Math (STEAM) with a passion for leading and teaching. The mission is to provide youth driven STEAM education programs to all New Mexico youth. The objectives include promoting understanding of and making personal connections to STEAM education, keeping participation accessible for youth, and bridging the gap between opportunity and education. A total of five workshops were delivered to 280 youth. Youth indicated participation in the innovator program provides an environment for them to communicate information to a larger audience, lead a group of youth to complete a project, work effectively with people they do not know, better serve their club, and improve their knowledge about STEAM and about a variety of STEAM activities. Participants have also indicated they enjoy connecting with other youth across the state and experiencing a shared interest in STEAM education. The 4-H STEAM Innovators program enriched STEAM education through inquiry-based and experiential learning, improved understanding of STEAM interest by youth statewide with a multiplier effect and cost savings by facilitating virtual training sessions.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Cooperative Extension Service

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$15,665,600

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$15,095,600

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	Over 100
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**2. Project Description / Executive Summary:**

Cooperative Extension Service (CES) is a unique federal, state, and county partnership that was enabled by the Smith-Lever Act of 1914 and constitutionally mandated in New Mexico in 1915. CES annually disseminates research-based information to assist agriculture producers large and small to make decisions increasing sustainability, improve soil health, environmental protection, improve food systems and livestock herd health and improved profitability; assist families to make choices about time, money, child rearing, nutrition and health including diabetes and mental health; to provide youth opportunities to learn skills, gain knowledge, make contributions to their communities and address current youth issues; and help to grow and empower communities, develop entrepreneurs, build and promote leaders, and enhance human and social capital.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Budget enhancement will provide funding for 4 critical positions:  
 Water conservation specialist - to educate homeowners and agriculture producers on methods and technology to conserve water.  
 4-H STEAM specialist - to develop curriculum and provide hands on experiential learning opportunities for youth in the sciences, technology, engineering, and math fields.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Agricultural policy specialist - to interpret federal, state and county statutes, regulation and policy regarding water, land management, the environment and estate planning.  
Extension Energy Specialist - to work statewide on alternative energy uses for home and farm and demonstrate applications of new technology and its uses.

**4. Program Mission (include population served, other demographic info):**

Cooperative Extension Service provides programs statewide. The over-reaching mission is to provide the people of New Mexico with practical, research-based knowledge and programs to improve their quality of life in the areas of family and consumer science, agriculture, 4-H youth development and community development. CES has 240 faculty and staff members in all 33 counties and many tribal areas in New Mexico.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Disseminate research-based information to assist agricultural producers make decisions that increase sustainability, improve soil, environmental and herd health, and improve profitability; assist families with making choices about time, money, child rearing, nutrition and health; provide youth opportunities to learn skills, gain knowledge, make contributions to their communities, and address current youth issues; help grow and empower communities, develop entrepreneurs, build and promote leaders, and enhance human and social capital.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

As a land-grant university, programs delivered to the citizens of New Mexico by the Cooperative Extension Service maintain New Mexico State University's presence throughout the State and, on a continual basis, fulfills the mission of the University to meet the educational needs of New Mexico's diverse population through comprehensive programs of education, research, extension education and public service. Needs of New Mexicans have changed over the past 100 years, but CES continues to listen to the citizens of New Mexico and provides up-to-date information throughout the state—both in rural and urban communities. Sustainable agriculture, healthy families, empowered youth and community development are forefront in programs delivered. Cooperative Extension Service offices address more than 35,000 calls and over 33,000 walk-in requests yearly. Statewide, personal contacts in the last fiscal year reached 378,104 with social media touching 21,997,000. Our faculty collaborates with over 1,000 organizations; provides training to volunteers who give back over \$18M of in-kind contributions. CES effectively changed program delivery to a virtual format in response to Covid-19.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

CES has promoted COVID-19 vaccinations through relevant messaging and innovative models for community action. The priority audience is rural and other hard-to-reach audiences. The NMSU Dairy Producer Essential Workers Health Project was awarded \$24,178 to promote vaccinations. Partnering working NM dairy producers to host mobile vaccine clinics on their farms, the program is scheduled to reach 2,700 residents. CES worked with the Governor's food, farm and hunger initiative and works across NM to improve food systems and food insecurity.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Additional funding sources include County funding, Federal funding, and Grants and Contracts.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

**9. Accomplishment/ Highlights (bullet form)**

**Food and Fiber Production and Marketing**

**Supporting Southern and Northern Pueblos in New Mexico**

There are over 8,500 self-identified Native American producers in New Mexico with a total of 100 producers from the Southern and Northern Pueblos. NMSU CES Pueblo Extension, in collaboration with community leaders, provided education and technical assistance in the areas of range management, soil health, and beef genetic selection to 155 producers. As a result, Pueblo leadership supports efforts to increase their tribal food sovereignty, promote positive stewardship of the land, teach their youth about their cultures and language, and to educate their members to return to their communities to lead and strengthen their Han-Nu (Keres word for "the people").

**New Mexico Dairy Workforce Development and Training**

Herd size of New Mexico dairies is more than ten times the U.S. average. With limited educational opportunities, effective training of current and future employees is imperative. The program seeks to raise safety awareness and improve job performance. Safety awareness training will be provided to about one-third of the NM dairy workforce.

Approximately 3,500 employees have directly been trained in dairy safety and animal handling. Training is provided in a preferred language available (English, Spanish, or K'iche). Training effectiveness is a key evaluation metric. NMSU's dairy workforce development program is now considered a leading example, with program details being utilized on some of the largest dairy operations in the U.S. Idaho Dairymen's Association (IDA) adopted the program with significant processor and co-op support. Due to processor and customer demands, National Milk Producers Federation (NMPF) created a Workforce Development Task Force (2017), which developed a Dairy Safety Reference Manual in English and Spanish.

**Genetic Improvement in the NM Cow Herd**

The New Mexico beef industry contributes 900 million dollars to the gross state product annually. Drought is a significant risk to this economically important industry. Optimizing genetics and animal efficiency can help minimize losses due to drought. The Tucumcari Bull test has doubled its capacity in efficiency testing bulls since 2015, reaching over 1,000 producers from 5 states. The average value of bulls sold through the Tucumcari Bull Test has increased by \$500 per animal, improving the profitability of New Mexico purebred cattle producers. The genetic selection seminars coupled with The Tucumcari Bull Test has improved the profitability of New Mexico purebred cattle producers.

**NM Bull Survey**

New Mexico beef production contributes over 16,000 jobs, \$1.68 billion in output, and \$448 million in labor. Nationally, Bovine respiratory disease remains the largest challenge facing the beef industry with costs exceeding several billion dollars annually. Anecdotal evidence through communication with cattle buyers suggests NM calves are more prone to cases of bovine respiratory disease. However, it remains unknown why some calves are predisposed to bovine respiratory disease. Moreover, despite billions of dollars spent on research, improved vaccines, and improved utilization of vaccines, Bovine respiratory disease rates continue to increase. Using blood samples from feedlot calves, NMSU Extension in collaboration with NMSU Animal Science identified serum

## 9. Accomplishment/ Highlights (bullet form)

components that identified calves that were predisposed to severe or fatal cases of bovine respiratory disease. The novel blood test could be a method to identify calves that are predisposed to severe cases of respiratory to manage those calves more intensively. In addition, the test may provide a means to identify animals in the herd that are predisposed to severe cases of respiratory disease allowing ranchers to cull them from the herd potentially saving billions in economic losses to bovine respiratory disease.

### **Aquaponics: Efficient and sustainable use of aquatic resources**

Aquaponics is a sustainable food production system that provides fresh locally grown produce and fish, creating access to nutritious food and providing greater food security, an issue in many areas of New Mexico that experience food deserts. In response to a growing demand for information and training about aquaponics, NMSU Cooperative Extension Office and Santa Fe Community College's Controlled Environment Agriculture Program developed a four-part online seminar concentrated on the types of systems, fish culture, plant culture, pest management, water quality, and food safety. A total of 110 program participants attended the webinars, 99% agreed the information presented in the series increased their knowledge of aquaponics, 86% plan to build or improve their aquaponics system. Aquaculture permits issued in New Mexico (an indirect indicator of growing interest in aquaponics) increased by 100% from 2020 to 2021.

### **Undercover Tomatoes Managing Stress, Pests, and Disease**

Beet curly top virus (BCTV) is a familiar problem affecting multiple crops in New Mexico and other semiarid regions of the world. BCTV has been known to affect more than 300 plant species from 44 different families. Heat, water, and disease stressors are among the biggest hurdles for commercial and backyard tomato growers in the southwestern US.

Shade cloth may help growers overcome hurdles by either protecting plants from the tiny, jumping insect vector that spreads BCTV (tiny, as in a skinny grain of rice) or reducing sun and heat stress on the plants and thereby reducing water requirements. This program aims to increase knowledge and agricultural literacy of sustainable growing practices, including the development of IPM (Integrated Pest Management) strategies for BCTV control.

In 2021, over 20 volunteers helped grow 153 tomato plants, totaling more than 350 hours (about 2 weeks) of volunteer service and over \$4,100 in equivalent wages. Volunteers harvested a total of 5,444 pounds of tomatoes. Volunteers shared fresh tomatoes with families, neighbors, and donated to local food banks. Volunteers reported they enjoyed the outdoor work and learning about the NMSU Agricultural Science Center system, research methods, beneficial & pest insects, and common tomato diseases. Tomato-related problems are among the highest commonly fielded questions from the public. Results from this study on strategies for supplying shade and avoiding death-by-disease may increase the productivity and sustainability of this wildly popular crop. These programs can be used to engage the public, share sustainable methods, and improve agricultural literacy in the urban sector.

### **Ready, Set, Grow!**

In response to the public demand for gardening classes, especially for at-home food production, NMSU CES Agents and the Urban Horticulture Specialist created the "Ready, Set, GROW!" The online gardening series provides recorded gardening videos along with live virtual classes. The series facilitated 27 classes, increasing class attendance by 2,430%, from an average of 20 to 506 program participants. Of the 418 survey respondents, 99.5%

## **9. Accomplishment/ Highlights (bullet form)**

would recommend the series and 90% of participants reported they would change their current or implement a recommended gardening practice based on information learned from a class.

### **Developing Alternative Crops for New Mexico**

Agricultural production in New Mexico is facing diverse challenges. Some of these challenges are crop production and cost-of-operation related. The increasing cost of inputs has been accompanied by a non-matching increase in product prices, leaving farmers to make tough decisions on whether to stay in farming or quit. Additionally, crop production has faced recurrent droughts and reduced availability of irrigation water in recent years. Farmers are seeking solutions that can keep them engaged in profitable farming in New Mexico.

The NMSU Cooperative Extension Specialists have identified guar and guayule as prospective alternative crops that can enhance the income of farmers in New Mexico. Guar is an annual legume with seeds that can be processed into guar gum. Guar gum is an industrial product that is in high demand, especially by the oil and gas industries. Guayule is a perennial crop belonging to the sunflower family, that can yield natural rubber. Both crops are adapted to southwestern arid regions and are water efficient. These crops can serve as feedstock for processing plants that produce guar gum or natural rubber.

Best management practices arising from multiple years of trials with guar and guayule are being shared with producers in the state. Demonstration trials at various locations in New Mexico have been used to explain important production practices to farmers. Growing guar and guayule as industrial crops in New Mexico can diversify the income of farmers and provide much-needed support towards economic and cropping systems sustainability.

### **Family Development and Health of New Mexicans**

#### **"ICAN - Ideas for Cooking and Nutrition "**

Thirty-eight percent of Many New Mexicans (38%) live at or below 185% of the federal poverty level. Over 72% of New Mexican students are eligible for free/reduced-price lunches, compared to the national average of 49.5%. And 17.16% of New Mexico households claim Supplemental Nutrition Assistance Program (SNAP) benefits. Poverty is a key driver of health, and it is vital to have programs that serve SNAP-eligible families. Helping families prevent chronic disease through the reduction of obesity reduces healthcare costs and improves quality of life. Thirty-six percent of youth in New Mexico's SNAP-eligible families are overweight or obese. Among SNAP-eligible adults, 69.3% are overweight or obese.

In 2021, ICAN education expanded into virtual settings across the state, reaching over 10,000 New Mexicans with live virtual cooking and nutrition classes, food gardening classes, and other educational activities. Adult graduates of ICAN series education claim several benefits. In 2021, 97% improved one or more diet quality indicators, 92% improved one or more food resource management practices such as cooking dinner at home, and 70% improved their food safety. With ICAN's expansion into virtual engagement, 140 cooking and food gardening videos were produced for platforms like YouTube and Facebook, with ICAN's Facebook posts reaching over 475,000 users. Significant strides were also made in community partnerships, with ICAN offering educational flyers to food pantries and other community sites, reaching over 214,000 clients with recipes and healthy lifestyle tips.

ICAN's mission is to help New Mexicans reach better health outcomes and enjoy a higher quality of life by providing evidence-based nutrition education that inspires healthy food and lifestyle choices. ICAN seeks to make those choices possible for SNAP-eligible families by creating a health-friendly environment. For clients, ICAN offers practical, money-saving skills and advice. For SNAP-eligible communities, ICAN facilitates the development of

## **9. Accomplishment/ Highlights (bullet form)**

healthy public spaces. But this work helps everyone in New Mexico—through the reduction of healthcare costs stemming from obesity, through the strengthening of the labor force, and through the creation of communities that work for the people.

### **Kitchen Creations**

It is estimated that over 12% of adults in New Mexico have diagnosed diabetes, 53,000 have undiagnosed diabetes, and 36% have prediabetes. Diabetes and prediabetes cost an estimated \$2 billion in NM each year. Individuals and families affected by diabetes regularly struggle with diet modifications that would help manage health. Access to nutrition and diabetes professionals is limited, particularly among those without health insurance and those living in rural NM. Kitchen Creations, a diabetes cooking school, includes up to 12 hours of group nutrition and cooking education led by Registered Dietitian Nutritionists, Diabetes Care and Education Specialists, and Extension Agents. The Kitchen Creation program attracted 235 adults in 19 cooking schools, with potential cost savings of over \$282,000. Overall, 99% of participants reported understanding the strategies to plan and prepare healthy meals.

### **Chronic Disease Self-Management Education Programs (CDSMEP)**

About 80% of older adults have at least one chronic disease, and 68% have at least two. Many adults with conditions such as arthritis, asthma, diabetes, lung disease, heart disease, stroke, osteoporosis, and others, struggle to find ways to manage their condition. Adults with chronic conditions are the primary users of healthcare in the United States and account for two-thirds of total healthcare spending. Healthcare related cost savings are evidenced through decreased hospitalizations, emergency room visits, and lengths of hospital stays. In New Mexico, 30% of adults aged 40 years and older, and 40% of adults aged 65 years and older, have been diagnosed with two or more chronic diseases.

CES and the NM Department of Health Diabetes Prevention and Control partnered to deliver the Chronic Disease Self- Management Education Program (CDSMEP) to increase participation in, access to, reach and effectiveness of evidence- based programs in our communities (offered in English and Spanish). With \$90,000 in funding, face-to-face workshops were offered in Dona Ana and Otero Counties. Approximately 76 individuals participated in and graduated from the program.

Nationally, the CDSMEP has shown a \$714 per person savings in emergency room visits and hospital utilization. This equates to \$364 per person net savings after considering estimated program costs of \$350 per participant. CDSMEP has been improving lives in New Mexico since 2011, graduating approximately 1,200 participants for a potential economic impact of \$856,800 in reduced health care costs.

### **Know Diabetes by Heart**

Cardiovascular disease remains to be a leading cause of death for people living with type 2 diabetes. The American Heart Association and the American Diabetes Association (ADA), along with industry leaders, have proudly launched the groundbreaking collaborative initiative Know Diabetes by Heart™ to reduce cardiovascular deaths, heart attacks and strokes in people living with type 2 diabetes.

Using KDBH curriculum, NMSU CES incorporated the lessons with current CES programming Kitchen Creations (KC) and On the Road to Living Well with Diabetes (OTR). Both programs seek to help individuals manage their diabetes. The combined initiative seeks to comprehensively combat the national public health impact of type 2 diabetes. Three hundred community members participated in the program. Of the 300, 92 participants made a commitment to make one change toward managing their diabetes and reducing their risk of cardiovascular

## **9. Accomplishment/ Highlights (bullet form)**

disease. The program also connected 174 additional participants to ADA's "Living with Type 2 Diabetes" program which offers additional resources and help with managing diabetes and reducing the risk for cardiovascular disease.

New Mexico State University Cooperative Extension Service received funding from the American Diabetes Association and American Heart Association as part of an initiative to decrease heart disease and strokes among people with type 2 diabetes.

### **Stress and Resilience in a COVID World**

As a result of the COVID-19 pandemic, individuals and families have experienced significant amounts of stress which can negatively affect social, emotional, and physical health and wellness. A team of Extension agents and specialists developed an online seminar series trilogy to increase knowledge and use of stress management and resilience strategies. A total of 779 individuals registered for the webinars which were recorded and posted on the ACES (Agricultural, Consumer and Environmental Sciences) COVID-19 response website with resource material. Evaluations showed 92% expressed increased confidence in managing stress and building resilience. This project demonstrates Extension's ability to deliver information in innovative ways to address emergent issues.

### **Behavioral Health and Wellness Programming**

Behavioral health challenges are critical issues in New Mexico with suicide rates 59% higher than the U.S. and suicide being the second leading cause of death for NM residents, age 10-44 years of age (NM DOH, 2015). By February 2021, six faculty were trained as Youth Mental Health First Aid instructors and 23 CES faculty, staff and community partners were trained as QPR instructors.

Both YMHFA and QPR are evidence-based programs. The YMHFA program teaches educators, family members or other caring adults how to help an adolescent who is experiencing a mental health challenge or is in crisis to get the help they need. Additionally, QPR focuses on teaching three simple steps anyone can learn to help save a life from suicide. Over 62 participants have gained knowledge and skills through attending these programs. Selected evaluation data included: 88% thought the program content was outstanding or above average; 94% thought the overall course was outstanding or above average; 100% thought the instructors demonstrated a thorough knowledge of subject matter; and 91% thought the course provided practical applications.

Mental health challenges and suicide are pressing issues in New Mexico for both youth and adults. The NMSU CES has a presence in every NM county and has a long history of being a trusted resource for communities on a variety of issues related to health and wellness. While behavioral health is a new topic area, CES is well- positioned to help address these issues. This initiative demonstrates CES's ability to build capacity through multidisciplinary efforts to address emergent issues through delivery of evidence-based programs.

### **The 8 Success Habits Everyone Should Implement**

In response to emerging concerns for the financial and emotional well-being of families in Chaves, Roosevelt, and Lea Counties, and across the state of New Mexico, NMSU CES identified "The 8 Success Habits Everyone Should Implement" as a workshop that could help individuals and families navigate the COVID-19 outbreak from a financial, emotional, and individual growth standpoint

Mindfulness, gratitude, goal setting, and principles of positive self-improvement were used to help participants reflect on their current and future situation. Using a multi-site approach, the program has reached 124 participants throughout New Mexico

## **9. Accomplishment/ Highlights (bullet form)**

With a total of 124 participants attending classes, the following outcomes were achieved:

- 100% learned specific strategies and tools to help them live a life of success
- 97% were either likely or very likely to apply concepts learned
- 93% felt motivated or inspired to make a positive change in their life

Participants in New Mexico State University's self-improvement and life success program, "The 8 Success Habits Everyone Should Implement," increased in knowledge, attitudes, and skills regarding how to help them live a life of financial, emotional, and individual growth. Mindfulness, gratitude, goal setting, and principles of positive self-improvement leads to feeling less stressed and more in control of one's own life, especially amid a global pandemic and financial hardship.

### **Environmental Stewardship**

#### **Rangeland Ecology, Monitoring, and Management Planning**

There is an increasing need for land stewards to be trained in and collect quantitative, objective, scientifically based information to make proactive management decisions. Presentations and demonstrations are used to deliver scientific information in support of Beef Quality Assurance and Pesticide Applicators Trainings as well as Youth, Tribal, and independent events for all New Mexicans. NMSU CES distributed 54 "getting started" monitoring kits. Program participants (76%) indicated intentions to begin monitoring while others (21%) requested further one-on-one assistance.

NMSU CES provides training to New Mexican rangeland professionals and producers to assess rangeland conditions, understand ecological function, interpret monitoring data, and develop management plans to maintain or improve rangelands for future use quickly and effectively.

#### **Learning to Live with Fire**

Every year, devastating wildfires burn across the United States. At the same time, a growing number of New Mexicans are living where wildfires are a real risk. Understanding fires will continue to happen, NMSU CES assists the community in protecting homes and neighborhoods while keeping families safe. The "Learning to Live with Fire" program attracted 134 homeowners, volunteer fire fighters, home association members, and employees from county, state, and federal government agencies. Ten months after the program, participants responding to the follow up survey reported developing immediate evacuation plans (89%). In addition, 94% of participants safeguarded their property from wildfire.

The "Learning to Live with Fire" program has encouraged community members to thin dead, low hand branches, add water cubes to property, participate in fire wise forest clearing, and developing a guide to accomplish goals to protect their families and property.

#### **Water Conservation: Home, Yard, Farm & Ranch**

In a recent study published in "Nature Climate Change," climate scientists found the last two decades in the Southwest were the driest period in at least 1,200 years. As a result of the prolonged drought in New Mexico, the environment, economic stability, or health of many New Mexicans has been negatively impacted. NMSU CES partnered with the New Mexico Bureau of Geology & Mineral Resources to provide a six-week online community education program focused on best practices with a goal of increasing knowledge and use of water conserving techniques. Offering collaborative solutions to 178 New Mexicans, trainings on current research and issues in New

## 9. Accomplishment/ Highlights (bullet form)

Mexicans were reported to be relevant (96%). Moreover, 85% of participants reported they would change their practice to save water. This collaborative partnership promotes water conservation education and water efficiency solutions to families, individuals from industry, and the commercial sector.

### Youth Development

#### Educating Youth in Agriculture in New Mexico

The average age of a New Mexico livestock producer is 60.5 (USDA NASS, 2017). Given this reality, youth education and involvement in agriculture is needed to sustain and grow the industry. NMSU CES hosts a series of engagement opportunities for youth in New Mexico:

- **New Mexico Youth Ranch Management Camp:** a five-day camp emphasizing all aspects of ranching.
- **New Mexico Youth Quality Assurance:** an educational training focused on exhibiting livestock, health management, nutrition, and showmanship.
- **New Mexico Youth Beef Project:** program aids youth in raising steer from weaning to finishing while being introduced to different strategies and approaches to supply chain management in the beef industry.
- **Ag Tech Camp:** a three-day camp highlighting the use of technology in agriculture with the goal of improving yield, efficiency, and profitability.

Since 2010, over 400 New Mexican youth have participated in the series. Three New Mexico Ranch Management Camp participants are now veterinarians or studying to be a large animal veterinarian. In addition, 60% of participants decided to attend NMSU and enroll in agriculture related degree programs. Of those who graduated, 90% have remained in the agriculture industry.

#### Youth Develop Career Skills for Agriculture

While employers in the field of agriculture value technical skills necessary for the job, they are also looking for graduates who are prepared with soft skills. The NMSU CES reinforces skill development by engaging youth in judging competitions and bowl tournaments. The program attracted 96 Horse Bowl Tournament participants, testing their knowledge of animal husbandry, veterinary science, and equine training principles. The TexMex Horse Judging Clinic trained 23 youth participants.

Horse Bowl participants were surveyed, 88 youth responded. Results indicated 98% increased their knowledge of horses, 92% reported using time management skills to prepare and participate in the contest, and 83% used technology to participate in the program. All TexMex Horse Judging Clinic youth reported improved confidence in their judging skills and while being more likely to participate in future judging competitions. It is important that today's youth have experiential learning environments where they can develop important business skills prior to entering the workforce. Programs like these are essential for developing the future generation of agricultural entrepreneurs in New Mexico.

#### 4-H Youth Lead the Way: STEAM Innovators

The 4-H STEAM Innovator program is a virtual learning series for youth interested in Science, Technology, Engineering, Art, and Math (STEAM) with a passion for leading and teaching. Six youth were selected and have led the way. The mission is to provide youth driven STEAM education programs to all New Mexico youth. The objectives include promoting understanding of and making personal connections to STEAM education, keeping participation accessible for youth, and bridging the gap between opportunity and education.

**9. Accomplishment/ Highlights (bullet form)**

A total of five workshops were delivered to 280 youth. Youth indicated participation in the innovator program provides an environment for them to communicate information to a larger audience, lead a group of youth to complete a project, work effectively with people they do not know, better serve their club, and improve their knowledge about STEAM and about a variety of STEAM activities. Participants have also indicated they enjoy connecting with other youth across the state and experiencing a shared interest in STEAM education.

The 4-H STEAM Innovators program enriched STEAM education through inquiry-based and experiential learning, improved understanding of STEAM interest by youth statewide with a multiplier effect and cost savings by facilitating virtual training sessions.

**Healthy Habits**

Childhood obesity has a significant impact on health care costs, quality of life, and may also result in the inability to produce a well-educated and prepared workforce. Poor nutrition and limited physical activity are risk factors for chronic diseases and play a role in a student's ability to learn, thereby affecting scholastic success. To address this critical issue, NMSU CES agents and local teachers promoted Healthy Habits, an eight-hour educational program emphasizing nutrition, physical activity, and mental health awareness. Reaching 583 youth in four local schools, to achieve program sustainability and reach underserved youth, CES agents trained teen leaders to serve as Health Ambassadors. After participating in the Healthy Habits program, youth participants reported knowing how to keep a cooking area clean to stop the spread of germs (81%), reported they could use knives safely (87%), and 74% could follow a recipe. Regarding drinking water and exercising, 80% reported being aware of water intake and exercise per day.

**NM Farm to School**

Many New Mexico schools and institutionalized residences have limited access to nutritious, high quality, fresh produce. To address part of this issue, the New Mexico State Legislature has funded the NM Farm to School and Farm to Institution program, reimbursing schools, and institutions for purchasing New Mexico grown fresh fruits and vegetables. In addition, farmers were required to attend food safety training and conduct risk assessments.

NMSU CES developed a three-pronged approach to assisting local farmers. A total of 125 farmers completed produce and food safety training. Approximately 90 producers and food hubs submitted food safety plans. In 2019-2020, 64 producers and food hubs sold to schools and institutions totaling \$1.2 million in sales. Of those sales, \$450,000 was reimbursed to schools. This program has been recognized by Whole Foods, various CO-OP Markets, and grocery stores who are purchasing NM grown produce from farmers who participated in food safety training and develop plans for market.

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> CES <b>Contact Name:</b> Jon Boren <b>Contact Email:</b> <a href="mailto:Jon.Boren@nmsu.edu">Jon Boren</a>	<b>FY24 Request</b> <b>\$15,665,600</b>
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**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** Using outreach and internships to increase student enrollment and retention

RPSP Objective 1: Enrollment and Recruitment		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Provide development opportunities and preparation for college and career readiness for NM youth.	36,408	17,141	5,792	8,000	60,000	60,000	45,000	45,000	40,000	30,000	Covid related school closure and limited ability to conduct face to face programs severely limited our ability to work with youth.
RPSP Objective 2: Diverse workforce		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Maintain a diverse faculty and staff to address educational needs of NM citizens.	248	251	285	250	300	250	250	250	200	200	Faculty and staff numbers stable

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Leverage Extension to increase applied research

RPSP Objective 1: Scholarship		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Educate and inform clientele through publications and media distributions.	59 publications 24 million media	42 publications 21 million media	45 publications plus media	45 publications plus media	60 publications plus media	60 publications plus media	60 publications plus media	60 publications plus media	50 publications plus media	50 publications plus media	45 refereed journal articles, 547 Extension publications, 11,440,615 social media contacts
2	Submit funding proposals to secure additional dollars	19,424,413	14,848,822	17,873,700	15,000,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	State dollars leveraged to increase funding

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> CES <b>Contact Name:</b> Jon Boren <b>Contact Email:</b> <a href="mailto:Jon.Boren@nmsu.edu">Jon Boren</a>	<b>FY24 Request</b> <b>\$15,665,600</b>
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**NMSU LEADS 2025 Goal:** 3 - Amplify Extension and Outreach  
**RPSP Goal:** Provide research-based information to improve lives of New Mexicans

Objective 1: State-wide Engagement and presence		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Disseminate research-based information and community development activities to the citizens of NM.	490,375	378,104	498,891	449,071	500,000	500,000	500,000	500,000	400,000,000	400,000	Numbers will exceed target

**NMSU LEADS 2025 Goal:** 4 - Build a Robust University System  
**RPSP Goal:** To identify and secure new revenue sources

RPSP Objective 1: Alternative funding		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Secure other funding by leveraging State Dollars	12,663,715	12,183,261	10,534,730	10,800,000	12,500,000	12,500,000	12,500,000	12,500,000	11,000,000	11,000,000	State dollars leveraged to secure other funding
2	Submit funding proposals to secure additional dollars	19,424,413	14,848,822	17,873,700	15,000,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	10,500,000	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget		Change	Request		Comments	
Revenue and Transfers	FY 23			FY 24			
<b>Beginning Fund Balance</b>	\$	2,546,093.00	\$	300,266.00	\$	2,846,359.00	
<b>Appropriations</b>							
Federal	\$	2,700,000.00	\$	-	\$	2,700,000.00	
State plus Tobacco Settlement Fund	\$	15,095,600.00	\$	570,000.00	\$	15,665,600.00	SB1 350K recurring included in FY23. Total recurring base should be 15,095,600.
Local	\$	2,500,000.00	\$	-	\$	2,500,000.00	
<b>Total Appropriations</b>	\$	20,295,600.00	\$	570,000.00	\$	20,865,600.00	
<b>Grants and Contracts</b>							
Federal	\$	4,098,525.00	\$	-	\$	4,098,525.00	
State	\$	780,000.00	\$	-	\$	780,000.00	
Local	\$	250,000.00	\$	-	\$	250,000.00	
<b>Total Grants and Contracts</b>	\$	5,128,525.00	\$	-	\$	5,128,525.00	
<b>Private Gifts, Grants and Contracts</b>	\$	275,000.00	\$	-	\$	275,000.00	
<b>Land &amp; Permanent Fund or Local Property Taxes</b>			\$	-			
<b>Tuition and Fees</b>			\$	-			
<b>Endowment</b>			\$	-			
<b>Sales and Services</b>	\$	50,000.00	\$	-	\$	50,000.00	
<b>Other Sources - Detail in Comments</b>	\$	750,000.00	\$	-	\$	750,000.00	
<b>Total Revenues</b>	\$	26,499,125.00	\$	570,000.00	\$	27,069,125.00	
<b>Transfers (to) from</b>							
Instruction and General	\$	1,327,263.00	\$	-	\$	1,327,263.00	
Student Social and Cultural	\$	(200,321.00)	\$	-	\$	(200,321.00)	
Research	\$	(212,172.00)	\$	-	\$	(212,172.00)	
Public Service			\$	-			
Internal Service			\$	-			
Student Aid			\$	-			
Auxiliary Enterprises			\$	-			
Athletics			\$	-			
Independent Operations	\$	2,500.00	\$	-	\$	2,500.00	
Capital Outlay	\$	(50,000.00)	\$	-	\$	(50,000.00)	
Renewal and Replacement			\$	-			
<b>Total Transfers</b>	\$	867,270.00	\$	-	\$	867,270.00	
<b>Expenses</b>							
	FY23		Change		FY24		
	FTE		FTE	\$	FTE		
Faculty Salaries	100.50	\$ 8,704,775.00	(100.50)	\$ 378,180.00	0.00	\$ 9,082,955.00	adding 4 fte to address expertise void
Professional Salaries	44.27	\$ 2,783,109.00	(44.27)	\$ -	0.00	\$ 2,783,109.00	
Other Staff Salaries	95.21	\$ 3,250,833.00	(95.21)	\$ -	0.00	\$ 3,250,833.00	
Student Salaries (GA/TA)	30.08	\$ 895,000.00	(30.08)	\$ -	0.00	\$ 895,000.00	
Other Salaries	2.05	\$ 70,000.00	(2.05)	\$ -	0.00	\$ 70,000.00	
<b>Total All Salaries</b>	272.11	\$ 15,703,717.00	-272.11	\$ 378,180.00	0.00	\$ 16,081,897.00	
Fringe Benefits		\$ 5,424,612.00		\$ 141,820.00		\$ 5,566,432.00	Fringes on addtl 4 ftes
Travel		\$ 575,000.00		\$ -		\$ 575,000.00	
Utilities		\$ 26,000.00		\$ -		\$ 26,000.00	
Institutional Support Charges		\$ 661,800.00		\$ -		\$ 661,800.00	
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 4,600,000.00		\$ -		\$ 4,600,000.00	
Equipment		\$ 75,000.00		\$ -		\$ 75,000.00	
Other Expenditures				\$ -			
<b>Total Expenditures</b>	272.11	\$ 27,066,129.00	-272.11	\$ 520,000.00	0.00	\$ 27,586,129.00	
<b>Ending Fund Balance</b>		\$ 2,846,359.00		\$ 350,266.00		\$ 3,196,625.00	

<b>FY23 Recurring Appropriation:</b>	\$13,850,700
<b>FY24 Base Appropriation:</b> *Includes \$632,800 in additional recurring funding	\$14,233,500
<b>FY24 Expansion Request Recurring:</b>	\$1,075,000
<b>FY24 Expansion Request Non-Recurring:</b>	\$400,000
<b>FY24 Total Expansion Request:</b>	\$15,708,500
<b>FY24 Capitol Request:</b> Phase 4 NMDA Building	\$10,900,000

## FY23 PRIORITY AREAS

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### *COMPENSATION MANAGEMENT (\$300,000)*

To administer a strategic approach to retention management and address compression created between team members, despite differences in skills, experience, performance, seniority, or tenure created starting salaries for new employees that are in close proximity to long standing employees. Funding will also address key promotions in an effort to create retention and longevity.

### *VETERINARY DIAGNOSTIC SERVICES (\$400,000)*

Since 1979, the primary function of VDS has been to provide efficient and accurate diagnosis of diseases in New Mexico livestock, companion animals, exotics, and wildlife. The average yearly number of submissions has increased by 27% in the past 10 years. Most of the diagnostic submissions continue to be from veterinarians within New Mexico and diagnostic partnerships with NMSU Cooperative Extension Service, New Mexico Livestock Board (NMLB), New Mexico Department of Game and Fish (NMGF), NMDOH, New Mexico Racing Commission (NMRC), USDA, the Federal Bureau of Investigation (FBI), Albuquerque BioPark, Navajo Nation, Bernalillo County Animal Control, Albuquerque Animal Welfare Department, and several other animal welfare departments throughout the state. As a result, a result of growth, VDS is in the need of additional operational funds and staff to created continuity of operations with in testing areas and addressing the additional workload.



### *STANDARDS AND CONSUMER SERVICES (\$775,000)*

NMDA is responsible for the annual inspecting and testing of all commercial petroleum measuring devices used in the state, as well as ensuring product quality for gasoline, diesel, kerosene, brake fluid, antifreeze, and lubricating oil. Routine activities under the Weights and Measures Law include inspection of commercial weighing and measuring devices, packaged commodities for correct net content and labeling, verification of pricing accuracy of retailers utilizing Universal Product Code scanners and conducted country-of-origin labeling (COOL) inspections. In addition, livestock scales and farm milk tanks are inspected upon request. NMDA continues to see significant growth in the number of devices requiring annual inspection with a recent analysis indicating the need for additional staffing and operational costs of \$375,000 to satisfy the statutory requirements along with one-time equipment expenses of \$400,000.

### *CAPITOL REQUEST (\$10,900,000)*

Phase 4. The replacement of NMDA building (#330) with approximately 15,200 SF, which is not yet funded. Design and construction for the replacement of NMDA building which is close to 50 years old, with a FCI of 41.8%, which equals POOR condition. Design, abate and demolition of building.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	New Mexico Department of Agriculture

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$15,708,500

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$13,850,700

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input checked="" type="checkbox"/>	

*Please explain if other is marked:*

Independent operation classification per NMSU.

Constitutional entity created under Article XV Section 1 [Department of agriculture].  
There shall be a department of agriculture which shall be under the control of the board of regents of the college of agriculture and mechanic arts; and the legislature shall provide lands and funds necessary for experimental farming and demonstrating by said department.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	62
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**2. Project Description / Executive Summary:**

Director's office: Provides overall leadership and establishes policy for NMDA and serves as liaison between ag producers and gov't entities.

Veterinary Diagnostic Svs: Performs diagnostic analyses of animals on a referral basis to determine the cause of death/identify diseases; works with other state & federal agencies for disease surveillance and agroterrorism/emergency response.

Ag & Environmental Svs: Pesticide Mgt, administers pesticide-use laws. Entomology & Nursery Ind, oversees pest detection surveys, regulates quarantines, & sale of live plants & cut flowers;

Agriculture Production services: houses Feed, Seed, & Fertilizer, (regulates distribution of feed, seed, & fertilizer) Dairy (Provides dairy farm, processing facilities & milk sampler/hauler inspections & permitting), produce safety, and Ag Biosecurity (Interacts with ag industry & law enforcement to design & direct programs that safeguard & secure industry & food supply.).

Marketing and Development: Domestic/international market expansion/development for NM commodities; specialty crop program, produce program.

Standards and Consumer Svs: licensing/inspection of weight and measuring devices; packaged commodities, eggs/dairy products; oversees metrology/petroleum standards labs.

Ag Programs and Resources; Technical assistance to SWCDs and the ag industry; provides info affecting

**2. Project Description / Executive Summary:**  
policy decisions.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

FY23 One time Appropriation	\$5,280,000
FY23 Recurring Funding	\$13,850,700
FY22 Recurring Funding	\$ 216,000
FY23 Total Appropriation	\$19,346,700
FY24 Total Recurring Expansion Request:	\$ 1,075,000
FY24 Total Non-Recurring Request:	\$ 400,000
FY24 General Fund Recurring Request:	\$14,233,500
FY24 TOTAL REQUEST:	\$15,708,500

Funds allow NMSU and NMDA to fulfill statutory mandates and missions.  
The FY23 recurring funding includes new recurring funding in the amount of 466,000 for the acequia Community Ditch Fund Act, Marketing Campaign, Youth Agricultural Development Programs. FY24 recurring funding includes an additional \$166,800 for administrative support for the Food and Hunger initiative programs support. Recurring funds also include a 6.30336% COMP plus 30% benefits of \$440,300.

**4. Program Mission (include population served, other demographic info):**  
NMDA is a constitutionally established state agency governed by the Board of Regents of New Mexico State University with a primary purpose of supporting agriculture and the agricultural industry in the state of New Mexico as well as providing regulatory oversight to protect New Mexico citizens in standards and consumer services, pesticides, licensing, etc.

- 5. Key Project Objectives (Overview only – relates to separate performance measure form)**
- Marketplace and Economic Development:
- Assist industry with domestic and international trade and marketing for New Mexico commodities and value-added products in current and emerging markets.
  - Coordinate programs for agricultural production, promotion, processing, marketing, and distribution through public and private partnerships including legislative efforts.
  - Provide the agricultural industry with information on emerging technologies and opportunities.
  - Support all agricultural and value-added industries through programs and initiatives.
  - Provide leadership in shaping rural economic development policies and programs.
- Food Protection:
- Identify and provide resources for food protection, which includes food safety, food defense, and food security.
  - Develop proactive public relations campaigns to increase knowledge about the farm-to-fork continuum and its need to be protected.
  - Engage top state officials in food protection policy.
  - Identify opportunities and solutions to food protection issues in partnership with domestic and international public and private sector entities.
- Regulatory Compliance:
- Support a uniform, fair market place through the consistent application of laws and compliance programs.
  - Communicate and collaborate with stakeholders and interested parties regarding regulations and compliance issues affecting agriculture.
  - Provide consumer and industry protection through timely development and consistent administration

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

of programs.

- Support all agricultural and value-added industries through programs and initiatives.
- Provide leadership in shaping rural economic development policies and programs.

Natural Resources:

- Participate and collaborate with public and private entities in natural resource policy and planning processes to promote the beneficial use and protection of natural resources.
- Provide leadership in support of research to promote the long-term viability of agriculture and the state's natural resources.
- Provide consumer and industry protection through timely development and consistent administration of programs.
- Support agriculture through programs, policies, and public information regarding management and protection of natural resources.
- Promote natural resource management under the principles of multiple use and sustained yields across ownership boundaries.
- Support agricultural interests in natural resources and alternative energy development.
- Act as a conduit for the exchange of information about renewable energy resources and agriculture.
- Support best available science-based analyses of alternative energy resources and potential indirect effects to agriculture.
- Continued management of the Healthy Soils Program allocating funding to a variety of ground projects across the state to include research and trainings through collaborative agreements with NMSU Cooperative Extension Services.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Major Accomplishments:

The New Mexico Department of Agriculture (NMDA) launched several major initiatives reaching producers, consumers, and buyers including: a new advertising campaign with a message of resilience and diversity serving as the first launching point for the newly refreshed NM—Taste the Tradition® and –Grown with Tradition® logos called “Our Spirit Remains” encompassing six TV commercials (one award- winning) and a robust digital and social media marketing campaign; a second launching point called the \$5 Challenge Campaign, including a contest for retailers and consumers that was promoted through in-store demos, one-day website takeovers, media interviews, and social media ads (exceeding the goal of 2.4 million overall impressions); a green chile social media influencer campaign and a digital culinary campaign centered around pecans reaching strategically targeted audiences across the U.S. and beyond; three new livestock-focused trade missions, three new virtual activities, and a New Mexico Pavilion at the SIAL American and National Restaurant Association tradeshow reaching international buyers; and the Chile Labor Incentive Program (CLIP) created in efforts to support both the New Mexico chile farmers and processors by incentivize the hiring and retention of the seasonal workforce.

The Healthy Soil Act was passed in 2019. Annually, the Healthy Soil Program funds on-the-ground projects to help land managers implement soil health projects. This grant funding allows farmers and ranchers to try innovative practices. The program supports research that supports and demonstrates science-based practices in support of the program.

Obstacles:

Bi-annual evaluation of the implementation of the Biodiesel mandate. Industry’s contined attempts to remedy this have been unsuccessful.

<b>6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.</b>
Employment and program restrictions due to COVID19 .
Lack of opportunity for growth (i.e., limited expansion in laboratory space and personnel).

<b>7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)</b>
NMDA works on or in cooperation with other state agencies to address the following Governor initiatives: 1. Value-Added Agriculture: *NMDA has worked with the New Mexico Chile Association to develop the New Mexico Certified Chile Program. Chile grown within the state is identified with a trademarked logo. *Legislation creating the New Mexico Chile Advertising Act was signed in 2011 and strengthened with legislation in 2013, making it unlawful to advertise green chile as a product of New Mexico if the product was not grown in the state. NMDA was appropriated \$200,000 during the 2018 legislative session to carry out the enforcement provisions of the chile advertising act. 2. The NMDA Marketing and Development Division is dedicated to promoting and heightening consumer awareness of New Mexico agriculture commodities and the farmers and ranchers who produce them. This is accomplished through implementation of domestic and international trade shows, conferences, technical seminars, fairs, culinary events, in store demonstrations, advertising campaigns. Also, the division oversees publication of the Agricultural Statistics Bulletin, Fruits and Vegetable Inspection Program, the Taste the Tradition/Grown with Tradition/Get Your Fix Programs, Specialty Crop Block Grant Program and the Livestock Market News for the State of New Mexico.

<b>8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?</b>
NMDA receives federal grants and continues to seek out funding from other sources. Currently NMDA is working on programs funded by: 1. United States Department of Agriculture/Wildlife Services 2. United States Department of Agriculture/Agricultural Marketing Service 3. United States Department of Agriculture/Animal and Plant Health Inspection Service 4. United States Department of Interior/Fish and Wildlife Service 5. United States Department of Health and Human Services/Food and Drug Administration 6. United States Environmental Protection Agency 7. State of New Mexico/Department of Homeland Security and Emergency Management

<b>9. Accomplishment/ Highlights (bullet form)</b>
****See Performance Matrix.

Medical Projects	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report

RPSP Title: New Mexico Department of Agriculture  
Contact Name: Tammy Bracamonte  
Contact Email: [tbracamonte@nmda.nmsu.edu](mailto:tbracamonte@nmda.nmsu.edu)

FY24 Request  
\$15,708,500

NMSU LEADS 2025 3 - Amplify Extension and Outreach

RPSP Goal:

RPSP Objective 1: Promote New Mexico agricultural commodities on the state, national, and global markets		Measure results				Measure targets						Comments (Briefly state your case)	
RPSP Measures:	FY19 Actuals	FY20 Actuals	FY21 Estimate	FY21 Actual	FY18	FY19	FY20	FY21	FY22	FY23	FY24		
1	Expand NMDA's "Grown with Tradition" program which highlights value-added agriculture while celebrating our environmental assets. Increase participation in tradeshows and other events while utilizing the food trailer to promote New Mexico Grown Foods throughout the state.	Provided tradeshow assistance to 46 companies to participate in various domestic and international shows. Utilized the trailer for 7 events to promote New Mexico products at 7 community and industry events.	Provided tradeshow assistance to 45 companies to participate in various domestic & international tradeshows. Utilized the trailer event to promote New Mexico products at 2 community industry events.	All tradeshows were cancelled or transitioned to virtual due to COVID19. All food sampling/food trailer events were cancelled in FY21 due to COVID19. 131 educational in store retail demonstrations occurred; 14 new on-line cooking demonstration videos were produced and launched; new elevateNMag.com website was launched; One new Virtual Merchantile event; One new Social Media Influencer Campaign.	In-person events were still limited in the first half of the FY due to COVID-19 uncertainties. Launched new "My Spirit Remains" ad campaign consisting of 6 TV commercials and numerous digital ads. Over 20 new on-line cooking demonstrations were produced and launched and 2 Social Media Influencer Campaigns were successfully conducted. Provided funding assistance to 21 companies for participation in lead-generating events and 9 for new advertising efforts or labels. Utilized the trailer for 3 large community and industry events to promote New Mexico agriculture and products (Ag Day, Hometown, FFA BBQ). Organized and implemented a NM-Taste the Tradition/Grown with Tradition pavilion at 2 large tradeshows with both domestic and international buyers (SIAL America and National Restaurant Association/American Food Fair). Eighty-eight hours of in-store demonstrations occurred.	Continue to provide cost share assistance to New Mexico Companies to participate in tradeshows and expand their markets outside of New Mexico; work with food distributors to showcase New Mexico food products at retail outlets using the food trailer to sample / promote.	Continue to provide cost share assistance to New Mexico Companies to participate in tradeshows and expand their markets outside of New Mexico; work with food distributors to showcase New Mexico food products at retail outlets using the food trailer to sample / promote.	Continue to provide cost share assistance to New Mexico Companies to participate in tradeshows and expand their markets outside of New Mexico; work with food distributors to showcase New Mexico food products at retail outlets using the food trailer to sample / promote.	Continue to provide cost share assistance to New Mexico agribusinesses to advertise /participate in tradeshows in efforts to expand their markets and market share; work with wholesalers, retailers, and distributors to showcase / promote New Mexico grown and made products to potential buyers, and connect consumers with suppliers through various marketing campaigns, food demos, and sampling.	Continue to provide cost share assistance to 25 New Mexico agribusinesses to advertise and participate in various lead-generating events to expand markets and market share; work with wholesalers, retailers, and distributors to showcase and promote New Mexico grown and made products to potential buyers, and connect consumers with suppliers through various marketing campaigns, food demos, virtual events, and sampling.	Continue to provide cost-share assistance to 25 New Mexico agribusinesses to advertise and participate in various lead-generating events to expand markets and market share; work with wholesalers, retailers, and distributors to showcase and promote New Mexico grown and made products to potential buyers; and connect consumers with suppliers through various marketing campaigns, food demos, virtual programs/events, and sampling.		
2	Economic Development: Assist industry with domestic and international trade and marketing for New Mexico commodities and value-added products in current and emerging markets: Develop and implement two or more new trade activities. Marketing and Development Division	Four new international activities occurred thru the United States Livestock Genetics Export Program; Four new activities occurred through the Western United States Agricultural Trade Assoc.; Three new activity through US Pecan; and, Two new domestic /international activities through the federal Specialty Crop Block Grant Program.	Two new virtual international trade activities completed through the US Livestock Genetics Export Program; Three new international trade activities through the Western US Agricultural Trade Association; One NMDA International Activity; One new domestic/international activity through federal Specialty Crop Block Grant Program.	One new virtual international trade activity through US Livestock Genetics Export Program; One new virtual international activity thru Western US Agricultural Trade Association; One new NMDA International Product Showcase; Two new NMDA virtual Agriculture Export Webinars.	Three new international trade activities occurred through US Livestock Genetics Export Program; Three virtual international activities through Western US Agricultural Trade Association; One new NMDA international activity (Sial America Trade Show and Global Inbound Mission)	International: Two new trade activities. Domestic: Two new marketing activities.	International: Two new trade activities. Domestic: One new marketing activity	International: Two new trade activities. Domestic: One new marketing activity	International: Two new trade activities. Domestic: One new marketing activity	International: Two new trade activities. Domestic: One new marketing activity.	International: Two new trade activities. Domestic: One new marketing activity. (depending on COVID 19 restrictions)	International: Four new trade activities. Domestic: One new marketing activity. (depending on COVID 19 restrictions)	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> New Mexico Department of Agriculture	<b>FY24 Request</b>
<b>Contact Name:</b> Tammy Bracamonte	<b>\$15,708,500</b>
<b>Contact Email:</b> <a href="mailto:tbracamonte@nmda.nmsu.edu">tbracamonte@nmda.nmsu.edu</a>	

RPSP Objective 2: Ensure New Mexico food and safety and product and industry regulation compliance		Measure results				Measure targets							Comments (Briefly state your case)	
		FY19 Actuals	FY20 Actuals	FY21 Estimate	FY21 Actual	FY18	FY19	FY20	FY21	FY22	FY23	FY24		
1	Global Activities: Achieve an increased global presence by 2020. NMDA Agricultural Biosecurity	Biosecurity director position was vacant for much of the fiscal year. Position has been filled and director has been busy getting up to speed.	Responded to food safety and security issues in coordination with NM Dept. of Homeland Security during the pandemic.	With coordination with other state agencies and ag stakeholders, work on developing a large scale carcass disposal plan for New Mexico.	Statewide carcass disposal plan is in it's final stages of review.	Draft curriculum and pilot in one select area of the European Union.	Continuing work with our partners at UTK, the DOS and NCBRT, we shall target training deliverable in other nations that help push out zone of security away from our borders and help ensure that food products transported into the United States are safe. Two such classes will be created and delivered. Additionally, an exercise on the Mexico and United States border will be in the planning stages as a state-level exercise.	Using some of the curriculum that has been developed, we will engage our partners in Mexico on Food Protection to include food safety, food defense, and food security.	Using some of the curriculum that has been developed, we will continue engage our partners in Mexico on animal health, Food Protection to include food safety, food defense, and food security.	Using some of the curriculum that has been developed, we will continue engage our partners in Mexico on animal health, Food Protection to include food safety, food defense, and food security.	Continue to engage the ag industry stakeholders in NM and bordering states on animal health issues and food safety, security, and defense issues.	Continue to engage the ag industry stakeholders in NM and bordering states on animal health issues and food safety, security, and defense issues.		
2	Inspection of year-round dairy farms. Dairy Division.	Inspections are on target for the year.	Inspections are on target for the year.	Inspect all dairy farms a minimum of twice per year.	Inspections are on target for the year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	Inspect all dairy farms a minimum of twice per year.	
3	Inspection of year-round dairy plants. Dairy Division.	Inspections are on target for the year.	Inspections are on target for the year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspections are on target for the year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	Inspect all dairy plants that operate year-round a minimum of four times per year.	
4	Inspection of semiannual dairy plants. Dairy Division.	Inspections are on target for the year.	Inspections are on target for the year.	Inspect all dairy plants that operate semi-annually a minimum of twice per year.	Inspections are on target for the year.	Inspect all dairy plants that operate semiannually a minimum of twice per year.	Inspect all dairy plants that operate semiannually a minimum of twice per year.	Inspect all dairy plants that operate semiannually a minimum of twice per year.	Inspect all dairy plants that operate semiannually a minimum of twice per year.	Inspect all dairy plants that operate semiannually a minimum of twice per year.	Inspect all dairy plants that operate semi-annually a minimum of twice per year.	Inspect all dairy plants that operate semi-annually a minimum of twice per year.	Inspect all dairy plants that operate semi-annually a minimum of twice per year.	
5	Inspection of the regulated industry to ensure compliance for pesticide products and use; plant phytosanitary requirements and licensing; and feed, seed and fertilizer product labeling and registration. Agricultural and Environmental Services Economic Development and Community Engagement: Inspection of the regulated industry to ensure compliance for pesticide products and use; plant phytosanitary requirements and licensing; and feed, seed and fertilizer product labeling and registration. Agricultural and Environmental Services Division	The AES division completed 1100 statutory-based inspections related to the nursery and pesticide industries. Additional services provided include AES division- 828 field activities related to trapping for new plant pests of economic and export concerns and addressing consumer complaints related to pesticide use. Field staff activities supported issuance of 900 documents supporting exports of NM agricultural raw products.	The AES division conducted 1845 statutory-based inspections related to pesticide industries, nursery industries, agricultural commodities and hemp industries. Additional services provided by the ENI section included 606 field activities related to trapping of new plant pests of economic and export concerns. ENI field staff activities supported issuance of 790 documents supporting raw agricultural commodity exports.	To date, the AES Division has conducted 1294 statutory-based inspections related to pesticide industries, nursery industries, agricultural commodities and hemp industries. Additional services provided by the ENI section include 700 field activities related to trapping of new plant pests of economic and export concerns. ENI field staff activities supported issuance of 720 documents supporting raw agricultural commodity exports.	During the reporting year, 507 pesticide related inspections, and 595 plant-pest nursery or hemp THC compliance inspections performed. Additionally, 930 field-related invasive pest trapping and surveying activities conducted. 415 documents were processed; at the public's request, in support of national and international requirements for the movement of raw agricultural commodities.	2,100 regulatory inspections.	3,200 regulatory inspections.	Continue to provide inspections related to ensuring proper use of pesticides by licensed applicators; review of pesticide products for use in the state; inspections of the plant-nursery industry to ensure compliance with state statutes; support of commodity exports through plant pest-related inspections; and continue surveys for early detection of invasive plant pests. Continue inspections and samples in support of feed, seed, and fertilizer regulations.	Continue to provide inspections to ensure proper use of pesticides by licensed applicators; review of pesticide products for use in the state; inspections of the plant-nursery industry to ensure compliance with state statutes; support of commodity exports through plant pest-related inspections; continue surveys for early detection of invasive plant pests. Continue to inspect distributors of feed, seed and fertilizer products for distribution; ensure compliance with state regulations.	Continue to provide inspections related to ensuring proper use of pesticides by licensed applicators; review of pesticide products for use in the state; inspections of the plant-nursery industry to ensure compliance with state statutes; support of commodity exports through plant pest-related inspections; and continue surveys for early detection of invasive plant pests. Continue inspection of hemp producers to ensure compliance with state statutes.	Continue to provide inspections to ensure proper use of pesticides by licensed applicators, complete the review of pesticide products for use in the state according to state and federal pesticide registration statutes; ensure compliance with plant/nursery industry state statutes; compliance with state and federal hemp statutes; support of commodity exports through plant pest-related inspections; and continue surveys for early detection of invasive plant pests.	Continue to provide inspections to ensure proper use of pesticides by licensed applicators, complete the review of pesticide products for use in the state according to state and federal pesticide registration statutes; ensure compliance with plant/nursery industry state statutes; compliance with state and federal hemp statutes; support of commodity exports through plant pest-related inspections; and continue surveys for early detection of invasive plant pests.		

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> New Mexico Department of Agriculture	<b>FY24 Request</b>
<b>Contact Name:</b> Tammy Bracamonte	<b>\$15,708,500</b>
<b>Contact Email:</b> <a href="mailto:tbracamonte@nmda.nmsu.edu">tbracamonte@nmda.nmsu.edu</a>	

6	Sample and analyze regulatory samples of pesticide, feed, seed, and fertilizer. Agricultural and Environmental Services Division	The AES division has processed 1007 samples in support of plant protection, agricultural exports and in addressing consumer complaints related to pesticides.	Processed 460 samples in support of pesticide inspections and investigations. The Feed, Seed & Fertilizer Section collected 262 feed samples and 42 seed samples.	Processed 298 samples in support of pesticide inspections and investigations, plant protection and agricultural exports. Collect 500 Feed, 70 Seed and 100 Fertilizer samples.	19 environmental and pesticide samples collected for analysis and 487 plant samples collected for presence of and identification of insect/pathogens.	900 samples and analyses.	1,000 samples and analyses	Estimate regulatory samples include 550 related to pesticide and nursery purposes; 700 related to feed, seed, and fertilizer. An additional 2,000 related to seed service samples.	Estimate 800 samples related to pesticides and nursery purposes. Estimate 500 feed samples, 100 fertilizer samples and 70 seed samples.	Estimated regulatory samples include 500 samples related to regulatory nursery purposes.	Continue to collect and process regulatory samples related to the pesticide section and ENI section needs. Estimate 500 feed samples, 100 fertilizer samples and 70 seed samples.	Continue to collect and process regulatory samples related to the compliance verification to state and federal pesticide laws and to state and federal plant pest laws.	
7	Analysis of petroleum samples - NMDA Petroleum Standards Laboratory. Standards and Consumer Services Division	15,310	10,459	7,583	7,585	Perform 12,500 analyses	Perform 12,500 analyses	Perform 12,500 analyses	Perform 12,500 analyses	Perform 12,500 analyses	Perform 12,500 analyses	Perform 12,500 analyses	lower numbers due to inspector vacancies and training of new staff (retirement of 5 SCS inspectors in 2021)
8	Perform calibrations on artifacts received into the NMDA Metrology Laboratory. Standards and Consumer Services	6,625	7,252	7,429	7,429	10,000 calibrations	10,000 calibrations	10,000 calibrations	10,000 calibrations	10,000 calibrations	10,000 calibrations	10,000 calibrations	lower numbers due to inspector vacancies and training of new staff (retirement of 5 SCS inspectors in 2021)
9	Perform weighing and measuring device (Petroleum) inspections. Standards and Consumer Services Division	23,200	19,775	18,783	18,783	22,700 meter inspections	30,539 meter inspections	28,000 meter inspections	28,000meter inspections	28,000 meter inspections	28,000 meter inspections	28,000 meter inspections	lower numbers due to inspector vacancies and training of new staff (retirement of 5 SCS inspectors in 2021)
10	Perform weighing and measuring device (Scales) inspections. Standards and Consumer Services Division	6,555	4,798	5,563	5,719	4,900 scale inspections	6,900 scale inspections	7,000 scale inspections	7,000 scale inspections	7,000 scale inspections	7,000 scale inspections	7,000 scale inspections	lower numbers due to inspector vacancies and training of new staff (retirement of 5 SCS inspectors in 2021)

RPSP Objective 3: Community and Engagement and Support		Measure results				Measure targets						Comments (Briefly state your case)	
		FY19 Actuals	FY20 Actuals	FY21 Estimate	FY21 Actual	FY18	FY19	FY20	FY21	FY22	FY23		FY24
1	Provide assistance to the 47 Soil and Water Conservation Districts (SWCDs) in accordance with statutory requirements. Agricultural Programs and Resources Division	Attended over 80% of local SWCD meetings. Fully allocated appropriated funds to SWCDs. Over five trainings were delivered to SWCDs.	Attended over 80% 47 SWCD meetings via zoom, phone, or other electronic platform due to COVID-19 meeting restrictions. Trainings were delivered remotely. All funding was allocated to SWCDs in accordance with statutory requirements.	Attended 80 percent of local SWCD meetings. All meetings were conducted to date remotely via zoom, telephone or other electronic means. Allocated 100 percent of available general funds to SWCDs in accordance with statutory requirements. Provided over five trainings via zoom or other electronic means in FY21.	Achieved measures as presented. Attended 80 percent of local SWCD meetings. All meetings were conducted to date remotely via zoom, telephone or other electronic means. Allocated 100 percent of available general funds to SWCDs in accordance with statutory requirements. Provided over five trainings via zoom or other electronic means in FY21.	Attend 80 percent of local SWCD meetings. Allocate 100 percent of available general funds to SWCDs on an annual basis in accordance with statutory requirements. Provide three trainings to SWCDs per year.	Attend 80 percent of local SWCD meetings. Allocate 100 percent of available general funds to SWCDs on an annual basis in accordance with statutory requirements. Provide at least five trainings to SWCDs per year.	Attend 80 percent of local SWCD meetings. Allocate 100 percent of available general funds to SWCDs on an annual basis in accordance with statutory requirements. Provide at least five trainings to SWCDs per year.	Attend 80 percent of local SWCD meetings. Allocate 100 percent of available general funds to SWCDs on an annual basis in accordance with statutory requirements. Provide at least five trainings to SWCDs per year.	Attend 80 percent of local SWCD meetings. Allocate 100 percent of available general funds to SWCDs on an annual basis in accordance with statutory requirements. Provide at least five trainings to SWCDs per year.	Attend 80 percent of 47 SWCD meetings across the state. Meetings may be attended in person or via electronic remote means based on continued COVID-19 issues. Five trainings will be conducted, person, or electronically/remotely in accordance with a variety of factors. Allocate all SWCD funding in accordance with statutory requirements. Conduct at least two SWCC meetings annually. Fully distribute the additional \$3 million appropriation by Jun 30, 2025.	Attend 80 percent of 47 SWCD meetings across the state. Meetings may be attended in person or via electronic remote means based on continued COVID-19 issues. Five trainings will be conducted, person, or electronically/remotely in accordance with a variety of factors. Allocate all SWCD funding in accordance with statutory requirements. Conduct at least two SWCC meetings annually. Fully distribute the additional \$3 million appropriation by Jun 30, 2025.	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> New Mexico Department of Agriculture <b>Contact Name:</b> Tammy Bracamonte <b>Contact Email:</b> <a href="mailto:tbracamonte@nmda.nmsu.edu">tbracamonte@nmda.nmsu.edu</a>											<b>FY24 Request</b> <b>\$15,708,500</b>
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2	<p>Acequia and Community Ditch Fund (ACDF) for entities to protect community water rights. Agricultural Programs and Resources Division</p>	<p>Convened two ACDF meetings and fully allocated all available funds to eligible ACDF recipients.</p>	<p>Convened two ACDF meetings to allocate all funds available to eligible ACDF recipients.</p>	<p>Convene the ACDF committee for at least one meeting per year. Annually allocate 100 percent of available funds to eligible ACDF recipients.</p>	<p><b>Achieved measures as presented. Convened two ACDF meetings to allocate all funds available to eligible ACDF recipients.</b></p>	<p>Convene the ACDF committee for at least one meeting per year. Annually allocate 100 percent of available funds to eligible ACDF recipients.</p>	<p>Convene the ACDF committee for at least one meeting per year. Annually allocate 100 percent of available funds to eligible ACDF recipients.</p>	<p>Convene the ACDF committee for at least one meeting per year. Annually allocate 100 percent of available funds to eligible ACDF recipients.</p>	<p>Convene the ACDF committee for two meetings per year. Annually allocate 100 percent of available funds to eligible ACDF recipients.</p>	<p>Convene the ACDF committee for two meetings per year. Annually allocate 100 percent of available funds to eligible ACDF recipients.</p>	<p>Convene the ACDF committee for two meetings per year. Allocated 100 percent of available funds to eligible ACDF recipients in accordance with statutory requirements.</p>	<p>Convene the ACDF committee for two meetings per year. Allocated 100 percent of available funds to eligible ACDF recipients in accordance with statutory requirements.</p>	
3	<p>Develop and implement a healthy soils program and the NM Ag workforce development program.</p>	<p>Healthy Soil Program was implemented and all available funding was distributed. On the ground projects research projects and trainings, and outreach were conducted.</p>	<p>Healthy Soil Program was implemented in FY21. All funds were allocated to a variety of on the ground projects across the state. Research and trainings were provided through collaborative agreements with NMSU CES. In FY21 four listening sessions were provided to eligible entity communities. Grant training was also provided. A new application process was developed and implemented using new software.</p>	<p><b>Implemented the Healthy Soil Program. All funds were allocated to on-the-ground projects. 26 research projects were funded and completed. Training was completed.</b></p>			<p>Stand up healthy soils program and workforce development programs during end of FY19 and through FY20. Metrics are being developed.</p>	<p>Establish and achieve program goals for the healthy soil program in accordance with available budget. Report outcomes for the HSP from FY20 and review achievements to improve program outcomes.</p>	<p>Establish and achieve program goals for the healthy soil program in accordance with available budget. Report outcomes for the HSP from FY20 and review achievements to improve program outcomes.</p>	<p>Establish and achieve program goals for the healthy soil program in accordance with available budget. Report outcomes for the HSP from FY20 and review achievements to improve program outcomes.</p>	<p>Healthy Soil Program implementation was improved for FY21. All funds were allocated to a variety of on the ground projects across the state. Research and trainings were provided through collaborative agreements with NMSU CES. In FY21 four listening sessions were provided to eligible entity communities. Grant training was also provided. A new application process was developed and implemented using new software. In FY23 program will require additional funds to begin to establish data collection and/or other metrics to understand impacts of program. Staff or contracted assistance will be required to achieve next level results.</p>	<p>Develop and provide training to interested stakeholders for application to the HSP grant program. Engage with Eligible Entities to build capacity for the HSP program. Fully distribute all funds including the additional FY23 funding. Provide reporting in accordance with DFA/Governor's office for the funding inclusive of the \$1,086,000 made available in HB 2 for FY23. Continue to support research efforts for healthy soil, workshops for stakeholders, and outreach efforts.</p>	

Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report

RPSP Title: New Mexico Department of Agriculture  
Contact Name: Tammy Bracamonte  
Contact Email: [tbracamonte@nmda.nmsu.edu](mailto:tbracamonte@nmda.nmsu.edu)

FY24 Request  
\$15,708,500

NMSU LEADS 2025 2 - Elevate Research and Creativity

RPSP Goal:

RPSP Objective 1: Improve research capability		Measure results				Measure targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Estimate	FY21 Actual	FY18	FY19	FY20	FY21	FY22	FY23	
1	Maintain and expand accreditation: Veterinary Diagnostics Services Division	Maintain NAHLN membership and associated accreditations. Maintain ISO/IEC 17025:2005 accreditation. Investigate possibility of additional testing based on client/industry needs.	Maintained NAHLN membership with tier two accreditation. Quality Management System updated to ISO/IEC 17025:2017 standard. VDS diagnostics reviewed and adjusted according to need versus expense.	Maintain NAHLN membership with tier two accreditation. Maintain ISO 17025 accreditation. Review diagnostics offered by VDS. Adjust according to client/industry needs.	Maintained tier two laboratory status in NAHLN. Maintained ISO 17025 accreditation. Adjusted some testing based on client and industry needs. Purchased laboratory equipment to bring more testing in house to decrease turn-around-times for clients.	Maintain NAHLN membership. Attain ISO 17025 accreditation or AAVLD accreditation. Investigate possibility of additional testing based on client/industry needs. Discuss option of modifying plague and tularemia diagnostics.	Maintain NAHLN membership and associated accreditations.	Maintain NAHLN membership and associated accreditations. Update Quality Management System to meet requirements of the ISO/IEC 17025:2017 standard. Investigate possibility of additional testing based on client/industry needs.	Maintain NAHLN membership at the current level. Maintain ISO 17025 accreditation. Investigate possibility of additional testing based on client/industry needs. Increase caseload.	Maintain NAHLN membership and ISO/IEC 17025:2017 accreditations. Investigate possibility of additional testing based on client/industry needs.	Maintain NAHLN membership and tier two accreditation. Maintain ISO 17025 accreditation. Review diagnostics offered by VDS. Adjust according to client/industry needs.	Maintain NAHLN tier two laboratory status. Maintain ISO 17025 accreditation. Review diagnostic testing performed to adjust testing to meet client/industry needs. Explore adding more staff to offer more testing and reduce turn-around-time for testing for clients.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: New Mexico Department of Agriculture Total: **\$ 15,708,500.00**

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments		
<b>Revenue and Transfers</b>						
<b>Beginning Fund Balance</b>	\$ 3,614,140.00	\$ (2,712,818.00)	\$ 901,322.00			
<b>Appropriations</b>						
Federal		\$ -				
State plus Tobacco Settlement Fund	\$ 13,850,700.00	\$ 1,857,800.00	\$ 15,708,500.00	The total recurring base for NMDA is \$14,233,500. A total of \$216,000 from SB1 was budgeted in FY22 and is part of the beginning balance. Total recurring base should be 14,233,500 which includes \$166,800 for the hunger initiative that is transferred from DFA and recurring.		
Local		\$ -				
<b>Total Appropriations</b>	\$ 13,850,700.00	\$ 1,857,800.00	\$ 15,708,500.00			
<b>Grants and Contracts</b>						
Federal	\$ 4,014,300.00	\$ 485,700.00	\$ 4,500,000.00			
State	\$ 9,100.00	\$ 5,900.00	\$ 15,000.00			
Local		\$ -				
<b>Total Grants and Contracts</b>	\$ 4,023,400.00	\$ 491,600.00	\$ 4,515,000.00			
<b>Private Gifts, Grants and Contracts</b>	\$ 130,000.00	\$ -	\$ 130,000.00			
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -				
<b>Tuition and Fees</b>		\$ -				
<b>Endowment</b>		\$ -				
<b>Sales and Services</b>		\$ -				
<b>Other Sources - Detail in Comments</b>	\$ 6,215,610.00	\$ -	\$ 6,215,610.00			
<b>Total Revenues</b>	\$ 24,219,710.00	\$ 2,349,400.00	\$ 26,569,110.00			
<b>Transfers (to) from</b>						
Instruction and General		\$ -				
Student Social and Cultural		\$ -				
Research	\$ (415,688.00)	\$ (100,000.00)	\$ (515,688.00)			
Public Service	\$ (2,500.00)	\$ (2,500.00)	\$ (5,000.00)			
Internal Service		\$ -				
Student Aid		\$ -				
Auxiliary Enterprises		\$ -				
Athletics		\$ -				
Independent Operations		\$ -				
Capital Outlay		\$ -				
Renewal and Replacement		\$ -				
<b>Total Transfers</b>	\$ (418,188.00)	\$ (102,500.00)	\$ (520,688.00)			
<b>Expenses</b>						
	FY23 FTE		Change FTE		FY24 FTE	
Faculty Salaries	0.99	\$ 85,000.00	(0.01)	\$ -	0.98	\$ 85,000.00
Professional Salaries	111.04	\$ 6,979,363.00	3.51	\$ 220,637.00	114.55	\$ 7,200,000.00
Other Staff Salaries	20.78	\$ 709,744.00	0.01	\$ 256.00	20.79	\$ 710,000.00
Student Salaries (GA/TA)	6.78	\$ 173,396.00	(2.20)	\$ 11,604.00	4.58	\$ 185,000.00
Other Salaries	0.43	\$ 14,692.00	0.01	\$ 308.00	0.44	\$ 15,000.00
<b>Total All Salaries</b>	140.02	\$ 7,962,195.00	1.33	\$ 232,805.00	141.35	\$ 8,195,000.00
Fringe Benefits		\$ 2,915,289.00		\$ (183,414.00)		\$ 2,731,875.00
Travel		\$ 607,563.00		\$ 42,437.00		\$ 650,000.00
Utilities		\$ 121,920.00		\$ 13,080.00		\$ 135,000.00
Institutional Support Charges		\$ 872,900.00		\$ 17,100.00		\$ 890,000.00
Plant Operation and Maintenance Charges		\$ 12,670.00		\$ 330.00		\$ 13,000.00
Supplies and Expenses		\$ 13,621,178.00		\$ 178,822.00		\$ 13,800,000.00
Equipment		\$ 400,625.00		\$ 99,375.00		\$ 500,000.00
Other Expenditures				\$ -		
<b>Total Expenditures</b>	140.02	\$ 26,514,340.00	1.33	\$ 400,535.00	141.35	\$ 26,914,875.00
<b>Ending Fund Balance</b>		\$ 901,322.00		\$ (866,453.00)		\$ 34,869.00

## Intercollegiate Athletics

FY23	Actual:	\$6,001,700
FY24	Request:	\$8,201,700
\$ Change:		\$2,200,000

NMSU Athletics inspires student athletes to build **strong communities** and strives to be known for its integrity and commitment to its **student's academic and athletic success.**

The student population of approximately **400 student-athletes** contributes to the economy at a personal level by fulfilling their financial obligation as students and community members.

As team members, student-athletes are provided a platform to grow as leaders, team players, and responsible and successful community members.

The contributions made by intercollegiate athletics include educating, mentoring, and the training of **future leaders** and providing on-the-job training to allow workforce ready skills acquired by the student - athlete.

NMSU sponsors 16 sports including 6 men's: football, basketball, baseball, golf, tennis, and cross country, and 10 women's sports: basketball, volleyball, softball,

soccer, tennis, golf, cross country, indoor track, outdoor track and swimming and diving. The 16 sports is the minimum number that is required by the NCAA to maintain Division I Football Bowl Subdivision status. The contributions made by intercollegiate athletics participation, demonstrates successful students with workforce skills acquired through their role as a student-athlete, student employee or graduate assistant. By providing hands-on and on the field experience, students are workforce ready when they leave NMSU, providing capable employees within the state and throughout the nation. The student-athlete population, contributes to the economy at a personal level by fulfilling their financial obligation as students and community members. Positive economic impact is also recognized at the state level through various team and individual activities.



## Student Athletes

- All of our 16 NMSU Men's and Women's Athletic Sport Teams cumulative grade point averages combined over the last 17 years, 34 consecutive semesters, have achieved the accomplishment of being combined at or above a **3.00 GPA**
- For the past 17 years, 34 consecutive semesters, Scholarship-Athlete representation (3.00 semester and cumulative GPA or higher) was higher than 50% of the student -athlete population
- Men's basketball, women's tennis, baseball and women's golf all won **WAC Championships.**
- Men's basketball, women's tennis, baseball and women's golf competed at the **NCAA Championships. Men's basketball won a game in the NCAA Tournament for the first time since 1993.**

## Athletics Objectives for Success

NMSU aims to continue to improve academically and competitively and give back through serving the community. Key project objectives include:

- Achieve NCAA Academic Progress Rate (APR) of 930 or higher for all NMSU Teams
- Enhance diversity among athletic staff and student-athletes
- Achieve recognition for all NMSU teams
- Win the WAC Commissioner's Cup to build loyalty and affinity by providing competitive teams
- Engage former student-athletes and alumni by holding various events around the state

Recent activities include:

- 143 NMSU student-athletes earned academic All-WAC
- Three Aggie teams posted perfect single-year APR scores
- 78 student-athletes graduated during the 2021-2022 commencement ceremonies
- NMSU Academic Support Programs and Services Center (ASPSC) continues to be committed to providing quality educational services that achieve academic, personal and career success for all student-athletes

### Athletics in Today's Financial Setting

NMSU Athletics continues to manage its financial situation. In doing so, the department has maintained its commitment to provide operating funds to its 16 sponsored sports. Increased costs, along with our geographic location have continued to place a strain on coaches and staff and have been consistent major challenges in managing costs. Part of recruiting and commitment to our student-athletes is the level of competition we provide them. The additional funding will be utilized to offset increasing travel cost, provide safer travel, provide cost of attendance, improve student-athlete nutrition, hiring a nutritionist, focus on mental health, hire full-time athletic trainers and invest in athletic training facilities.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Athletics

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$8,201,700

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$6,001,700

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input checked="" type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	Click or tap here to enter text.
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**2. Project Description / Executive Summary:**

New Mexico State University (NMSU), as a leading institute of higher learning provides an enhanced college experience by maintaining Division One FBS status of its athletic program. As the front porch to the land grant institution for the state of New Mexico, NMSU Athletics provides a well-rounded and quality educational opportunity for students of diverse backgrounds and athletic ability. The Division One status also offers its faculty, staff, alumni, and the community a unique opportunity to be a part of a Division One athletics program at a premier institution. NMSU Intercollegiate Athletics strives to be a premier Football Bowl Subdivision (Division 1 A) athletics program. As team members, student-athletes are provided a platform to grow as leaders, team players, and responsible and successful community members. Being a part of Division One FBS athletics provides vast opportunities and enhances the overall quality of the collegiate experience.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

NMSU Athletics continues to manage its financial situation. In doing so, the department has maintained its commitment to provide operating funds to its 16 sponsored sports. However, the cost of doing business has increased and these higher costs

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

are being passed on from our vendors, resulting in fewer resources for our teams. Travel, student housing and meals, athletic supplies and equipment, medical services and insurance, have continued to be the areas of greater need. NMSU teams must travel via airplane to most competition sites whereas other universities' athletics programs are within driving distance to competitions. These increased costs, along with our geographic location have continued to place a strain on our coaches and staff and have been consistent major challenges in managing costs. Part of recruiting and commitment to our student-athletes is the level of competition we provide them. Maintaining appropriate funding is necessary to allow the programs the opportunity to continue to meet obligations and provide a positive, safe and well-rounded experience for the students participating as athletes.

Should any level of funding be further reduced from the current level, NMSU athletic programs face multiple negative impacts including: member institutions classified as FBS to fund their athletic programs at minimum levels including adherence to the Division One philosophy, financial aid, scheduling of athletic contests and sports sponsorship. We continue to make strides in positioning ourselves for the future and towards meeting gender equity and Title IX requirements. NMSU Athletics will continue to improve academically and competitively and give back through serving the community. We remain committed to contributing to the "discovery" potential of each and every student-athlete.

**4. Program Mission (include population served, other demographic info):**

NMSU Athletics inspires student-athletes to build strong communities and strives to be known for its integrity and commitment to its student's academic and athletic success. NMSU sponsors 16 sports including 6 men's: football, basketball, baseball, golf, tennis, and cross country, and 10 women's sports: basketball, volleyball, softball, soccer, tennis, golf, cross country, indoor track, outdoor track, and swimming and diving. The student-athlete population of approximately 400 student-athletes contributes to the economy at a personal level by fulfilling their financial obligation as students and community members. Positive economic impact is also recognized at the state level through various team and individual activities.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Achieve NCAA Academic Progress Rate (APR) of 930 or higher for all NMSU Teams.  
Enhance diversity among athletic staff and student-athletes.  
Promote community service by NMSU student-athletes.  
Achieve recognition for all NMSU teams.  
Published rankings in the WAC Commissioner's Cup to build loyalty and affinity by providing competitive teams.  
Engage former student-athletes and alumni by holding various events around the state.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

ACCOMPLISHMENTS:

- Joining Conference USA in all sports and increasing revenue via conference distribution
- Hiring of new football head coach Jerry Kill

OBSTACLES:

- Not being able to provide cost of attendance
- Revenue and budget reductions due to Covid
- Increased travel costs in Conference USA (\$725k)
- Ongoing discussions at the national level about additional permissive legislation

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

The contributions made by intercollegiate athletics include educating, mentoring, and the training of future leaders and providing on the job training to allow workforce ready skills acquired by the student-athlete, student employee and graduate assistant.

NMSU Academic Support Programs and Services Center (ASPSC) is committed to providing quality educational services that achieve academic, personal, and career success for all student-athletes. The ASPSC offers a full range of support and referral services to assist student-athletes in their holistic growth and development. These efforts contribute to meeting the

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

workforce demands of the state, providing an opportunity for the future of these students. The contributions made by intercollegiate athletics participation, demonstrates successful students with workforce skills acquired through their role as a student-athlete, student employee or graduate assistant. By providing hands on and on the field experience, these students are workforce ready when they leave NMSU, providing capable employees within the state and throughout the nation. NMSU Athletics provides an outreach within the state and nationally through Aggie Sports Network and Aggie Vision. Aggie Vision is responsible for providing television editing and broadcasting services to the university, including athletic events. NMSU Athletics Program annually visits communities across the state.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

NMSU Athletics receives private donations. Additional revenues utilized include student fees as well as self generated revenues such as sales, services, and NCAA provided funding.

**9. Accomplishment/ Highlights (bullet form)**

ACADEMICS:

- All of our 16 NMSU Men's and Women's Athletic Sport Teams cumulative grade point averages combined for the last 17 years, 34 consecutive semesters, have achieved the accomplishment of being at or above a 3.00 GPA
- For the past 17 years, 34 consecutive semesters, Scholarship-Athlete representation (3.00 semester and cumulative GPA or higher) was higher than 50% of the student -athlete population

ATHLETIC ACHIEVEMENTS:

- Volleyball, men’s basketball, women’s tennis, women’s golf and baseball all won WAC Championships.
- Men’s basketball, women’s tennis, women’s golf and baseball all competed at the NCAA Championships. Men’s basketball won a game in the NCAA Tournament for the first time since 1993.

Medical Projects	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** NMSU Athletics  
**Contact Name:** Braun Cartwright  
**Contact Email:** [braunc@nmsu.edu](mailto:braunc@nmsu.edu)

**FY24 Request**  
**\$8,201,700**

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Academics and Graduation

RPSP Objective 1: Academic Success		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Continue to provide athletic aid to students that are academically prepared	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
2	Achieve NCAA Academic Progress Rate (APR) of 930 or higher for all NMSU teams (Percentage of Teams)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
3	Achieve NCAA Academic Recognition for Top 10% APR (# of Teams)	1	2	NA	NA	2	2	2	2	2	2	Due to COVID the NCAA did not award Top 10%

RPSP Objective 2: Graduation		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Achieve a 55% four-class average graduation rate - 6yr	57%	59%	59%	59%	55%	55%	55%	55%	55%	55%	

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Diversity and Internationalization

RPSP Objective 1: Diversity		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Enhance diversity amongst Athletics staff	44%	36%	40%	37%	35%	35%	35%	35%	35%	35%	
2	Enhance diversity amount student-athletes	67%	64%	67%	70%	50%	50%	50%	64%	64%	64%	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** NMSU Athletics  
**Contact Name:** Braun Cartwright  
**Contact Email:** [braunc@nmsu.edu](mailto:braunc@nmsu.edu)

**FY24 Request**

**\$8,201,700**

RPSP Objective 2: Internationalization		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Enhance diversity among student-athletes	13%	12%	13%	9%	6%	6%	6%	6%	6%	6%	

**NMSU LEADS 2025 Goal:**

**3 - Amplify Extension and Outreach**

**RPSP Goal:** Community and Alumni Outreach

RPSP Objective 1: Local Community Outreach		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Community Service by student-athletes (hours)	6300	NA	NA	NA	6,000	6,000	6,000	6,000	6,000		Community service was not performed due to COVID

RPSP Objective 2: Alumni Outreach		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
2	Engage alumni by holding events around the state (# of Alumni)	120	0	0	325	200	200	200	200	200	325	

**NMSU LEADS 2025 Goal:**

**4 - Build a Robust University System**

**RPSP Goal:** Athletic Performance

RPSP Objective 1: Team and Department Success		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Athletic teams finish in the top third in the conference (Number of Teams)	11	3	8	7	10	10	10	10	10	10	
2	Win the WAC Commissioners Cup (Rank)	2	3	2	4	1	1	1	1	1	1	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget verses Actual	Budget	Change	Request	Comments			
Revenue and Transfers	FY 23		FY 24				
<b>Beginning Fund Balance</b>	\$(3,179,660.00)	\$624,473.00	\$(2,555,187.00)				
<b>Appropriations</b>		\$-					
Federal							
State plus Tobacco Settlement Fund	\$5,951,700.00	\$2,250,000.00	\$8,201,700.00	\$50,000 from SB1 was classified from non recurring to recurring and budgeted in FY22 and appears in the beginning fund balance. The total recurring base should be \$6,001,700 and a total increase of \$2.20 million for a total request of \$8,201,700			
Local		\$-					
<b>Total Appropriations</b>	\$5,951,700.00	\$2,250,000.00	\$8,201,700.00				
<b>Grants and Contracts</b>							
Federal	\$18,100.00	\$-	\$18,100.00				
State	\$54,100.00	\$-	\$54,100.00				
Local		\$-					
<b>Total Grants and Contracts</b>	\$72,200.00	\$-	\$72,200.00				
<b>Private Gifts, Grants and Contracts</b>	\$1,476,419.00	\$50,000.00	\$1,526,419.00				
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$-					
<b>Tuition and Fees</b>	\$3,467,555.00	\$-	\$3,467,555.00				
<b>Endowment</b>		\$-					
<b>Sales and Services</b>	\$1,698,036.00	\$55,409.00	\$1,753,445.00	Ticket Sales, Concessions			
<b>Other Sources - Detail in Comments</b>	\$6,467,376.00	\$705,434.00	\$7,172,810.00	Game Guarantees, NCAA/CUSA, Multimedia Rights			
<b>Total Revenues</b>	\$19,133,286.00	\$3,060,843.00	\$22,194,129.00				
<b>Transfers (to) from</b>							
Instruction and General	\$3,490,663.00	\$-	\$3,490,663.00				
Student Social and Cultural	\$(34,800.00)	\$-	\$(34,800.00)				
Research	\$400,000.00	\$-	\$400,000.00				
Public Service		\$-					
Internal Service		\$-					
Student Aid		\$-					
Auxiliary Enterprises		\$-					
Athletics		\$-					
Independent Operations		\$-					
Capital Outlay		\$-					
Community Colleges	\$5,000.00	\$-	\$5,000.00				
<b>Total Transfers</b>	\$3,860,863.00	\$-	\$3,860,863.00				
<b>Expenses</b>							
	FY23 FTE	Change FTE	\$-	FY24 FTE			
Faculty Salaries		0.00	\$-	0.00			
Professional Salaries	107.44	\$6,753,515.00	4.02	\$252,708.00	111.46	\$7,006,223.00	5 FT Ath Trainers/1 FT Nutrition Positions
Other Staff Salaries	7.55	\$258,031.00	0.01	\$-	7.56	\$258,031.00	
Student Salaries (GA/TA)	7.60	\$229,200.00	(1.92)	\$-	5.68	\$229,200.00	
Other Salaries	0.98	\$33,400.00	(0.00)	\$-	0.98	\$33,400.00	
<b>Total All Salaries</b>	123.57	\$7,274,146.00	2.11	\$252,708.00	125.68	\$7,526,854.00	
Fringe Benefits		\$2,613,803.00		\$97,292.00		\$2,711,095.00	5 FT Ath Trainers/1 FT Nutrition Positions
Travel		\$2,624,000.00		\$738,120.00		\$3,362,120.00	\$725k for increased travel in CUSA (FL,TN,KY,VA,AL,LA)
Utilities		\$143,000.00		\$-		\$143,000.00	
Institutional Support Charges		\$729,800.00		\$266,546.00		\$996,346.00	
Plant Operation and Maintenance Charges		\$79,449.00		\$-		\$79,449.00	
Supplies and Expenses		\$8,880,478.00		\$866,083.00		\$9,746,561.00	\$425k for nutrition, maintenance&repair of equipment, purchase or new equipment
Equipment		\$25,000.00		\$-		\$25,000.00	
Other Expenditures				\$-			
<b>Total Expenditures</b>	123.57	\$22,369,676.00	2.11	\$2,220,749.00	125.68	\$24,590,425.00	
<b>Ending Fund Balance</b>		\$(2,555,187.00)	\$1,464,567.00	\$(1,090,620.00)			

# Educational Television, KRWG



2021

**BE BOLD.** Shape the Future.

FY 23 Actual: \$1,174,200  
FY 24 Request: \$1,299,200  
Change: \$125,000

## About KRWG TV

KRWG TV is the largest pre-k educator in the region. In addition to our curriculum-based educational programming, we provide news, cultural programming, relevant public affairs information, entertainment, and much more for the citizen's of New Mexico. For many, this vital public service is their only source for news and information.

We partner with NMSU to provide students with real-world experience that leads directly to employment upon graduation. KRWG also plays an important role in meeting NMSU's promise as a land grant institution.

## COVID-19 Response

In response to the COVID-19 crisis, KRWG collaborated with Albuquerque Public Schools, KNME TV and KENW TV to air K-5 educational programming statewide.

To support the health and safety of New Mexico citizens in our region, we created online resources that became central hubs for any COVID-19-related information.

## Public Safety & Educational Datacasting

KRWG, KNME & KENW are partnering with NMPED in a pilot program to deliver educational materials, to students with no or inadequate internet connectivity at home. The electronic educational materials are delivered via an encrypted over-the-air signal directly to students with no impact to our viewers.

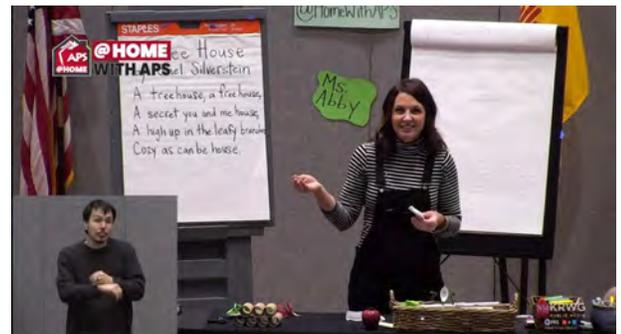
Using the same technology, all three stations are partnering with NM DHSEM to provide Public Safety Datacasting statewide. This project will have a significant impact in the most rural parts of the state, delivering vital emergency information such as live video, photos, bulletins, etc., to various agencies throughout the state.

Once fully implemented, the Public Safety Datacasting project will expand our services into the Boot Heel, providing the area with vital services for the first time.

### Our Mission

We strive to educate and engage community development by providing relevant news, a forum for open discussion, a celebration of the arts while preserving and conveying human and natural history.

## K-12 @Home Educational Support





### Coverage Area



### Early Childhood Education Impact

KRWG airs high-quality, curriculum-based early childhood educational programs an average of 10 hours a day on our main channel and 24 hours a day, 365 days a year on our PBS Kids sub-channel. This makes KRWG Public Media the largest Pre-K educator in the region.

KRWG TV covers a region roughly the size of West Virginia. We broadcast from the campus of New Mexico State University.

Every year, KRWG TV provides over 10,600 hours of children’s educational programming.

Our signal extends west to Grant County, north to Sierra County, and east to Otero County.

### NMSU Impact

KRWG provides hands-on professional experience for university students resulting in post-graduation employment. KRWG student employees have gone on to work for local TV affiliates in El Paso, Albuquerque and even ESPN & NBC News. Experience gained at KRWG directly translates into careers for many students.

As the population and use of media evolve, KRWG has made a commitment to continue to provide relevant services that will meet the needs of all of Southwestern New Mexico.

### Regional Impact

KRWG provides 24-hour service of award-winning children’s programming, public affairs shows, cultural offerings and over 150 hours of local productions to serve the needs of viewers in our region.

KRWG TV – Providing educational outreach to Southwestern New Mexico for 49 years!

### Statewide Impact

In collaboration with KNME (Albuquerque) and KENW (Portales), we provide the only statewide television services. During a statewide emergency, public media is the only source to reach 98% of the state via radio, TV, web, Facebook, and Twitter.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Educational Television

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$1,299,200

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$1,174,200

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	49
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**2. Project Description / Executive Summary:**

KRWG-TV provides educational television services to southern New Mexico. Our coverage area is equivalent to the size of West Virginia, roughly 25,000 square miles, most of it rural. KRWG plays a vital role in meeting NMSU's promise as a land grant institution. In addition, we offer a distinctly unique service to the region from New Mexico State University. This is accomplished by extending the main transmitter in Las Cruces to translators in Deming, Silver City, Hillsboro, T or C, Caballo Peak, Hatch, and Alamogordo.

KRWG's facilities are utilized by multiple NMSU educational departments like Journalism and the Creative Media Institute as laboratory and classroom space. KRWG engineering staff provides maintenance and repair services for the facilities that these other NMSU departments utilize. These departments incur no costs for these support services.

In response to the pandemic, KRWG re-tooled our entire operation to provide the region with at-home learning support for k-12 students. While slightly modified, these efforts are still ongoing. Feedback from viewers was universally positive.

To serve our region, KRWG continues to place emphasis on the latest news and health information related to COVID-19. The importance of reliable, accurate information can't be overstated. For many in our region, we are their primary source of information. In addition to health information, KRWG TV also provides information related to the economy, directly impacting

## **2. Project Description / Executive Summary:**

everyone in our viewing area. We also provide fact-based, non-sensational political forums during a time when civil discourse is in short supply.

Expansion Justification:

While we fully support K-5 with our national programming, we currently don't have the resources to make a direct local impact. The expansion request will allow us to forge meaningful partnerships with various schools and community agencies to provide educational resources in support of positive educational outcomes for those children most at-risk children. The expansion request will allow us to provide a staff member that will be responsible for training educators to give them the tools that will enable them to leverage the vast resources that PBS makes available and use them for the benefit of students, families, and our community.

We will also leverage the expansion funds to increase our outreach to the communities we serve via our website and social media on Facebook, Twitter, Instagram, and other developing platforms. Social media engagement is crucial in strengthening our connections to the citizens we serve. However, our current structure requires responsibilities to be distributed throughout the organization. This results in sometimes fragmented and less than ideal interactions. The expansion request will allow us to ensure consistent, relevant information via social media by providing a staff member whose sole focus will be social media engagement. As social media becomes a more significant part of everyone's daily life, our strategic goal is to expand our footprint and, as we do over the airwaves, become a primary and trusted source for news, entertainment, and even crucial safety information.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

KRWG TV is funded through multiple sources:

- Corporation for Public Broadcasting Grants
- State of New Mexico
- Business Underwriting
- Member Support
- Other Grants

Each source of funding is a critical piece that allows us to fulfill our mission to serve the communities in our viewing area.

As detailed in Section 8, any increase in Non-Federal Financial Support (NFFS) will result in additional grant monies as part of the Corporation for Public Broadcasting's funding formula.

## **4. Program Mission (include population served, other demographic info):**

Our Mission Statement, "...to educate and engage community development by providing relevant news, a forum for open discussion, a celebration of the arts while preserving and conveying human and natural history..."

To fulfill our mission, we provide free over-the-air educational, cultural, and news programming to our largely rural viewing area. Our signal reaches roughly 250,000 citizens in southern New Mexico. In addition, through PBS and locally produced programs, we provide learning opportunities for all generations. Examples include early childhood offerings, lifelong learning offerings, and collaborative integration with NMSU degree programs.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Our key project objectives are to maintain or grow our student contact hours, community outreach and fundraising activities to build paths to additional revenue.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

We provide free, over-the-air, educational, cultural, and news programming.

Through PBS and locally produced programs, we provide learning opportunities for all generations. Examples include early childhood offerings like Sesame Street, lifelong learning offerings like NOVA, and collaborative integration with NMSU degree programs like News22 and CMI. KRWG staff is also highly active in collaborating with community groups in the arts and education to extend educational opportunities beyond television.

Our services will respect one's intelligence and encourage civil discourse in our daily presentation of programs that inform, educate and entertain.

Because of the COVID-19 pandemic, we experienced significant challenges in how we fulfilled our mission of service to the region. However, we adapted our processes and continue to provide the citizens of New Mexico with timely, accurate news, health, and safety information to keep them informed during a time when this vital information can mean the difference between life and death.

These efforts are outlined in section 7 below.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

In alignment with our educational mission, we aired over 10,000 hours of k-5 standards-aligned programming on two of our channels. In addition, we aired grades 6-12 educational programming on our secondary channel for students learning from home. While most students have returned to the classroom, we continue to be a trusted source for standards-based educational content. This content is available year-round and can be used an evergreen resource during breaks and for those districts that have shifted to non-traditional calendars.

KRWG TV recognizes the importance of providing accurate, unbiased information during election cycles. To that end, KRWG TV is committed to producing candidate interviews and forums for our region's citizens. In support of the universal service mandate described in the Public Broadcasting Act of 1967, KRWG provides this vital coverage to everyone in our area, especially for our rural communities. In addition, for many, KRWG is their only source for candidate/election information. As a result, we play a crucial role in informing the electorate.

On the safety front, we provide countless hours of COVID-19-related programming as well as online resources that continue to be relevant and help keep our communities safe. The combination of local and national programming provided the citizens of New Mexico in our region with the latest information on tracking the deadly pandemic, how to stay safe, and advances in vaccines and treatments.

Our facilities offer broad opportunities for the academic and university community. Students who utilize the KRWG facilities can leverage the "real-world experience" they gained to move on to post-graduation employment. Students who worked at KRWG have moved on to work at KTSM, KVIA & KDBC in El Paso - KOAT & KOB in Albuquerque, even ESPN in Bristol, CT, and more.

The three Public Media stations in New Mexico, KNME in Albuquerque (UNM/APS) and KENW (ENMU), and KRWG (NMSU), provide the only statewide television services. NM Public Media is the only source to reach 98% of the state via broadcast television during a statewide emergency. Our combined service provided the citizens of the

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

entire state with critical statewide alerts and emergency information, support for at-home learning, and much more during the pandemic.

KRWG, KNME & KENW are partnering with NMPED in a pilot program to deliver educational materials to students with no or inadequate internet connectivity at home. The electronic educational materials are provided via an encrypted over-the-air signal directly to students without impacting our viewers.

Using the same technology, all three stations are partnering with NM DHSEM to provide Public Safety Datacasting statewide. This project will have a significant impact in the most rural parts of the state, delivering vital emergency information such as live video, photos, bulletins, etc., to various agencies throughout the state.

Once fully implemented, the Public Safety Datacasting project will expand our services into the Boot Heel, providing the area with vital services for the first time.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

KRWG TV received approximately \$1,258,969 in external funding during FY22.

We received Community Service Grants totaling \$ 805,152 for FY22 from the Corporation for Public Broadcasting. The base grant amount is \$558,000. The remainder of the CSG funding is determined using the following funding formula: Grantee's FY 2020 Weighted NFFS X 0.1280476998 + Base Grant.

The Corporation for Public Broadcasting uses the formula above to calculate our annual grant amounts. There is a financial incentive to access non-federal funds. We receive approximately 12% in additional funding for every non-federal dollar we acquire. Therefore, reducing or expanding Non-Federal Financial Support (NFFS) will reduce or increase our overall CSG funding accordingly. NFFS includes all sources such as appropriations, membership, underwriting, indirect support from NMSU, etc. For FY22 our NFFS support resulted in approximately \$161,000 of additional grant monies awarded to our organization to support our mission.

2022 Community Service Grant	\$757,038
2022 Universal Service Support Grant	\$34,202
2022 Interconnection Grant	\$13,912

In addition to the grant funding, KRWG TV also receives support from members and underwriters and private gifts such as estate gifts. As of 5/31/22, combined members, underwriters, and various gift support for FY22 is \$282,969. At the time this form is being prepared, we have approximately three weeks left in FY 22. We expect a slight increase in the remaining weeks.

**9. Accomplishment/ Highlights (bullet form)**

Aired 10,610 hours of educational children's programming

In response to the COVID-19 crisis, we provide air K-12 educational programming as a learning resource for students, teachers and families in our region.

**9. Accomplishment/ Highlights (bullet form)**

Aired 1,400+ hours of grades K-12 educational programming on our secondary channel for students learning from home

Produced and aired 174 hours of local, relevant public affairs, news, and health programming for viewers in our region

Produced and aired exhaustive local and national COVID-19 related programming

Won 9 New Mexico Broadcasters Excellence In Broadcasting awards, including Best Statewide Election Coverage

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

RPSP Title: EDTV1-KRWG  
Contact Name: Adrian Velarde  
Contact Email: [avelarde@nmsu.edu](mailto:avelarde@nmsu.edu)

FY24 Request

**\$1,299,200**

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Feature programming to represent our region's culture and opportunities.

RPSP Objective 1: Present two events and 50 segments concerning diversity, highlighted Fronteras, and other community collaborations.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of Events	3	2	3	4	2	2	2	4	3	4	Goal exceeded due to lifting of COVID restrictions
2	Number of Segments	55	58	67	40	55	50	40	55	55	25	Lowered FY 24 target to focus on longer segments
3	Local Production Hours	223	179	174	175	220	175	175	175	180	190	From SABS 7.1 Report - Decreases due to COVID (New FY23)

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal:** Support student success and provide "real-world" experiential learning opportunities

RPSP Objective 1: Track the number of student contact hours created by our programs as reported on student time sheets, tutorials and mentoring and classroom hours.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Student Contact Hours	15,629	14,235	13,981	15,000	6,000	7,000	5,000	10,000	10,000	17,000	Goal exceeded due to lifting of COVID restrictions

**NMSU LEADS 2025 Goal: 4 - Build a Robust University System**

**RPSP Goal:** Effectively manage current revenue stream and build new paths to additional revenue.

RPSP Objective 1: Conduct a minimum of 6 fundraising activities this year.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	# of Pledge Drives	4	5	5	5	4	4	4	4	4	5	Goal met
2	# of Coffee visits & Other outreach, Rotary, etc.	7	6	6	6	6	8	4	8	8	6	Goal exceeded

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 192,586.00	\$ (14,150.00)	\$ 178,436.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 1,174,200.00	\$ 125,000.00	\$ 1,299,200.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 1,174,200.00	\$ 125,000.00	\$ 1,299,200.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>	\$ 1,000,000.00	\$ 105,152.00	\$ 1,105,152.00	
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>	\$ 7,000.00	\$ -	\$ 7,000.00	
<b>Other Sources - Detail in Comments</b>	\$ 8,000.00	\$ -	\$ 8,000.00	
<b>Total Revenues</b>	\$ 2,189,200.00	\$ 230,152.00	\$ 2,419,352.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	<b>FY23 FTE</b>	<b>Change FTE</b>	<b>FY24 FTE</b>	
Faculty Salaries		0.00	0.00	
Professional Salaries	7.95	2.50	10.45	
Other Staff Salaries	6.74	0.47	7.21	
Student Salaries (GA/TA)	2.04	(0.48)	1.56	
Other Salaries	0.03	0.00	0.03	
<b>Total All Salaries</b>	16.76	2.49	19.25	
Fringe Benefits				
Travel				
Utilities				
Institutional Support Charges				
Plant Operation and Maintenance Charges				
Supplies and Expenses				
Equipment				
Other Expenditures				
<b>Total Expenditures</b>	16.76	2.49	19.25	
<b>Ending Fund Balance</b>	\$ 178,436.00	\$ (154,229.00)	\$ 24,207.00	



# Nurse Expansion

2023

FY23 Actual: \$ 946,200  
 FY24 Request: \$1,981,200  
 \$ Change: \$1,035,000

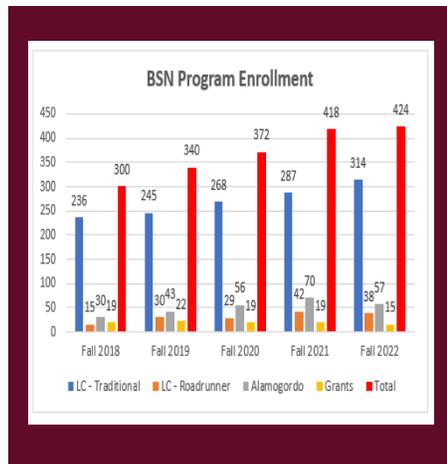
## Overview

The **NMSU Nurse Expansion** initiative has increased the number of nursing graduates with a Bachelor of Science in Nursing (BSN) for clinical agencies in Southern New Mexico. This initiative supports the State of New Mexico’s nursing workforce needs, but also addresses the nationwide and regional nursing shortages identified in the American Journal of Medical Quality. Nurse Expansion funding supports the hiring of qualified nursing faculty, implementation and evaluation of the nursing curriculum, clinical simulation learning and access to educational tools to support student success.

## Increasing Access to Nursing Education in Rural NM Communities

The NMSU School of Nursing has satellite BSN programs at Alamogordo and Grants, NM. The NMSU-Alamogordo program accepts 24 new BSN students each year and the NMSU-Grants program accepts 8 new BSN students each year. Students attend classes through distance education classrooms and complete their clinical training at local hospitals and community health agencies. The School of Nursing hires full time nursing faculty and support staff at both sites and collaborates with

community college advising to maintain the pipeline of qualified applicants for these programs. The community college campuses donate classroom and laboratory spaces, as well as resources and support for students and faculty.



## Graduating Registered Nurses for New Mexico

- During the RPSF funding period (2005-2022), the School of Nursing has graduated over 2,250 nurses
- 424 students enrolled in the BSN program in Fall 2022
- BSN program retention rates are currently 88%
- 75% of those graduating from NMSU obtain their original RN license to practice nursing in New Mexico
- 74% of BSN students were from minority and under-represented backgrounds
- 43% of students are from rural counties in New Mexico
- Admission preference to the NMSU BSN program is given to NM residents

## Additional Funding to Support Enrollment and Student Success

NMSU's FY24 RPSP Nurse Expansion funding request combines the \$946,200 requested in FY23 with an additional \$1,035,000 for a total of \$1,981,200. The increase in funding for FY24 is a direct result of the recurring budget items submitted to the Higher Education Department as part of the FY23 Nurse Expansion Request for Applications. The FY24 RPSP funding request will be used to support additional faculty, staff, tutors, and a new student success program called SON Cares. In addition, the funding will support several systems that will be used to manage our student population to assist with identification of those at-risk for not graduation or passing the NCLEX-RN exam, and systems to enhance our simulation/clinical activities for our nursing students.

Salaries in the request include:

- Three new nursing faculty (two in Las Cruces and one in Alamogordo) to reduce the number of faculty in overload status (teaching >12 credits).
- One new clinical coordinator to expand clinical sites options beyond urban area hospitals (i.e., nursing homes, rehab centers, clinics, birthing centers, etc.).
- A new Director of Simulation Education, a position strongly recommended by the NM Board of Nursing, responsible for standardizing NMSU's simulation policies, procedures, and clinical training scenarios across the BSN curriculum.
- A new Lab Coordinator to support our remodeled Nursing Skills and Simulation Center (est. completion date Fall 2024).
- Two new staff positions for our SON Cares Program (an academic advisor who will focus on recruitment, outreach and pre-nursing student advising and a SON Cares Program Coordinator to address the academic challenges and other social determinants that affect a student's ability to learn.
- Ten nursing faculty to teach 1 credit per semester to Expand our Pre-Nursing Freshman Seminar.
- Sixteen BSN tutors to provide academic support for students that are at-risk for not graduating.
- Market-based salary adjustments to support full-time BSN faculty.



Other funding will include:

- Professional development for faculty and staff in nursing and simulation education.
- Recruitment and marketing for our second-degree Road Runner program.
- Annual fees for the Nurse Skills & Simulation Center's enterprise management software called SimulationIQ and a virtual reality simulation program to enhance clinical training for our nursing students.
- Additional modules within ProjectConcert, our department's student management system, that will improve advising services, student tracking, clinical placement, and accreditation processes.
- Standardized testing fees for Health Education Systems Inc, (HESI), which is designed to provide nursing students with NCLEX-style test taking experiences throughout the program, identify students that require remediation, and to provide the faculty with feedback about the curriculum at each Level

### SON Cares Program



The School of Nursing is initiating a comprehensive student success program called "SON Cares". This program will provide a three-prong approach to support pre-nursing and nursing students from all backgrounds, with a special focus on first generation college students and under-represented minorities in the nursing workforce.

1. Target pre-nursing students through a variety of outreach activities/events that promote a sense of community across this large cohort of students.
2. Establish a SON Care Center to address academic and non-academic needs. The students' connection to the center will start with a 50-question risk assessment survey that every nursing student takes upon entry into the program. Students will meet with a staff member from the Center to discuss issues ranging from food insecurity to English as a second language. Each student will then have an individual plan for success mapped out for them based on the results of the survey.
3. Target graduating nursing students who are preparing for the NCLEX-RN licensure exam through intensive exam preparation and mentorship. Students will receive a free six-month subscription to UWorld, a NCLEX prep course. Formal NCLEX preparation/coaching will occur in Level 4 & 5 classes and will emphasize successful studying techniques, test taking skills, and mindfulness for reduction of test anxiety. Students will also have the option to attend NCLEX preparation mentoring sessions that will be provided through the SON Cares Center. Students and graduates will have access to the Cares Center for any help they need to facilitate passing the NCLEX on their first attempt

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Nurse Expansion - NMSU

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$1,981,200

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$946,200

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	18
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**2. Project Description / Executive Summary:**

RPSP funding supports initiatives to meet a critical state-wide demand for baccalaureate-prepared nurses. The NMSU School of Nursing provides New Mexico hospitals and clinical agencies with highly trained new nursing graduates. With 75% of NMSU Bachelor of Science in Nursing (BSN) graduates staying in New Mexico in 2021, the NMSU BSN program is a critical part of the solution to the state’s critical nursing workforce needs. Graduating qualified nurses during a pandemic is especially important, as nurses are the vital link between the patient and the rest of the health care team. The NMSU Bachelor of Science in Nursing (BSN) program collaborates with its higher education partners across the state to deliver a common curriculum that allows nursing students to easily move from community college to university level courses. At NMSU the BSN degree consists of 3 semesters of nursing pre-requisite coursework, followed by 5 semesters of nursing courses with 780 hours of clinical training. In addition to the Las Cruces campus, NMSU delivers the BSN program to students at the NMSU-Alamogordo and NMSU-Grants campuses, meeting critical workforce needs in those communities.

## **2. Project Description / Executive Summary:**

In addition to growing enrollment by 35% over the past three year, the NMSU School of Nursing is planning for future enrollment growth after its Nursing Skills & Simulation Center expansion and renovation is complete. BSN program enrollment is limited by 1) the number of qualified faculty, and 2) laboratory space available for clinical skills instruction and training. Nurse Expansion funds currently support nursing faculty salaries and professional development, professional staff salaries, student support services, as well as equipment and software to improve the quality and efficiency of delivering nursing education. The School of Nursing is requesting continued funding to 1) support enrollment growth (faculty and professional staff salaries), 2) support a nursing student success program to increase BSN student retention, graduation, and licensing exam pass rates, and 3) support a student management and simulation-related systems and that will promote efficient operations of the School of Nursing and support the expansion of our newly remodeled Skills and Simulation Center (expected date of completion December 2024).

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

NMSU's FY24 RPSP Nurse Expansion funding request combines the \$946,200 requested in FY23, plus an additional 1,035,000 for a total of \$1,981,200. The increase in funding for FY24 is a direct result of the recurring budget items submitted to the Higher Education Department (HED) as part of the FY23 Request for Applications (RFA). The funding for the RFA, pursuant to Laws 2022, Chapter 54 of the 55th Legislative Session, General Appropriations Act – HB2 Section 5, only allowed nursing schools to request funding for expenditures and activities in FY23.

FY24 funding will be used for:

- Faculty and professional staff salaries to support enrollment growth, clinical coordination, simulation education, and our new student success program called SON Cares;
- Market-based salary adjustments for full-time BSN Faculty;
- Sixteen (16) undergraduate nursing tutors for the BSN didactic courses;
- Ten nursing faculty to teach the Pre-Nursing Freshman Seminars that serve as the foundation for nursing student success;
- Professional development for faculty and staff in nursing and simulation education;
- Recruitment and marketing for our second-degree Road Runner program;
- Annual licensing fees for the Nurse Skills & Simulation Center's enterprise management software (SimulationIQ) and a virtual reality simulation program to enhance clinical training for our nursing students;
- Additional modules in ProjectConcert, the School of Nursing's student management system that will improve advising services, student tracking, clinical placement, clinical site monitoring, and accreditation processes;
- Standardized testing fees for Health Education Systems Inc, (HESI), which is designed to provide nursing students with NCLEX-style test taking experiences throughout the program, identify students that require remediation, and to provide the faculty with feedback about the curriculum at each Level.
- Miscellaneous expenses for the BSN program operations

#### **4. Program Mission (include population served, other demographic info):**

Our mission at the School of Nursing is to promote health and improve the quality of life of the people of New Mexico through nursing education, research, practice, and public service, recognizing the state's multicultural heritage and dynamic border environment. A BSN degree from NMSU provides great opportunity for social mobility due to our near-100% graduate employment rates and the high earning potential of nurses (average New Mexico RN salary in 2021 was \$77,590/year).

The School of Nursing BSN program serves a diverse student body:

- 74% are from under-represented racial and ethnic minority populations
- 70% were designated as having 'financial need' (a federal financial aid designation that is reported through the Office of Financial Aid).
- 51% qualified for Pell Grants—The Federal Pell Grant is usually awarded to undergraduates who have a high degree of unmet financial need. Students whose families have a total income of up to \$50,000 may be eligible for the need-based funding, though most Pell grant money goes to students with a total family income below \$20,000/year.
- Approximately 68% work part time or full time while going to nursing school
- In Academic Year 2021-22, 87% of BSN students were from New Mexico and approximately 43% of those students are from rural counties.

The goal of this RPSP request is to continue efforts to increase the pipeline of baccalaureate-prepared RNs for the state of New Mexico. One key element of this program has been the implementation of the statewide New Mexico Nursing Education Consortium (NMNEC) BSN curriculum. NMSU nursing faculty participate in monthly NMNEC leadership and education committee meetings, attend then semi-annual educator conferences, and work with faculty from NMNEC schools on collaborative research/scholarship. In addition to being founding members and active leaders in NMNEC, the NMSU School of Nursing regularly collaborates with the nursing programs at Dona Ana Community College and Western New Mexico University.

A second critical component of NMSU's Nurse Expansion efforts are its BSN programs that are housed at two rural community college campuses – NMSU-Alamogordo and NMSU-Grants. Students at these campuses are taught by NMSU School of Nursing faculty, attend didactic courses with main campus students, and complete clinical rotations in their local hospitals and community health centers.

The Nurse Expansion program at NMSU supports the State's workforce needs and helps address the predicted US and regional nursing shortage as outlined in the U.S. Registered Nurse Workforce Report Card and Shortage Forecast: A Revisit published in the May/June 2018 issue of the American Journal of Medical Quality. The article states that "a shortage of registered nurses is projected to spread across the country between 2016 and 2030. In their state-by-state analysis, the authors forecast the RN shortage to be most intense in the South and the West." Meanwhile, the American Association of Colleges of Nursing 2021 Employment of New Nurse Graduates report states that 77% of employers state a preference to hire nurses with the BSN degree due to research demonstrating improved patient outcomes when a higher percentage of BSN-prepared nurses are employed.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Nurse Expansion Objectives for FY24

- Increase BSN program enrollment in a sustainable manner, while maintaining required faculty/student ratios
- Increasing graduation and NCLEX-RN exam pass rates through enhanced student preparation and mentoring.
- Identify additional innovative and high-quality clinical training experiences for BSN students.
- Offer a 1-credit pre-nursing Freshman seminar to orient all incoming pre-nursing students to the university, BSN major, and nursing profession (~300 students per year = 10 course sections).
- Provide faculty with professional development in advances in teaching and learning, the new national guidelines in BSN education (The Essentials: Core Competencies for Professional Nursing Education, AACN, 2021) and the new NextGen NCLEX-RN exam.
- Support faculty in obtaining the Certified Nurse Educator certification from the National League for Nursing.
- Enhance advising and student support mechanisms for all BSN and pre-nursing students.
- Strengthen partnerships with campus programs that support pre-nursing students from diverse and disadvantaged backgrounds such as the College Assistant Migrant Program (CAMP).
- Support a nursing student success program, SON Cares, to increase BSN student retention, graduation, licensing exam pass rates, and provide career guidance.
- Support the operations of the newly remodeled Nursing Skills and Simulation Center (expected date of completion Fall 2024), with additional staff, systems, and innovative simulation programs that enhance clinical training for BSN students.
- Seek additional program funding through federal agencies such as the Health Research and Services Administration (HRSA).

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Major Accomplishments (Academic Year 2021-22)

- Maintained BSN program enrollment in AY 21-22 (154 in Las Cruces, 22 in Alamogordo, and 8 in Grants admitted to the BSN program).
- Graduated 152 BSN students across three campuses in AY 21-22.
- Selected an architectural firm to assist with the re-design of the School of Nursing's Skills and Simulation Center. The design phase is underway; with an expected construction start date of 07/2023 and construction completion date of 12/2024.
- Improved outreach and advising offered to pre-nursing students at all three campuses.
- Implemented a standardized patient pilot program (i.e., using patient actors) with our Level 1 and Level 2 students to better prepare them for their nursing clinical and community rotations.
- Developed additional partnerships with local and regional healthcare organizations to increase the number of clinical training sites used by the BSN program.
- Revised our BSN graduate NCLEX testing plan to address NCLEX pass rates including more NCLEX style questions in quizzes and exams in all levels, added NCLEX prep work to Level 5 students' Concept

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Synthesis course, purchased a 3-month UWorld subscription for all graduates, and offering mentoring sessions post-graduation to students who want additional NCLEX testing support and strategies.

- Maintained high student satisfaction with the BSN program as evidenced by course evaluations, exit/alumni surveys, and clinical site surveys.

**Challenges/Obstacles:**

- Faculty shortages continue to require that existing faculty assume overload teaching which could lead to burn out.
- Coordinating the advising and tracking of over 600 pre-nursing students with the NMSU Center for Academic Advising and Student Success.
- Maintaining a coordinated effort to support student success (both retention and NCLEX pass rates post-graduation) considering the number of faculty and existing workload requirements.
- Addressing gaps from our New Mexico Board of Nursing BSN program visit in the areas of limited lab space, equipment; improvements in our simulation program; and the use of standardized testing and student remediation for program improvements and NCLEX preparation.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The Nurse Expansion program at NMSU addresses Governor Lujan Grisham’s workforce priority to increase the number of registered nurses available to fill New Mexico’s critical vacancies. Since its inception in 2005, the Nurse Expansion program at NMSU has graduated over 2250 nurses. Currently, the program graduates approximately 150 new nurses each year. Over the past three years, between 75-80% of NMSU BSN graduates have sought initial licensing as an RN in New Mexico.

The School of Nursing is a founding member and active leader in the New Mexico Nursing Education Consortium (NMNEC) partnership, which has established a common nursing curriculum across the state so that colleges and universities can educate nurses at the BSN level. This initiative also allows colleges throughout the state to offer bachelor's degrees in nursing in their own communities - keeping more aspiring nurses in rural areas and ending the requirement that they move to an urban area to attain their higher education.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The College of Health, Education & Social Transformation obtained a \$400,000 donation from Blue Cross and Blue Shield of New Mexico in 2020 for nursing student scholarships and a 3-year Professor of Practice position for a nursing faculty. The goal of this professorship is to increase the number of BSN graduates in the region and state.

In FY22, the School of Nursing successfully concluded two mental health focused training grants (\$1.35 million HRSA grant and \$200,000 SAMHSA grant) geared towards improving the education and training for Nurse Practitioners in the prevention, identification, and treatment of opioid and other substance use disorders. Funds from these awards were not available to assist with the BSN enrollment growth and

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

program support outlined in this expansion request but did support faculty development in the areas of substance use disorders and telehealth/ telemedicine.

In April 2022, the School of Nursing submitted two NMSU Campus suicide prevention grant applications (one to HRSA which is under review and one to the NM HED which was funded). This funding will be used to increase awareness of suicide prevention resources and increase access to mental health care services on campus. However, these funds will not be available to support BSN enrollment or program activities.

**9. Accomplishment/ Highlights (bullet form)**

- NMSU continues to expand enrollment in the BSN program, while maintaining excellence in nursing education.
- NMSU provides a critical pipeline to a career in nursing for students from diverse and disadvantaged backgrounds.
- NMSU is a leader in nursing education in the state of New Mexico through the New Mexico Nursing Education Consortium.
- NMSU supports Governor Lujan Grisham and Workforce Solution’s efforts to address the nursing workforce shortage in New Mexico and expand the pipeline to healthcare careers that offer extraordinary opportunity for social and economic mobility to citizens of New Mexico.
- NMSU selected an architectural firm to assist with the re-design of the School of Nursing’s Skills and Simulation Center with an expected date of completion in Fall 2024 to support future expansion in enrollment for the School of Nursing.
- NMSU’s School of Nursing implemented a standardized patient pilot program with our Level One and Two students to better prepare them for their nursing clinical and community rotations outside the Skills and Simulation Center setting.
- NMSU’s School of Nursing maintains a high student satisfaction with the BSN program as evidenced by course evaluations, exit/alumni surveys, and clinical site surveys.

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	75%

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Nurse Expansion  
**Contact Name:** Alexa Doig, PhD, RN  
**Contact Email:** [adoig@nmsu.edu](mailto:adoig@nmsu.edu)

**FY24 Request**

**\$1,981,200**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** To enhance student success and social mobility through a baccalaureate nursing education

RPSP Objective 1: NMSU Nursing majors will be successful at NMSU		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	First fall to second fall retention rate of nursing majors	93%	94%	95%	88%	90%	90%	90%	90%	90%	90%	
2	Graduation rate of nursing majors	88%	92%	90%	88%	90%	90%	90%	90%	90%	90%	National accreditation benchmark = 70%.
3	NCLEX pass rate	80%	76.3%	80%	73%	90%	90%	90%	90%	90%	80%	National accreditation benchmark = 80%

RPSP Objective 2: Support minority and other underrepresented student populations in the Nursing program.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Percent of BSN enrollment of students from minority and under-represented backgrounds	68%	71%	65%	74%	60%	60%	60%	60%	60%	70%	

RPSP Objective 3: SON Cares Program supports student success		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Percent of BSN enrollment of students from minority and under-represented backgrounds	NA	NA	NA	NA	NA	NA	NA	NA	NA	80%	Contingent upon approved funding in FY24
2	Percent of students that receive at least one support service as identified on their individualized SON Cares plan.	NA	NA	NA	NA	NA	NA	NA	NA	NA	70%	Contingent upon approved funding in FY24

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Nurse Expansion  
**Contact Name:** Alexa Doig, PhD, RN  
**Contact Email:** [adoig@nmsu.edu](mailto:adoig@nmsu.edu)

**FY24 Request**

**\$1,981,200**

**NMSU LEADS 2025 Goal:** 3 - Amplify Extension and Outreach

**RPSP Goal:** To increase the pipeline of baccalaureate-prepared nurses for the state of New Mexico

RPSP Objective 1: Encourage BSN graduates to practice in New Mexico.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Percent of BSN graduates who practice in New Mexico	68%	81%	75%	75%	75%	70%	70%	70%	70%	75%	The SON is enhancing caree guidance and promotion on New Mexico employers.
2	Number of affiliation agreements for clinical agencies that host BSN students	NA	NA	NA	NA	NA	NA	NA	NA	NA	70%	Currently have 24 approved clinical sites.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Nurse Expansion - NMSU Total: **\$ 1,981,200.00**

Budget verses Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 105,211.25	\$ 100,000.00	\$ 205,211.25	
<b>Appropriations</b>				
Federal		\$ -	\$ -	
State plus Tobacco Settlement Fund	\$ 946,200.00	\$ 1,035,000.00	\$ 1,981,200.00	SB1 100K included in FY23. Total recurring base should be \$946,200.
Local		\$ -		
<b>Total Appropriations</b>	\$ 946,200.00	\$ 1,035,000.00	\$ 1,981,200.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 946,200.00	\$ 1,035,000.00	\$ 1,981,200.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	FY23 FTE	Change FTE	FY24 FTE	
Faculty Salaries		13.24	\$ 1,146,845.25	
Professional Salaries		4.12	\$ 258,949.96	
Other Staff Salaries		2.97	\$ 101,531.42	
Student Salaries (GA/TA)		1.49	\$ 60,000.00	
Other Salaries		0.00	\$ -	
<b>Total All Salaries</b>	0.00	\$ -	21.82	\$ 1,567,326.63
Fringe Benefits			\$ 406,442.00	
Travel			\$ 1,997.62	
Utilities			\$ -	
Institutional Support Charges			\$ -	
Plant Operation and Maintenance Charges			\$ -	
Supplies and Expenses			\$ 846,200.00	
Equipment			\$ -	
Other Expenditures			\$ 210,645.00	Software & licenses
<b>Total Expenditures</b>	0.00	\$ 846,200.00	21.82	\$ 1,340,211.25
<b>Ending Fund Balance</b>		\$ 205,211.25	\$ (205,211.25)	\$ -

# College Assistance Migrant Program (CAMP)



2022

BE BOLD. Shape the Future.

## College Assistance Migrant Program (CAMP)

FY 23 Actual: \$297,900  
FY 24 Request: \$297,900  
Change: \$0

### NMSU CAMP Mission

To serve the postsecondary educational needs of eligible farmworkers, dairy workers, and ranch workers across New Mexico by recruiting and retaining them until their graduation at NMSU.



Sheyla Gutierrez and Daniel Grajeda  
Spring 2022 Graduates

## Successful Practices

CAMP provides farmworker students with individualized educational planning, academic advising, and financial assistance. It also provides book stipends, tutoring, mentoring, leadership conferences and multiple STEM workshops throughout their first year.

After their freshman year, students apply for limited book stipends and financial assistance for internships and other career related opportunities. CAMP helps students with resume writing, mock job interviews, job portfolio development, and career readiness.

All CAMP students have access to a CAMP computer lab, a study area, laptops and graphing calculators.



Daniela Devora, Lisandro Galvan, Abigail Diaz  
Spring 2022 NMSU CAMP Graduates

### NMSU **CAMP's** Impact in New Mexico

- Nearly 70% success rate includes graduates and students enrolled in SP 2022
- Approximately 70% of CAMP graduates are professionals in New Mexico **contributing to the State's** workforce engine.
- NMSU CAMP fulfills **NMSU's** land-grant mission of serving traditionally underserved populations across New Mexico.
- NMSU CAMP outreach and recruitment occur across New Mexico, reaching 200-300\* prospective students to determine eligibility. We visit families in rural communities, at college fairs, farms, dairies and ranches. We also work with NMSU Cooperative Extension.
- NMSU CAMP students are mostly Hispanic, first-generation college students, and Pell grant recipients.
- In 2022, NMSU CAMP has been awarded a five-year grant from the U.S. Department of Education, Office of Migrant Education for \$2,375,000 until 2027 .
- State funds are imperative in leveraging the over \$10 million awarded in federal funding from 2002-2027.

\*Due to COVID, outreach events & activities were limited.

## CAMP Focus on STEM-H

Since 2012, CAMP freshmen have been exposed to STEM programs at NMSU, in efforts to generate academic interest in the following:

- Alliance for Minority Participation (AMP)
- Maximizing Access to Research Careers (MARC)
- Science Engineering Mathematics and Aerospace Academy (SEMAA)
- Medicinal Plants Research Internship Program (MPRI). Each summer, six to eight CAMP students participate in this research internship (as funds are available)
- NMSU Civil Engineering Bridge Inspection Program (BIP). One to three CAMP students participate in this internship each summer (as funds are available)



## NMSU CAMP peer mentors help retain students at NMSU

NMSU CAMP has a successful peer-mentoring program: COMPAS (Cultivating Opportunities through Mentoring and Promoting Academic Success). First-year students are paired with CAMP upper-class students throughout their first year of college. COMPAS help freshmen with intensive advising, peer mentoring, tutoring, and overall peer guidance. This program works as a retention tool for both freshmen and upperclassmen.

### Recruiting, retaining, and graduating farmworker students since 2002: CAMP Quick Facts (as of May 2022)

- Recruited: 563 students have participated in NMSU CAMP, including 97 sets of siblings.
- Retained: 125 students are currently enrolled as undergraduates, 7 are working on a master's degree, 1 on an Ed.D., 2 on a Ph.D.
- Graduated: 252 students have graduated with a bachelor's degree, 42 with a master's degree, 2 with a Ph.D., 1 with a M.D., 2 with a J.D., 1 with an Ed.D., and 54 have completed an associate's degree.
- NMSU CAMP success rate for graduates and currently enrolled students is nearly 70%. Freshmen retention rate for the academic year 2021-2022 was 91%, above our national goal.
- 30 freshmen from across New Mexico will begin their 2022-2023 academic year this Fall 2022.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	College Assistance Migrant Program

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$297,900

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$297,900

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	16
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**2. Project Description / Executive Summary:**

NMSU CAMP specifically serves the educational needs of eligible U.S. citizen and permanent resident farming, dairy and ranch workers from across New Mexico. NMSU CAMP recruits, retains and works to graduate economically disadvantaged students and provides them with professional preparedness training and student leadership opportunities. CAMP students are underrepresented, first generation college students (mainly Hispanic and Pell Grant recipients [99%]). Students major across all disciplines and majors at NMSU, and freshmen are specifically exposed to several NMSU STEM based programs to generate scientific interest and STEM majors. At CAMP, students receive outreach, mentoring, stipends, leadership orientations, preparedness courses, research experiences, and job readiness and internship opportunities when funding is possible.

State funding will help retain students with hands-on STEM experiences and research-related activities including professional and job preparedness and leadership opportunities. State funding also supports efforts to leverage federal funds for programming (over \$10 million since 2002), which increases graduation rates, post-graduate studies, internships, and contributes to the professional workforce in New Mexico including graduates paying it forward as professionals (i.e. as keynotes, monthly speakers, professional mentors, advisory board members, etc.).

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Funds are necessary to accomplish program goals, objectives, and retention initiatives for students until their graduation/degree completion. Support services and financial support (book stipends and scholarships) will be awarded to upperclass students as funds are available. Research and internship programs within New Mexico will help students with job preparedness and career readiness. State funds have consistently strengthened our federal funding, and overall retention of students. This summer 2022, NMSU CAMP received federal funding for an additional five years (2022-2027) in the amount of \$2.375 million from the U.S. Department of Education. This is due in part to the RPSP state funding (federal dollars are only for freshmen; RPSP funding functions to retain students through their graduation). RPSP funding continues to be critical for leveraging federal funds to NMSU.

**4. Program Mission (include population served, other demographic info):**

NMSU CAMP's mission is to serve the educational needs of eligible farm workers, dairy workers and ranch workers from across New Mexico by recruiting, retaining and graduating them from NMSU.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

All project objectives address Academics, Graduation and Diversity, as well as Workforce Development activities. Program objectives will function to recruit, retain, and support continuing students beyond the freshmen year, and will work to increase and/or maintain a freshmen cohort of 30 incoming students through outreach and other related activities conducted until their graduation.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- CAMP has generated over \$10 million in federal dollars for NMSU through the U.S. Department of Education for freshmen retention purposes. RPSP funding has made it possible to leverage federal dollars.
- CAMP serves first generation, mainly Pell Grant recipient students (99%) ranging from first generation to fourth generation New Mexicans working on small farms to large-scale dairy, ranching, and agricultural operations across New Mexico.
- Since 2002, 563 students have participated in the NMSU CAMP program including 97 sets of siblings.
- 38% of our CAMP students graduated from NMSU between 4-4.5 year; 3% in 3-3.5 years; 35% in 5-5.5 years; and 24% in 6+ years.
- As of Spring 2022, 73% of CAMP students were enrolled at NMSU and/or have graduated since 2002.
- As of May 2022, 54 students have an Associates; 252 have a Bachelors; 42 have Masters degrees.
- 7 students are currently pursuing Masters degrees at NMSU and 2 are completing dissertations in engineering at NMSU after participating in a Masters Accelerated Program; 1 student is completing her doctorate in education degree through an on-line program (but she has her own business in NM).
- Our first medical doctor works at UNM Hospital; two students completed a PhD from NMSU and work in academic settings (out-of-state). One graduate is an Education Specialist (Bilingual Counseling and Psychology) working in New Mexico. We now have two Juris Doctorate recipients, both graduates of UNM Law school--one opened his private practice in Las Cruces and the other just graduated and is returning to southern NM/EI Paso region to work at a non-profit.
- The Civil Engineering Department's Summer Bridge Inspection Program (BIP) internship/CAMP partnership served 1 CAMP student in FY21. In FY22, there were no CAMP engineering students who completed the pre-requisite courses required to participate in BIP. This 6-week program includes 2 weeks of coursework and 4 weeks of field work across NM. In FY23, at least 2 students will be eligible to apply to BIP.
- The Medicinal Plants Summer Research Internship Program, which served 8 CAMPers who conducted research in a NMSU research lab, presented their work successfully during FY21. In FY22, the faculty member we partnered with retired; her replacement was on medical leave. We are planning next summer's

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

research experience with the new faculty member to guide a minimum of 8 CAMPers in this research experience.

- 83 book stipends were awarded and 23 students received CAMP financial assistance to decrease their student account balance. The additional Junior Bill funding not only allowed us to pay and place CAMP interns in the community, but also allowed us to provide scholarships to 41 students. These students were able to pay the majority of their student account balance, cancel student loans, and cover emergency expenses that arose this FY22. With this support, we were also able to award tuition scholarships to two students who, after 10 years, have returned to complete their bachelors, one of which completed his bachelor's degree in December and is now a full-time teacher with Deming Public Schools.
- 10 students were also part of the CAMP Internship Program throughout the FY22. They were placed with a variety of partners across the Las Cruces and university community.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

NMSU CAMP fosters the economic growth of professionals working in New Mexico by preparing a diverse and educated workforce that is competent and highly qualified. Students are prepared to work in a competitive workforce at the state, national, and international levels. The vast majority of our students are bilingual and bicultural which are additional traits needed for a changing demographic environment and majority-minority state. CAMP also works to increase the educational level and earning power of New Mexicans, and to increase extension and outreach services that stimulate economic, social, education and community development across New Mexico. These efforts also benefit hard to reach rural and farmworking communities. NMSU CAMP recruits students statewide to provide New Mexico residents with access to postsecondary education, and opportunities to become professionals in their desired fields, and ultimately to return to their local communities to work (CAMP students traditionally desire to return to their hometowns across New Mexico to work, or choose to stay in New Mexico to remain close to their families). They have also proven to give back to their communities through volunteerism; approximately 70% of NMSU CAMP graduates work throughout New Mexico in various careers such as teachers, scientists, engineers, criminal justice professionals, accountants, agricultural specialists, and nurses, while contributing to the state's economic developmental goals. We invite graduates to return to NMSU as speakers and professionals in their field to present to our students. \*Student's Outcomes are noted below under "Accomplishments."

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Since 2002, NMSU CAMP has received federal funds from the U.S. Department of Education through competitive grants. This month of June 2022, we secured \$2.375 million in federal funding until June 30, 2027 (there were 40 applicants and only 11 were funded including ours). We also have two endowed scholarships and one memorial scholarship fund through the NMSU Foundation in which at least 5 scholarships are awarded to CAMP students each academic year. In FY22, CAMP received over \$180,000 from the American Rescue Plan: Higher Education Emergency Relief Funding for student technology needs (all funding was spent).

**9. Accomplishment/ Highlights (bullet form)**

- In 2021-2022, we celebrated 20 years of serving farmworking students at NMSU beginning with an art installation titled "Mariposas Campesinas," where CAMP art major, Jesus del Rio created an outdoor installation of over 300 butterflies that were then delivered to farmworkers in the fields with messages of gratitude (local newspapers and NMSU's Panorama magazine wrote about this). This was followed by our sponsorship of the 2022 social justice symposium.

**9. Accomplishment/ Highlights (bullet form)**

- In 2022, for the second year in a row, CAMP virtually co-hosted the annual NMSU J. Paul Taylor Social Justice Symposium. The theme was “Cultivando el Futuro/Cultivating the Future: Celebrating CAMP’s 20<sup>th</sup> Anniversary.” All CAMP students, partners and the community at large were invited to attend the 2-day virtual event. The first-day was a panel of 6 NMSU CAMP Graduates from across the country who shared their story “From Campos to College to Career.” The second day was a keynote presentation by Dolores Huerta followed by a Q & A session. The CAMP Student Council and CAMP Ambassadors also promoted the Butterfly Project educating and engaging the community on the work and needs of farmworkers..
- Since 2002, 563 students have participated in the NMSU CAMP program, including 97 sets of siblings.
- 252 students have graduated with a Bachelors degree; 42 with a Masters degree; 2 with a PhD and 3 are currently working on their PhD/EdD; 2 with a JD; one former student is an MD. One CAMP graduate is an Education Specialist in Bilingual Counseling and Psychology working in Southern NM. We periodically have our graduates return to give workshops or public presentations to our current students and their families. Two former CAMP students, now a CPA/partner in an accounting firm and a social worker/advocate for NM migrant education, sit on our advisory council; another professional CAMPer will join our board in fall 2022.
- 54 students have completed an Associates degree.
- Average GPA of CAMP graduates (Bachelors) is 3.20.
- 83 book stipends were awarded and 23 students received CAMP financial assistance to decrease their student account balance. The additional Junior Bill funding not only allowed us to pay and place CAMP interns, but also allowed us to provide scholarships to 41 students. These students were able to pay the majority of their student account balance, cancel student loans, and cover emergency expenses that arose this FY22. With this support, we were able to award tuition scholarships to two students who, after 10 years, have returned to complete their bachelors. One of those students completed his bacherlos degree in December and is now a full-time teacher with Deming Public Schools.
- 10 students were part of the CAMP Internship Program throughout the FY22. They were placed with a variety of partners across the Las Cruces and university community with possible future employment.
- CAMP is the only year-long academic program focused on at-risk farmworker students at NMSU. We have a strong partnership with the State Migrant Education Programs (MEP) across NM that led to our first MEP days at NMSU in May 2022, where 8-12th grade MEP students from Gadsden and Las Cruces toured NMSU. We also work with farmworker advocate stakeholders like NMSU’s Cooperative Extension Services.
- A series of virtual events and in-person visits took place this year for students and community in an effort to recruit the 21<sup>st</sup> CAMP Cohort and to promote the program and access to services for farmworkers.
- In FY22 we were able to celebrate the Fall 21 and Spring 22 graduates in person alongside their families. We were also able to hold our first in person CAMP First Year Graduation.

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** College Assistance Migrant Program  
**Contact Name:** Dr. Cynthia Bejarano  
**Contact Email:** [cbejaran@nmsu.edu](mailto:cbejaran@nmsu.edu)

**FY24 Request**  
**\$297,900**

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Recruit, retain, and support students from migrant farmworking backgrounds each academic year.

RPSP Objective 1: To support and retain freshmen from migrant/seasonal farmworking backgrounds for their first year		Measure Results				Measure Targets						Comments ( <i>Briefly state your case</i> )
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of incoming students in the freshmen cohort	30	33	30	30	30	31	30	30	30	30	In FY21, 30 new freshmen were served.
2	First fall to second fall retention of freshmen served	93%	97%	97%	93%	80%	80%	80%	80%	90%	90%	Of the 30 freshmen in FY 21, 29 enrolled in FA 22.
3	Number of freshmen assigned to the CAMP Living Learning Community in campus housing	18	20	8	22	30	30	15	20	15	20	Due to the COVID pandemic and the majority of courses being held online, the majority of CAMP students did not live on-campus in FY21.
4	Number of freshmen assessed for Math and English proficiency levels	30	33	30	30	30	30	30	30	30	30	CAMP students proficiency is assessed using application writing samples, NMSU math placement exams, and ACT/SAT scores.
5	Percent of freshmen receiving tutoring services	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	In FY21, CAMP students attended virtual study hour sessions. FY22 goal was met via virtual and/or in-person tutoring.
6	Number of family involvement partnership meetings (with students' families) conducted	4	4	4	4	4	4	4	4	4	4	In FY22 we were able to host virtual and in person family meetings.
7	Number of freshmen provided with summer STEM research experiences (Medicinal Plants Research Program and Engineering Bridge Inspection Internship)	8	1	9	0	6	6	10	6	6	10	FY 21 we had only 1 student who met course pre-reqs for Bridge Inspection program. FY22 no current CAMP students met pre-reqs. Med.Plants faculty no longer at university. FY23 we will have new partners overseeing research programs.
8	Number of freshmen exposed to university STEM partner programs throughout the academic year	30	33	30	30	30	30	30	30	30	30	The first-year freshmen were exposed to STEM partner programs throughout the academic year.
9	Number of community organizations contacted for recruitment and community engagement	14	14	20	28	10	10	10	10	10	10	Virtual sessions in FY21 allowed us to exceed our target. In FY21, a combination of in-person and virtual events took place.

**Research and Public Service Projects (RPS)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPS Title:** College Assistance Migrant Program  
**Contact Name:** Dr. Cynthia Bejarano  
**Contact Email:** [cbejaran@nmsu.edu](mailto:cbejaran@nmsu.edu)

**FY24 Request**

**\$297,900**

RPS Objective 2: To support and retain students beyond their freshmen year until graduation		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPS Measures:</b>												
1	Percent of all CAMP alumni students who continue in their 2nd - 4th years in college.	74%	69%	70%	67%	67%	67%	67%	67%	67%	67%	Target was exceeded. Students were retained due to CAMP staff and peer support, resources and scholarships/stipends.
2	Number of retention seminars /workshops/activities conducted throughout the academic year	4	6	13	16	4	4	4	4	4	4	Target was exceeded. Workshops and activities were conducted primarily in virtual format.
3	Number of book stipends awarded to academically eligible CAMP upperclassmen	62	93	58	83	40	40	40	40	40	40	83 book stipends were awarded in FY22, an additional 64 scholarships were awarded to aid students with college costs.
4	Number of students graduated per academic year with a Bachelor's degree from NMSU	17	18	17	20	7	7	7	7	7	7	Target was exceeded. We continue to work with student to assist them with degree completion.

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPS Goal:** Promote and serve low-income students from first generation New Mexican families with migrant/seasonal farmworking backgrounds

RPS Objective 1: Increase access and educational opportunities for low-income, first generation migrant/farmworking students across New Mexico		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPS Measures:</b>												
1	Number of low income, first generation (CAMP) students enrolled in the academic year	129	140	126	119	75	75	75	75	90	90	Target was exceeded. Students w/ most need continue to be recruited due to CAMP support and resources.
2	Number of seminars/workshops/outreach activities conducted in key remote, recruitment areas	40	40	75	55	25	25	25	25	25	25	Target was exceeded. Outreach activities were conducted virtually and in person throughout the year.
3	Number of high schools across New Mexico contacted	30	30	30	30	30	30	30	30	30	30	Target was met. Schools were contacted and CAMP information was shared.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 8,875.00	\$ 21,962.00	\$ 30,837.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 297,900.00	\$ -	\$ 297,900.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 297,900.00	\$ -	\$ 297,900.00	
<b>Grants and Contracts</b>				
Federal	\$ 475,000.00	\$ -	\$ 475,000.00	CAMP Fed Grant, FY 24, Yr 2 of 5
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ 475,000.00	\$ -	\$ 475,000.00	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 772,900.00	\$ -	\$ 772,900.00	
<b>Transfers (to) from</b>				
Instruction and General	\$ 11,820.00	\$ (11,820.00)		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ 11,820.00	\$ (11,820.00)	\$ -	
<b>Expenses</b>				
	<b>FY23 FTE</b>	<b>Change FTE</b>	<b>FY24 FTE</b>	
Faculty Salaries	0.26 \$ 22,000.00	0.03 \$ 3,000.00	0.29 \$ 25,000.00	Summer programming sal.
Professional Salaries	3.44 \$ 216,302.00	0.12 \$ 7,562.00	3.56 \$ 223,864.00	\$10K to sal for mgmt of state funds
Other Staff Salaries	0.03 \$ 1,000.00	0.28 \$ 9,661.00	0.31 \$ 10,661.00	Temp Data Analyst
Student Salaries (GA/TA)	1.72 \$ 52,446.00	(0.56) \$ (5,587.00)	1.16 \$ 46,859.00	GA, Peer Mentors, Student office staff
Other Salaries		0.00 \$ -	0.00	
<b>Total All Salaries</b>	<b>5.45 \$ 291,748.00</b>	<b>-0.13 \$ 14,636.00</b>	<b>5.32 \$ 306,384.00</b>	
Fringe Benefits	\$ 82,210.00	\$ 7,334.00	\$ 89,544.00	
Travel	\$ 33,511.00	\$ (5,987.00)	\$ 27,524.00	Student & staff travel, outreach
Utilities		\$ -		
Institutional Support Charges	\$ 9,700.00	\$ 15,300.00	\$ 25,000.00	Estimated fed grant IDC
Plant Operation and Maintenance Charges		\$ -		
Supplies and Expenses	\$ 345,589.00	\$ 9,696.00	\$ 355,285.00	
Equipment		\$ -		
Other Expenditures		\$ -		
<b>Total Expenditures</b>	<b>5.45 \$ 762,758.00</b>	<b>-0.13 \$ 40,979.00</b>	<b>5.32 \$ 803,737.00</b>	
<b>Ending Fund Balance</b>	\$ 30,837.00	\$ (30,837.00)	\$ -	

**BE BOLD. Shape the Future.**

**FY23 Actual: \$1,141,300 recurring**  
**FY24 Request: \$1,341,300 recurring**  
**Change: \$200,000 expansion**



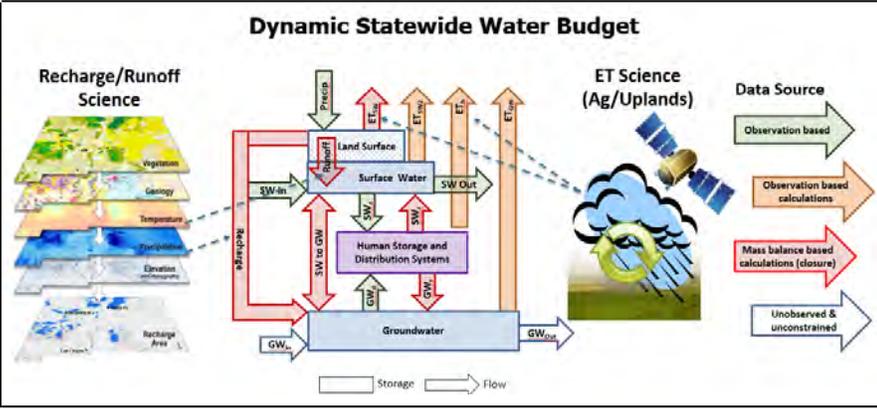
New community hydrology on-the-ground water resilience research in three regions facing water storage crises typical to the Southwest.

### Cutting Edge Science to Meet User Needs with the Dynamic Statewide Water Budget (DSWB)

- The DSWB provides an integrative view of water resources and user-defined future scenarios; and supports local, regional, and statewide water planning.
- The model includes future scenarios for population growth, agricultural, municipal and industrial water-use efficiency, and management decisions for protecting water in NM.
- The DSWB is an evolving tool used in community conversations with public and private entities to educate on the state's water budget and future resilience.
- An offshoot model is used for stakeholder engagement for drought planning in the Hatch-Mesilla Valley.
- Collaborators of the DSWB include: NMSU, NM WRRI, State of NM, NMT, UNM, USGS, OSE, SNL, NM EPSCoR, TT, BoR, NSF, ISC, NMBGMR, EPA.

### Expansion Request for Community Hydrology Project

- NM WRRI researcher and stakeholder collaborations create opportunities for new technology and irrigation alternatives to mitigate drought. This program makes water data available to community stakeholders such as acequia irrigators, researchers, community planners, and ranchers, who need up to the minute research information for their water management needs.
- The new project supports research on watershed restoration to recharge groundwater and help community agriculture.
- Funds will be used to support water resilience research on surface water and groundwater as communities continue to face issues related to water scarcity and drought. New study areas include: San Juan River Region; northern NM Rio Grande Region; pueblos and nations; and multiple acequia communities.
- Ongoing study areas for community hydrology research include: Rio Hondo (real time acequia flow information system); Central NM (rancher soil moisture and vegetation monitoring and research); Lower Rio Grande (dual drip and flood irrigation research); and Rincon Arroyo (community stakeholder-driven rangeland watershed restoration).
- Provides development of management scenarios that can increase resilience for farmers and ranchers.

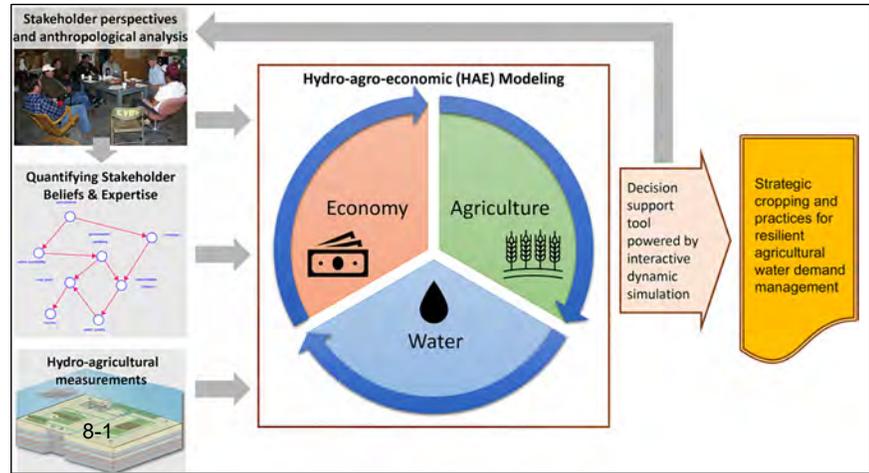


Schematic representing the DSWB with contributing science.

### Groundwater Conservation

- Works with farmers, water managers, and other stakeholders to identify strategic cropping and practices for water demand management;
- Assesses the impacts of these alternative agricultural land use strategies on water budgets and agricultural economies.
- Creates water sustainability by conserving groundwater through reduced pumping; improving environmental quality and reducing dust storms; supporting farmer livelihoods by informing sustainable groundwater management; connecting river valley water to NMDSWB and 50-Year Water Plan for resilience

### Stakeholder-Driven Decision Support Model for Groundwater Conservation



## New Mexico Universities Produced Water Synthesis Project

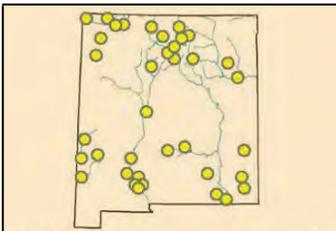
- Understand the implications of the millions of barrels of produced water generated annually from the oil and gas industry on NM's water budget under various management strategies (i.e. treated reuse for agriculture, hydraulic fracturing, mining, energy production, and regional water agreements).
- Applies a novel hybrid systems modeling approach that incorporates: treatment technologies; spatial variation of produced water volumes; impacts from injection; and, the legal and regulatory implications of the recent Produced Water Act.
- Develops graduate students for positions within the oil and gas industry.

## A Long History As New Mexico's Water Institute

NM WRRI (est. 1963) supports water research for improved water management. It is one of 54 national water institutes supported by the USGS (US Water Resources Research Act), is the water research institute of NM (Statute NMSA 1978 21-8-40), and has received NM General Fund support for 53 years.

## Harnessing Research to Support New Mexico's Water Future

- State funding to advance NM WRRI's mission to conduct research and disseminate knowledge that solves water resources problems.
- Tap into the brainpower of the state research universities to make advances in critical areas of water-related research.
- Strengthen the development of resilience strategies and dissemination of the NM Interstate Stream Commission's 50-Year Water Plan.
- In FY21, NM WRRI leveraged funding from external sources in the amount of \$846K.
- Support workforce and economic development by providing hands-on experience in the lab and field giving students the skill sets needed to successfully complete degree programs and move into NM's job sector.
- FY21 and FY22 provided a total of 26 student water research awards across the state supporting at least 57 students.
- Faculty seed grants help pave the way for additional research and funding.



*NM WRRI supports water-related projects throughout the state*

## Some Recent Efforts by Students:

- Mitigation of Harmful Algal Blooms Using Modified Clays
- Sequential Isotopic Determination of Actinides in Water
- Wastewater treatment and water recycling through use of byproducts from hydrothermal liquefaction of food waste
- Living with Water-Insecurity: How do people adapt and cope with poor water quality and access?
- Sediment Transport Management in New Mexico's Water Systems Using CFO Platform Flow 3-D Code
- Techno-Economic Analysis to Determine Cost of Atmospheric Water Capture Technologies
- Nesting Ecology of the Rio Grande Cooter on the Black River, New Mexico
- Quantifying groundwater to surface water exchanges in the Belen reach of the MRGCD
- Hydrogeochemical Analysis of Springs in the Cibola National Forest
- A Comparative Legal and Policy Analysis of the Nile and Rio Grande Basins



## Informing Water Management for New Mexico's Economy

- Every sector of NM's economy, including jobs, education, culture, and health relies on available and good quality water.
- NM WRRI provides opportunities for students statewide to become the next generation of water professionals addressing NM's water issues.
- Helps communities and water agencies better plan and manage water, protect acequias, avoid lawsuits, save water with crops, avoid water shortages, and improve watersheds.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Water Resources Research Institute

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$1,341,300

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$1,141,300

Type of Project (X for Type)			
Research <input checked="" type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

N/A

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	53
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**2. Project Description / Executive Summary:**

Since its creation in 1963, NM WRRI has been the state's nucleus for coordinating water resources research among university faculty statewide. Due to the continuing need for research and training related to water scarcity and other critical water issues in New Mexico, NM WRRI has received Research and Public Service Project general fund support for 53 years. NM WRRI will continue to work to provide new tools for addressing New Mexico's myriad water problems. Continued support by the New Mexico State Legislature has allowed for the ongoing development and expansion of powerful tools to account for existing water in New Mexico.

The institute is operationalizing critical work to develop a Statewide Water Assessment that complements the existing state's tabulations every five years of water use attached to water rights. The NM WRRI recently updated the New Mexico Dynamic Statewide Water Budget (NMDSWB) model to include input data for the historical period by addition of the Water Use by Categories report released in 2019 by the NM Office of the State Engineer. This new version of the model is available on the NM WRRI website. The model synthesizes water supply and demand information; provides easy to access data at a variety of spatial scales (county and/or water planning regions); produces a holistic view of water resources and user-defined future scenarios; and supports local,

## **2. Project Description / Executive Summary:**

regional, and statewide water planning. Recurring funding continues to support the NMDSWB responding to stakeholder needs for quantitative data providing future scenarios for population growth, Ag and M&I water-use efficiency, and management decisions for protecting water in New Mexico. In collaboration with its partners, including the New Mexico Interstate Stream Commission to develop the 50-year Water Plan, tasked by Governor Michelle Lujan Grisham, NMWRRRI has continued to expand its statewide water planning and management efforts for water resiliency.

Continuing funding and FY24 expansion request of \$200,000 will expand the Community Hydrology Program that funds field water budget equipment and faculty and graduate student research on NM surface water-groundwater interactions in communities of northwest New Mexico, Upper Rio Grande, Central New Mexico, the Lower Rio Grande, Rincon Arroyo, and other critical sites. The Community Hydrology Program also supports research on watershed restoration to recharge groundwater and support community agriculture. NM WRRRI researcher and stakeholder collaborations create opportunities for new technology and irrigation alternatives to mitigate drought. The Community Hydrology Program makes water data available to community stakeholders who need up-to-the-minute research information for their water management needs: 1) Acequia irrigators in northern NM use a real-time data website to manage water sharing; 2) researchers and farmers in the LRG developed a dual drip and flood pecan irrigation system ; 3) researchers and community planners in Dona Ana and Sierra counties obtained federal funding for Rincon Arroyo watershed restoration to recharge groundwater and support agriculture; and 4) rancher stakeholders in central NM are able to access a real-time rangeland soil moisture monitoring system installed at NMSU Corona Range and Livestock Research Center.

State appropriations funding the expansion of weather stations throughout New Mexico are valuable to help NM WRRRI provide data for our modeling to build onto our Statewide Water Budget. NM WRRRI's partnership and collaboration with State Climatologist David DuBois will provide data needed to expand and build offshoot models for decision-makers and drought resiliency. The \$200,000 NM WRRRI expansion request will be used to provide integrated community resilient monitoring and research. These community research efforts will be improved with access to the new weather monitoring equipment recently funded by the state legislature.

General Fund assistance will continue to support the New Mexico Universities Produced Water Synthesis Project (NMUPWSP). The project's overall goal is to bring together experts in the areas of treatment technology, geochemistry, seismology, hydrogeology, policy, data management and analysis, stakeholder engagement, and system science to provide an independent understanding of the broad implications of produced water management decisions. Funded projects of the NMUPWSP will further examine: treatment technologies used for economically treating produced water; toxicity of produced water in New Mexico; current trends in volumes of produced water; surface deformation and increasing seismicity related to injection well disposal; the legal and regulatory implications of the recent Produced Water Act; assessment of current available data; and, the use of a hybrid spatial system dynamics model to understand the interconnections within produced water management. Because oil and gas production continues to increase, and more stringent regulations are limiting disposal options, the produced water management problem needs to be examined through the lens of water budgets and not only meeting the industry need. It works closely with three state agencies and complements the NMSU-NMED Produced Water Research Consortium. The NMUPWSP supports a multi-university coalition with NMSU, UNM, NMT, and NM WRRRI.

The General Fund supports: faculty and student water research grants statewide; coordination and data acquisition to obtain, process, synthesize, and deliver data; clean drinking water technology; and improved water management through enhanced water use estimates in agricultural areas starting with the Lower Rio Grande.

## **2. Project Description / Executive Summary:**

In FY23 NM WRRRI is initiating a new project, the groundwater conservation project. This project will work with farmers, water managers, and other stakeholders to identify strategic cropping and practices for water demand management. This project will assess the impacts of groundwater conservation on water budget and agricultural economies.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

NM WRRRI is requesting recurring funding of \$1,343,300, which includes a \$200,000 expansion request (described in more detail in the next paragraph). The RPSP request provides water budget equipment and salary for researchers, staff, graduate research assistants, and undergraduates; to fund faculty and student water research grants statewide; resolve important water issues; coordinate data acquisition to obtain, process, synthesize, and deliver data; improve water management; continue ongoing research and updates on the NMDSWB, New Mexico surface water-groundwater interactions and community hydrology in communities of the Upper Rio Grande, the Estancia Basin, the Lower Rio Grande, and other critical sites, such as northern NM, Dona Ana and Sierra counties, Rincon Arroyo, central NM, and NMSU Corona Range and Livestock Research Center; sustain the New Mexico Universities Produced Water Synthesis Project. Funding will provide continued support for recently initiated Groundwater Conservation Project, the expansion of the NM DSWB and Community Hydrology Projects, as well on the ongoing support of the Faculty and Student Water Research Grant Projects, and the New Mexico State Universities Produced Water Synthesis Project. State appropriations will also provide cash-match and leverage needed to meet the objectives and deliverables of recently externally funded projects pertaining to watershed restoration, drought resiliency, and sustainable agricultural water futures. State appropriations will also provide cost-share for projects supporting the governor's 50-Year Water Plan.

**NM WRRRI's expansion request of \$200,000 for its community hydrology program will increase actionable science useful for stakeholders.** Additional funding for field water budget equipment and graduate student staff to conduct the studies is proposed to provide critical applied research components to existing and proposed community water resilience projects. Existing funded projects currently plan to test alternative crops in three climatic regions, and proposed studies include watershed restoration, flood control, and aquifer recharge projects. The outcomes will be more robust data published in peer-reviewed manuscripts and technical reports to inform the development of management scenarios that can increase resilience for farmers and ranchers. These water budget studies will inform land managers of ranges of reasonable expectations and reduce uncertainties of the result of various strategies, e.g. the effect that an aquifer recharge project could have on groundwater levels. As well, this data would additional inputs which will improve the accuracy of the NM Dynamic Statewide Water Budget (DSWB) Regional Water and Community (RegWac) models, which are currently being developed to estimate the comparative long-term effect of alternative management strategies. Each element of the water budget would be measured at each site, precipitation inputs and weather data, surface water inflows and outflows, infiltration and recharge, and soil moisture retention. This funding leverages existing teams of professors and researchers to support these additional efforts.

## **4. Program Mission (include population served, other demographic info):**

The NM WRRRI was created in 1963 as a statewide program supporting the state's water research at NMSU, UNM, and NM Tech. In 2005, the state legislature gave NM WRRRI statutory authority (NMSA 1978 21-8-40). The institute was approved under the 1964 federal Water Resources Research Act and is one of 54 water institutes nationwide, with an institute in each state plus three territories and the District of Columbia. The 1964 law was introduced by NM Sen. Clinton P. Anderson and was modeled on the NM WRRRI. It is located at its land grant college and is the nucleus for coordinating water resources research in the state. The overall mission is to develop and disseminate knowledge that will assist the state and nation in solving water problems. Water managers and users throughout

**4. Program Mission (include population served, other demographic info):**

the area rely upon the institute for objective, timely scientific information, and new technologies for water management. Users and beneficiaries are local, city, and county government, local water agencies, water user organizations, state agencies, and New Mexico universities. NM WRRRI helps NM solve its water problems statewide; supports research at NMSU, UNM, NM Tech, Eastern, Western, Highlands and Northern NMC; applies research findings in small communities for local water supply sustainability; identifies new water sources such as untapped groundwater; identifies new technology for small communities to treat brackish groundwater; and develops a hydrological accurate and dynamic up-to-the-minute statewide water budget. The NM WRRRI has administered over 500 research projects; funded over 350 state faculty; provided training for over 2,650 university students; and produced over 431 technical and miscellaneous reports. FY24 funding will support the ongoing research on surface water and groundwater as communities continue to face issues related to water scarcity and drought, as well as improve NM's ability to respond to changing water conditions through an easily accessible Statewide Water Assessment, utilizing state-of-the-art data streams from remote sensing and new data networks to show current water conditions. The development of the statewide water budget includes the state's water use diversity: acequias, pueblos, groundwater extractors, river corridor users, and rangeland producers, among others. The statewide water budget project coordinates efforts among NM's water management agencies. The water budget resource will be made available to researchers to support cutting-edge multidisciplinary water research, and will include all water inputs and outputs to the state to enable hydrology-based water planning. A downloadable version of the dynamic systems model is available on the NM WRRRI website and enables scenario testing by planners and scientists for managing existing water and developing new water. Every sector of New Mexico's economy, including jobs, education, culture, and health relies on available and good quality water.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Research: NM WRRRI funding supports faculty and student water-related research at the state's major research universities and public four-year colleges thereby benefitting faculty and students statewide. It supports research in both water quality and water quantity, and in water planning, management, and coordination. NM WRRRI funding helps graduate degree programs primarily at NMSU, NM Tech, UNM, ENMU, and NMHU. The NM WRRRI will continue to administer water-related research and participate in collaborative research efforts, thereby complementing water research statewide and leveraging funds to attract federal and private funding.

Public Service: Limited water resources and current drought conditions in NM require the highest quality research to solve its water-related problems. For decades, the NM WRRRI has been a leader in water research. Ultimately, the citizens of NM are the primary beneficiaries of the services provided by NM WRRRI.

Teaching: Training undergraduate and graduate students at NM's universities is a core mission of the NM WRRRI and is instrumental in preparing students to become our future water resources scientists, technicians, and managers. Grants provide students with opportunities for hands-on experience in both the lab and in the field to better prepare them with the skill sets needed to successfully complete degree programs and move into New Mexico's job sector.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Eight years ago, water planning stakeholders requested better information on NM's water budget in order to ameliorate impacts of drought. NM WRRRI responded and built the NM Dynamic Statewide Water Budget (DSWB). The DSWB brings together over 30 million data points in a single easy to access tool that describes the major flows and reservoirs of water in NM. The DSWB helps counties, water planning regions, and the state access data that

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

were never before compiled in a single location, and it runs scenarios of future water supplies based on management decisions. The Statewide Water Assessment continues updates to the following two main projects:

- Comparison of Operational Precipitation and Evapotranspiration Products. The overall study goal is to develop a procedure for a cost-effective assessment of existing precipitation and evapotranspiration products at spatial and temporal scales needed by New Mexico's water resources managers. Specifically, objectives are: 1) Compare and contrast the five precipitation and three evapotranspiration products and quantify biases present over the entire state and over specific ecological climate zones; 2) Validate each product against reliable measurements; 3) Validate two existing methods for assessment of the reference ET for the New Mexico environment.
- The NM Dynamic Statewide Water Budget synthesizes water supply and demand information from across the state into a single, easily accessible location, and in such a way that users can view information at a variety of spatial scales. The DSWB provides a holistic view of water resources in the state, helping to support local and regional education as well as planning, to improve stewardship of New Mexico's limited and critically important water resources.

Research and creative activity to address local and global challenges are facilitated with the NMDSWB project, which involves one PhD student who updates and maintains the NMDSWB with the latest data from OSE and USGS including water use and hydroclimate data and evaluating the Drought Monitor Index using NMDSWB.

The NMDSWB project has also amplified the impact of research findings by addressing local needs that align with global challenges, some of the ways include:

- Comparing operational precipitation and evapotranspiration products for their usefulness at various spatial scales
- Developing interdisciplinary system dynamics models as offshoots of the New Mexico Dynamic Statewide Water Budget (NMDSWB) model
- Assessing local and regional data received from stakeholders, experts, and decision makers through the offshoot modeling process for accuracy and appropriateness for updating the NMDSWB
- Developing new drought index specific to climatic and physical conditions in New Mexico
- Providing online access to model and associated data to a large audience

The Community Hydrology Program offers a program tightly integrated with efforts related to research, service, and outreach. The program continues to support research on surface water and groundwater in the Upper Rio Grande, the Estancia Basin, and other critical sites where communities continue to face issues related to water scarcity and drought, elevate graduate education and provide experience with outreach by maintaining constant communication which connect university and local individuals and groups. This program continues to build a platform of trust with local communities relevant for implementing projects to address research questions. The Community Hydrology Program also supports research on watershed restoration to recharge groundwater and support community agriculture. NM WRRRI researcher and stakeholder collaborations create opportunities for new technology and irrigation alternatives to mitigate drought. The Community Hydrology Program makes water data

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

available to community stakeholders who need up to the minute research information for their water management needs: 1) Acequia irrigators in northern NM use a real-time data website to manage water sharing; 2) researchers and farmers in LRG developed a dual drip and flood pecan irrigation system ; 3) researchers and community planners in Dona Ana and Sierra counties and obtained federal funding for Rincon Arroyo and the Hatch and Mesilla Valley watersheds restoration to recharge groundwater and support agriculture; and 4) rancher stakeholders in central NM are able to access a real-time rangeland soil moisture monitoring system, which was installed at NMSU Corona Range and Livestock Research Center.

The Community Hydrology Program in the Rincon Sub basin fosters stakeholder collaboration on watershed restoration strategies that served as a pilot for the restoration on the scale of the Hatch and Mesilla Valley watershed. NM WRRRI is making connections with communities developing collaborative partnerships to reduce erosion from the uplands, which will reduce sediment in the flows to the downstream agricultural irrigation infrastructure and river system. This increases the efficiency of the surface water delivery system and reduces flooding risks in the Hatch and Mesilla Valley.

A Partnership with the Doña Ana Soil and Water Conservation District's Master Watershed Conservationist program through the Community Hydrology Program has 1) Equipped the citizens of New Mexico's lower Rio Grande watershed with the knowledge and skills to make informed decisions in the planning and management of the watershed, 2) Engaged and empowered volunteers to implement conservation projects that address one or more critical conservation issues in the region, and 3) Empowered volunteers to engage in leadership roles and organize educational efforts that promote the stewardship of the region.

Collaboration with Northern New Mexico stakeholders, specifically with New Mexico Acequia Association (NMAA) and partners has increased NM WRRRI's opportunity to respond to external funding opportunities. NM WRRRI and NMAA have partnered to submit funding proposals to build agricultural and water resilience. During group conversations conceptualizing ways to contribute to the ISC's 50-Year Water Plan, NM WRRRI conducted several events with NMAA. Throughout the course of these events, the NMAA was able to convene a steering committee that includes leaders from a soil and water conservation district, an extension agent, and regional executive leaders to help sustain the initiative long-term.

NM WRRRI strengthens public-private engagement by collaborating with stakeholders to establish a watershed restoration working relationship and securing approval for the installation of necessary monitoring equipment, watershed restoration practices, and implementation.

The New Mexico Universities Produced Water Synthesis Project builds upon and enhances the work of several previous and contemporaneous research projects on produced water. The spirit of this project is to synthesize the information produced by our expert multidisciplinary research team from the New Mexico Water Resources Research Institute (NM WRRRI), New Mexico State University (NMSU), New Mexico Tech (NMT), and the University of New Mexico (UNM). The researchers involved in this project were able to leverage the funding from other research projects for an overall higher impact research project. The main benefits of this project are an improved database with new produced water data and more thorough analysis of source and disposal formations, further assessment treated produced water reuse potential, and a novel modeling framework for bringing together typically disparate data for analyzing produced water management impacts on New Mexico's water budget. Built on multidisciplinary collaboration and industry knowledge, this collaborative research minimizes parallel efforts and allies the brainpower of New Mexico to seek consensual resolution for the salient produced water challenges. In FY22, three publications as a result of this project were released in peer-reviewed journals, with a fourth article

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

currently under review. The project has helped support the training of six graduate students, several of who gained positions through competitive interviewing processes. Both the industry and the PWRC have expressed a desire to continue collaborating with NM WRRRI and the NMUPWSP because of NM WRRRI's strengths in systems modeling, GIS, stakeholder engagement, and project coordination. Because oil and gas production continues to increase, while at the same time, more stringent regulations are limiting disposal options, it is important for the produced water management problem to be examined through the lens of water budgets and not only meeting the industry needs.

In FY23 a newly initiated project, the Groundwater Conservation has begun its proposed work with community stakeholders to assess the multifunctional impacts of land fallowing and alternative land use scenarios for the resiliency of New Mexico's river valley agricultural systems and their associated communities. The project's goal is to conserve groundwater by developing strategic cropping and practices for resilient agricultural land use strategies on water budgets and agricultural economies to long-term water supply. The complementary goal is to assess the impacts of these alternative agricultural land use strategies on water budgets and agricultural economies to assist farmers in realizing water demand reductions and support policy-makers in understanding policy effects. The expected outcomes of this collaborative research and projected impacts resulting from this project are: reduced water usage; improved environmental quality, e.g. reduced dust storms; supported agricultural communities to thrive and adapt; further developed ability to assess regional water management; addressed underlying water scarcity issues which are currently leading to conflicts. This project connects river valley water to the NM DSWB and the 50-Year Water Plan for resilience.

FY21-22 Provided 26 student water research awards across the state supporting at least 56 students. Significant beneficial impacts in communities, hands-on experience in the lab and field have provided students with the skill sets needed to successfully complete degree programs and move into NM's job sector. In FY21, 13 students supported by funding from the WRRRI completed their graduate degree programs.

FY21 funding supported 4 faculty and 1 staff researcher and 11 students. The faculty seed grants help pave the way for additional research and funding.

The Clean Drinking Water Technology project developed a working clay pellet technology to clean uranium from household water supplies, and the parameters and protocols for the fabrication of the clay technology have been established in the laboratory. Characterization of the clay materials used in these pellets ensuring the sequester of uranium to allow the removal of toxic materials from water is in its final stages, and a paper on this matter will be submitted for publication in the fall of 2022. Uranium adsorption is being analyzed as the clay from each region has unique properties that must be understood if each region is going to use the resources at hand. In addition to published results, the project is moving into the design phase to provide guidance for production of a marketable clay pellet water quality treatment product.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

The NMDSWB will develop public-private collaborative research and implementation projects with land managers in New Mexico to enhance community resilience.

Findings and analyses related to the Community Hydrology Program will help identify specific infrastructural problems and needs that must be targeted for more accurate data, and by involving non-scientist individuals into

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

the project introduces diversity of local knowledge, supports adaptive management, builds resilience, and addresses water resource risk management.

The New Mexico Universities Produced Water Synthesis Project works closely with at least three state agencies to inform solutions to water scarcity and water quality using technology and community involvement to better treat and utilize produced water. The NM research university expertise is complemented with private sector on-the-ground input to provide cutting-edge research for effective new approaches to produced water.

Clean Drinking Water Technology project is serving communities where the ability to obtain clean water persists, such as in the northwest corner of New Mexico.

The New Mexico Universities Produced Water Synthesis Project works closely with at least three state agencies to inform solutions to water scarcity and water quality using technology and community involvement to better treat and utilize produced water. The NM research university expertise will be complemented with private sector on-the-ground input to provide cutting-edge research for effective new approaches to produced water.

Preparing students to become NM's future water resources scientists, technicians, managers, and policy makers is central to the mission of the NM WRRI. Grants provide students with opportunities for hands-on experience in the lab and field and provide students with the skill sets needed to successfully complete degree programs and move into NM's job sector.

Students work under the guidance of accomplished and knowledgeable faculty researchers. Funding through NM WRRI allows faculty and students to present research results at regional, national, and international forums; to disseminate research results through academic and other publications; to secure additional funding from federal, state, and private sources thereby helping to retain students; and can also provide working positions with water agency staff allowing students entry opportunities into New Mexico's workforce. Many student recipients of NM WRRI grants are now established university faculty and federal laboratory scientists as well as technicians and experts at every level of local, state, and federal agencies. They are also well represented in private water-related industry.

These projects will gather, process, analyze, and deliver the data to NM communities for better water management based on their own community-provided needs.

The groundwater conservation project assesses the impacts of alternative agricultural water demand reduction strategies to assist farmers in realizing water demand reductions and support policy-makers in understanding policy effects. The output will be strategies for irrigated river valleys that show significant promise for farmer resiliency in New Mexico.

These projects will enhance the Governor's initiative on the Center of Excellence in Sustainable Food and Agriculture Systems by supporting water systems research to better integrate multidisciplinary research and applied solutions.

Water Resources Research Institute will support the Governor's 50-year water plan initiative through efforts to improve regional water planning based on stakeholder involvement in integrated water resources studies in collaboration with the Office of the State Engineer and the Interstate Stream Commission.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

NM WRRI assists faculty in obtaining support for their water-related projects from external sources and often administers these projects. During the period from July 1, 2021, through June 30, 2022, NM WRRI managed 20 externally funded awards. The institute administered 27 projects as a result of the 20 externally funded awards issued to NM WRRI. The primary research focus of the projects centered around water quality and water planning, and management issues. Agencies providing support included the National Science Foundation (NSF), U.S. Geological Survey (USGS), New Mexico Environment Department, U.S. Bureau of Reclamation, U.S. Department of Agriculture (USDA), Foundation for Food & Agriculture, Thornburg Corporation, Elephant Butte Irrigation District, Jornada Resource Conservation, New Mexico Produced Water Research Consortium, and the United State Environmental Protection Agency. Agencies award funding to researchers via the NM WRRI, which administers the projects. The institute director and staff participate in proposal development to secure funding whenever opportunities arise. These efforts are often multi-university and interdisciplinary projects.

In the past year, six proposals were developed which sought funding from Bureau of Reclamation, National Science Foundation, United States Department of Agriculture, and New Mexico Acequias Association.

**9. Accomplishment/ Highlights (bullet form)**

The SWA project continues to respond to stakeholders by providing quantitative information and data available for water planning across the state. The project continues to provide:

- a collaborative understanding of regional water dynamics through visualizations from the NM DSWB. Community conversations synthesize local knowledge for the vision, goals, vulnerabilities, and future needs related to water resilience included in the NM ISC's 50-Year Water Plan;
- a dramatically improved understanding of water availability for users in state;
- new water science that works for New Mexico;
- a better understanding of where future shortages might occur;
- better estimates for recharge, evapotranspiration, and groundwater storage change in NM;
- possible future water sources where surface water is not available;
- a coalition of private energy industry, local community stakeholders, university extension and research faculty, and project scientists and students working together to characterize produced water
- water quality by depth and location, water volume produced, and potential for use by municipalities and agriculture. This work will help show limitations and opportunities between the energy sector and water for both southeastern and northwestern New Mexico.
- a new participatory learning and innovation lab that brings together multiple interests around the topic of water for applied solutions and experiential learning.
- a new water tool based on the Dynamic Statewide Water Budget to assure water security in the future for the economy, agriculture, and communities. It will be an important part of the State Water Plan.

## 9. Accomplishment/ Highlights (bullet form)

- NM WRRRI the opportunity to continue to explore and act on relevant water activity for intersecting initiatives of healthy borders and US-Mexico border water management

The Community Hydrology Program contributes to community stewardship of the river by providing real-time access to stage, flow, and water temperature through a web interface. The Community Hydrology Program allows a pathway for co-developing new technologies such as dual drip and flood pecan irrigation systems using surface water and groundwater data to reduce drought. Collaborating with community planners and obtaining federal funding for watershed restoration to recharge groundwater and support community agriculture is another goal realized by the Community Hydrology Program. Meetings and workshops to deliver data to stakeholder groups for water management and planning needs were conducted and ongoing.

- Data delivered for user needs across the state is ongoing.
- NM WRRRI is addressing on-the-ground community member needs in Northwestern New Mexico, North Central New Mexico, Southern New Mexico, and Southeastern New Mexico.

The New Mexico Universities Produced Water Synthesis Project:

- Five projects at NMT, UNM, NMSU, and NM WRRRI are ongoing.
- Three technical completion reports have been published.
- Coordinated and collaborated on brackish and produced water research.
- Collaborated and supported the Produced Water Research Consortium Project, an NMSU and NMED partnership.

The Clean Drinking Water Technology Project:

- A large-scale experiment is underway to determine optimal firing parameters of the various clays used for treatment.
- The experimental design requiring modeling/mechanisms by which uranium is adsorbed to the clay pellets has begun.
- The technology is being recognized on a larger scale. The team is partnering with All Relations United, a non-profit organization from the Pine Indian Reservation in South Dakota

NM WRRRI achieved significant additional accomplishments in research, outreach, and education:

- NM WRRRI funded 15 students through the Student Water Research Program in FY21 and 11 students in FY22. Students supported through student and faculty water-related research across the state totaled 57. Twenty-five students provided final reports which are uploaded at [nm.wrri.edu](http://nm.wrri.edu). These students also presented results on their research findings at the NM WRRRI Annual New Mexico Water Conferences.
- In FY22, the cumulative number of water resources trained graduates who received funding from NM WRRRI was 12.

**9. Accomplishment/ Highlights (bullet form)**

- As part of mission to disseminate water research results, NM WRRRI published five peer-reviewed technical completion reports in FY22.
- Three hundred eighty-eight registrants attended the NM WRRRI 66th Annual NM Water Conference, which was held virtually in FY22. The conference hosts an informative two-day program and provides an outlet for researchers to share their ideas, and receive peer review on important water topics they are researching.
- NM WRRRI hosted four specialty conferences in FY21 related to transboundary groundwater at the US-Mexico Border, exploring adaptive water strategies for managing drought, the Gold King Mine spill, as well as a binational water education curricular development workshop. Total number in attendance at these conferences and workshops were 792.

**Medical Projects**

<b>10. How many graduates stay in practice in New Mexico</b>	N/A
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Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report

<b>RPSP Title:</b> Water Resources Research Institute <b>Contact Name:</b> Sam Fernald <b>Contact Email:</b> <a href="mailto:afernald@nmsu.edu">afernald@nmsu.edu</a>	<b>FY24 Request</b> <span style="border: 1px solid black; padding: 2px;"><b>\$1,341,300</b></span>
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**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Train next generation of water professionals

RPSP Objective 1: Provide funding to students and faculty for water-related research projects		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of student WRRRI Student Water Research Grants awarded	21	16	15	12	15	16	12	16	16	16	
2	Total number of students supported by the WRRRI Student Water Research Grants	45	36	41	15	15	16	12	16	16	16	
3	Number of students participating on Faculty Directed Graduate Student Research Program	12	7	11	8	3	3	3	3	8	8	

RPSP Objective 2: Report and presentation of student research projects		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of completed reports submitted by WRRRI Student Research Grant recipients	21	14.00	14.00	12.00	0	16	12	16	16	16	
2	Number of students who present results at WRRRI Annual Water Conference	62	45.00	52.00	30.00	15	30	30	16	30	30	

RPSP Objective 3: Water Resources Trained Graduates		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Cumulative number of students who graduate who receive funding from WRRRI	15	12	13	12	2	8	6	8	11	11	

**RPSP Title:** Water Resources Research Institute  
**Contact Name:** Sam Fernald  
**Contact Email:** [afernald@nmsu.edu](mailto:afernald@nmsu.edu)

**FY24 Request**  
**\$1,341,300**

**NMSU LEADS 2025 Goal:** 2 - Elevate Research and Creativity

**RPSP Goal:** Solving New Mexico's water problems through university-level research

RPSP Objective 1: Continue developing the Statewide Water Assessment (SWA)		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of project awards made	2	4	5	5	7	4	5	2	2	6	
2	Number of faculty and researchers funded on SWA projects	10	10	10	10	17	4	4	4	10	10	
3	Number of products (maps, reports, databases, models) produced	1 report 2 draft	2 reports 2 presentations	8 maps 6 reports	10 maps 5 reports	3 reports 1 db	3 reports 1 db	1+ reports 1 db	1+ reports 1 db	5 reports 2 db	8 maps 5 reports	Will be phased out in FY24 and going forward. The same measures are included individually below
4	Number of maps produced	9	9	8	10	NA	NA	4	4	10	10	
5	Number of reports produced	NA	NA	6	5	NA	NA	NA	1	5	5	
6	Number of draft reports	NA	NA	1	1	NA	NA	NA	NA	NA	1	
7	Number of databases produced or revised	NA	NA	2	1	NA	NA	NA	1	2	0	
8	Number of presentations	NA	NA	2	2	NA	NA	NA	1	5	12	
9	Number of models produced or revised	NA	NA	1	1	NA	NA	NA	1	2	1	
10	Number of project-oriented meetings held throughout state associated with SWA	4	10	1	20	6	4	12+	18	18	18	

RPSP Objective 2: Deliver data to stakeholder groups for water management and planning needs <b>New objective for FY20</b>		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	Meetings/workshops to gather stakeholder needs for quantitative data	0	40	40	35	N/A	3	10+	10+	35	35	
2	Information delivered for user needs across the state (presentations, documents, etc.)	0	17	23	15	N/A	3	3	3	110	110	

**RPSP Title:** Water Resources Research Institute  
**Contact Name:** Sam Fernald  
**Contact Email:** [afernald@nmsu.edu](mailto:afernald@nmsu.edu)

**FY24 Request**

**\$1,341,300**

RPSP Objective 3: Coordinate and collaborate on brackish and produced water research		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	Number of meetings/conference calls held throughout state related to brackish and produced water resources	3	10	47	20	12	4	4	4	20	20	
2	Number of awards made for brackish and produced water research	0	3	5	5	1	2	2	2	3	3	
3	Number of databases and models produced or revised	1 proposal	2 final draft reports including maps 3 progress reports	1 database update	1 model 1 database	5	2 reports 1 series of maps	5	5	4	4	
4	Number of proposals	NA	NA	5	5			NA	2	3	3	
5	Number of final reports	NA	NA	1	5			NA	2	3	3	
6	Number of draft reports	NA	NA	5	5			NA	2	3	3	
7	Number of maps produced	NA	NA	12	10			NA	2	10	10	
8	Number of Progress reports	NA	NA	2	5			NA	2	3	0	This is an internal measure and will be phased out for FY24 and going forward

RPSP Title: Water Resources Research Institute  
 Contact Name: Sam Fernald  
 Contact Email: [afernald@nmsu.edu](mailto:afernald@nmsu.edu)

FY24 Request  
**\$1,341,300**

RPSP Objective 4: Publish reports to disseminate water research results		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures												
1	Number of technical reports published by faculty	4	3	6	5	5	5	5	5	5	5	
2	Number of final reports by Student Grant recipients	21	13	14	15	15	16	12	12	15	15	
3	Number of conference proceedings produced	0	2	2	2	1	2	2	3	3	3	
4	Number of final reports associated with the Statewide Water Assessment posted on WRRRI website	1	4	6	4	1	3	2	2	2	2	
5	Number of special reports, often associated with sponsored conference or workshop	6	9	11	10	5	7	3	4	10	10	
6	Peer-reviewed Journal publications that address NM water issues published by WRRRI staff, postdoctoral researchers, and graduate research assistants	NA	NA	NA	10	NA	NA	NA	NA	12	12	
7	Proposals submitted to leverage funding	NA	NA	NA	8	NA	NA	NA	NA	8	8	

**NMSU LEADS 2025 Goal:**

**3 - Amplify Extension and Outreach**

**RPSP Goal:**

Disseminate knowledge to assist New Mexico in solving our water problem

RPSP Objective 1: Foster Statewide service and collaboration		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Number of meetings held with public and private entities to educate about the Statewide Water Assessment	5	6	22	25	6	6	6	6	25	25	
2	Number of "hits" to the WRRRI website	1,627	719	2,084	1,200	3,800	1,500	1,600	1,750	1,200	1,200	
3	Number of "NM Water eNews" produced annually	12	12	12	12	12	12	12	12	12	12	
4	Average number per month of NM Water eNews distributed	1,581	1,550	1,931	2,050	1,600	1625	1650	1800	1800	2000	

RPSP Objective 2: Promote NM WRRRI through conferences and workshops

Measure Results

Measure Targets

**RPSP Title:** Water Resources Research Institute  
**Contact Name:** Sam Fernald  
**Contact Email:** [afernald@nmsu.edu](mailto:afernald@nmsu.edu)

**FY24 Request**

**\$1,341,300**

RPSP Measures	Measure Results				Measure Targets						Comments (Briefly state your case)
	FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1 Number of annual Water Conference participants	277	270	540	350	250	250	250	250	310	310	
2 Number of specialty conferences/workshops offered	8	4	4	5	3	2	2	2	4	4	
3 Number of participants at specialty conferences/workshops	823	636	792	600	100	100	100	100	600	600	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 888,123.00	\$ (519,635.00)	\$ 368,488.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 1,141,300.00	\$ 200,000.00	\$ 1,341,300.00	Includes \$200K Expansion Request
Local		\$ -		
<b>Total Appropriations</b>	\$ 1,141,300.00	\$ 200,000.00	\$ 1,341,300.00	
<b>Grants and Contracts</b>				
Federal	\$ 577,156.00	\$ 253,403.00	\$ 830,559.00	SWF, TAAP, USGS, ORG
State	\$ 290,012.00	\$ (85,727.00)	\$ 204,285.00	NMED GKM & MV Watershed
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ 867,168.00	\$ 167,676.00	\$ 1,034,844.00	
<b>Private Gifts, Grants and Contracts</b>	\$ 288,835.00	\$ (21,857.00)	\$ 266,978.00	FFAR and LANL and SNL water conf sponsor
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>	\$ 95.00	\$ -	\$ 95.00	Water war books
<b>Other Sources - Detail in Comments</b>	\$ 8,000.00	\$ -	\$ 8,000.00	Conf. registraton fees
<b>Total Revenues</b>	\$ 2,305,398.00	\$ 345,819.00	\$ 2,651,217.00	
<b>Transfers (to) from</b>				
Instruction and General	\$ 78,000.00	\$ 7,000.00	\$ 85,000.00	Overhead recovery
Student Social and Cultural		\$ -		
Research	\$ (47,800.00)	\$ -	\$ (47,800.00)	Clean Drinking Water
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ 30,200.00	\$ 7,000.00	\$ 37,200.00	
<b>Expenses</b>				
	<b>FY23 FTE</b>	<b>Change FTE</b>	<b>FY24 FTE</b>	
Faculty Salaries	1.14 \$ 103,571.00	0.06 \$ -	1.20 \$ 103,571.00	
Professional Salaries	10.67 \$ 670,678.00	0.95 \$ 60,000.00	11.62 \$ 730,678.00	Increase budget for a research scientist to assist with new project
Other Staff Salaries	4.46 \$ 152,468.00	0.01 \$ -	4.47 \$ 152,468.00	
Student Salaries (GA/TA)	9.69 \$ 328,346.00	(1.56) \$ -	8.13 \$ 328,346.00	
Other Salaries	1.33 \$ 45,418.00	0.00 \$ -	1.33 \$ 45,418.00	
<b>Total All Salaries</b>	<b>27.29 \$ 1,300,481.00</b>	<b>-0.54 \$ 60,000.00</b>	<b>26.75 \$ 1,360,481.00</b>	
Fringe Benefits	\$ 359,708.00	\$ 12,554.00	\$ 372,262.00	Using FY23 fringe rates
Travel	\$ 29,990.00	\$ 3,405.00	\$ 33,395.00	
Utilities		\$ -		
Institutional Support Charges	\$ 50,800.00	\$ -	\$ 50,800.00	
Plant Operation and Maintenance Charges		\$ -		
Supplies and Expenses	\$ 1,114,254.00	\$ 123,624.00	\$ 1,237,878.00	Monitoring equipment and supplies for community Hydrology
Equipment		\$ -		
Other Expenditures		\$ -		
<b>Total Expenditures</b>	<b>27.29 \$ 2,855,233.00</b>	<b>-0.54 \$ 199,583.00</b>	<b>26.75 \$ 3,054,816.00</b>	
<b>Ending Fund Balance</b>	\$ 368,488.00	\$ (366,399.00)	\$ 2,089.00	



FY23 Actual: \$0  
 FY24 Request: \$627,185  
 \$ Change: \$627,185

## Overview

New Mexico’s hospitals have a critical need for anesthesia providers throughout the state due to nation-wide shortages and difficulty recruiting providers, especially to rural healthcare centers. Nationwide, hospitals in urban and rural areas rely on certified registered nurse anesthetists (CRNAs) to provide necessary anesthesia in surgical, obstetrics and other specialty settings. According to American Association of Nurse Anesthetists, CRNAs are more likely to work in lower-income, Medicaid-eligible, uninsured, and unemployed populations than physician anesthesiologists. In rural New Mexico, CRNAs also provide care for COVID-19 patients through airway and ventilator management, shared expertise with physicians on sedation of ventilated patients, and managing critically ill patients until they are transferred to larger facilities.

The New Mexico State University (NMSU) School of Nursing has been working with stakeholders for two years to develop and launch a new Doctor of Nursing Practice (DNP) degree concentration in **Nurse Anesthesiology** with a focus on **rural health and health disparities in New Mexico**. Graduates will be qualified to take the national certification exam to become a certified registered nurse anesthetist (CRNA). The goal is to admit 24 students annually starting in May 2023 and the first cohort will graduate in May 2026. Admission preference will be given to qualified New Mexico residents. Obtaining RPSF funding will facilitate program start up and reduce the cost of tuition for New Mexico nurses seeking to become a CRNA.

## Critical Need for Anesthesia Providers in NM

Stakeholders, including the NM Association of Nurse Anesthetists and the NM Hospital Association, recognize that the only sustainable way to meet the critical need for highly trained anesthesia providers is to launch a nurse anesthesiology program in New Mexico. The COVID-19 pandemic has amplified the need for health care providers trained to manage critically ill patients in a diverse array of settings. The launch of this new program will directly impact the quality of nursing and medical care offered across New Mexico and the surrounding border region.



## New Mexico CRNA Workforce Data

- 150-200 open positions for CRNAs in NM
- 25% of NM CRNAs will be retiring in the next few years
- Most hospitals hire locums and other temporary CRNAs which increases healthcare costs
- National unemployment rate for CRNAs is < 1%
- Projected job growth between 2019-2029 is 45%
- Currently ~2400 new CRNA graduates/year in the U.S. – projected need by 2028 is 7600/year.

## Status of NMSU Nurse Anesthesiology Program

- The Nurse Anesthesiology concentration in the DNP program was approved by the NMSU University Program Approval Committee in November 2021 and by the Higher Learning Commission in March 2022.
- Nurse Anesthesiology degree plan and course syllabi approved by the university.
- Established a Nurse Anesthesiology Program Advisory Board.
- Conducted meetings with statewide stakeholders (hospital CNOs, CEOs, chief CRNAs/anesthesiologists, NM Hospital Association, NM Association of Nurse Anesthetists) and conducted site visits to 14 hospitals and surgical centers in NM.
- Held program information sessions and sent program updates to potential applicants – over 350 nurses have expressed an interest in the program.
- Obtained affiliation agreements for the Nurse Anesthesiology program with 11 hospitals and surgical centers in New Mexico (4 additional agreements are pending).
- Eligibility report (i.e., preliminary accreditation feasibility/capability application) was approved on 6/24/22.
- Accreditation site visit scheduled for October 20-21, 2022.
- Anticipated program start date: May 2023.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Nurse Anesthesiology

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

<b>FY24 Funding Request (\$XXX,XXX):</b>	\$627,185
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<b>If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):</b>	N/A
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Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	0
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**2. Project Description / Executive Summary:**

The New Mexico State University (NMSU) School of Nursing is proposing to develop and launch a new Doctor of Nursing Practice (DNP) degree concentration in **Nurse Anesthesiology** with a focus on **rural health and health disparities in New Mexico**. Graduates will be qualified to take the national certification exam administered by the National Boards of Certification and Recertification of Nurse Anesthetists to become a certified registered nurse anesthetist (CRNA). To become a certified registered nurse anesthetist (CRNA), students complete a three-year program with rigorous didactic courses and over 2500 hours of supervised clinical training. New Mexico’s hospitals have a critical need for anesthesia providers due to nation-wide shortages and difficulty recruiting providers, especially to rural healthcare centers. Since the national unemployment rate for CRNAs is < 1%, the only sustainable way for New Mexico to meet its anesthesia provider shortage is to start a nurse anesthesiology program in the state. A program accreditation self-study will be submitted to the Council on Accreditation for Nurse Anesthesia Programs in August 2022 with a site visit planned for October 2022. The goal is to admit 24 students annually starting in May 2023 and the first cohort will graduate in May 2026. NMSU School of Nursing has a proud and successful history of recognizing emerging nursing education needs in the state and region, and then rapidly developing successful educational programs to address these needs. Obtaining RPSP funding for the Nurse Anesthesiology will facilitate program start up and will reduce the cost of tuition for New Mexico nurses seeking to become a CRNA.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

RPSP Funding will be used for the following budget items:

1. 12-month base salary and fringe for two faculty (program director and assistant program director) and one staff member (program coordinator). Justification: The program accreditation agency requires that nurse anesthesia programs have a qualified program director and assistant director who are doctorally-prepared CRNAs with extensive clinical and teaching experience.
2. Travel to the National Association of Nurse Anesthetists Educators Conference for 2 faculty and annual visits to every clinical site in the state of New Mexico. Justification: The director and assistant director attend this annual meeting to stay current on policies and trends in nurse anesthesia education. An annual clinical site visit required by the program accreditation agency.
3. Anesthesia task trainers for central line placement, arterial line placement, intubation, and other basic skills for CRNAs. Justification: Prior to starting clinical rotations in the hospitals, nurse anesthesiology students will complete rigorous training in a simulated operating room setting so that they are very familiar with these complex procedures before performing them on patients. Students will complete a skills boot camp at the end of their first year in the program. This bootcamp will utilize task trainer equipment that is specially designed for each skill.
4. Student stipends (20 x \$10,000/year for New Mexico residents only) to defray the cost of tuition and other school-related expenses.

**4. Program Mission (include population served, other demographic info):**

Our mission at the NMSU School of Nursing is to promote health and improve the quality of life of the people of New Mexico through nursing education, research, practice and public service, recognizing the state's multicultural heritage and dynamic border environment. The mission of the Nurse Anesthesiology program at NMSU is to increase access to surgical services and medical procedures that require anesthesia for the residents of New Mexico by graduating CRNAs who are committed to practicing in the state. This program will be the first in the nation to focus on rural health and health disparities, as well as the prevention of opioid and other substance use disorders. All students are required to take a rural health seminar and complete a minimum of one clinical rotation at a rural hospital or surgical center. Competencies in opioid and other substance use disorders are threaded throughout the entire DNP curriculum.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

1. Admit 24 students per year starting in May 2023.
2. Fully develop the 20 new Nurse Anesthesiology specialty courses (lecture materials, readings, assignments, exams, etc.)
3. Develop guidelines for clinical training and clinical evaluation tools for use in each of the six clinical courses.
4. Obtain affiliation agreements with additional clinical training sites with a focus on rural and critical access hospitals in New Mexico.
5. Work in partnership with clinical facilities to identify clinical coordinators and outstanding clinical preceptors.
6. Develop a preceptor training module and deliver training to preceptors.
7. Maintain a student retention rate of > 90%.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Top Objectives

1. Achieve program accreditation, recruit a strong pool of applicants and admit 24 students in May 2023.
2. Identify additional clinical training sites with a focus on rural and critical access hospitals in New Mexico.

Top Challenges

1. Developing the curriculum and program policies that are required for program accreditation.
2. Developing the eligibility report and the full program accreditation report for this extensive and rigorous accreditation process.
3. Recruiting a highly qualified program director and assistant program director given the shortage of nurse anesthesia faculty in the nation.

Note – All of these challenges have been met. The SON director has invested hundreds of hours of time over the past two years to get this program ready for accreditation by the Council on Accreditation for Nurse Anesthesia Programs.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The NMSU Nurse Anesthesiology program is being developed to address a current and future critical workforce need in the state. This aligns closely with Governor Lujan Grisham’s initiatives to increase access to health care and improve quality of care for New Mexicans. NMSU contributes to Governor Lujan Grisham and Workforce Solution’s efforts to address the healthcare provider workforce shortage in New Mexico and expand the pipeline to healthcare careers that offer extraordinary opportunity for social and economic mobility to citizens of New Mexico. This program will help keep tuition and future tax revenue in New Mexico (CRNAs can earn between \$200,000 and \$350,000/year).

There is a critical shortage of anesthesia providers in New Mexico, which limits the number of surgeries and procedures requiring anesthesia that can be performed. According to the NM Hospital Association, the most critical shortages are in rural regions of the state. Hospitals and anesthesia providers in the state struggle to recruit anesthesiologists and CRNAs due to a nationwide shortage and astronomically high salaries in coastal cities. According to the American Association of Nurse Anesthetists, CRNAs are more likely to work in lower-income, Medicaid-eligible, uninsured, and unemployed populations than physician anesthesiologists. In the post COVID-19 era, patients will have more co-morbidities and healthcare needs that CRNAs can help rural communities address. This program will prioritize enrolling New Mexico residents who intend to stay and practice in New Mexico upon graduation.

New Mexico CRNA Workforce Needs Assessment

- As of March 25, 2021 there were 238 CRNAs with NM licenses who report working in the state (NMBON, 2021).
- Of the CRNAs working in the state of New Mexico, 86% report New Mexico as their state of residence (NMBON, 2021).
- During the past two years there have been between 150 and 200 open positions for CRNAs in New Mexico posted on national job listing sites.
- The average age of CRNAs employed in New Mexico is 50 years (SD 12.7 years) with 25% being 60 years or older (NMBON, 2021).
- The national unemployment rate for CRNAs is < 1%, which means that the pool of recruitable providers is severely limited (AANA, 2021).

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

- There are currently ~2400 new CRNA graduates/year in the U.S., however the projected need for 2028 is 7600 graduates/year (AANA, 2021).
- Many hospitals in southern New Mexico and rural regions of the state are having to hire locums and other temporary/short term contract CRNAs from out of state which increases healthcare costs and does not address the long-term workforce needs in the state.
- The NM Association of Nurse Anesthetists conducted a survey of its members in 2016 and found that of the 247 respondents, 25% of full-time CRNAs planned to retire by 2022.
- The U.S. Bureau of Labor Statistics projected job growth for CRNAs to be 45% between 2019 and 2029.

Note: NM Board of Nursing data obtained from Executive Director Dr. Sasha Poole in March 2021.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

- 1) The NMSU School of Nursing received \$150,000 from the NM Board of Nursing Excellence Fund for program development and accreditation.
- 2) The NMSU School of Nursing director has raised \$500,000 in gifts from private and corporate donors for program start up costs.
- 3) The NMSU School of Nursing is seeking \$3 million in funding through congressional direct spending. The request is for the following construction and equipment:  
Construction of Nurse Anesthesiology Operating Room Training Suite in the NMSU School of Nursing Skills & Simulation Center = \$1.5 million
  - Includes an operating room table, surgical lights, gas supply, vacuum, intercom, alarm systems storage cabinets, and other furniture required in an operating room.
  - The suite will have sophisticated, streaming audiovisual capability with multiple active cameras, audio and video mixers, monitors, and digital recorders.Refurbished anesthesia equipment and new simulation patient mannequins = \$1.5 million
  - Anesthesia equipment includes anesthesia gas machines, anesthesia carts, emergency carts, a malignant hyperthermia (MH) cart, OR and critical care supplies,
  - Mannequins include a line of Laerdal Mannequins including SimMan®, SimMom®, SimBaby®, SimNewbie®, and SimEssential®.

After the program has been accredited, the School of Nursing will seek funding for student stipends through the Health Resources and Services Administration (HRSA).

**9. Accomplishment/ Highlights (bullet form)**

- The Nurse Anesthesiology concentration in the DNP program was approved by the NMSU University Program Approval Committee in November 2021 and by the Higher Learning Commission in March 2022.
- Degree plan and course syllabi for 20 new courses have been approved by the university.
- Established a Nurse Anesthesiology Program Advisory Board.
- Conducted meetings with statewide stakeholders (hospital CNOs, CEOs, chief CRNAs/anesthesiologists, NM Hospital Association, NM Association of Nurse Anesthetists) and conducted site visits to 14 hospitals and surgical centers in New Mexico.
- Held program information sessions and sent program updates to potential applicants – over 350 nurses have expressed an interest in the program.

**9. Accomplishment/ Highlights (bullet form)**

- Obtained affiliation agreements for the Nurse Anesthesiology program with 11 hospitals and surgical centers in New Mexico (4 additional agreements are pending).
- Eligibility report (i.e., preliminary accreditation feasibility/capability application) was approved on 6/24/22. This report included:
  - Legal authority of NMSU to conduct the program including distance education.
  - Formal authority to award the degree conferred.
  - Affiliation agreements with main clinical agencies where clinical training will take place (Presbyterian Health System, Lovelace Health System, Nor Lea Hospital, Memorial Medical Center, Mountainview Regional Medical Center, Gerald Champion Regional Medical Center).
  - Assessment of number of annual surgical cases/procedures (general and specialty areas)
- Consultants hired to develop the program and complete the accreditation process will complete the COA self-study by September 1, 2022 and have developed all of the policy, application, and other required program administration documents.
- Currently interviewing candidates for the founding program director.
- Accreditation site visit scheduled for October 20-21, 2022.

**Medical Projects**

<b>10. How many graduates stay in practice in New Mexico</b>	Goal 80%
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**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Nurse Anesthesiology</p> <p><b>Contact Name:</b> Alexa Doig, School of Nursing</p> <p><b>Contact Email:</b> <a href="mailto:adoig@nmsu.edu">adoig@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="border: 2px solid black; padding: 5px; display: inline-block;"><b>\$627,185</b></p>
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**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal: Develop, launch and sustain a Nurse Anesthesiology program for the state of New Mexico.**

	RPSP Objective 1: Provide opportunities for New Mexico nurses to remain in the state for nurse anesthesia education.	Measure Targets	Comments ( <i>Briefly state your case</i> )
RPSP Measures:		FY24	
1	Size of application pool comprised of New Mexico Bachelor-prepared registered nurses.	100	At least 100 qualified applicants will be from New Mexico.
2	Number of nurse anesthesiology students admitted each year.	24	This is the maximum class size that the accreditation will allow new programs to enroll. We will plan for future enrollment growth after the first cohort has graduated in 3 years.
3	Number of nurse anesthesiology students from New Mexico admitted each year.	20	We anticipate having qualified applicants from the El Paso region.
4	Percent of graduates who become licensed in New Mexico after graduation	N/A	The first cohort of nurse anesthesiology students will graduate in may 2026. We anticipate that 80% will practice in New Mexico.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Nurse Anesthesiology</p> <p><b>Contact Name:</b> Alexa Doig, School of Nursing</p> <p><b>Contact Email:</b> <a href="mailto:adoig@nmsu.edu">adoig@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; display: inline-block; margin-top: 10px;"> <p><b>\$627,185</b></p> </div>
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	RPSP Objective 2: Provide a quality educational experiences and student support for nurse anesthesiology students.	Measure Targets	Comments ( <i>Briefly state your case</i> )
	<b>RPSP Measures:</b>	<b>FY24</b>	
1	First-to-second year retention rates	96%	
2	Graduation rates (# students graduating/# students admitted)	90%	The first cohort of nurse anesthesiology students will graduate in May 2026. Our goal is a 90% graduation rate.
3	Number of clinical training sites in New Mexico and border region	12	
4	Number of rural clinical training sites in New Mexico	6	
5	Certification exam first-time pass rates	N/A	The first cohort of nurse anesthesiology students will graduate in May 2026. Our goal is a 90% first time pass rate.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Nurse Anesthesiology		<b>FY24 Request</b>
<b>Contact Name:</b> Alexa Doig, School of Nursing		<b>\$627,185</b>
<b>Contact Email:</b> <a href="mailto:adoig@nmsu.edu">adoig@nmsu.edu</a>		

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal: Prepare Doctor of Nursing Practice students to serve as healthcare delivery innovators.**

<b>RPSP Objective 1:</b> Mentor and train nurse anesthesiology DNP students in quality improvement and evidence based practice innovations.		<b>Measure Targets</b>	<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY24</b>	
1	Percent of graduates that complete a DNP project that positively influences patient care, patient safety and/or healthcare delivery	N/A	The first cohort of nurse anesthesiology students will start their DNP projects in May 2024. 100% of students will complete a DNP project since it is a program requirement.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Nurse Anesthesiology		<b>FY24 Request</b>
<b>Contact Name:</b> Alexa Doig, School of Nursing		<b>\$627,185</b>
<b>Contact Email:</b> <a href="mailto:adoig@nmsu.edu">adoig@nmsu.edu</a>		

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal: Increase the likelihood that graduates will choose to practice in rural NM hospitals upon graduation.**

<b>RPSP Objective:</b> Provide exposure to independent CRNA practice in rural hospitals and prepare graduates to practice in rural healthcare settings.		<b>Measure Targets</b>	<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY24</b>	
1	Number of students completing a rural health clinical rotation	N/A	Students will not start clinicals until May 2024. Students will be required to complete at least one clinical rotation for a minimum of 1 month in a rural or critical access hospital or surgical center.
2	Number of students who complete their DNP project at a rural or critical access hospital	N/A	The first cohort of nurse anesthesiology students will start their DNP projects in May 2024. Our goal is that 25% will complete their projects in a rural or critical access setting.
3	Percent of graduates who practice in a rural or critical access hospital in New Mexico	N/A	The first cohort of nurse anesthesiology students will graduate in May 2026. Our goal is that at least 30% will practice in rural

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSB)**  
**Project Budget Sheet**

Institution:

RPSB Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	-	\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ 627,185.00	\$ 627,185.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ -	\$ 627,185.00	\$ 627,185.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ -	\$ 627,185.00	\$ 627,185.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	FY23 FTE	Change FTE	FY24 FTE	
Faculty Salaries		2.00	\$ 224,000.00	
Professional Salaries		1.00	\$ 45,000.00	
Other Staff Salaries		0.00	\$ -	
Student Salaries (GA/TA)		0.00	\$ -	
Other Salaries		0.00	\$ -	
<b>Total All Salaries</b>	0.00	\$ -	3.00	\$ 269,000.00
Fringe Benefits			\$ 98,185.00	\$ 98,185.00
Travel			\$ 10,000.00	\$ 10,000.00
Utilities			\$ -	
Institutional Support Charges			\$ -	
Plant Operation and Maintenance Charges			\$ -	
Supplies and Expenses			\$ -	
Equipment			\$ 50,000.00	\$ 50,000.00
Other Expenditures			\$ 200,000.00	\$ 200,000.00
<b>Total Expenditures</b>	0.00	\$ -	3.00	\$ 627,185.00
<b>Ending Fund Balance</b>	\$ -	\$ -	\$ -	

FY23 Actual: \$940,000  
 FY24 Request: \$1,315,000  
 \$ Change: \$375,000

## Overview

There continues to be a critical need for mental health services in New Mexico, particularly in underserved and rural areas. Meeting those needs is a priority for the NMSU School of Nursing. RPSP funding has supported the Psychiatric Mental Health Nurse Practitioner (PMHNP) specialty track in the three-year Doctor of Nursing Practice (DNP) program. The School of Nursing also offers a post-graduate certificate for nurse practitioners in other specialties that, in one year, allows them to sit for the PMHNP certification exam. Students are encouraged to participate in clinical experiences in rural and other underserved areas throughout New Mexico. A focus of the PMHNP program is opioid use disorder prevention, treatment, and recovery, as well as suicide prevention in youth and young adults.

RPSP funds have been used to hire qualified faculty and student advisors, support innovative clinical training activities, provide professional development for faculty, and for student stipends. With the additional funding requested for FY24, the School of Nursing will be able to offer stipends to all New Mexico residents in the PMHNP DNP and post graduate certificate programs. This stipend, which would cover 80% of tuition and textbooks, will be used as a program recruitment

## Clinical Training Sites in the Border Region

- La Clinica de Familia
- Ben Archer Health Center
- Mesilla Valley Hospital
- Memorial Medical Center
- Esperanza Guidance Services, Inc.
- Desert Sky Counseling Services
- Peak Behavioral Health Services
- Counselling Las Cruces
- Amado Health Center
- El Paso Psychiatric Center



## PMHNP Program Accomplishments

- Increased enrollment in the PMHNP Post-Graduate Certificate enrollment from 9 students in Fall 2021 to 16 students in Fall 2022.
- Completed a \$1.35 million federal training grant that supported education and training substance use disorder evaluation, and treatment.
- Received a \$306,000 federal grant from SAMHSA to launch a campus suicide prevention and mental health awareness program.
- 100% PMHNP certification pass rate in 2021.
- DNP students complete a scholarly project that addresses a patient-focused practice issue in mental/behavioral health care.
- Admission preference to the NMSU PMHNP program is given to NM residents.

## Leaders in Opioid Use Disorder Education and Training

The SON received a 3-year, \$1.35 million HRSA Opioid Workforce Education Program grant in September 2019 titled 'Expanding the New Mexico SUD/OD Treatment and Prevention Workforce through Interprofessional Education and Training'. This project is an interdisciplinary collaboration with the Counselling Education Psychology PhD and the Master's in Social Work programs. To achieve the overall goal of increasing the number of professionals in NM trained in interprofessional settings to effectively prevent and treat OUD and SUD in community-based practices a rigorous curriculum and training program was developed. The university also leveraged its current academic-practice partnerships to conduct clinical training experiences in the delivery of OUD/SUD prevention, treatment, and recovery services.

One such collaboration was with NMSU's 4-H extension to increase the knowledge and early recognition of substance use in youth across the NM. Another successful grant activity was Data Waiver 2000 training. This training increased the number of nurse practitioners providing Medication-Assisted Treatment using Suboxone to individuals in rural and underserved areas of NM.

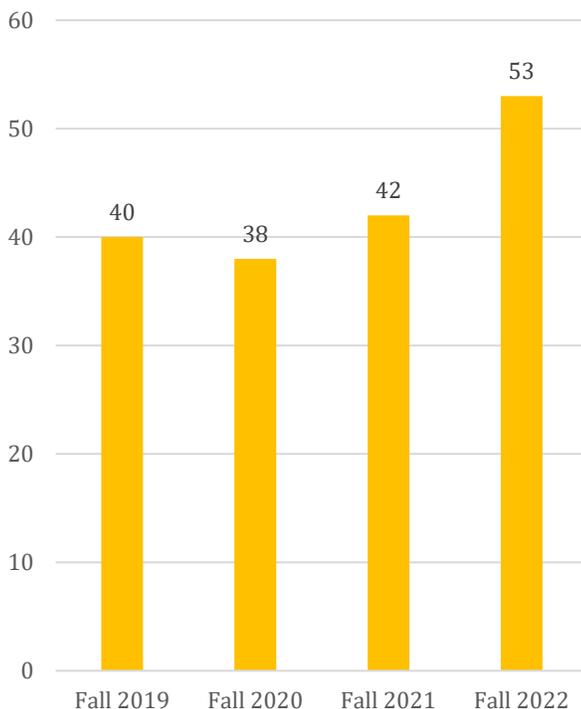


## Leaders in Telemental Health Education and Training

The NMSU School of Nursing is one of the few health professional programs south of Socorro that has incorporated telehealth technology into the curriculum for all nurse practitioner students. Telehealth is the use of telecommunications technology to provide health care and patient health-related education at a distance. Telehealth improves health care service to remote locations or environments without clinic facilities. All nurse practitioner students are trained on the use of telehealth equipment and in telehealth delivery protocols. The NMSU School of Nursing faculty and students are actively engaged in delivering mental/behavioral health services to patients at Ben Archer Health Clinics, using telehealth services.



PMHNP Program Enrollment



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Mental Health Nurse Practitioner

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$1,315,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$940,000

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	15
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**2. Project Description / Executive Summary:**

RPSP funding supports the NMSU psychiatric mental health nurse practitioner (PMHNP) program, which is delivered in a distance education format to nurses throughout the State of New Mexico. This program supports initiatives to meet a critical state-wide demand for highly trained mental health care providers. The 3-year Doctor of Nursing Practice (DNP) graduate degree program prepares nurses to take a national certification exam that will allow them to provide comprehensive mental health services, including mental health evaluation, diagnosis, and treatment, as well as providing psychotherapy/counseling. Certified PMHNPs have legal authority to prescribe psychoactive medications and adjunctive pharmacological agents that ameliorate side effects of these medications. Nurse practitioners with other specializations (e.g., family nurse practitioner) can complete NMSU's 1-year PMHNP post graduate certificate program which provides eligibility to sit for the PMHNP certification exam. Students in the PMHNP DNP and certificate programs are also trained to deliver tele-mental health services, which is a key solution for delivering mental health services to residents in rural communities. The PMHNP program is offered through distance education, which allows students to remain in their communities, practicing

**2. Project Description / Executive Summary:**

as a nurse while earning their DNP degree. RPSP funding provides critical support and career advancement opportunities to students from rural and medically underserved communities in New Mexico. Mental Health Nurse Practitioner funds support nursing faculty salaries and professional development, student support services, as well as equipment and software to improve the quality and efficiency of delivering nursing education. With the additional funding request, the School of Nursing will be able to offer student stipends to every DNP and post graduate certificate PMHNP student who is a New Mexico resident. This stipend, which can cover tuition and textbooks, will be used as a program recruitment tool.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Currently, Mental Health funding is used for:

- Faculty and professional staff salaries - In clinical courses, the nationally mandated ratio of nurse practitioner faculty to students is 1:6.
- Faculty professional development - required for nurse practitioner re-certification.
- Student stipends during the clinical training year – provides support for tuition and other educational expenses in the PMHNP DNP program certificate program.
- Medical equipment for clinical assessment training.
- Guest lecturers, equipment, and other resources for nurse practitioner ‘bootcamp’ – a one-week clinical training required by the program accreditation agency.
- Program marketing and advertising - required to maintain program enrollment and recruit potential students from rural counties in New Mexico.

With the additional funding request of \$435,000, the School of Nursing will be able to offer stipends to every DNP and post graduate certificate PMHNP student who is a New Mexico resident. This stipend, which can cover tuition and textbooks, will be used as a program recruitment tool.

**4. Program Mission (include population served, other demographic info):**

Our mission at the School of Nursing is to promote health and improve the quality of life of the people of New Mexico through nursing education, research, practice and public service, recognizing the state’s multicultural heritage and dynamic border environment. The mission of the Psychiatric Mental Health Nurse Practitioner (PMHNP) program at New Mexico State University is to educate nurses for the advanced practice role with the goal of increasing access to mental health services for the residents of New Mexico. The RPSP funding received by the School of Nursing from the New Mexico legislature is the primary sources of funding for this important program. Once certified as a PMHNP, our graduates are qualified to provide comprehensive mental health services, including mental health diagnosis, prescribing medications, and psychotherapy/counseling. A recent addition to the curriculum is enhanced education and training on opioid and other substance use disorder, including the delivery of prevention, treatment and recovery services.

The Psychiatric Mental Health Nurse Practitioner program prepares nurses for advanced practice with a focus on mental health issues across the lifespan. The curriculum builds upon four core PMHNP competencies: advanced health assessment (physical and psychosocial); diagnosis (diagnosis of mental disorders, pathophysiology, and neurophysiology); psychotherapy (individual, group, and family); and medication management (pharmacology and psychopharmacology). Other courses develop competencies in health care systems, best-practice research utilization and translation, and health care quality improvement. Graduates are prepared to sit for the Psychiatric/Mental Health Nurse Practitioner certification exam through the American Nurses Credentialing Center

**4. Program Mission (include population served, other demographic info):**

(ANCC). PMHNPs assess the mental health needs of individuals, families, and groups. They formulate healthcare plans, implement treatment, and evaluate the effectiveness of short- and long-term progress. Although PMHNPs have independent practice in New Mexico, they often collaborate with physicians and other health professionals in the treatment of complex mental health disorders. This funding mechanism supports the education for students from rural and medically underserved areas in New Mexico and provide them the opportunity to obtain an advanced nursing practice degree. The continuation of funding allows the SON to sustain this past year's enrollment growth and the awarding of stipends to PMHNP students who commit to living in New Mexico for three-years post-graduation. Since the majority of our students are working RNs, our distance education format allows them to pursue an advanced degree, while continuing to live and work in their home communities.

Lastly, the SON is one of the few health professional programs south of Socorro that has incorporated telehealth technology into the curricula for our nurse practitioner students. Telemedicine is the use of telecommunication technology to support long distance clinical health care, patient and professional health-related education, public health and community health, health systems development and epidemiology. Telemedicine improves health care service availability in remote or difficult to operate environments. The PMHNP faculty and students are actively engaged in delivering "Teen Health" services through telehealth to Las Cruces, Oate, Chaparral, and Gadsden high schools with plans to expand to other area schools.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Mental Health Nurse Practitioner Objectives for FY24:

- Increase PMHNP DNP and certificate program enrollment in a sustainable manner, while maintaining mandated faculty/student ratios, graduation rates, and certification exam pass rates;
- Increase PMHNP program marketing to and recruitment of students residing in rural counties in New Mexico;
- Increase retention of PMHNP students to 90% or above;
- Identify additional innovative and high-quality clinical training experiences for PMHNP students throughout southwestern New Mexico, with a focus on rural areas and substance use disorder evaluation and treatment facilities;
- Provide faculty with state of the science professional development in nurse practitioner and mental health care provider education;
- Seek additional program funding through federal agencies such as the Health Research and Services Administration (HRSA) for telehealth training initiatives.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Major Accomplishments:

- 100% of NMSU graduates passed their PMHNP certification exam on their first attempt in 2021.
- Maintained enrollment in the 3-year PMHNP DNP program - accepted 11 to start in Fall 2022, will graduate 11 during the 2022-23 academic year, currently have 28 students enrolled in the PMHNP DNP program.
- Increased enrollment in 1-year PMHNP post graduate certificate program - accepted 21 to start in Fall 2022, 7 will graduate in August 2022, currently have 30 students enrolled in the PMHNP certificate program.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- Sixty percent (60%) of New Mexico residents are enrolled in the PMHNP DNP and certificate programs.
- Improved administrative processes within the program to improve clinical hour tracking and completion for graduation.
- Provided stipends to all PMHNP DNP and certificate students who were New Mexico residents and not receiving federal stipends through the School of Nursing's HRSA grant.
- Expanded the number of clinical agencies that the PMHNP program uses as a clinical training site throughout the state of New Mexico, including substance use disorder/medical assisted treatment for opioid use disorder clinics.
- Improved efficiency of faculty and administrator workload to support enrollment increases.
- Held a virtual clinical immersion bootcamp during the Spring of 2022 with the PMHNP students that included sessions on psychiatric emergencies, assessment tools, domestic violence, Autism, conceptualization treatment planning, play therapy and mental health during COVID.
- Trained PMHNP students to deliver tele-mental health (evaluation, psychotherapy and medication management) to clients throughout New Mexico.

**Obstacles:**

- Retention rates in the PMHNP DNP program increased from 75% to 82% (9/11), however is still below our target of 90%.
- Recruiting PMHNP students from rural counties in New Mexico
- Identifying clinical sites for PMHNP practice in rural and underserved areas in New Mexico (competition from BCOM, UNM PMHNP program, School of Medicine and psychiatry residency program and lower numbers of NP preceptors in rural and underserved areas)

Lack of psych mental health clinical sites required for graduate students to complete clinical hours as a result of COVID restrictions

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

The Mental Health RPSP program at NMSU addresses several of the key healthcare priorities identified by the National Governor's Association, which compiled 2022 healthcare priority areas from the nation's Governors as outlined in their State of the State Addresses and/or in their proposed state budgets. Three key areas, from their list of eight, highlight the need to continue strengthen investments in:

- The health care workforce, including the behavioral health workforce
- Mental health including the mental health workforce, cross-agency or department collaboration, and affordable and accessible services.
- Mental health disorders and substance use disorders including preventing overdoses, bolstering the behavioral health workforce, and providing funding to support increased services for prevention and treatment.

Continued on next page

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

This RPSP funding request is also one of Governor Lujan Grisham’s workforce priorities established in 2019, which is to rebuild the mental health provider network in New Mexico to fill critical vacancies throughout the state, especially in rural communities. In New Mexico has some of the highest incidence of opioid and other illicit drug use in the country, greatest need for mental health providers, and some of the most extreme health disparities in the nation. COVID-19 has dramatically increased the need for mental health care providers in the state. Thirty-three out of 34 counties in New Mexico are designated as a mental health geographic Health Professional Shortage Area by the Health Research and Services Administration (HRSA). Currently 53% of students enrolled in the PMHNP DNP and certificate programs are New Mexico residents. PMHNP graduates provide mental health services to rural and underserved communities throughout the state.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

In August 2022, the School of Nursing was awarded a \$306,000 federal grant from the Substance Abuse and Mental Health Services Administration (SAMHSA). This three year project will be used to increase awareness of suicide prevention resources and increase access to mental health care services on campus. The School of Nursing also received \$50,000 from the NM HED to support this project in FY24.

In FY22, the School of Nursing successfully concluded two mental health focused federal grants. The first grant was a 3-year, \$1.35 million HRSA Opioid Workforce Education Program grant titled ‘Expanding the New Mexico SUD/OD Treatment and Prevention Workforce through Interprofessional Education and Training’. This grant was successful at increasing interprofessional training experiences, completing a curriculum mapping of SUD/OD content in NMSU’s DNP program, and enriching the content in seven courses, and increasing the number of executed affiliation agreements for PMHNP students.

The second grant was a 2-year, \$200,000 training grant from the Substance Abuse and Mental Health Services Administration (SAMHSA) in April 2020 titled, ‘Integrating Competencies in SUD Prevention, Screening and Treatment throughout a Family Nurse Practitioner Curriculum in the Rural U.S.-Mexico Border Region’. This grant was successful at embedding SUD/OD content into 12 courses in the core and FNP curricula.

In 2020, the College of Health, Education & Social Transformation obtained a \$400,000 donation from Blue Cross and Blue Shield of New Mexico for nurse practitioner and nursing student scholarships and a 3-year Professor of Practice position for a nursing faculty. The goal of this professorship is to increase the number of nursing and nurse practitioner graduates in the region and state.

**9. Accomplishment/ Highlights (bullet form)**

- Over the past three years, NMSU has increased enrollment in the PMHNP program and increased the percent of students from New Mexico, while maintaining excellence in nursing education, as well as graduation and certification exam pass rates.

**9. Accomplishment/ Highlights (bullet form)**

- NMSU provides a critical pipeline to a career as a psychiatric mental health nurse practitioner, with the only doctoral-level program in the state.
- NMSU is a state-wide leader in education and training in the area of integrated primary health and mental health care.
- NMSU supports Governor Lujan Grisham and Workforce Solution's efforts to address the mental health workforce shortage in New Mexico and expand the pipeline to healthcare careers that offer extraordinary social and economic mobility.

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

60%

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Mental Health Nurse Practitioner  
**Contact Name:** Alexa Doig, PhD, RN  
**Contact Email:** [adoig@nmsu.edu](mailto:adoig@nmsu.edu)

**FY24 Request**  
**\$1,315,000**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** To enhance student success and social mobility through nurse practitioner graduate education

RPSP Objective 1: Maintain a high level of retention of Nursing students		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Percent retention over 2 years	94%	93%	92%	82%	80%	80%	80%	90%	90%	90%	Retention rates affected by COVID-19 pandemic and the increase demand put on nurses in the workforce. Some students made the decision to withdraw and apply again in the future.

RPSP Objective 2: Encourage participation in clinical experiences in rural and underserved areas		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Percent of nurse practitioner students who participate in clinical experiences in rural and underserved areas.	50%	45%	50%	19%	70%	60%	60%	60%	60%	60%	Lower numbers of NP preceptors in rural and underserved areas are causing higher percentages of NMSU's NP students to obtain clinical experiences in larger and urban citites.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Mental Health Nurse Practitioner  
**Contact Name:** Alexa Doig, PhD, RN  
**Contact Email:** [adoig@nmsu.edu](mailto:adoig@nmsu.edu)

**FY24 Request**  
**\$1,315,000**

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Have our graduates be innovators in their field

RPSP Objective 1: Prepare doctorate of nursing practice students to serve as innovators in nursing care		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Percent of graduating FPMH students who will have completed a capstone project that focuses on an innovative practice change.	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Note FMPH = PMHNP

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal:** To increase the pipeline of mental health providers for the state of New Mexico with a focus on substance use disorder treatment

RPSP Objective 1: Continue to provide nurse practitioners to meet state workforce needs		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Graduation rate of nurse practitioners	100%	92%	90%	55%	90%	90%	90%	90%	90%	90%	Graduation rates were affected by the COVID pandemic and the lack of available clinical sites and preceptors and delays in DNP project completion. The majority of these students are on track to graduate in Dec 2022.
2	Percent of graduates who practice in New Mexico	50%	50%	58%	60%	75%	75%	75%	60%	60%	65%	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:

Total:

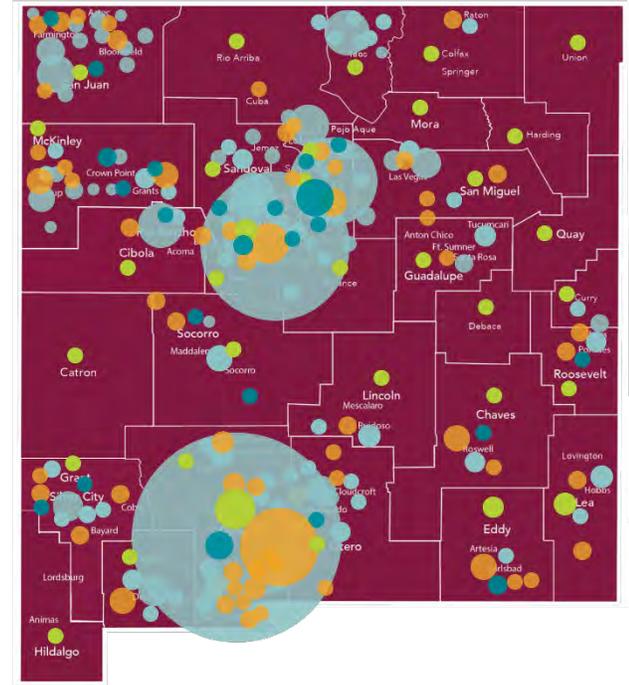
Budget verses Actual	Budget FY 23	Change	Request FY 24	Comments			
<b>Revenue and Transfers</b>							
<b>Beginning Fund Balance</b>	\$ 161,582.16	\$ -	\$ 161,582.16				
<b>Appropriations</b>							
Federal		\$ -					
State plus Tobacco Settlement Fund	\$ 940,000.00	\$ 375,000.00	\$ 1,315,000.00				
Local		\$ -					
<b>Total Appropriations</b>	\$ 940,000.00	\$ 375,000.00	\$ 1,315,000.00				
<b>Grants and Contracts</b>							
Federal		\$ -					
State		\$ -					
Local		\$ -					
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -				
<b>Private Gifts, Grants and Contracts</b>		\$ -					
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -					
<b>Tuition and Fees</b>		\$ -					
<b>Endowment</b>		\$ -					
<b>Sales and Services</b>		\$ -					
<b>Other Sources - Detail in Comments</b>		\$ -					
<b>Total Revenues</b>	\$ 940,000.00	\$ 375,000.00	\$ 1,315,000.00				
<b>Transfers (to) from</b>							
Instruction and General		\$ -					
Student Social and Cultural		\$ -					
Research		\$ -					
Public Service		\$ -					
Internal Service		\$ -					
Student Aid		\$ -					
Auxiliary Enterprises		\$ -					
Athletics		\$ -					
Independent Operations		\$ -					
Capital Outlay		\$ -					
Renewal and Replacement		\$ -					
<b>Total Transfers</b>	\$ -	\$ -	\$ -				
<b>Expenses</b>							
	FY23 FTE		Change FTE		FY24 FTE		
Faculty Salaries		6.65	\$ 575,960.26	6.65	\$ 575,960.26		
Professional Salaries		2.09	\$ 131,423.08	2.09	\$ 131,423.08		
Other Staff Salaries		2.47	\$ 84,309.17	2.47	\$ 84,309.17		
Student Salaries (GA/TA)		0.00	\$ -	0.00			
Other Salaries		0.00	\$ -	0.00			
<b>Total All Salaries</b>	0.00	\$ -	11.21	\$ 791,692.51	11.21	\$ 791,692.51	
Fringe Benefits			\$ 251,432.49		\$ 251,432.49		
Travel			\$ -				
Utilities			\$ -				
Institutional Support Charges			\$ -				
Plant Operation and Maintenance Charges			\$ -				
Supplies and Expenses		\$ 940,000.00	\$ (881,542.84)		\$ 58,457.16		
Equipment			\$ -				
Other Expenditures			\$ 375,000.00		\$ 375,000.00		Student stipends for NM PMHNP Students
<b>Total Expenditures</b>	0.00	\$ 940,000.00	11.21	\$ 536,582.16	11.21	\$ 1,476,582.16	
<b>Ending Fund Balance</b>		\$ 161,582.16	\$ (161,582.16)		\$ -		

FY 23 Actual: \$355,100  
 FY 24 Request: \$555,100

**Arrowhead Center** (Arrowhead) at New Mexico State University (NMSU) plays a vital role supporting the state’s entrepreneurial and innovation ecosystem, creating economic opportunity in New Mexico. Arrowhead builds capacity statewide by making available to individuals and firms the knowledge, skills, and resources they need to be successful in business creation and growth as well as technology commercialization. This results in favorable outcomes benefiting the state: new businesses and jobs, new products, increased investment, increased entrepreneurial skills (enhancing employability), and strategic public-private partnerships. Arrowhead serves NMSU faculty, staff and students as well as students (K-16), inventors, entrepreneurs and young firms statewide.

**Map Legend**

- Small Business Creation and Growth
- University Student Business Accelerators
- K-12 Entrepreneurship Programs
- Economic Studies



## Economic Opportunity for New Mexico

Arrowhead enhances economic opportunity for all New Mexicans, ultimately bolstering the state’s economy as a whole. We capitalize on New Mexico’s unique assets and talent, while securing federal and private funding to support these strengths. This work helps to diversify the state’s economy, ensuring we are poised to benefit from our opportunities, recover in the face of challenges, and demonstrate future resiliency.

- Arrowhead primes New Mexico’s entrepreneurial and innovation pipeline with opportunities for the state’s youngest innovators and potential business owners. We work with students from kindergarten through university, challenging them to build their ideas into ventures.
- Arrowhead makes entrepreneurship accessible to anyone, anywhere in New Mexico. Business acceleration programs offered virtually and outside of typical working hours open possibilities for those who may not have the time or resources to otherwise pursue their business ideas. This is reflected in Arrowhead’s success working with populations traditionally underrepresented in entrepreneurship, such as women and ethnic minorities.
- Arrowhead works with existing companies to help them realize their full potential. Access to mentorship, educational resources, investment opportunities, and professional networks leads to more jobs, more revenue, and greater opportunities for growth and expansion.

## Highlights FY 2021

<b>1,072</b>	New Direct Jobs
<b>415</b>	Businesses Accelerated
<b>\$1.3 M</b>	Awards from Sponsors
<b>5,013</b>	K-12 Students
<b>1,280</b>	NM University Student Ventures
<b>\$434 M</b>	Total Economic Impact

## Tailored Assistance for New Mexicans

Arrowhead recognizes that each entrepreneur, innovator, and business venture is unique – particularly in New Mexico’s richly diverse population. We emphasize one-on-one support customized to the individual needs of our clients and the communities in which they live.

- Arrowhead operates programs targeting New Mexico’s most promising industries, such as value-added agriculture, clean energy, healthcare, and recreation and tourism. At the same time, we are open to entrepreneurs and companies from any sector, supported by an extensive network of experts from an array of industries and disciplines.
- Arrowhead’s Sprint business accelerators blend cohort-based instruction with individualized mentoring sessions to make sure each participant gets the specific support they need to create or grow their business.
- Arrowhead provides personalized assistance to existing businesses, based on their individual needs. From feasibility studies, to product prototyping, to business model pivots to deal with continued economic recovery from the COVID-19 crisis, Arrowhead serves New Mexico’s businesses with the tailored assistance they need to grow and thrive.



LAUNCH Participants

## Highlights and Looking Forward

Arrowhead continues to offer the majority of programs in hybrid formats, with in-person and virtual options available to make resources as accessible as possible. Highlights over the last year include:

- Creating a robust suite of resources, ranging from COVID-19 funding opportunities; virtual events, consultations, and services; online videos and webinars; and training to help businesses bolster their online presence.
- Pursuing and leveraging federal funding opportunities (e.g. Department of Energy, Small Business Administration, Economic Development Administration, and Minority Business Development Agency, among others) to bring more outside dollars to the State of NM.
- Growing key partnerships that will facilitate the growth of NM’s innovation/entrepreneurship ecosystem (e.g. New Mexico Economic Development Department, SBA as a resource partner, and the national laboratories).



*Offering Arrowhead programs, resources, and specialized services to Agricultural Value-Added Enterprises in NM*

## FY24 Expansion Request - \$200,000 Agriculture Venture Center

The Agriculture Venture Center will provide resources and connections for entrepreneurs seeking to launch or expand agriculture/food-based ventures (technology- or product-based). Clients will gain access to market and feasibility research for new and existing businesses, business acceleration programming, assistance with federal funding pursuit (e.g., SBIR/STTR programs, USDA VAPG), capital investment, and connections to necessary elements such as manufacturing capabilities and regulatory guidance. AVC is expected to be particularly impactful for rural and tribal communities dependent on ag-related economies.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Arrowhead Center for Business Development

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$555,100

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$355,100

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	17
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**2. Project Description / Executive Summary:**

Arrowhead Center (Arrowhead) requests a total of \$551,100 (FY 2024) in recurring and expansion funding for an existing project (Arrowhead Center for Business Development). This project supports our economic development mission to enhance innovation and entrepreneurship, creating economic opportunities and social mobility in NM.

Arrowhead builds statewide capacity by providing individuals and businesses knowledge, skills, and resources for entrepreneurship. This capacity-building leads to favorable outcomes: new businesses and jobs, new products, increased investment, increased entrepreneurial skills (enhancing employability), and strategic public-private partnerships.

Arrowhead’s goals and performance measures reflect dual roles serving NMSU and NM. We work with inventors, entrepreneurs, businesses, students, and communities across NM, as well as NMSU faculty, staff, students and alums.

Strategic partners of Arrowhead include UNM, NMT, Navajo Technical University, LANL, Sandia, NMEDD, SBA, MVEDA, EDA, MBDA, local governments, various community and regional economic development organizations, and private foundations.

## **2. Project Description / Executive Summary:**

Since March 2020, this work has included emphasis on helping existing NM businesses deal with the economic challenges associated with the COVID-19 pandemic. This has included, but is not limited to, assisting businesses in creating or enhancing their online presence to reach customers when face-to-face interactions were not possible; providing connections to information and support resources from partner organizations; and publishing online content addressing an array of business concerns and solutions tied to the crisis. This work continues as NM recovers economically from the pandemic.

### **Expansion Justification:**

Arrowhead requests expansion funding of \$200,000 to support the Agriculture Venture Center (AVC), a business accelerator that will provide resources and connections for entrepreneurs seeking to launch or expand agriculture/food-based ventures. AVC will be developed in collaboration with the NMSU College of Agriculture, Consumer and Environmental Science.

NM's current agriculture industry primarily consists of production of raw agricultural good which are shipped out of state for processing. This represent missed opportunities for NM to develop higher-value products. Maximizing profits for ag producers, processors, and distributors represents significant economic opportunity for NM.

Clients would gain access to market and feasibility research for new and existing businesses, business acceleration programming, assistance with federal funding pursuit (e.g., Small Business Innovation Research/Small Business Tech Transfer programs, USDA Value Added Producer Grants), capital investment, and connections to necessary elements such as manufacturing capabilities and regulatory guidance.

The AVC will: 1) Support entry into new markets which can be a hurdle to small business growth; 2) Provide awareness and connectivity to capital, innovation, and entrepreneurship training programs; and 3) Collaborate with other resource partners to help build networks for entrepreneurs to connect and diversify.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Arrowhead's RPSP budget is allocated to personnel and other expenses in support of assistance to businesses across the state, technology commercialization, student entrepreneurship and business creation, and development of public-private partnerships for investment in NM. Personnel budget includes staff and student salaries and fringe. Travel costs cover travel within NM for the purposes of delivery of programs. Supplies and other expenses are also required to deliver Arrowhead programs.

### **Expansion Justification:**

Expansion funding is requested to cover expenses for the proposed AVC, including personnel (FTE to design and implement programming), travel (travel to rural locations is critical for engaging communities and stakeholders), and program support (e.g. supplies, marketing, food for in-person workshops/events, etc.).

## **4. Program Mission (include population served, other demographic info):**

Arrowhead's mission is to enhance entrepreneurship and innovation, creating economic opportunities and social mobility for New Mexicans. We accomplish this through comprehensive programming ready to assist individuals and businesses regardless of where they may be in the innovation/entrepreneurial journey, with access to expertise, mentorship, funding opportunities, and physical resources. Goals supporting this mission are to: 1) Enhance student experiential learning through entrepreneurship education, practice, and application; 2) Enhance NMSU's research, innovation, and creativity profile through engagement with industry, government, and public/private partners; 3) Maintain and expand entrepreneurship and innovation services; and 4) Track and evaluate all activities efficiently and effectively, with an emphasis on justice, equity, diversity and inclusion (JEDI).

Arrowhead serves the entire State of NM through our promotion of innovation and entrepreneurship, and provides the private sector with enhanced capabilities to create economic growth. Clients include students (K-12, university and alumni),

#### **4. Program Mission (include population served, other demographic info):**

entrepreneurs, seasoned business owners, faculty and researchers, and organizations. Arrowhead is accomplishing this by collaboratively facilitating the growth of an innovation-driven economy, where NM's ability to convert ideas into marketable products and to develop a deep pool of entrepreneurs will improve the pace of economic growth. Arrowhead has a strong track record of serving diverse client bases (e.g., approximately 75% of participants in Sprint business accelerator cohorts are from groups historically underserved by entrepreneurial programming) and has demonstrated success in working with minority business populations, including ethnic minorities, women, rural communities, and Native American tribes/pueblos. We are committed to making innovation- and entrepreneurship-driven economic opportunity and social mobility available to all in NM – for example, Arrowhead's NM Clean Energy Resilience and Growth Cluster (CERG), which focused on clean energy technologies, places strong focus on underserved startups: 92.3% of applicants have fallen into a JEDI category, and 87.5% of accepted NM CERG participants represent underserved populations. Arrowhead serves NMSU faculty, staff, and students; inventors, entrepreneurs, and young and established firms across NM; government organizations; and educational/research institutions in NM.

Expansion Justification: Many NM communities identify the ag industry (agriculture, agribusinesses, and food processing) as key to the economic viability of their communities. The New Mexico Economic Development Department (NMEDD) identified value-added ag as one of nine target industries in their recent strategic plan. This plan cited the economics of agriculture as a primary weakness for the ag industry. In addition to outcomes such as new businesses, revenue and job growth, opportunities for rural communities, etc., growth of the value-added ag industry is an opportunity to increase state consumption of products developed in our state. The AVC will help to capitalize on ag-related opportunities and mitigate challenges to business growth in the sector.

#### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Arrowhead's RPSP objectives are focused on growing a stronger private sector in NM through entrepreneurship and innovation. These objectives include continued growth of commercialization programs and business assistance; creation and growth of scalable startups statewide; increased participation in NMSU innovation acceleration programs; growth of startups based on discoveries and innovation of NMSU faculty, staff, and students; engagement of students in hands-on entrepreneurial programs, experiential-learning employment, and internships; and growth of private sector and industry contracts and private-public collaborations. Key project beneficiaries include individual innovators and entrepreneurs on- and off-campus, NM-based companies, partners at NM-based research and higher education institutions, and partners in the private sector.

This project will:

- Through expansion of commercialization and business assistance programs, increase the number of innovators, entrepreneurs, and companies assisted statewide, building NM's base and creating economic and employment opportunities;
- Through creation and growth of scalable startups statewide, increase the number of new businesses and enhance existing firms, improving chances of success for these entities;
- Through growth of startups based on NMSU innovation, increase the number of business ventures based on NMSU technologies, providing exceptional commercial products and creating alternative revenue streams for NMSU;
- Through engagement of students in entrepreneurial programs and experiential learning, increase entrepreneurial skills and mindset in students, encouraging and enabling them to launch their own ventures in the future, while concurrently making them more employable in varied work environments; and
- Through growth of public-private/industry contracts and collaborations, increase Arrowhead's and NMSU's outward-facing relationships, creating opportunities for joint research and funding initiatives, internship and employment opportunities for NMSU students and graduates, and alternative revenue streams for NMSU.

Expansion Justification:

The AVC will support current Arrowhead objectives (see above), with a specific focus on agriculture. Specifically, AVC will: 1) Facilitate entry into new ag markets which can be a hurdle to small business growth; 2) Provide awareness and connectivity to

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

capital, innovation, and entrepreneurship training programs; and 3) Collaborate with other resource partners to help build networks for ag entrepreneurs to connect and diversify.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

As of the date of submission of this form, complete data for FY 2022 were not available; the data presented here reflect accomplishments in FY 2021.

**Economic Impact**

- \$434M total economic impact
- \$1.4 funding for Arrowhead programs from external federal and private sponsors
- 1,500 direct jobs created/retained
- Infusion of private and public capital into Arrowhead Park, generating 301 direct jobs

**Creation and Growth of Scalable Startups Statewide**

- Implementation of statewide business acceleration programs (Sprints program)
- 1,008 businesses and entrepreneurs assisted statewide (non-NMSU origin)
- Investments from Arrowhead Innovation Fund, an early-stage capital source for NM-based businesses

**Expansion of Student Entrepreneurship Programs**

- K-12 programs served 9 counties and 22 schools
- Expansion of Arrowhead student business accelerators to NM universities, community colleges, and national labs
- 1,280 NM student-led ventures, generating revenues of \$892K
- Entrepreneurial skills learning across the state for 5,013 K-12 students

**Growth of Public-Private Collaborations**

- 50 contracts with private entities
- 44 active, collaborative relationships with universities, national labs, government, and the private sector

**Funding**

- Awards from three gifts: \$500,000 from the Hunt Family Foundation and \$250,000 from Alejandra de la Vega Foster and Paul Foster
- \$1,354,717 in federal and private sector grant and contract expenditures; sources include the SBA, EDA, NSF, DOC, MBDA, DOE national labs, AFRL, NIH, NTU, NMEDD, Daniels Fund, PNMR Foundation, Westmeath Foundation, Wells Fargo, Bank of America, and Eddy County.

**Expansion Justification:**

The primary objective of the AVC is to grow the agriculture entrepreneurial ecosystem in NM, ensuring access to entrepreneurial resources and markets. Objectives include: assess commercial opportunities in various regions and communities in the state; work with local partners (CES, county and municipal governments, business leaders) to identify the most critical resource gaps; provide Arrowhead resources to fill those gaps (training, expertise, funding, connections); and track and evaluate AVC performance.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

Major Arrowhead impacts include business and job creation, revenue generation, private and public investment, and support for workforce development in NM, all supporting sustainable economic development for the state. Arrowhead impacts the number of startups in NM, which bolsters statewide job creation. Our assistance also enhances companies’ capacity for revenue generation. Export and local revenue is generated through Arrowhead programs and startups assisted. Arrowhead

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

has been successful in securing federal and private dollars to support entrepreneurship, innovation, technology development, and commercialization in NM.

Arrowhead’s engagement of the private sector through contracts and donations impacts revenue to NMSU and opens avenues for further research and education partnerships. Arrowhead contributes to the development of a skilled workforce through its entrepreneurial programming, instilling entrepreneurial skills and mindset in K-university students. A common theme among today’s employers is the desire for their employees to approach their jobs with entrepreneurial mindsets or attitudes, using leadership, risk-taking, and problem-solving skills. These are the precise skills instilled at Arrowhead that benefit students, whether they create their own companies or become employees at established companies or organizations. Arrowhead’s K-university programs also require hands-on application of STEM skills to make products and test hypotheses. Since mid-March 2020, we have made programming available online to address the needs of clients during COVID-19 and have emphasized strategies for businesses to deal with the economic impact of the pandemic.

Arrowhead’s impacts are statewide through its various K-university entrepreneurship programs and through its business acceleration programs. Arrowhead also provides employment and learning opportunities to NMSU students from all disciplines, allowing them the opportunity to work on real-world challenges and solutions and to understand the potential for and impact of entrepreneurship in all fields. Also, Arrowhead’s efforts support economic development goals of Governor Lujan-Grisham, NMEDD, recommendations of the NM Jobs Council, the Comprehensive Economic Development Strategy of the Councils of Government, the Higher Education Department, the Public Education Department, and the Department of Workforce Solutions. Arrowhead’s programs directly support entrepreneurship as a recovery strategy, as promoted by NMEDD.

Expansion Justification: The AVC will benefit individuals and communities engaged in agriculture/food-based ventures across NM. Programming is anticipated to be particularly impactful in rural and tribal communities heavily reliant on agriculturally focused economies. Direct results include the number of new ag products launched and new processes adopted, number of new and expanded ag businesses, number of new and expanded ag markets, and growth in private investment and public funding for ag businesses. Impact metrics include percent of ag products exported and purchased, job and revenue growth, new and/or expanded ag-related commercial activity in underserved/distressed communities, and ag businesses relocating the the region.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Arrowhead actively pursues funding from private donors, foundations, and the federal government. It uses RPSP funding as a cost match when this is a requirement. Most of Arrowhead’s federal sponsors require a 1:1 cost match; Arrowhead leverages the programs and capabilities funded through state support to bring external dollars to NM.

FY2021 actuals include:

- \$634,896 from federal grants (U.S. SBA, NSF I-Corps, U.S. DOC, Sandia National Labs, Los Alamos National Lab, NREL, MBDA, U.S. DOE)
- \$750,000 from private gifts (Hunt Family Foundation, Paul Foster and Alejandra de la Vega Foster)
- \$192,500 local government and private sector contracts (Eddy County, El Paso City, City of LC)

Expansion Justification:

The \$200,000 additional FY 2024 RPSP funding is anticipated to bring in additional federal dollars and private sector investment, leveraging state dollars for a return on investment beginning in FY 2025.

## 9. Accomplishment/ Highlights (bullet form)

### Successful Leveraging of State Appropriations to Attract Outside Funding

- Federal funding to grow programs, requiring a 1:1 cost match
- Substantial gifts from private donors, leveraging federal-, state-, and NMSU-provided funds

### Expansion of Commercialization and Business Assistance Programs

- Growth of Sprint business accelerator programs in agricultural technology, digital health technology, export-based businesses, clean energy and COVID-19 recovery.
- DOE award for clean energy cluster creation; partnered with LANL, Sandia and NMEDD
- Received national Tibbetts award for SBIR/STTR program (NM FAST) achievements

### Creation and Growth of Scalable Startups Statewide

- Startup ecosystem growth through continued growth of an early-stage venture fund (Arrowhead Innovation Fund)

### Growth of Startups Based on NMSU Innovation

- Increase in technology licensing through LAUNCH, an annual licensing/proof of concept program
- National recognition among universities as a National Science Foundation I-Corps site/affiliate, focused on commercialization of NSF-funded research

### Engagement of Students in Entrepreneurial Programs, Experiential Learning, and Internships

- STEM-based innovation and entrepreneurship programs in K-12 environments across NM
- Rapid expansion of number of students and businesses in Studio G student business accelerator over the last five years; currently active at 18 sites
- NMSU student employment and internships (average of 31 students from FY19-FY22) providing income and institutional engagement

### Growth of Public-Private/Industry Contracts and Collaboration

- Strong partnerships with federal agencies (e.g., U.S. Economic Development Administration, U.S. Small Business Administration, and National Science Foundation, Department of Energy) to promote commercialization, entrepreneurship, and research park development)
- Continued development of Arrowhead Innovation Network, composed of 50+ experts in business, technology, science, and investment, which is a foundation for all Arrowhead commercialization acceleration and startup projects

### National and Global Recognition among Universities

- NSF I-Corps site, focused on commercialization of NSF-funded research
- Top 20 university incubators in the world, ranking by UBI Global, and mention in Forbes Magazine

### Expansion Justification:

AVC will support creation and growth of scale startups statewide, growth of public/private partnerships and industry relations; expansion of commercialization programs; and leveraging of state funding to attract funding from outside NM.

### Medical Projects

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

RPSP Title: Arrowhead Center for Business Development  
Contact Name: Kathy Hansen, Director of Arrowhead Center  
Contact Email: [hansen@nmsu.edu](mailto:hansen@nmsu.edu)

**FY24 Request**

**\$555,100**

**NMSU LEADS 2025 Goal:**

**3 - Amplify Extension and Outreach**

**RPSP Goal:**

To create economic opportunity through entrepreneurship and innovation

RPSP Objective 1: Expand commercialization programs and business assistance statewide.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of entrepreneurs assisted (non-NMSU)	270	663	1,008	1,029	72	121	729	802	1,058	1,296	FY21 actuals & FY22 estimates exceed respective targets. FY24 target is based on FY22 numbers and expansion request.

RPSP Objective 2: Support the creation and growth of scalable startups statewide		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of ventures (non-NMSU)	111	269	415	554	57	117	296	326	436	645	FY21 actual & FY22 estimate exceed respective targets; FY24 target is based on FY22 numbers and expansion request.
2	Number of Arrowhead offerings	NA	NA	NA	NA	NA	NA	NA	NA	15	17	New measure for FY23

RPSP Objective 3: Implement streamlined commercialization strategies		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	# of participants in Launch (acceleration program)	22	16	11	26	48	40	24	26	26	36	LAUNCH program delayed and redesigned due to COVID.
2	# of researchers receiving commercialization assistance	185	190	65	84	222	275	209	230	230	120	Arrowhead is using a stricter definition of assistance; COVID impact on researcher access
3	# of participants in tech commercialization acceleration programs	NA	NA	NA	NA	NA	NA	NA	NA	225	250	New measure for FY23

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Arrowhead Center for Business Development  
**Contact Name:** Kathy Hansen, Director of Arrowhead Center  
**Contact Email:** [hansen@nmsu.edu](mailto:hansen@nmsu.edu)

**FY24 Request**  
**\$555,100**

RPSP Objective 4: Promote startup creation and licensing of IP		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Number of ventures based on NMSU innovation	180	195	206	217	33	192	205	215	216	220	FY21 actual & FY22 estimate exceed respective targets; FY24 target is based on projected sustainment of FY22 numbers.

RPSP Objective 5: Engage students in entrepreneurial programs		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Number of NMSU students and recent alumni pursuing a business	722	964	946	1,531	332	798	1,012	1,062	1,115	1,115	FY 21 actual slightly lower than FY 21 target due to a stricter definition of what constitutes an "active" client.
2	Number of mid and high school students participating in entrepreneurial education and innovation programs	438	709	575	399	377	482	780	858	901	NA	COVID restrictions continued to affect K-12 programming; this measure is replaced in FY24 to include elementary students
3	Number of Native American students in entrepreneurial programs	NA	28	33	33	NA	NA	31	34	36	40	COVID restrictions continued to affect K-12 programming.
4	Number of NM student-led startups	548	1,075	1,280	1,122	62	576	764	802	842	1,200	FY21 actual & FY22 estimate exceed respective targets; FY24 target is based on projected sustainment of FY22 numbers.
5	Number of K-12 students participating in entrepreneurial education and	NA	NA	NA	NA	NA	NA	NA	NA	6,000	6,600	New metric For FY23
6	Number of NM students and recent alumni pursuing a business	NA	NA	NA	NA	NA	NA	NA	NA	2,400	2,500	New metric For FY23

RPSP Objective 6: To provide experiential-learning employment and internship opportunities		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Number of student employees and interns	37	80	63	61	30	41	84	88	88	70	FY21 actuals & FY22 estimates below respective targets due to lack of funding sources for student engagement growth. FY24 target based on anticipated growth of internships.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Arrowhead Center for Business Development  
**Contact Name:** Kathy Hansen, Director of Arrowhead Center  
**Contact Email:** [hansen@nmsu.edu](mailto:hansen@nmsu.edu)

**FY24 Request**  
**\$555,100**

RPSP Objective 7: Collaborate with public sector		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures												
1	Number of contracts with the private sector	50	52	50	42	25	50	57	63	63	45	FY22 estimate lower than target due to decrease in demand for office space contracts.

RPSP Objective 8: Collaborate with public sector entities in support of business creation and growth		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures												
1	Number of collaborative initiatives	18	25	44	47	8	17	28	31	34	55	FY21 actuals and FY22 estimate exceed respective targets.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Arrowhead Center for Business Development

Total: **\$ 555,100.00**

Budget verses Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 311,944.00	\$ (107,600.00)	\$ 204,344.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 355,100.00	\$ 200,000.00	\$ 555,100.00	200K Expansion
Local		\$ -		
<b>Total Appropriations</b>	\$ 355,100.00	\$ 200,000.00	\$ 555,100.00	
<b>Grants and Contracts</b>				
Federal	\$ 674,646.00	\$ -	\$ 674,646.00	
State	\$ 9,328.00	\$ -	\$ 9,328.00	
Local	\$ 35,488.00	\$ -	\$ 35,488.00	
<b>Total Grants and Contracts</b>	\$ 719,462.00	\$ -	\$ 719,462.00	
<b>Private Gifts, Grants and Contracts</b>	\$ 674,523.00	\$ -	\$ 674,523.00	
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -	\$ -	
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>	\$ 90,000.00	\$ -	\$ 90,000.00	
<b>Total Revenues</b>	\$ 1,839,085.00	\$ 200,000.00	\$ 2,039,085.00	
<b>Transfers (to) from</b>				
Instruction and General	\$ 161,388.00	\$ -	\$ 161,388.00	
Student Social and Cultural		\$ -		
Research	\$ 290,048.00	\$ -	\$ 290,048.00	
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ 451,436.00	\$ -	\$ 451,436.00	
<b>Expenses</b>				
	<b>FY23 FTE</b>	<b>Change FTE</b>	<b>FY24 FTE</b>	
Faculty Salaries	0.63 \$ 54,565.00	0.00 \$ -	0.63 \$ 54,565.00	
Professional Salaries	16.10 \$ 1,011,381.00	1.57 \$ 99,420.00	17.67 \$ 1,110,801.00	50% of additional request
Other Staff Salaries	2.35 \$ 80,303.00	0.00 \$ -	2.35 \$ 80,303.00	
Student Salaries (GA/TA)	6.23 \$ 160,774.00	(1.65) \$ 24,216.00	4.58 \$ 184,990.00	Add GA
Other Salaries		0.00 \$ -	0.00	
<b>Total All Salaries</b>	25.31 \$ 1,307,023.00	-0.07 \$ 123,636.00	25.24 \$ 1,430,659.00	
Fringe Benefits		\$ 46,364.00	\$ 441,993.00	
Travel	\$ 26,687.00	\$ 10,000.00	\$ 36,687.00	5% travel expansion
Utilities		\$ -	\$ -	
Institutional Support Charges	\$ 16,200.00	\$ -	\$ 16,200.00	
Plant Operation and Maintenance Charges	\$ 72,186.00	\$ -	\$ 72,186.00	
Supplies and Expenses	\$ 580,396.00	\$ 20,000.00	\$ 600,396.00	10% PSC/Supplies
Equipment		\$ -		
Other Expenditures		\$ -		
<b>Total Expenditures</b>	25.31 \$ 2,398,121.00	-0.07 \$ 200,000.00	25.24 \$ 2,598,121.00	
<b>Ending Fund Balance</b>	\$ 204,344.00	\$ (107,600.00)	\$ 96,744.00	



# NMSU Autism Diagnostic Center

BE BOLD. Shape the Future.

2024

<b>FY 23 Actual:</b>	<b>\$ 711,800</b>
<b>FY 24 Request:</b>	<b>\$ 1,087,560</b>
<b>\$Change:</b>	<b>\$ 356,660</b>

**Purpose:** The purpose of the FY24 funding is to operate an Autism Diagnostic Center (ADC) in southern New Mexico and to expand diagnostic services for individuals referred for an autism diagnosis. The NMSU ADC will address the need for a timely diagnosis for children and adolescents with autism spectrum disorder (ASD) in southern New Mexico. The ADC has operated with less than one complete diagnostic team during the past funding period. Due to our efforts over the last year, we were able to add five members to our clinical team - two psychologists, two speech-language pathologists, and one social worker. The on-boarding of these team members will be completed prior to the start of FY23. Starting FY23, the ADC will have two multidisciplinary diagnostic teams - including one Spanish/English bilingual team - available for autism diagnostic services for New Mexican families. We request additional funding for one occupational therapist and one additional social worker to complete our two interdisciplinary diagnostic teams. This will allow us to increase the number of weekly ASD evaluations by 700%. In addition to increasing the availability of ASD diagnostic services in Southern New Mexico, this expansion of the ADC will also enable us to increase the number of NMSU students receiving specialized training in the area of autism. This, in turn, will add professionals with a much-needed skill set to the work force in New Mexico.

Wait times for families seeking ASD evaluation are among some of the longest in the nation and range from 24 to 36 months. Given the rise in the incidence of ASD and long wait times to access diagnostic services, the NMSU ADC is much needed to meet the needs of our state. With the additional \$356,660 request in funding, we will be able to add an occupational therapist and a bilingual social worker to our diagnostic team to better serve the diverse communities in New Mexico. Furthermore, we will be able to retain the other team members in the ADC with the competitive salaries that we had previously requested and which were granted.

## Statement of Need:

1. Need to **decrease wait time for a diagnosis** of autism. Prior to the ADC, New Mexico had only one interdisciplinary team for the diagnosis of autism located at the UNM Center for Development and Disability. The location of the center in the northern part of the state left a large disparity in access for the southern part of the state. The ADC was created to address this disparity and continues to find ways to increase its diagnostic capacity.
2. Need to **maximize intervention outcomes through early intervention**. Evidence-based research clearly reveals that the greatest positive outcomes for individuals with autism occur when intervention is offered as early as possible and continuously. However, even after initial diagnosis, insurances require an updated diagnosis every two years. Therefore, diagnostic services for individuals with ASD are necessary every two years for uninterrupted treatment. Positive treatment outcomes could be drastically reduced due to postponed diagnosis.
3. Need to **offer more local services**. Offering a southern hub with professionals specializing in the diagnosis and treatment of autism supports increased collaboration with community service providers and the creation of a knowledgeable workforce through student education and continued education of local healthcare providers in the southern part of the state.



## INCIDENCE OF AUTISM SPECTRUM DISORDER

- 2016 **1 in 54**
- 2022 **1 in 44**

Incidence of ASD is rapidly increasing – the need for early intervention by qualified practitioners, is critically needed in New Mexico.

<https://www.cdc.gov/ncbddd/autism/data.htm>

## Background

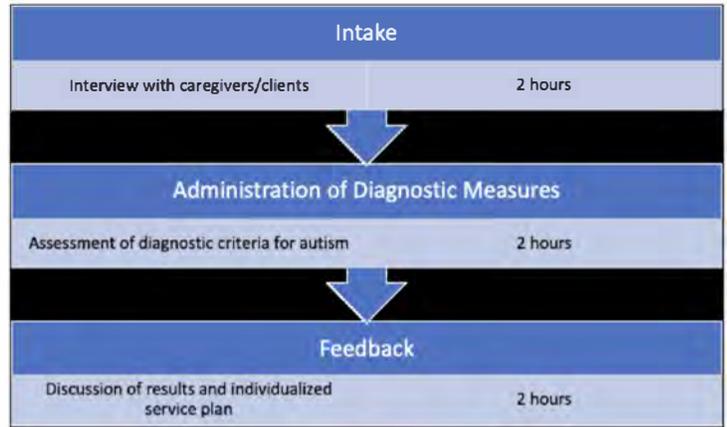
ASD is a neurodevelopment disorder that impacts a person's communication, behavior, and ability to function, and ranges from a total inability to form meaningful communication and social interactions to functional but limited social communication and interaction.

- ASD diagnosis is derived from behavioral observation
- ASD behaviors vary widely along a spectrum of behaviors
- ASD behaviors change with development and intervention

# Diagnosis

Intervention services for an individual with ASD begin with a comprehensive diagnosis. The diagnosis serves two essential purposes:

1. Identifies the individual as eligible for third-party insurance including the state Medicaid program.
2. Identifies the individual's strengths and weaknesses in order to develop an Individualized Service Plan (ISP).



## The ADC Team:

A team comprised of Clinical Psychologists, Speech-Language Pathologists, Occupational Therapist, Social Workers, and other professionals will make the NMSU ADC a vital force in our region's efforts to diagnose and refer for treatment individuals for an autism diagnosis

### Current Diagnostic Teams

- 2 Clinical Psychologists
- 2 Speech-Language Pathologists
- 1 Occupational Therapist (requested)
- 2 Social Workers (requested)

### Administration Team

- Clinic Director
- Grant Writer

### Assessment Support

- 6-8 Graduate Assistants (GAs)



## Impact:

The Autism Diagnostic Center's significant impact on the autism community of southern New Mexico can be best visualized with objective data:

- 26 families per month to receive necessary diagnoses for individualized services and follow-up care
- 39 hours of weekly face-to-face diagnostic services currently being provided by the ADC Team to NM residents
- Provided specialized training to eight graduate students, 3 of which graduated and are now working in New Mexico
- Provided 10 conference presentations, service provider trainings, and community education events.
- Continued provision of RUBI Parent Training to families on our waitlist
- Delivered the inaugural evidence-based social skills training program to local teens and their families

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Autism Program

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$1, 087,560

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$730,900

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	4
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**2. Project Description / Executive Summary:**

The Autism Diagnostic Center (ADC) housed at New Mexico State University (NMSU) was established to provide state-of-the art autism diagnostic services to families in Southern New Mexico and beyond. This is the fourth year this project has received RPSP funding, and we are now in a position to offer consistent services to families seeking an autism diagnosis through our two interdisciplinary diagnostic teams – one Spanish-English bilingual team and one monolingual English team. This service will help to significantly reduce the state-wide wait time for an autism diagnosis.

Along with the rest of the country, the ADC adjusted to the new normal of living with the novel coronavirus (COVID-19), which brought challenges and opportunities. One of the major challenges that we faced was the loss of the ADC director and diagnosing psychologist in May 2021, leaving the center without the ability to provide diagnostic services for several months. While this was unfortunate, it led to the exploration of alternative models to provide diagnostic services, and it generated increased awareness in our college leadership that clinical psychologists with the necessary credentials required by the New Mexico Medical Assistance Division to provide a medical diagnosis of autism are in extremely short supply. The shortage of these highly qualified individuals resulted in a challenging hiring process during which highly competitive wages needed to be offered. However,

## **2. Project Description / Executive Summary:**

despite these challenges, the NMSU ADC continued to build, both human and physical infrastructure as well as conduct telehealth and in person client evaluations using a consultant model during this reporting period. This model allowed the ADC to continue to provide approximately 300 hours of face-to-face diagnostic services resulting in 21 completed autism evaluations while expanding its ability to assess and diagnose clients from 18 months to 18 years of age.

While the ADC continued to recruit for its key positions (Clinical Psychologists and Speech-Language Pathologists), the team also provided outreach services in the form of parent trainings for families diagnosed with autism as well as a much-needed social skills intervention for teens with autism. At the same time, the ADC leadership developed a goal to have two complete multidisciplinary teams housed within its facilities, which will result in moving the ADC from a clinical setting that provided minimal services to a robust functioning clinical structure that has the ability to continue to grow and meet the needs of the diverse communities it serves as it works to establish its reputation as a premiere regional autism center.

The two teams were intentionally developed as follows:

**Team 1.** Is monolingual and comprised of a Clinical Psychologist, Speech-Language Pathologists (SLP), a .5 FTE Social Worker and a .5 Occupational Therapist (OT).

**Team 2.** While all members on the second team are bilingual, they have the same staffing structure of a Clinical Psychologist, Speech-Language Pathologists (SLP), a .5 FTE Social Worker, and a .5 Occupational Therapist (OT).

It should be noted that the bilingual team plays a critical role in providing equitable access to the communities of southern NM as well as many rural communities along its eastern, western and southern borders that the ADC services.

Ultimately, the ADC was able to recruit and hire two Clinical Psychologists with extensive experience in diagnosing and treating individuals with autism. These psychologists bring individual expertise in differential diagnosis and are lead members of our two multidisciplinary teams that include speech-language pathologists (SLPs), who are experts in communication.

Now that the ADC has successfully hired a full time Clinical Director, two Clinical Psychologists and Speech-Language Pathologists (SLP), it will recruit an Occupational Therapist (OT) and one additional Social Worker. The Occupational Therapist position was not filled during reporting period as there was need to hire the Clinical Psychologists first so that OT services could be integrated into the multidisciplinary team.

The Licensed Social worker (LSW) position is a new position in this funding proposal. The position will focus solely on supporting clients and families through the ADC process and bridging the diagnostic process to community resources by connecting and referring clients to intervention services that are locally available to families.

In addition to the services provided to families in New Mexico, the ADC also trained eight graduate student assistant – four in Communication Disorders, three in Counseling and Educational Psychology, and one in Social Work. The opportunity to train as part of an interdisciplinary team will provide these future health care providers with the experience and training in the interaction and collaboration with other health care professionals since collaboration with different practitioners is a central part of caring for clients and patients to obtain optimal outcomes.

In regards to securing additional funding for the ADC, we were able obtain support for a grant application to the New Mexico Early Childhood Education and Care Department from two local service agencies, Aprendamos and

## **2. Project Description / Executive Summary:**

Full Bloom Pediatrics. This grant application was funded and as a result we are currently collaborating with UNM's Early Childhood Evaluation Program (ECEP) to decrease wait time for autism diagnostic services for children up to three years of age.

The work completed during this reporting period has established a strong foundation which in turn will allow the ADC to continue to reduce wait time from referral to diagnosis across New Mexico, provide resource coordination and support many of the needs of its communities and continue to successfully grow as needed.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The ADC is respectfully requesting an increase of \$356,660 during this cycle of funding to be utilized to continue to attract and retain highly qualified interdisciplinary clinical team members. The clinical team assesses clients for ASD both for initial and re-assessment, which is required by insurances every two years. In order to determine whether an ASD diagnosis is warranted, deficits in social communication, social interaction, and restricted and repetitive behavior patterns need to be assessed. Now that the core of two diagnostic teams has been established, we need the support of a full-time Occupational Therapist (OT) to aide in the assessment of sensory deficits common in autism. Furthermore, we are asking for an increase to be able hire a full-time, bilingual Licensed Social Worker (LSW). The LSW position will support the bilingual diagnostic team by identifying and referring families and clients to resources that they can access once the diagnosis has been received, effectively bridging diagnosis to intervention. Additionally, the increase in funding will allow the ADC to retain its current faculty and staff accounting for the recent raises for employees in higher education settings in New Mexico.

1. CLINICAL PERSONNEL: 6.25 FTE faculty positions are required to sufficiently operate the Autism Diagnostic Center. Of these five, four faculty positions will be strictly dedicated to the diagnostic team which will include 2.0 FTE Clinical Psychologists, 2.0 FTE Speech-Language Pathologists and one 1.0 FTE Occupational Therapist, 1.0 Clinical Director, and one .25 FTE Grant Writer

In order to support the ADC administratively, we ask for 0.25 FTE for a program coordinator. Furthermore, we ask for 1.0 FTE staff position for a bilingual Licensed Social Worker, while the salary for the current Social Worker will be paid from a different funding source.

Each faculty and staff member are (or will be) hired as a 12-month employee. The total for base salaries and percent of effort for faculty for FY 24 is \$590,00 and 6.25 FTE, respectively. The total base salaries and percent effort for staff are \$77,360 and 1.25, leading to a total base salary for personnel of \$716,524 and 7.5 FTE.

2. Graduate Assistant: Six graduate students at 0.25 FTE (total of 1.5FTE) will be hired annually to engage in clinical training in ongoing ASD assessments as well as outreach activities. The GAs will also complete graduate level coursework in autism. Currently there are 8 graduate students engaged in this project – two paid from a different funding source.

3. FRINGE BENEFITS: NMSU's fringe benefit amounts are based on a percent of direct labor costs. The total cost of fringe benefits for FY 24 is \$215,436.00.

4. TRAVEL: Travel funds are for clinical faculty and staff to travel to locations across Southern NM for outreach, attend national conferences, complete professional development activities, attend seminars and/or conferences

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

to increase knowledge, skills, and advanced training in autism, and to collaborate with UNM CDD. The total cost of travel is \$20,000.

5. UTILITIES: The ADC does not anticipate utility costs for FY 24.

6. INSTITUTIONAL SUPPORT COSTS: THE ADC anticipates Facilities and Administrative Rate in the amount of \$30,700.00 to recover general institutional costs that are incurred for common or joint objectives. Examples of these costs include operation and maintenance of buildings and grounds, student administration and service expenses, and general and departmental administrative expenses.

7. EQUIPMENT: The equipment costs associated with the project include ongoing technology needs, including the acquisition of equipment for physical examinations to be conducted by contract pediatricians, hearing screening equipment, purchase, repair and/or replacement of office equipment, and ICT services is anticipated to total \$50,000.00.

8. SUPPLIES AND EXPENSES: The primary objective of the ADC is to conduct assessment of individuals who are referred for diagnostic evaluation. Thus, ongoing costs related to assessments, protocols, on-line platforms for telehealth services, and general office supplies will be required. Furthermore, the ADC does estimate that it will have contractual expenses for FY 24 as we continue to use our team of contracting psychologists, contracting pediatricians, contracting physical and occupational therapists, as well as contracting speech-language pathologists to provide a wider array of expertise so that services can be tailored to individual client needs. We request a total amount of \$384,437 for supplies and expenses.

9. CONSTRUCTION: The ADC does anticipate construction expenses for a renovation during FY 24 that will provide additional office space for clinical personnel as well as space for outreach activities such as parent trainings and group interventions. However, we anticipate using funds that have remained from prior years when we were unable to use salaries due to our hiring challenges described in the executive summary or other funding sources.

**4. Program Mission (include population served, other demographic info):**

The NMSU Autism Diagnostic Center will broaden the reach of services for children and adolescents with autism spectrum disorder (ASD) in New Mexico. The program provides state-of-the-art multidisciplinary diagnostic services in the second most densely populated county in southern New Mexico (Dona Ana pop 215,579) and neighboring counties, thereby reducing the current backlog for diagnostic services statewide. The program provides these services to the culturally and linguistically diverse population of New Mexico by providing services in English and Spanish.

The current multidisciplinary configuration of the ADC will increase diagnostic capacity within the state by providing timely diagnosis for children suspected of having ASD. Diagnostic evaluations facilitate timely access to intervention services that lead to meaningful outcomes and improve the quality of life of those affected by autism.

This program will continue to increase the number of health care professionals (SLPs, Social Workers, and School Psychologists) in New Mexico specifically trained to meet the needs of individuals with ASD and their families.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

1. Elevate graduate education; 100% completion rate for graduate program students
  - a. Students apply/selected for Autism GA program

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

- i. 6 students will be working with the ADC this fiscal year
- b. Students will complete specialized clinical training and complete at least one graduate level course in the area of autism
  - i. The ADC will provide specialized clinical training and funding for graduate level courses in the area of autism during their assistantship
- c. Students complete supervised clinical training in ASD assessment
  - i. Students will work alongside experienced professionals within the ADC
2. Amplify impact of research findings by addressing local needs that align with global changes
  - a. ADC program collaborates with NMSU faculty to present at one national conference
    - i. Faculty will continue to partner with faculty in collaborating departments to provide presentations and national conferences
  - b. ADC program collaborates with faculty to publish one article in a peer reviewed journal
    - i. ADC faculty joining in July, 2022 will create plans to be productive in NMSU research to meet this goal
3. Hire staff, locate facility, establish operational guidelines
  - a. Hire key personnel
    - i. One Occupational Therapist – An OT that specializes in evaluating sensory profiles with knowledge and clinical experience in the area of ASD
    - ii. One bilingual Social Worker – A SW to round out our bilingual team to support the bridging of diagnosis to appropriate services on an individual basis; a SW with experience in case management, community outreach and clinical experience within an interdisciplinary team
  - b. Retain critical personnel
    - i. Clinic Director
    - ii. Clinical Psychologists
    - iii. Speech-Language Pathologists
    - iv. Social Worker
    - v. Program Coordinator
    - vi. Graduate Assistants (6-8) – 0.25 FTE each; From Communication Disorders, Counseling and Educational Psychology and Social Work Departments
  - c. Locate office space for personnel
    - i. Seek final approvals and participate in renovation planning for the addition of contractor work space (pods), community collaboration space (support groups, social skills group, professional development), and additional community outreach/professional work spaces for expanding team to existing ADC
4. Provide appropriate diagnosis for children referred for Autism Spectrum Disorder
  - a. Establish communication with other autism diagnostic providers in New Mexico to decrease wait times for families who seek an autism evaluation

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

- i. Establish contracts with private Stage 1 providers within our state to increase ADC capacity to decrease wait times in our state with an increased number of providers available
  - ii. Partner with state agencies, such as Early Childhood Education and Care Department, to decrease the current waitlist in New Mexico by relieving current institutions of significant waitlists
- b. Complete 5 assessments per week
- i. Two full time diagnosing psychologists will begin diagnosing at the ADC July, 2022. We anticipate a 700% increase in number of evaluations this coming year with a target of 7 evaluations per week.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

The ADC lost its only diagnosing psychologist in June of 2021. This posed a severe challenge as psychologists in this field are in extremely high demand and recruitment and retention of these experts is extremely competitive. However, as noted previously, the ADC’s consulting model did allow us to continue to provide services to the community as noted below. Furthermore, the previously hired program coordinator resigned her position in December 2021, leaving the program without administrative support for much of the spring until the current program coordinator started in May.

Major Accomplishments:

- Hired two clinical psychologists, two speech-language pathologists, and a Program Coordinator with decades of experience in autism, differential diagnosis, Medicaid guidelines, billing, and overall disability knowledge in New Mexico.
- Provided diagnostic services via telehealth and conducted approximately 300 hours of face-to-face diagnostic services for individuals and their families in New Mexico. Twenty (20) evaluations were completed by our contractors since October 2021 with eighteen (16) of these children being diagnosed with autism.
- Provided social skills training to individuals on the waitlist. Faculty and staff of the ADC and the Communication Disorders Department took certifications courses through UCLA to be PEERS providers. This is a 16-week course that focuses on teens with autism who have difficulty establishing and maintaining social relationships across settings. The ADC graduated their first group of teens in June, 2022, and has begun scheduling future courses as a waitlist for this program has already been created.
- Provided RUBI Parent Training to individuals on our waitlist. Faculty and staff at the ADC sought certification in an evidence-based parent training program to support families with individuals dealing with behavior differences that required specialized instruction outside of general parenting support. Families participate in a 14-week course with ADC faculty to evaluate and respond to behavior differences their family is experiencing.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

Geographic Reach:

- Provided Diagnostic Services to 21 children across 3 New Mexican Counties and 3 Cities.

<b>7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)</b>	
<ul style="list-style-type: none"> <li>Enabled the ADC to refer children for evaluation by early intervention agencies, community health clinics, pediatricians, and ABA providers located throughout the state of New Mexico.</li> </ul> <p>Demographic makeup of clients served during this reporting period.</p> <ul style="list-style-type: none"> <li>81% of clients served were male</li> <li>19% of clients served were female</li> </ul> <p>Diagnostic makeup of clients served during this reporting period.</p> <ul style="list-style-type: none"> <li>81% of all clients evaluated were diagnosed with autism spectrum disorder</li> <li>15% of all clients evaluated were diagnosed as Developmentally Delayed</li> <li>4% of all clients evaluated were diagnosed with a different psychological disorder</li> </ul> <p>The ADC addresses several of the Governor’s priorities:  By diagnosing children with autism, these children will be able to receive the interventions and supports they need to be successful at home and at school.  Furthermore, the training of graduate students in fields such as speech-language pathology, social work, and psychology feeds into the pipeline of much-needed health care providers with expertise in autism for New Mexico. Out of the three graduate students who completed their educational program during this cycle, all three stayed in New Mexico and work within healthcare (1) and educational (2) settings. The remainder of the graduate students continue their degree program at NMSU.</p>	

<b>8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?</b>	
The ADC has successfully sought out other funding sources that to date total \$265,000.00 in public funds (NM DOH, NM ECECD) and \$150,000.00 in private donations.	

<b>9. Accomplishment/ Highlights (bullet form)</b>	
<ul style="list-style-type: none"> <li>Hired majority of key personnel for two multidisciplinary diagnostic teams: two psychologists, two speech-language pathologists, and one program coordinator with three out of these five hires being bilingual.</li> <li>Developed a consultant model that allowed the ADC to contract with diagnosing psychologists, pediatricians, and one occupational therapist to keep diagnostic services available to our families on the waitlist while the center hired full-time clinical personnel. The ADC was able to provide 300 of direct clinical services to diagnose 21 children despite not having a full-time psychologist.</li> <li>Obtained a commitment from NMSU for additional space to expand the ADC’s onsite presence</li> </ul>	

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	3/3

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Autism Diagnostic Center	<b>FY24 Request</b>
<b>Contact Name:</b> Dr. Heike Lehnert-LeHouillier / Dr. Smith R. Frederick / Victoria Almaguer, MA, CCC-SLP	<b>\$1,087,560</b>

<b>NMSU LEADS 2025 Goal:</b> 1 - Enhance Student Success and Social Mobility
<b>RPSP Goal:</b> Goal 1.4. Strengthen career pathways through service-learning, and experiential learning and research engagement & Goal 1.5: Elevate graduate education

RPSP Objective 1 Elevate graduate education. KPI: Completion: 100% completion rate for graduate program students.		Measure Results						Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Estimate	FY20 Actuals	FY21 Estimate	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Students apply/selected for Autism GA program	N/A	8	8	4	4	6	NA	4	2	4	4	6	We will be adding two GAs from Counseling and Educational Psychology to work with our two full-time diagnosing psychologists.
2	Students will complete specialized clinical training and complete at least one graduate level course in the area of autism.	N/A	8	8	4	4	6	NA	0	2	4	4	6	All four GAs completed specialized clinical training and took coursework towards the graduate certificate in Autism. However, the students could not complete the certificate due to some courses not being offered or being cancelled due to low enrollment.
3	Students complete supervised clinical training in ASD assessment.	N/A	8	0	2	4	6	NA	0	2	4	4	6	All four GAs funded via the RPSP received clinical training in ASD assessment, and one also received training in an ASD social skills intervention.

<b>NMSU LEADS 2025 Goal:</b> 2 - Elevate Research and Creativity
<b>RPSP Goal:</b> Goal 2.1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education

RPSP Objective 1: Amplify impact of research findings by addressing local needs that align with global changes		Measure Results						Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Estimate	FY20 Actuals	FY21 Estimate	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	ADC program collaborates with NMSU faculty to present at one national conference	N/A	0	0	0	2	2	NA	1	0	0	1	2	Two faculty working with two ADC GAs presented at the annual convention of the American Speech Language Hearing Association (ASHA). Furthermore, the entire ADC team in collaboration with faculty from CD and CEP presented at the New Mexico Speech Language Hearing Association.
2	ADC program collaborates with faculty to publish one article in a peer reviewed journal	N/A	0	0	0	0	0	NA	0	0	0	1	1	With 5 new faculty joining the team, we are not yet able to predict the research productivity of these new faculty.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title: Autism Diagnostic Center</b>	<b>FY24 Request</b>
<b>Contact Name:</b> Dr. Heike Lehnert-LeHouillier / Dr. Smith R. Frederick / Victoria Almaguer, MA, CCC-SLP	<b>\$1,087,560</b>

<b>NMSU LEADS 2025 Goal:</b>	<b>3 - Amplify Extension and Outreach</b>
<b>RPSP Goal: Goal 3.5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities</b>	

RPSP Objective 1: Hire staff, locate facility, establish operational guidelines		Measure Results						Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Estimate	FY20 Actuals	FY21 Estimate	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Hire key personnel	N/A	0	1	3	6	2	NA	3	3	3	0	1	The ADC successfully hired two psychologists, two speech-language pathologists, one social worker, and one program coordinator. We anticipate hiring one occupational therapist and a second social worker in the upcoming year to complete our two diagnostic teams.
2	Hire clinical personnel	N/A	2	2	1	5	2	NA	2	1	0	4	1	Out of the six new hires, five are clinical personnel (psychologists, speech-language pathologists, and social worker). Please see above comment for anticipated hires.
3	Locate office space for personnel	N/A	7	7	1	0	8	NA	7	0	1	0	8	The ADC is in the process of expanding the center to accommodate all new clinic personnel. The space request has been approved by the NMSU space committee and is currently under review by the Space Cabinet/Chief Executive Team for approval.

<b>NMSU LEADS 2025 Goal:</b>	<b>4 - Build a Robust University System</b>
<b>RPSP Goal: Goal 4.2. Cultivate faculty and staff excellence</b>	

RPSP Objective 1: Provide appropriate diagnosis for children referred for Autism Spectrum Disorder		Measure Results						Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Estimate	FY20 Actuals	FY21 Estimate	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Establish communication with other autism diagnostic providers in New Mexico to decrease the wait times for families who seek an autism evaluation.	N/A	0	0	1	1	3	NA	18	1	1	4	4	The ADC has collaborated with two other Stage 1 providers, Lauren Parks and Dina Hill, to decrease wait times at our center. Additionally, the ADC has received a grant from the Early Childhood Education and Care Department to partner with the Early Childhood Evaluation Program at the New Mexico Center for Development and Disability to provide evaluations for individuals nearing the age of three who have a suspected diagnosis of autism.
2	Assessments per week	N/A	0	0	2	1	7	NA	18	2	4	5	8	The ADC lost their only diagnosing psychologist in June of 2021. Through networking, the ADC was able to establish two contracts with diagnosing psychologists. These individuals were able to provide 2-3 evaluations per month starting October, 2021. The ADC was successful in hiring two full-time diagnosing psychologists who will assume their positions on the clinical team in July, 2022. We anticipate a 700% increase in number of evaluations in the upcoming year.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:

Total: **\$ 1,087,560.00**

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 620,473.00	\$ (291,036.00)	\$ 329,437.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 730,900.00	\$ 356,660.00	\$ 1,087,560.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 730,900.00	\$ 356,660.00	\$ 1,087,560.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 730,900.00	\$ 356,660.00	\$ 1,087,560.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	FY23 FTE	Change FTE	FY24 FTE	
Faculty Salaries	6.70	0.11	6.81	
Professional Salaries	\$ 580,000.00	\$ 10,000.00	\$ 590,000.00	
Other Staff Salaries	0.15	1.08	1.23	
Student Salaries (GA/TA)	\$ 9,360.00	\$ 68,000.00	\$ 77,360.00	
Other Salaries	1.22	0.00	0.00	
<b>Total All Salaries</b>	\$ 49,164.00	\$ (0.00)	\$ 49,164.00	
Fringe Benefits	8.07	1.19	9.26	
Travel	\$ 638,524.00	\$ 78,000.00	\$ 716,524.00	
Utilities				
Institutional Support Charges	\$ 215,436.00	\$ -	\$ 215,436.00	
Plant Operation and Maintenance Charges	\$ 5,000.00	\$ 15,000.00	\$ 20,000.00	
Supplies and Expenses				
Equipment	\$ 30,600.00	\$ -	\$ 30,600.00	
Other Expenditures	\$ 132,376.00	\$ 252,061.00	\$ 384,437.00	
<b>Total Expenditures</b>	\$ 50,000.00	\$ 50,000.00	\$ 50,000.00	
<b>Total Expenditures</b>	8.07	1.19	9.26	
<b>Total Expenditures</b>	\$ 1,021,936.00	\$ 395,061.00	\$ 1,416,997.00	
<b>Ending Fund Balance</b>	\$ 329,437.00	\$ (329,437.00)	\$ -	

Title: Commercial Space New Mexico  
 FY23 Actual: \$50,000  
 FY24 Request: \$350,000  
 \$ Change: \$300,000

The global space economy is estimated to grow over 400% in the next twenty years to above \$2.5T annually. The State of New Mexico is uniquely positioned to become a leader in commercial space by leveraging relationships with New Space New Mexico, Spaceport America, New Mexico's National Laboratories, the growing space industry, and space/aerospace research programs at New Mexico State University (NMSU). We request investment from New Mexico State to establish *Commercial Space New Mexico* as a center to promote space activities. The center will drive space innovation and commercialization by developing partnerships with the space industry and developing a highly trained workforce to support the growing needs of the space industry. *Commercial Space New Mexico* supports NMSU's Strategic Emerging Area of Research Opportunity - Space Commercialization. Gov. Michelle Lujan Grisham identified the space industry as one of nine economic growth sectors for the state.

## Goals and Objectives

**Goal:** Use New Mexico State University to drive economic expansion in New Mexico by supporting the emerging commercial space sector.

**Objective 1:** Grow human capital at NMSU to innovate new technologies for commercial space by providing development grants to promising concepts and partnering with the space industry.

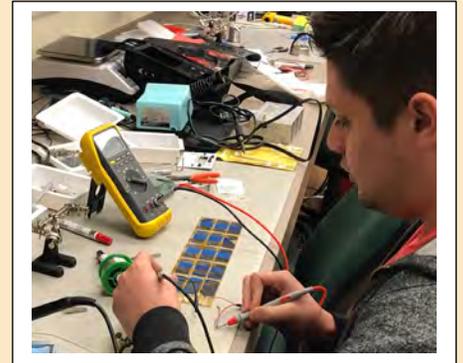
**Measures:** Number of researchers, Number of proposals submitted, External funding generated

**Objective 2:** Train faculty, staff, and students in the commercialization process and connect researchers with potential partners in industry and at the National Laboratories.

**Measures:** Number of joint projects, Number of industry contacts, Number of patent disclosures, Number of STTR/SBIRs

**Objective 3:** Provide students with the hands-on training in the development and commercialization of technologies for space. Combined with the exceptional academic programs at NMSU, this training will address the workforce needs to attract companies to New Mexico.

**Measures:** Number of students trained, Number of graduates, Number employed in the space industry, Number employed in NM



## Small Business Collaboration

The availability of a highly trained workforce is a crucial element to the success of growing the space industry in New Mexico. For space industry startups, students with exposure to the commercialization process as well as technical skills are of particular importance.

Programs at the NMSU **Arrowhead Center** boost the capabilities of NMSU students by providing exceptional opportunities to experience entrepreneurship and innovation ecosystems. Several successful examples include

C6 Launch hires NMSU NanoSat Lab students to help with programming to support rocket engine testing at Spaceport America. C6 Launch is considering opening a branch in NM.

Space Products and Innovation (SPiN) is working with the NMSU NanoSat Lab to push the state-of-the-art for plug-and-play technologies for small satellites. NMSU and SPiN have an SBIR award.

NMSU is engaged in preliminary conversations with the Canadian Space Mining Corporation about water mining on the lunar surface.

# Commercial Space New Mexico

## Model of Success

The NMSU Nanosat Lab's INCA Mission has demonstrated success in workforce development for the space industry. Fast Facts:

- AFRL – University Nanosat Program
- Collaboration with NASA/GSFC
- 81 Undergraduates
- 5 Masters
- 2 PhD
- 2 Companies
- 72% of graduates are working in the space industry



## Leveraging Opportunities Workforce

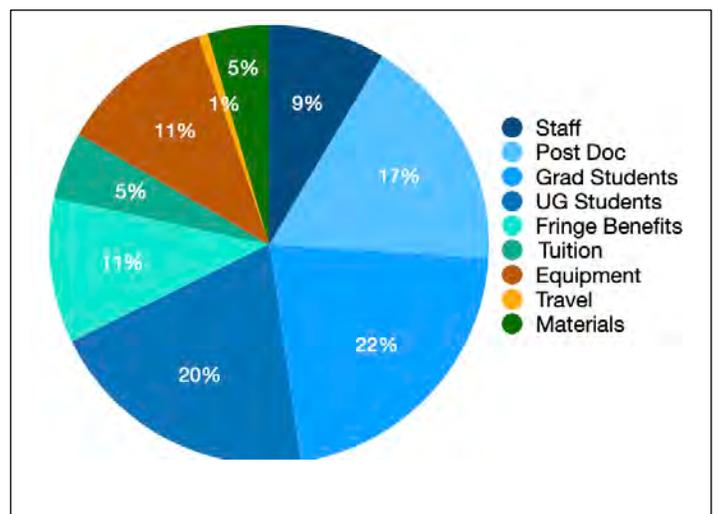
The goal of the *Commercial Space New Mexico* program is to have a one-to-one match of state funds with federal and industrial contributions. Currently, the following proposals are under review at NASA: *Coalition to Broaden Participation in Space-STEM, Advancing Regolith-related Technologies & Education, and Integrated Hardware-Software Modular Adaptor System*. In addition, we have a proposal to expand the Northrop Grumman Corporation sponsorship and proposals to start programs with Lockheed Martin and Applied Technology Associates. C6 Launch and SPiN employ NMSU students, and both companies are considering opening branch offices in NM. NASA has several student launch initiatives that offer both orbital and suborbital launches.

## Workforce and Innovation Development

A robust Commercial Space Ecosystem will boost and diversify New Mexico's economy. The *Commercial Space New Mexico* project will fund New Mexico State University programs that develop a space industry workforce and position NMSU as an innovation partner. Workforce development is essential in expanding the space industry in New Mexico and is not currently addressed by other programs within the State.

The majority of the funds requested by Commercial Space New Mexico are targeted toward human capital development. Commercial Space New Mexico will give New Mexicans the skills and experience they need to stay and work in the space industry in New Mexico.

## Budget Breakdown



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Space Commercialization

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$350,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$50,000

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	1
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**2. Project Description / Executive Summary:**

Commercial Space New Mexico will drive space innovation and commercialization by developing partnerships with the space industry and developing a highly trained workforce to support the growing needs of the space industry. The global space economy is estimated to grow over 400% in the next 20 years to above \$2.5T annually. This program will help New Mexico broaden its economic base by expanding the space industry. Commercial Space New Mexico supports NMSU's Strategic Emerging Area of Research Opportunity - Space Commercialization. Gov. Michelle Lujan Grisham identified the space industry as one of nine economic growth sectors for the state. The program directly supports the Governor's Space Valley initiative by growing the engineering workforce and promoting partnerships between the space industry and New Mexico universities.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Sixty-eight percent of the budget is an investment in human capital, including \$30k for faculty summer salaries, \$61k for a postdoc, \$76k to support three to four graduate students, and \$70k to support 15 undergraduates. Approximately \$37k goes toward fringe benefits and \$21k toward tuition. We request \$55.8K for supplies to support the student engagement projects. We will seek matching funds from the space industry for student projects and student internships.

#### **4. Program Mission (include population served, other demographic info):**

The commercial space industry is experiencing rapid growth. This expansion allows the transition of New Mexico from a "testing center" to a commercial space hub where new technologies are developed and built. *Commercial Space New Mexico* will spearhead this transition. The new paradigm will significantly amplify the space industry's economic impact on the State. For example, consider how much more the State of New Mexico would have benefited if Virgin Galactic's spacecraft was designed and built in New Mexico rather than just operated in New Mexico.

The transition of New Mexico into a hub for commercial space will require a supply of innovative ideas generated by the State's human capital and a workforce that can support the industry's growth. The State of New Mexico has several initiatives to attract the space industry. New Space New Mexico, United & Ignite, Q Station, and MaxQ have caught several companies' attention. Central New Mexico Community College is addressing the training of technicians for the space industry. *Commercial Space New Mexico* will support New Mexico State University as a producer of the engineering workforce for the space industry and an "ideas incubator" for commercial space concepts that can drive the commercial space industry. *Commercial Space New Mexico* will expand the research domains of existing faculty researchers to bring their fresh ideas and approaches to space-based applications and growing working relationships with the space industry. This hallmark approach has allowed companies that did not exist 15 years ago to become major players in commercial space.

The space environment is uniquely challenging and is one area where there is truly no substitute for experience. *Commercial Space New Mexico* will directly support at least 12 students annually. These students will graduate with an enhanced intuition of space. They will be ready to contribute significantly to New Mexico's space industry and the space-related programs at Los Alamos National Laboratory and Sandia National Laboratory.

#### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

**Objective 1:** Grow human capital at NMSU to innovate new technologies for commercial space by providing development grants to promising concepts and partnering with the space industry.

**Measures:** Number of researchers, Number of proposals submitted, External funding generated

**Objective 2:** Train faculty, staff, and students in the commercialization process and connect researchers with potential partners in industry and at the National Laboratories.

**Measures:** Number of joint projects, Number of industry contacts, Number of patent disclosures, Number of STTR/SBIRs

**Objective 3:** Provide students with hands-on training in developing and commercializing technologies for space. Combined with the exceptional academic programs at NMSU, this training will address the workforce needs to attract companies to New Mexico.

**Measures:** Number of students trained, Number of graduates, Number employed in the space industry, Number employed in NM

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Funding will officially start on 1 July 2022. We have one fund Phase 1 SBIR with SPiN and we are working on a project with GSFC-NASA

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

Commercial Space New Mexico directly supports New Mexico's Space Valley initiative. The program aims to support the space industry's growth throughout the state by developing innovations for commercial space applications and growing the workforce needed to support the industry. The program will provide students interested in commercial space with the experiential learning opportunities needed to thrive in the workforce. With commercial experience, the well-trained workforce will support current space companies and attract more to New Mexico. The program supports the initiatives of Governor Grisham by supporting the goals of her Higher Education Department, Economic Development, and Department of Workforce Solutions. NMSU has a constituency that covers the entire State of New Mexico.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Commercial Space New Mexico will leverage federal funding from NASA, AFRL, Spaceforce, and NSF. The space industry is eager to establish relationships with NMSU beyond student recruitment. Commercial Space New Mexico will increase the number and scope of joint research programs, including the space industry's capstone projects with NMSU.

The Commercial Space New Mexico program aims to have a one-to-one match of state funds with federal and industrial contributions. Currently, the following proposals are under review at NASA: *Coalition to Broaden Participation in Space-STEM, Advancing Regolith-related Technologies & Education, Integrated Hardware-Software Modular Adaptor System*. In addition, we have a proposal to expand the Northrop Grumman Corporation sponsorship and proposals to start programs with Lockheed Martin and Applied Technology Associates. C6 Launch and SPiN employ NMSU students, and both companies are considering opening branch offices in NM.

**9. Accomplishment/ Highlights (bullet form)**

Funding will officially start on 1 July 2022. We have one fund Phase 1 SBIR with SPiN and we are working on a project with GSFC-NASA

Medical Projects	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**FY24 Request**

**RPSP Title:** Commercial Space New Mexico

**Contact Name:** Steve Stochaj

**Contact Email:** [sstochaj@nmsu.edu](mailto:sstochaj@nmsu.edu)

**\$350,000**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** Develop a workforce to support growth of the Space Industry in New Mexico.

RPSP Objective 1: Provide students with the hands-on training in the development and commercialization of technologies for space. Combined with the exceptional academic programs at NMSU, this training will address the workforce needed to attract companies to New Mexico.		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of students trained	32	32	Funding starts 1 July 2022
2	Number of graduates	8	9	Funding starts 1 July 2022
3	Number employed in the space industry	8	8	Funding starts 1 July 2022
4	Number employed in NM	5	5	Funding starts 1 July 2022

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Increase the participation of faculty in space related research.

RPSP Objective 1: Grow human capital at NMSU to innovate new technologies for commercial space by providing development grants to promising concepts and partnering with the space industry.		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of reserachers	5	5	Funding starts 1 July 2022

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Commercial Space New Mexico		<b>FY24 Request</b>
<b>Contact Name:</b> Steve Stochaj		<b>\$350,000</b>
<b>Contact Email:</b> <a href="mailto:sstochaj@nmsu.edu">sstochaj@nmsu.edu</a>		

2	Number of proposal submitted	5	5	Funding starts 1 July 2022
3	External funding generated	\$250k	\$250k	

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal:** Increase the number of partnerships between NMSU and the Space Industry.

RPSP Objective 1: Train faculty, staff, and students in the commercialization process and connect researchers with potential partners in industry and at the National Laboratories.		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of joint projects	4	4	Funding starts 1 July 2022
2	Number of industry contacts	12	12	Funding starts 1 July 2022
3	Number of patent disclosures	1	1	Funding starts 1 July 2022
4	Number of Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) Seed Funds	2	2	Funding starts 1 July 2022

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total: **\$ 350,000.00**

Budget verses Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>		\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 50,000.00	\$ 300,000.00	\$ 350,000.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 50,000.00	\$ 300,000.00	\$ 350,000.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 50,000.00	\$ 300,000.00	\$ 350,000.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	FY23 FTE	Change FTE	FY24 FTE	
Faculty Salaries		0.35	\$ 30,000.00	\$ 30,000.00
Professional Salaries		0.97	\$ 61,000.00	\$ 61,000.00
Other Staff Salaries		0.00	\$ -	\$ -
Student Salaries (GA/TA)	2.66	(0.78)	\$ 26,309.00	\$ 76,011.00
Other Salaries		2.05	\$ 70,000.00	\$ 70,000.00
<b>Total All Salaries</b>	2.66	2.59	\$ 187,309.00	\$ 237,011.00
Fringe Benefits			\$ 37,177.00	\$ 37,475.00
Travel			\$ 2,500.00	\$ 2,500.00
Utilities			\$ -	
Institutional Support Charges			\$ 17,258.00	\$ 17,258.00
Plant Operation and Maintenance Charges			\$ -	
Supplies and Expenses			\$ 15,756.00	\$ 15,756.00
Equipment			\$ 40,000.00	\$ 40,000.00
Other Expenditures			\$ -	
<b>Total Expenditures</b>	2.66	2.59	\$ 300,000.00	\$ 350,000.00
<b>Ending Fund Balance</b>			\$ -	\$ -



# New Mexico Produced Water Research Consortium

2023

## New Mexico Produced Water Research Consortium

FY23 Actual: \$130,000

FY24 Request: \$500,000

\$ Change: \$370,000

In passing the 2019 Produced Water Act (PWA), the New Mexico legislature established a legal and policy framework for the ownership, management, and reuse of produced water inside and outside of the oil and gas sector.

Through the PWA, New Mexico encourages the treatment and reuse of produced water to enhance fresh water sustainability and support new economic development opportunities in New Mexico, while also protecting the environment and public health.

To fill the scientific and technical gaps associated with treatment and reuse of produced water outside the oil and gas sector, in 2019 the New Mexico Environment Department and New Mexico State University. (NMSU) entered into a Memorandum of Understanding to create the **New Mexico Produced Water Research Consortium**.

### Objectives of the NMPWRC

- Establish a robust research and development program to address the challenges of produced water reuse.
- Inform future development of science-based policies and regulations.
- Identify current infrastructure gaps for new economic opportunities and applications.
- Establish protocols for research, development, and demonstration testing and cost and performance evaluation requirements
- Establish an efficient produced water quality and quantity data archiving and analysis portal
- Define produced water sampling and analysis approaches for toxicology and risk analysis
- Conduct laboratory and pilot-scale testing to demonstrate technical performance and cost-effectiveness of treatment technologies
- Develop an education and outreach program to discuss public risk and safety concerns of treated produced water use

The Consortium has developed testbeds for pilot testing of innovative produced water treatment technologies at NMSU, Brackish Groundwater National Desalination Research Facility (BGNDRF) in Alamogordo, and the Permian Basin.



Fig. 1. Student demonstrating a high recovery reverse osmosis pilot unit



Fig. 2. Produced water storage tanks in BGNDRF for pilot projects

## How does it benefit New Mexico?



### Public and Environmental Health

- State-of-the-science risk and toxicology testing
- Provide human cell-line testing to protect human health
- Fate and transport verification for environmental contaminants



### Fresh Water Sustainability

- Provide a new water resource
- Create drought-proof water supplies to support resiliency
- Support water compact delivery
- Reduce fresh water demand



### Economic Development

- Water for new and growing industries that create jobs
- Create a high-tech water sector
- Support regional development
- Support clean energy production

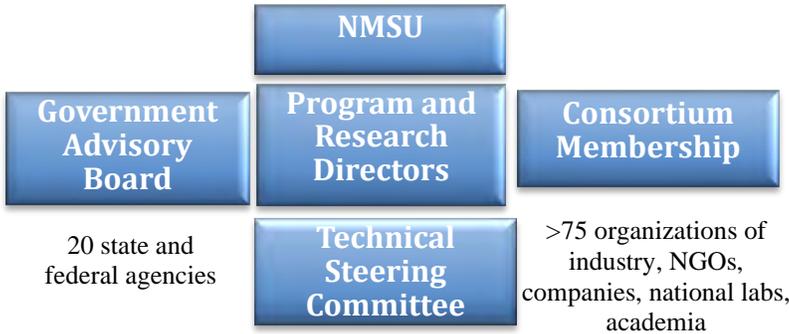
### Energy Security

- Reduce the risks of seismicity
- Support oil and natural gas production
- Reduce energy production costs
- Support energy security through new waste management strategies

- The **\$370,000 expansion** request will support the characterization of physical, chemical, and biological water quality parameters; conduct whole effluent toxicity tests and risks assessment; coordinate data acquisition to obtain, process, synthesize, and deliver data. The goal of the expanded research is to assess the risks and toxicology of produced water reuse to assist regulatory agencies in making science-based policies and regulations

# Advance science and technology for safe reuse of treated produced water to improve water sustainability

*A public-private partnership with 160 participants*



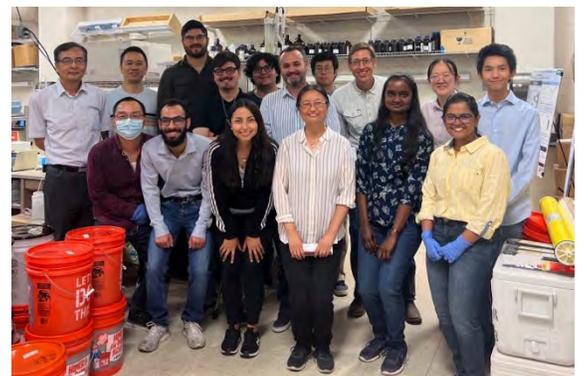
## NM state funds will support

- Improved characterization of physical, chemical, microbiological, and environmental toxicity analysis of produced water and treated produced water
- Developed state-of-the-science in produced water quality sampling and analysis
- Expanded web-based produced water quantity and quality data portal
- Enhanced public and environmental health, safety, and risk analyses
- Technical and economic assessment of integrated treatment systems including pretreatment, treatment/desalination, and post-treatment for fit-for-purpose applications
- Improved evaluation of economic, social, and environmental risks/benefits of produced water reuse
- Information and data to assist in NMED to make science-based decision in regulations and policy.
- Mentoring and training opportunities for postdocs, graduate, undergraduate and high school students to address energy, water, and environmental challenges.
- Hands-on experiences in both laboratory and field to better prepare students with skills and knowledge needed to complete their degrees and move forward with their career paths. The experience of working with industry and policy makers will strengthen students' capabilities of service-learning, experiential learning, and research engagement.

### New Mexico Produced Water Data Portal

## Highlights of Recent Accomplishments

- Selected by U.S. EPA to lead national research, development, and demonstration efforts on the treatment and fit-for-purpose reuse of produced water within their National Water Reuse Action Plan (WRAP).
- Completed several pilot and field demonstration projects of produced water treatment, and proceeding with several additional pilots demonstrations.
- Supported NMED on 5 state-wide public meetings and hosted 4 public outreach workshops across New Mexico to date.
- Expanding public outreach programming to ensure all stakeholders are informed of the science and technology research and development efforts of the Consortium, including a web portal and updates for real-time and online access to Consortium public meetings, workshops, technical information and public education efforts.
- Developed a system model for assessing the economic, societal, and environmental benefits of produced water fit-for-purpose treatment and reuse.
- Supported the research of 4 postdocs, 2 PhD students, 4 MS students, 8 undergraduate and 3 high school students.
- Published 12 peer-reviewed papers on top scientific journals and technical reports with Sandia National Laboratories and New Mexico Water Resources Research Institute.



## Leveraged

- Since 2019, the Consortium has received over \$1.25M in industry funded support and an additional \$1M through in-kind services. We have also received over \$1.5M in federal funds from the Department of Energy, Department of Agriculture, and Bureau of Reclamation to support produced water related research.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	New Mexico Produced Water Research Consortium

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$500,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$130,000

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

N/A

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	1
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**2. Project Description / Executive Summary:**

In passing the 2019 Produced Water Act (PWA), the New Mexico legislature established a legal and policy framework for the ownership, management, and reuse of produced water inside and outside of the oil and gas sector. Through the PWA, New Mexico encourages the treatment and reuse of treated produced water to enhance fresh water sustainability and support new economic development opportunities in New Mexico, while also protecting the environment and public health.

To fill the scientific and technical gaps associated with the treatment and reuse of produced water outside the oil and gas sector, in 2019 the New Mexico Environment Department (NMED) and New Mexico State University (NMSU) entered into a Memorandum of Understanding to create the **New Mexico Produced Water Research Consortium (NMPWRC)**.

## **2. Project Description / Executive Summary:**

To inform future development of science-based policies and regulations, the NMPWRC has identified current science and technology gaps and established a research roadmap to address these challenges, and included:

- Establish protocols for research, development, and demonstration testing, and specify cost and performance evaluation requirements;
- Conduct bench- and pilot-scale experiments to study a variety of produced water pre-treatment, desalination, and post-treatment technologies;
- Establish an efficient produced water quality and quantity analysis data archiving portal;
- Define produced water sampling and analysis approaches to assess human and environmental toxicology and risk associated with reuse;
- Establish an education and outreach program to discuss public risks and safety concerns of treated produced water use; and
- Identify current infrastructure needs to support emerging economic development opportunities and applications.

Since its launch in late 2019, the NMPWRC has attracted the engagement of over 160 participants from academia, industry, national labs, NGOs, technology developers, and federal, state and local government agencies. Both in terms of the caliber of technical experts on the NMPWRC and the aggressive and detailed research plan, the NMPWRC is widely recognized as leading the way on collaborative produced water research in the U.S. The NMPWRC's role in regional and national research is highlighted in the U.S. Environmental Protection Agency's (EPA) National Water Reuse Action Plan (WRAP), Action 4.2, which identifies "the New Mexico PWRC will Identify and fill Science and Technology Gaps for Off-Field Use of Treated Produced Water." In early 2022, the NMPWRC published the Research Plan and Gap Analysis for Produced Water Reuse in New Mexico (available at [https://nmpwrc.nmsu.edu/\\_assets/public\\_information/NMPWRC-Research-Plan-1-12-22-Final.pdf](https://nmpwrc.nmsu.edu/_assets/public_information/NMPWRC-Research-Plan-1-12-22-Final.pdf)). The gap analysis describes strategic program areas and priority tasks informed by the consortium's extensive research and technical discussions during 2020 and 2021. Objectives listed in the research plan include methods to reduce the risks of using treated produced water while guarding the state's socioeconomic, environmental and ecological systems. For the NMPWRC to achieve its critical research objectives and set the scientific stage for environmentally protective regulations in New Mexico and beyond, NMSU needs dedicated funding to invest in this nationally significant research and better position New Mexico for a resilient future in the face of increasing drought and freshwater shortages.

With New Mexico funding, the NMPWRC can support the following research priorities to assist NMED in making science-based regulations and policies for treated produced water reuse. The priorities include:

- State-of-the-science physical, chemical, microbiological, and toxicity analysis of produced water and treated produced water to support public and environmental health, safety, and risk assessment
- Technical and economic assessment of integrated treatment systems including pretreatment, treatment/desalination, and post-treatment for fit-for-purpose applications
- Evaluation of economic, social, and environmental risks of produced water reuse for different applications

**2. Project Description / Executive Summary:**

- Evaluation of using treated produced water for energy transitions, including clean H2 production, and valuable minerals recovery

The state funds would support faculty, staff, postdoc, graduate students, and undergraduate students' research on produced water testing, water quality analysis, risks and toxicity assessment, and social-economic-environmental evaluation for fit-for-purpose applications. The expected outcomes of the NMPWRC's activities directly benefit New Mexico by supporting fresh water sustainability, environmental and public health, economic development, energy security, as well as workforce development of next generation of professionals in the water and energy sectors.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

NMPWRC is requesting recurring funding of \$500,000, which includes a \$370,000 expansion request to support faculty, postdoctoral researchers, staff, graduate research assistants, and undergraduates salary and fringe; continue ongoing research and updates on the social, economic, and environmental assessment of produced water reuse applications; and to fund faculty and student water research with required water treatment equipment, chemicals, materials, and supplies. The \$370,000 expansion request will support the characterization of physical, chemical, and biological water quality parameters; conduct whole effluent toxicity tests and risks assessment; coordinate data acquisition to obtain, process, synthesize, and deliver data. The goal of the expanded research is to assess the risks and toxicology of produced water reuse to assist regulatory agencies in making science-based policies and regulations.

**4. Program Mission (include population served, other demographic info):**

Implementation of the Produced Water Act, enacted in 2019, supported policy objectives of creating more resilient communities and strengthening the economy in the face of increased drought associated with climate change and to support NM's energy transition. Research to fill the science and technology gaps associated with the safe and protective reuse of treated produced water for activities outside the oil and gas sector is an essential step to securing a new potential water source for New Mexico that would help relieve current demands on freshwater resources. Furthermore, this research may advance opportunities for blue and green hydrogen production in NM by creating a safe and abundant source of water for steam reforming of natural gas and electrolysis as an alternative to deep injection disposal of produced water. The program will benefit the entire state because oil and gas production and clean energy are important drivers of New Mexico's economy. More importantly, the research program will benefit New Mexico by enhancing public and environmental health; improving water sustainability by creating drought-proof supplies to support resilience and reducing demand for freshwater; promoting economic development by creating additional water for new and growing industries that create jobs; supporting regional development; reducing seismicity risks by reducing the volume of produced water for deep-well injection; and supporting energy security through enhanced waste management.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Research: The funding will continue to support the experimental research on developing low-cost, highly energy-efficient produced water treatment technologies and characterization of produced water for fit-for-purpose use beyond the oil and gas sectors. The project will support critical research that has been identified as "gaps" required for effective rule making by the NMED as outlined in the New Mexico Produced Water Act and the Research Plan developed by the NMPWRC to meet the ongoing needs of the state of New Mexico.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Teaching and advising: The workforce development and education is a core mission of the NMPWRC. The Consortium has trained postdoctoral researchers, PhD and Master graduate students, undergraduate students, and high school students to address energy, water, and environmental challenges. The research projects have provided hands-on experiences in both laboratory and field to better prepare students with skills and knowledge needed to complete their degrees and move into New Mexico's job sector.

Public outreach and service: Science-driven and public health-based education and outreach is the foundation of discussing fit-for-purpose treatment and reuse of treated produced water. Realizing the need to inform and educate the public on the benefits and impacts of produced water reuse, the Consortium established a comprehensive Consortium **Communication, Outreach, and Education Plan** to engage stakeholders in the state-of-the-science of produced water treatment and reuse. The Consortium has prepared materials (e.g., brochures, factsheets), updated the NMPWRC website for the consortium members and the public for easy access to information on Consortium efforts and activities, conducted several public education workshops in New Mexico, and published scientific papers and technical reports in top journals and conferences.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

The top objectives for the current FY are to:

- Establish and develop sampling and analysis methods for constituents of concern in treated produced water;
- Establish advanced analytical methods to measure the physical, chemical, and biological constituents in produced water and treated produced water;
- Quantify volumes and characterize the quality of produced water generated in New Mexico, including identification of constituents found in respective basins and formations and chemical additives used for hydraulic fracturing and drilling;
- Develop integrated treatment trains including pre-treatment, treatment/desalination, and post-treatment to meet the water quality requirements for different beneficial use applications;
- Measure the cost and effectiveness of different treatment approaches that can meet the quality criteria specific to uses such as road construction, rangeland rehabilitation, agriculture, livestock production, industrial applications, municipal applications, mining, and other uses;
- Quantify the cost and effectiveness of brine management, disposal, and potential minerals recovery technologies;
- Assess the health and safety effects of the use of treated produced water including risks and toxicity to public health and the environment;
- Outreach to the public through educational programs to improve the public understanding of the implication of research results in terms of expected impacts to public and environmental health and safety for fit-for-purpose reuse of treated produced water.

While the Consortium has made extensive progress in establishing the formal operational protocols and has begun initial research, there has been disruption to scheduled activities and significant reductions

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

from industry and NGO funding commitments as a result of the timing of the COVID pandemic. Consequently, there is an urgent need to immediately secure additional financial resources to ensure the required research is conducted with sufficient breadth and depth, and without undue delays or disruptions that undermine the integrity of the research outcomes. Investment of state funds into the ongoing work of the Consortium also serves to diversify revenue sources that will help maintain momentum and contribute to the overall program mission.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The NMPWRC was created to assist in the implementation of the Produced Water Act and support policy objectives of creating more resilient communities and strengthening the economy in the face of increased drought associated with climate change and NM’s energy transition. Research to fill the science and technology gaps associated with the safe and protective reuse of treated produced water for activities outside the oil and gas sector is an essential step to securing a new potential water source for New Mexico and relieving demand on freshwater resources. Utilization of treated produced water could account for an additional 100 million gallons per day of water available for municipal, commercial or industrial applications. Furthermore, this research may advance opportunities for green hydrogen production in NM by creating a safe and abundant source water for electrolysis as an alternative to deep injection disposal of produced water. The NMPWRC has attracted over 160 participants including industry experts, research scientists, and government policy experts from the southwest region, intermountain west and east coast. In addition to industry and technology developers, the federal, state, and local organizations partnering in or supporting the Consortium research activities include the NM Department of Environment, NM Oil Conservation Division, NM Office of State Engineers, NM Department of Public Health, NM Desalination Society, NM Oil and Gas Association, NM Desalination Society, Lea County, Eddy County, Bureau of Reclamation, Brackish Groundwater National Desalination Research Facility, US Environmental Protection Agency, US Department of Energy, and Sandia National Laboratories. The NMPWRC has coordinated a robust research and development program including funding nine laboratory and pilot-scale testing projects, and six working groups on water quality and quantity, treatment technologies, risks and toxicology, socio-economic-environmental assessment, infrastructure, and data portal. The NMPWRC has provided support to NMED to organize and conduct 5 statewide public meetings, 3 public education and outreach workshops, supported undergraduate research and design contest programs on produced water treatment for fit-for-purpose reuse.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The Consortium has received support from the membership and several industry sponsors to begin the research effort. In addition, the Consortium has acquired funding from the Department of Energy, Department of Agriculture, and the Bureau of Reclamation to develop innovative produced water treatment technologies. The consortium has collaborated with the New Mexico Water Resources Research Institute on the New Mexico Universities Produced Water Synthesis Project to inform solutions to

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

water scarcity and water quality using technology and community involvement to better treat and utilize produced water.

The Consortium will continue to seek funding from the U.S. Department of Energy, Bureau of Reclamation, Department of Agriculture, Nation Institutes of Health (NIH), industry, and other groups.

**9. Accomplishment/ Highlights (bullet form)**

Accomplishments to date:

- The Consortium has been selected by the U.S. EPA to work with the Ground Water Protection Council to lead the U.S. research, development, and demonstration efforts on the treatment and fit-for-purpose reuse of produced water within their National Water Reuse Action Plan. The Consortium continues to work closely with U.S. EPA and the Ground Water Protection Council to establish a National Coordination Council for Produced Water in support of EPA's Water Reuse Action Plan (WRAP).
- The Consortium has developed a robust research and education program with over 75 organizations, agencies, NGOs, and companies with over 160 participants who have joined and participated in various Consortium efforts.
- NGL Energy Partners has led industry support for this critical research with funding of \$500k and an additional \$500k through in-kind services.
- Additional research funding includes \$500k from ExxonMobil and a \$475k commitment from Chevron, and funding from TallGrass Midstream.
- To date, the Consortium has completed or has underway several research projects and several large pilots that are moving to mobilization and start-up phases.
- Consortium members are actively engaged in 6 working groups and 7 task committees in a broad range of technical issues associated with treatment and reuse of produced water including -
  - treatment technology research and evaluation,
  - improved understanding of public and environmental risk and toxicology associated with reuse,
  - improved analysis of produced water constituents and associated hazards,
  - produced water data portal to provide the public access to all produced water quality and quantity data,
  - and development of socio-economic models to evaluate the cost/benefits of the treatment and reuse of produced water to local communities.

## 9. Accomplishment/ Highlights (bullet form)

- The Consortium has provided support to NMED to organize and conduct 5 statewide public meetings on produced water treatment for fit-for-purpose reuse issues and concerns.
- The Consortium has been active in mentoring education activities of high school students and undergraduate students, such as 1) participated in the Navajo Tech-New Mexico Tech Navajo Nation Water Purification Project (N4WPP) held on April 23, 2022 at Farmington High School to judge and advise high school students on research projects to help solve some of the most important water challenges in New Mexico and across the Navajo Nation; 2) Developed a produced water treatment task for the WERC Design Contest participated by over 20 student teams from universities in the U.S.
- The Consortium hosted public education workshops at San Juan College, NMSU Carlsbad, and sessions in Hobbs, since October 2021. The workshops provided an overview of the status of current research and development of the fit-for-purpose treatment and reuse of oil and gas produced water. Attendees included a diverse cross-section of representatives from private industry, residents interested in finding out more about PW and the NMPWRC, County Economic Development leaders, and elected officials.
- The Consortium is currently expanding public outreach programming to ensure all stakeholders remain informed of the science and technology research and development efforts of the Consortium (i.e., web updates with relevant information, online access to Consortium public meetings and workshops, and an array of public education efforts).
- The New Mexico Produced Water Reuse data portal was developed through an agreement between the Consortium and the Ground Water Protection Council (GWPC) in support of the New Mexico Water Data Initiative. The WaterSTAR product of the GWPC was used as the basis of the data portal. The data sources used in the development of the data portal are provided by the New Mexico Oil Conservation Division (OCD) and the Petroleum Recovery Research Center: A Division of New Mexico Tech. In the portal, water quantity data is grouped monthly by  $\frac{1}{4}$  Township and only produced water identified as being disposed through Saltwater Disposal Wells (SWD) are being displayed in the interface. Produced water quality data is also grouped and anonymized by the same  $\frac{1}{4}$  Townships. This is designed to allow for the future addition of confidentially supplied produced water quality data. The data portal is available for public access from the Project Website at: <https://NM.WaterSTAR.org/> NM Water Data Catalog: <https://catalog.newmexicowaterdata.org/dataset/https-nm-waterstar-org>
- The Consortium is currently coordinating with several other states including, TX, OK, CA, PA, WY, CO, AZ, and KS, with discussions underway with UT. The TX Produced Water Consortium is especially interested in participation from NM Consortium. Through 2023, the NMPWRC will continue to increase interactions with other states to try and identify collaborative efforts and activities that support a consistent national effort on fit-for-purpose treatment and reuse of produced water.

**9. Accomplishment/ Highlights (bullet form)**

- The Consortium has developed a number of foundational documents and guidance on research roadmap and gap analysis, guidelines for produced water pilot testing, sampling protocols for produced water and operation. The research results have published in 12 peer-reviewed papers in top scientific journals.

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>FY24 Request</b>	
<b>RPSP Title:</b> New Mexico Produced Water Research Consortium  <b>Contact Name:</b> Pei Xu <b>Contact Email:</b> <a href="mailto:pxu@nmsu.edu">pxu@nmsu.edu</a>	<b>\$500,000</b>

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Workforce development for next generation professionals on water and energy sector

RPSP Objective 1: Elevate graduate education and strengthen career pathways through engaging students, postdoc, and faculty for produced water related research		Measure Targets		Comments ( <i>Briefly state your case</i> )
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Number of students involved in NMPWRC research	4	7	
2	Number of postdoc researchers supported by NMPWRC	2	3	
3	Number of students funded in NMPWRC research	2	3	
4	Number of undergraduate courses integrated with energy-water research	2	2	CE356 - Introduction of Environmental Engineering; CE355V - Technology and Global Environment
5	Number of graduate/senior undergraduate courses integrated with energy-water research	1	4	ENVE 452/552 - Unit Operation of Wastewater Treatment; ENVE 556 - Advanced Water Treatment and Reuse; ENVE 598 - Special Research Topic; Graduate Seminar

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> New Mexico Produced Water Research Consortium</p> <p><b>Contact Name:</b> Pei Xu</p> <p><b>Contact Email:</b> <a href="mailto:pxu@nmsu.edu">pxu@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="border: 2px solid black; background-color: yellow; padding: 5px; display: inline-block;"><b>\$500,000</b></p>
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**NMSU LEADS 2025 Goal:** **2 - Elevate Research and Creativity**

**RPSP Goal:** Integrate research with student education and accelerate technology and knowledge transfer

<b>RPSP Objective 1: Facilitate the convergence of cutting-edge research on the energy-water-environment nexus with undergraduate and graduate student education to address local and global water challenges</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	The number of projects funded by Federal agencies or industrial partners	3	3	
	The number of projects recognized by federal agencies or industrial partners	3	3	
2	The number of new technologies developed by the consortium	2	3	Produced water characterization methods using toxicity tests and chemical analysis
3	Number of research projects with international collaborations	0	1	with CSIRO
4	Number of journal publications authored/co-authored by students and postdocs	5	5	
5	Number of conference presentations for technology transfer and promoting economic development	5	5	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**FY24 Request**

**RPSP Title:** New Mexico Produced  
Water Research Consortium

**Contact Name:** Pei Xu

**Contact Email:** [pxu@nmsu.edu](mailto:pxu@nmsu.edu)

**\$500,000**

**NMSU LEADS 2025 Goal:**

**3 - Amplify Extension and Outreach**

**RPSP Goal:** Strengthen and elevate public-private engagement; amplify public outreach and services

RPSP Objective: Continue to provide data and information to industry, regulators, managers, and general public		Measure Targets		Comments ( <i>Briefly state your case</i> )
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Update NMPWRC website with news, reports, publications, presentations, and maps	Provide monthly updates on information	Provide monthly updates on information	
2	Continue monthly/biweekly meetings with stakeholders to maintain and lead the public-private partnership on produced water research	72 meetings a year	72 meetings a year	
3	Provide the results of socio-economic-environmental assessment on produced water treatment and reuse to stakeholders to promote economic and community development	2 public meetings	2 public meetings	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> New Mexico Produced Water Research Consortium</p> <p><b>Contact Name:</b> Pei Xu</p> <p><b>Contact Email:</b> <a href="mailto:pxu@nmsu.edu">pxu@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; margin-top: 10px;"> <p><b>\$500,000</b></p> </div>
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<b>NMSU LEADS 2025 Goal:</b>	<b>4 - Build a Robust University System</b>
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**RPSP Goal:** Cultivate collaboration and advance equity, inclusion and diversity

RPSP Objective 1: Engage the participation of minority and underrepresented students in research projects	Measure Targets		Comments <i>(Briefly state your case)</i>
RPSP Measures:	FY23	FY24	
1   Number of minority and underrepresented students and postdocs engaged in research projects	2	3	

RPSP Objective 2: Cultivate faculty and staff excellence, enhance productivity and improve work climate	Measure Targets		Comments <i>(Briefly state your case)</i>
RPSP Measures:	FY23	FY24	
1   Number of joint publications with NMSU faculty and industry partners	3	3	
2   Number of joint proposals submitted with NMSU faculty	3	3	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Produced Water Consortium Total: **\$ 500,000.00**

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
Beginning Fund Balance	\$ 130,000.00	\$ (130,000.00)	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ 500,000.00	\$ 500,000.00	\$130,000 Recurring in SB1 and budget for FY22
Local		\$ -		
<b>Total Appropriations</b>	\$ -	\$ 500,000.00	\$ 500,000.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ -	\$ 500,000.00	\$ 500,000.00	

<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

<b>Expenses</b>							
	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries	0.28	\$ 30,709.00	0.12	\$ 3,547.00	0.40	\$ 34,256.00	Three faculty 1 month summer salary: 0.11 FTE each, in total 0.33 FTE
Professional Salaries			0.88	\$ 55,000.00	0.88	\$ 55,000.00	Program manager
Other Staff Salaries			1.61	\$ 55,000.00	1.61	\$ 55,000.00	1 full-time postdoc
Student Salaries (GA/TA)	0.50	\$ 24,580.00	1.37	\$ 50,867.00	1.87	\$ 75,447.00	3 full-time students, each as 0.5 FTE
Other Salaries	0.50	\$ 24,000.00	(0.28)	\$ (16,500.00)	0.22	\$ 7,500.00	Admin support staff
<b>Total All Salaries</b>	<b>1.28</b>	<b>\$ 79,289.00</b>	<b>3.69</b>	<b>\$ 147,914.00</b>	<b>4.97</b>	<b>\$ 227,203.00</b>	
Fringe Benefits		\$ 16,516.00		\$ 33,791.00		\$ 50,307.00	
Travel				\$ 5,000.00		\$ 5,000.00	travel for conferences and sample collection
Utilities				\$ -		\$ -	
Institutional Support Charges				\$ -		\$ -	
Plant Operation and Maintenance Charges				\$ -		\$ -	
Supplies and Expenses				\$ 80,000.00		\$ 80,000.00	chemicals and supplies
Equipment				\$ 50,000.00		\$ 50,000.00	small equipment for chemical analysis and treatment
Other Expenditures		\$ 34,195.00		\$ 53,295.00		\$ 87,490.00	Chemical analysis fees and sample shipment
<b>Total Expenditures</b>	<b>1.28</b>	<b>\$ 130,000.00</b>	<b>3.69</b>	<b>\$ 370,000.00</b>	<b>4.97</b>	<b>\$ 500,000.00</b>	
<b>Ending Fund Balance</b>		\$ -		\$ -		\$ -	

# Sunspot Solar Observatory Consortium



2022

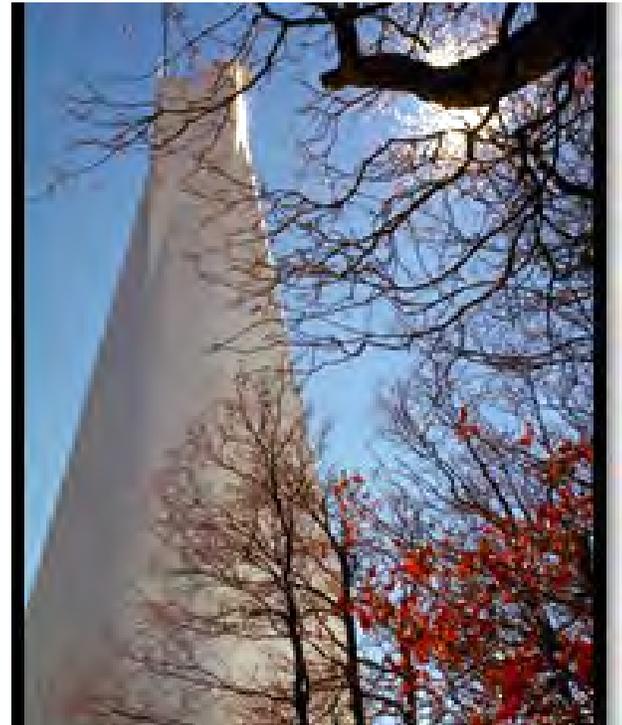
BE BOLD. Shape the Future.

FY 23 Actual: \$367,500  
FY 24 Request: \$400,000  
Change: \$32,500

New Mexico State University leads the Sunspot Solar Observatory (SSO) consortium in operating the world-renowned Dunn Solar Telescope and surrounding facilities that sit atop Sacramento Peak in Sunspot, NM. This is one of the preeminent places for studying the Sun. The project brings about \$1.3 million of revenue into the state annually. The National Science Foundation (NSF) provides 50% and NMSU, with commitments from the state of New Mexico, consortium partners, and grants, provides the other 50%.

This project strengthens the state's leadership in astrophysics and geospace research, enhances PhD student research and recruitment, improve a popular education and public outreach visitor center, and retain high-paying jobs in Otero County

The SSO oversees scientific and educational directives for the project, and its ongoing success depends on each consortium partner, including NMSU, to provide its own investment during operations. In FY24, we will continue to lead the SSOC, employ and train telescope personnel, provide for scientific and student research, employ and train STEM outreach personnel and organize STEM outreach events. State funding is used to enable NMSU to lead this project. All telescope personnel are NMSU employees and contribute to the mission of the university to serve the diverse needs of the state through education, research, extension, outreach, and public service.



## Putting New Mexico at the Forefront

NMSU, together with the NSO and the NSF, lead the consortium of US and international universities and institutes dedicated to funding and operating the facility over the next decade.

This leadership places NMSU in a national forefront role in addressing the global challenges of space weather and solar astronomy, subjects of tremendous interest to NSF, NASA, DoD, and DoE.

This directly retains high-paying jobs in Otero County and provides indirect economic benefits to the local region. Beyond maintaining about 11 FTE at the site, annual meetings and workshops will bring over 100 week-long scientists into the area from out of state, and about 20,000 public visitors.



## Research, education and jobs

The Sunspot Solar Observatory delivers

- A diverse consortium to operate the Dunn Solar Telescope
- An amplified outstanding reputation of New Mexico in cutting-edge research
- 11 FTEs in STEM jobs in Otero County
- A reinvigorated Sunspot Astronomy Visitor Center with new programs and attractions to boost tourism in Otero County
- Student training in areas of fundamental importance to the state's national laboratories
- Expanded outreach and education programs with NM public schools

# Sunspot Solar Observatory Consortium

In FY24, with NM funds we seek to:

**Lead the consortium:** establish strong leadership in areas of science, education, instrumentation, and outreach to ensure broad interest from the solar physics community; Obtain sufficient financial commitment to allow for full operations and to establish scientific agreements with institutes that provide instrumentation at the telescope.

**Employ and train telescope personnel:** supply mission-critical staff to continue development of scientific and educational operation plans for the site.

**Provide for scientific research:** provide for graduate recruitment and retention opportunities and

**Employ and train STEM outreach personnel:** Lead this premier STEM visitors center for the public.



## Sunspot Astronomy and Visitor Center

**Due to strong public interest in astronomy and the many visitors to astronomy facilities, the Sunspot Astronomy and Visitor Center opened its doors on Sacramento Peak in 1997. It is the result of a collaboration between the NSO/Sacramento Peak, Apache Point Observatory, and the USDA Forest Service. The Visitor Center attracts about 20,000 visitors per year.**



## Leveraged funds

Located at Sunspot, NM, the Dunn Solar Telescope specializes in high-resolution imaging and spectroscopy that allows astronomers worldwide to obtain a better understanding of the Sun and how space weather impacts Earth. The Dunn telescope continues to provide a versatile and user-friendly set-up to investigate a range of solar activity and provides a testbed for developing cutting-edge technologies.

This project leverages \$650,000 of state and partner funding, matching the \$650,000 annual investment of NSF.

In leading this project, NMSU Astronomy has successfully won several other grants. In 2019, NSF awarded a \$1,449,022 5-year grant to NMSU to hire a new faculty member and provide for research start-up costs including graduate students. In 2019-2022 a 3-year \$368,015 grant was awarded to NMSU from NSF, in addition to a \$212,000 grant from NSO, to fund additional student and postdoctoral research on solar filament eruptions.

In 2020-2024, the availability of data from the DST led to two NASA grants totaling \$70,000 per year. One of these is to provide support data for the Parker Solar Probe instrument as it fly through the Sun's atmosphere. The second became part of a major NASA research 'DRIVE' initiative lead by UCLA that resulted in a second larger proposal to NASA in the fall of 2021. NMSU involvement in both these projects is only possible because of our leadership in SSO

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Sunspot Solar Observatory Consortium

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    400,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    367,500

<b>Type of Project (X for Type)</b>			
Research <input checked="" type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	5
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**2. Project Description / Executive Summary:**

The goal of this RPSP is to continue to promote NMSU and the State of NM to lead a consortium in operating the solar astronomical research facilities at Sunspot, Otero County. This operation has an annual expenditure of ~\$1.3M in New Mexico, strengthens the state role as a leader in astronomical and geospace research, enhances PhD student recruitment for NMSU, improves a popular astronomical education and public outreach site, and retains high-paid jobs in Otero County. With this operating consortium and associated funding, the facility, now prospers as a world-class center for astrophysics research, education, and public outreach. NMSU leads the consortium for the the benefit of New Mexico in areas of scientific research of critical national importance, student training and education, advanced instrumentation, economic impacts to the state, and public outreach. In FY24, we will continue to employ observatory staff to provide for research in solar physics and space weather, provide graduate student training and enrich our public outreach program, and work with NSF to secure the long term future for the site.

Expansion Justification: In FY24 we will provide for 0.25FTE to integrate a new observation feature into the Visitors center in order to expand both our education for NMSU students, opportunities for more school visits, and extra open houses and special events for the public.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

In FY24, we will employ 6.5 FTES as part of the 11FTE team to provide for scientific research and public outreach in Sunspot. All FY23 budget for the RPSP is for NMSU personnel wages and fringes. Our request for FY24 is an expanded request of \$400,000.

In FY 24, the proposed budget is Professional Salaries: \$341, 858.92, this accounts for 7% increase in staff salaries during FY22, and addition 0.25 FTE to integrate a new telescope. Staff Salaries: \$43,719, this accounts for a 7% pay increase on FY22. Fringe Benefits: \$135, 559 Institutional Support: \$13,932.

**4. Program Mission (include population served, other demographic info):**

As our closest star, the Sun is a critical plasma and astrophysical laboratory. As the dominant external influence on Earth, the tremendous energy generated by the Sun can be suddenly and spontaneously released, sending radiation and high-energy particles to Earth that wreak havoc with communication satellites and power grids. These Space Weather effects are a combination of physics, astrophysics, and geophysics that makes studies of the Sun of fundamental importance to national funding agencies, including NASA, NSF, DOD and DOE. The Sunspot Solar Observatory has ran the Dunn Solar Telescope as a U.S. site for this interdisciplinary solar physics research at Sunspot, NM for over 5 years. In 2016, the previous operator, NSO, began to move most personnel to operate a new solar telescope. In 2017, the international research community recognized that facilities at Sunspot continue to be of significant scientific value and started the Sunspot Solar Observatory consortium. Since 2018, the state of New Mexico has invested in the scientific research and public outreach of the consortium in order to reinvent the facility to enable science, education, and public outreach focused on our nearest star. NMSU leads this consortium of national and international universities and institutes dedicated to funding and operating the facility over the next decade. NMSU leads and directs the project that brings about \$1.3M annually into the state. This retains high-paying jobs in Otero County, and provides economic tourism benefits to the local region. Beyond maintaining about 11 FTE at the site, annual meetings and workshops bring over 100 visitors to the area from out of state, and 50 scientists and engineers visit the facility each year for research and technical development. In total, using all available sources of funding in the consortium, the SSO fund 3 personnel at the telescope, 2 at the visitor’s center, 2 at NMSU, and NSF continue to fund 4 personnel for site operations. The SSO manages daily observing at the telescope, provides these data to the scientific community, operates a critical training facility with high-tech instrumentation for future scientists and engineers, contributes to a national graduate education program in solar physics, and operates the visitor center to attract about 15,000 visitors per year. No other facility in the country provides this combination of opportunities.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

In FY24 the 5 objectives of this RPSP are to continue to lead the consortium, employ and train telescope personnel, provide for scientific and student research at the telescope, employ and train STEM outreach personnel, and organize STEM outreach events.

Expansion Justification: The expansion refers to objectives 3, 4, and 5.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Given the science, instrumentation, and educational opportunities afforded by continued operation of the DST, the Sunspot Solar Observatory, consisting a consortium of several academic institutions and the NSF, provides for scientific research and public outreach centered on solar physics and space weather.

In FY22, we have four NMSU graduate student thesis using data from the telescope, have 5 ongoing MOUS, invested a federal NSF grant for FY22 to FY25, and completed a new instrument at the telescope. NSF continue to commit to their overall responsibility for the operations permit for the site, that included \$344,906 to NSO to retain their 4 staff at the site and a contribution of \$64,397 to NMSU in the first half of the year, and a new grant, currently in processing, of \$451,646 to NSO and \$224,041 to NMSU. Together this means that NSF will have contributed \$1,084,990 to the project in FY22, of which \$288,438 will have been awarded to NMSU. Other partners and NASA grants have contributed \$230,000 since 2018. In FY22

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

we also worked on the purchase of a new scientific instrument using \$100,000 capital outlay funds from the state of New Mexico.

The major obstacles to our success in FY22 were associated with the return to full reopening after the site closures due to COVID19 restrictions, budget pressures from our partners, and a new effort to seek out a new operator for FY24. We were open the entire year, but with limited visiting hours and mandatory masks in the telescope building. This affected our visitor numbers and visitor center income (which were both on track for a 35% increase), our professional visitor total, and our number of STEM and public outreach events. We have mitigated these effects by using this time to improve aspects of the project's long term viability. We redesigned computer control boards for the telescope, provided new extensive documentation for staff, and upgraded computing resources. We have enhanced the visitor experience through new exhibits and creating a new audio tour of the site.

Due to financial pressures, our two university partners were again unable to commit to a new funding agreement. To mitigate this loss of \$115,000/yr, in collaboration with NSO we submitted the expanded request of \$1,084,990 to NSF, and submitted 4 grants for a total of to NASA for \$252,766 of which two (\$67,728) as funded.

At the end of FY24, NSF are seeking a new site operator for the land use agreement. We have formed, and funded a environmental and risk assessment committee to look into NMSU taking over as operator. To this end, the expanded funding from NSF included a dedicated \$120,000 from NSF to personnel to complete this assessment, \$35,000 to fix the car park surface, \$150,000 to perform a site assessment, \$100,00 to upgrade the internet, and \$200,000 to simply infrastructure.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

The initial endeavor to lead the formation of the Sunspot Solar Observatory consortium made NMSU a new national hotspot for solar physics research. Leading this consortium to operate the Sunspot site now contributes directly to training and jobs in critical STEM areas in New Mexico. The major state research centers of Sandia, LANL, and AFRL are all concerned with replenishing their workforces with young, well-trained workers with precisely the set of STEM skills that the project provides and NMSU now has an education agreement and strong personal research connection with AFRL. The Sunspot site provides a unique setting for interdisciplinary research across the nation. For students in areas of space science, astrophysics, engineering and computer science, Sunspot offers a real-life research opportunity as part of their degree. In leading the program to retain and enhance Sunspot as a site for scientific discovery, we impact the local community with ~11 highpaying jobs in Otero County, and attracting visitors to the areas. The Sunspot visitor center provides outreach to the public and K-12 students, attracting ~15,000 visitors annually

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The project receives substantial external awards, and we continue to expand upon these.

In our ongoing MOU with NSF, beginning October 2019, they provide about \$350,000/yr channeled through NSO to retain site personnel, and \$250,000/yr to NMSU as their contribution to fund scientific operations. In FY20 and FY21, University partners provide an additional \$240,000 to NMSU to obtain their own observation. In FY20, Dr McAteer won to additional grants (total of \$70,000/yr) in which Sunspot is a 'Phase I' partner in two nationwide efforts funded by NASA. One of these, led by UCLA, was turned into a larger 5 year Phase II proposal submitted in FY 22.

In FY 22 we held several discussions and a site visit with NSF and Jacob's consulting to take over the entire site operations in Sunspot beginning Oct 2024. We partnered with NSO and submitted a proposal to fund NSO to perform essential deferred maintenance items, and thereby to allow NMSU to perform site inspections and permitting over the next years. This was used

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

to employ two extra people in the environmental and safety office at NMSU, including a full time project manager and increase to the amount coming to NMSU to \$288438/yr, and additional amount of \$485,000 for site upgrades.

Leading this Sunspot Solar Observatory consortium enables NMSU to obtain more research funding success. In FY19, NMSU Astronomy (PI McAteer) was awarded a \$394,000 (3-year) science proposal from NSF, and a \$212,000 (3-year) science proposal from NSO to fund student and postdoctoral research at NMSU to perform scientific research with the data from Sunspot and provide new space weather data products to the community. In August 2019, NMSU Astronomy was awarded a \$1.5million (5-year) faculty development grant from NSF to provide for a new tenure-track faculty position (including all start-up funds), with a focus on connecting DST research to other new national facilities and space weather prediction. With this, a new faculty member was hired to lead science planning and data acquisition.

In FY20, NMSU was awarded a \$350,000 NASA grant to build a instrument at Sunspot to observe Jupiter. This provides complementary solar system observations with international partners and graduate student participation, in addition to interdisciplinary instrument development with the College of Engineering. Each of these grants are key contributions to NMSU as it seeks to obtain Carnegie-R1 status, and are only possible due to our leadership in Sunspot. This grants runs through FY24.

In FY22, the visitor center has rebounded from a low of 3000 during the COVID-closure back up to an estimated 15,000. All proceeds in admission and purchases is redirected back into community outreach and enhanced visitor experience.

We stress that the continued NSF financial investment in Sunspot is dependent on NMSU obtaining RPSP funds. In return, we fully expect that continued state funding will be dependent on continuing NSF funding. Only by working together can we retain the ~11FTES on site, provide scientific research opportunities, and fully utilize the Visitor Center to attract tourists to the area.

**9. Accomplishment/ Highlights (bullet form)**

In our last year of completed RPSP funding (FY22), the program

- has 5 full time NMSU personnel in Sunspot
- completed the acquisition and commissions of a new scientific instrument
- published 3 astrophysics research papers using data from the telescope
- has three academic partners (Cal. St. Univ. Northridge, UC Boulder, NMSU) to scientific and financial investment into the consortium
- has 5 MOUs with partners
- had 5 PhD students performing graduate student research at the telescope in space weather research

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

<b>RPSP Title:</b> Sunspot Solar Observatory Consortium - Note: received first time non recurring funding in FY19	<b>FY23 Request</b>
<b>Contact Name:</b> R.T.James McAteer	<b>\$400,000</b>
<b>Contact Email:</b> <a href="mailto:mcateer@nmsu.edu">mcateer@nmsu.edu</a>	

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** The goal of this RPSP is to continue to promote NMSU and the State of NM to lead the consortium for the operations of solar astronomical research facilities at Sunspot, Otero County.

RPSP Objective 1: Lead the consortium		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	The number of NMSU graduate students in the program	3	3	3	4	3	3	3	4	4	5	Increase of 2 for FY24
2	The number of NMSU graduate students in national career pathways in space physics	3	3	3	4	3	3	3	4	4	5	Increase of 2 for FY24

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** The goal of this RPSP is to continue to promote NMSU and the State of NM to lead the consortium for the operations of solar astronomical research facilities at Sunspot, Otero County.

RPSP Objective 1: Lead the consortium		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Number of Memoranda of Understanding (MOUs) ongoing with other universities, research institutes, and funding agencies.	5	5	5	5	5	5	5	5	5	6	One new MOU for FY24
2	Total dollar amount agreed upon in the MOUs that will be sought by consortium partners.	710,089	750,000	126,932	999,912	750,000	750,000	750,000	750,000	750,000	750,000	New funding with NSF (total 675, 687) only started in Oct 2021.
3	Number of ongoing agreements reached with principal investigators of current telescope instruments	4	4	4	4	4	4	4	4	4	4	

RPSP Objective 2: Employ and Train telescope personnel		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	The number of qualified personnel successfully hired and retained	5	5	5	5	3	5	5	5	5	6	Expansion request raise in FY24

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

<b>RPSP Title:</b> Sunspot Solar Observatory Consortium - Note: received first time non recurring funding in FY19	<b>FY23 Request</b>
<b>Contact Name:</b> R.T.James McAteer	<b>\$400,000</b>
<b>Contact Email:</b> <a href="mailto:mcateer@nmsu.edu">mcateer@nmsu.edu</a>	

RPSP Objective 3: Provide for scientific and student research		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	The number of NMSU graduate students performing research at the telescope	4	4	4	5	3	4	4	4	4	5	Expansion request raise in FY24

<b>NMSU LEADS 2025 Goal:</b>	<b>3 - Amplify Extension and Outreach</b>
<b>RPSP Goal:</b>	The goal of this RPSP is to continue to promote NMSU and the State of NM to lead the consortium for the operations of solar astronomical research facilities at Sunspot, Otero County.

RPSP Objective 4: Employ and Train STEM outreach personnel		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	The number of professional participants attending STEM education events	168	25	0	50	40	40	40	40	40	50	No events in FY21, due to COVID19. Expansion request raise in FY24
2	The total number of STEM events for educators	9	6	0	2	NA	9	9	9	9	12	No events in FY21, due to COVID19. Expansion request raise in FY24
2	The total number of coordinated agreements with private companies to sell products in visitors center	2	2	2	2	NA	2	2	2	2	2	

RPSP Objective 5: Organize STEM outreach events		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	The number of schools contacted statewide to discuss future education and outreach efforts.	58	30	30	30	30	30	30	30	30	35	Expansion request raise in FY24. Expansion request raise in FY24
2	The number of students on trips to Sunspot	393	150	0	100	NA	200	200	200	200	250	No events in FY21, due to COVID19. Expansion request raise in FY24
3	The total number of visitors to Sunspot Visitors Center	11,095	8,115	2,409	11,000	15,000	15,000	15,000	15,000	15,000	20,000	FY21 affected by COVID site restrictions. FY 22 estimate of 8000 from June 2021 to April 2022.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

<b>RPSP Title:</b> Sunspot Solar Observatory Consortium - Note: received first time non recurring funding in FY19	<b>FY23 Request</b>
<b>Contact Name:</b> R.T.James McAteer	<b>\$400,000</b>
<b>Contact Email:</b> <a href="mailto:mcateer@nmsu.edu">mcateer@nmsu.edu</a>	

**NMSU LEADS 2025 Goal: 4 -Build a Robust University System**

<b>RPSP Goal:</b>		The goal of this RPSP is to continue to promote NMSU and the State of NM to lead the consortium for the operations of solar astronomical research facilities at Sunspot, Otero County.										
<b>RPSP Objective 3: Provide for scientific and student research</b>		<b>Measure Results</b>				<b>Measure Targets</b>						<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY19 Actual</b>	<b>FY20 Actual</b>	<b>FY21 Actual</b>	<b>FY22 Estimate</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	
1	The number of students and professional participants attending a workshop and observing at the telescope.	60	30	0	30	40	40	60	60	60	75	
2	The number of national partnerships and projects set up in Space Weather research as a Grand Challenge	NA	3	3	3	NA	3	3	3	3	3	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments			
<b>Revenue and Transfers</b>							
<b>Beginning Fund Balance</b>	\$ -	\$ -	\$ -				
<b>Appropriations</b>							
Federal		\$ -					
State plus Tobacco Settlement Fund	\$ 367,500.00	\$ 32,500.00	\$ 400,000.00				
Local		\$ -					
<b>Total Appropriations</b>	\$ 367,500.00	\$ 32,500.00	\$ 400,000.00				
<b>Grants and Contracts</b>							
Federal	\$ 112,020.00	\$ 23,049.00	\$ 135,069.00	\$409,303 request submitted to NSF			
State		\$ -		\$657,687 submitted for partner funding			
Local		\$ -					
<b>Total Grants and Contracts</b>	\$ 112,020.00	\$ 23,049.00	\$ 135,069.00				
<b>Private Gifts, Grants and Contracts</b>		\$ -					
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -					
<b>Tuition and Fees</b>		\$ -					
<b>Endowment</b>		\$ -					
<b>Sales and Services</b>		\$ -					
<b>Other Sources - Detail in Comments</b>		\$ -					
<b>Total Revenues</b>	\$ 479,520.00	\$ 55,549.00	\$ 535,069.00				
<b>Transfers (to) from</b>							
Instruction and General		\$ -					
Student Social and Cultural		\$ -					
Research		\$ -					
Public Service		\$ -					
Internal Service		\$ -					
Student Aid		\$ -					
Auxiliary Enterprises		\$ -					
Athletics		\$ -					
Independent Operations		\$ -					
Capital Outlay		\$ -					
Renewal and Replacement		\$ -					
<b>Total Transfers</b>	\$ -	\$ -	\$ -				
<b>Expenses</b>							
	FY23 FTE	Change FTE	\$	FY24 FTE			
Faculty Salaries		0.00	\$ -				
Professional Salaries	4.76	\$ 299,171.00	0.50	\$ 42,687.82	5.26	\$ 341,858.82	7% pay rise + additional 0.25FTE
Other Staff Salaries	1.20	\$ 40,859.00	0.00	\$ 2,860.13	1.20	\$ 43,719.13	7% pay raise
Student Salaries (GA/TA)		0.00	\$ -				
Other Salaries		0.00	\$ -				
<b>Total All Salaries</b>	5.96	\$ 340,030.00	0.50	\$ 45,547.95	6.46	\$ 385,577.95	
Fringe Benefits		\$ 126,690.00		\$ 8,869.05		\$ 135,559.05	
Travel			\$ -				
Utilities			\$ -				
Institutional Support Charges		\$ 12,800.00		\$ 1,132.00		\$ 13,932.00	3.50%
Plant Operation and Maintenance Charges			\$ -				
Supplies and Expenses			\$ -				
Equipment			\$ -				
Other Expenditures			\$ -				
<b>Total Expenditures</b>	5.96	\$ 479,520.00	0.50	\$ 55,549.00	6.46	\$ 535,069.00	
<b>Ending Fund Balance</b>		\$ -		\$ -		\$ -	



# The Alliance for the Advancement of Teaching and Learning

## Goal 2: Increase partnerships to support Teacher Recruitment in New Mexico

Alliance Partners: Outreach and Research				
Educators Rising High Schools 2022	State & National Partners	Education and STEM Outreach	External Funding FY22	
Alamogordo High School Atrisco Heritage Academy High School Aztec High School Bernalillo High School Centennial High School Chaparral High School Clovis High School Freshman Academy Clovis High School Del Norte High School Eldorado High School Espanola Valley High School Gadsden High School Grants High School Hatch Valley High School Hobbs High School Las Cruces High School Logan High School Los Lunas High School Manzano High School	Mayfield High School Newcomb High School Organ Mountain High School Piedra Vista High School Rio Grande High School Rio Rancho High School Santa Teresa High School Taos High School V. Sue Cleveland High School West Mesa High School Goddard High School Artesia Senior High School	ENMU DACC NMSU NMHU Educators Rising PDK NM Public Ed Department Anne E. Casey Foundation New Mexico Activities Assoc. Golden Apple of New Mexico	<ul style="list-style-type: none"> <li>Asombro Institute</li> <li>Bridge of Southern New Mexico</li> <li>Learning Alliance New Mexico</li> <li>NMSU STEM Outreach Center</li> <li>NMSU Scientifically Connected Communities (SC<sup>2</sup>)</li> <li>NMSU Pre-Engineering Program (Prep)</li> <li>NMSU Learning Games Lab</li> <li>New Mexico Coalition of Education Leaders</li> <li>NM Regional Education Cooperatives</li> <li>NMSU Cooperative Extension Service</li> <li>NSF HSI STEM Hub</li> </ul>	<p><b>Educators Rising:</b>                      NMPED (\$65,000)                      CES NM (\$25,000)                      NM Oil &amp; Gas Assoc. (\$1,000)                      ENMU (\$2,500)                      NMAA (\$1000)                      SOAR (\$135,000 from different grants)</p> <p><b>Research Partners:</b>                      *NMSU College of Engineering                      *NMSU STEM Outreach Center                      *NMSU Learning Games Lab                      *NMSU Agriculture Education                      *NMSU Biology and Biochemistry Departments                      *Non-Profits Statewide</p>

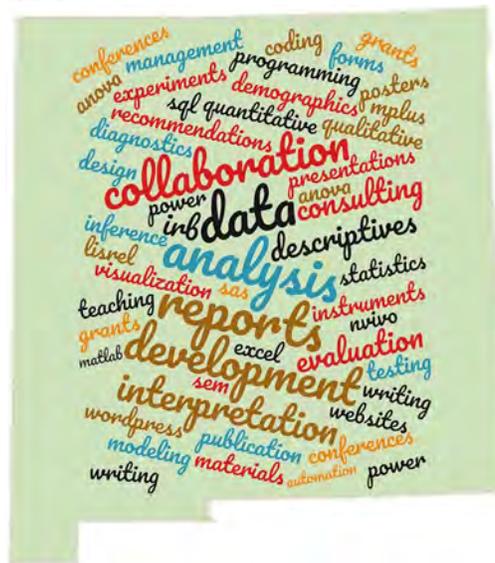
## Goal 3: Increase the Research Capacity in the College of Education



**SOAR: Southwest Outreach Academic Research Evaluation and Policy Center**

- Established the SOAR Lab in Fall (Now Center) in 2016
- SOAR Evaluation and Policy Center effective 2019
- Employ graduate students in a multi-disciplinary research team.
- Provide expertise in developing research protocols, instruments for data collection, data entry, qualitative and quantitative data analysis, producing reports, writing publications, presentations, and project evaluation services.
- Students have also published reports that have been used for policy making decisions (New Mexico Educator Vacancy Reports, 2015 - 2021)
- Partner with NMSU faculty and external groups in grant writing, serving as evaluator or research advisor.

For more information on SOAR activities, please visit <https://alliance.nmsu.edu>



We provide graduate students with hands-on research experience by helping K-20 Education Outreach programs close the Outreach-Research Gap.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Alliance Teaching and Learning Advancement

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$211,400

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$211,400

Type of Project (X for Type)			
Research <input checked="" type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input checked="" type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

N/A

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	16
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**2. Project Description / Executive Summary:**

The Alliance for the Advancement of Teaching and Learning focuses on two major initiatives: Educators Rising and the Southwest Outreach Academic Research (SOAR) Evaluation and Policy Center.

Educators Rising, established in 2015, is a "Grow Your Own" teacher pipeline program that supports high school students interested in education careers. The program is recognized by the U.S. Department of Education, the New Mexico Activities Association, and the NMPED as a Career Technical Student Organization (CTSO). There are currently 31 active high school chapters and 4 collegiate chapters with over 500 Educators Rising students throughout New Mexico. Educators Rising coordinates an annual state conference and support for students to attend the annual national Educators Rising conference. Educators Rising also provides curriculum support and professional learning opportunities for Teacher Leaders throughout the state.

The SOAR Evaluation and Policy Center, established in 2016, employs staff and graduate research assistants who work with NMSU Outreach programs and several departments across campus and organizations all over the state, to close the outreach-research gap through serving as evaluators on sponsored projects in K-12, higher education, and workforce development. SOAR also puts out the Annual Educator Vacancy Report, which is utilized by several groups statewide.

### **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The Alliance is asking for continued support for the rapid expansion of Educators Rising. Teacher Leaders need consistent and frequent support and training to help them establish their program. New Mexico is the first EdRising state to recognize bilingual chapters and competitions. Funds will be used to recruit, support and certify bilingual teacher leaders. In order to help with hitting our target chapters numbers, we are adding two regional coordinators to help support, train and recruit teachers in the central and northern regions of New Mexico. New Mexico is a large state and adding the regional coordinators will help us recruit and support more chapters.

Educators Rising is asking for its continued office support for 100% for the State Director, 25% Program Coordinator, 50% Administrative Assistant, and \$16,000 for the two part-time regional coordinators. Funding will be used to grow relationships with EPP's, recruit, support and retain new middle/high school chapters.

We are also supporting a faculty director position for Educators Rising. This person will serve as an umbrella figure of support for the Program Manager, assist with data collection, analysis of programming and showcasing of program outcomes for the state, spearhead partnerships between the program and the university and state, and will collaborate on new funding submissions.

We are also asking for support for the SOAR Director's salary. SOAR recently hired a full time postdoctoral researcher and continues to support doctoral students, which are great for the R1 goal. Having Alliance support for the director will help the entire center.

### **4. Program Mission (include population served, other demographic info):**

**MISSION** -The mission of the Alliance for the Advancement of Teaching and Learning is to contribute to the academic success of children and youth in New Mexico by supporting a statewide organization for future teachers known as Educators Rising and providing research support for K-12 STEM outreach programs through the Southwest Outreach Academic Research (SOAR) Center.

**VISION** - The vision of the Alliance is to serve as a catalyst in supporting educational initiatives in New Mexico, specifically those that focus on increasing the number of qualified teachers and raising the quality of education outreach programs.

Educators Rising has 31 active high school chapters: Alamogordo High School, Artesia Senior High School, Atrisco Heritage Academy High School, Aztec High School, Bernalillo High School, Centennial High School, Chaparral High School, Clovis High School, Clovis Freshman Academy, Del Norte High School, Eldorado High School, Espanola High School, Gadsden High School, Goddard High School, Hatch Valley High School (bilingual chapter), Hobbs High School, Grants High School, Las Cruces High School, Las Montañas Charter High School, Logan Middle/High School, Los Lunas High School, Manzano High School, Mayfield High School, Newcomb High School, Organ Mountain High School, Piedra Vista High School, Rio Grande High School, Rio Rancho High School, Santa Teresa High School, Taos High School, V. Sue Cleveland High School, West Mesa High School.

In terms of populations served, the SOAR Center partnered with several organizations at NMSU and across the state that reach thousands of faculty, students, teachers, and service providers in several diverse districts. This includes Las Cruces Public Schools, the Gadsden Independent School District, Espanola Schools, and Taos as well. Many of our evaluations are for projects that focus on underserved students in particular, including K-12 and higher education students who need additional supports to progress through school, obtain a degree, or gain employment.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

MISSION -The mission of the Alliance for the Advancement of Teaching and Learning is to contribute to the academic success of children and youth in New Mexico by supporting a statewide organization for future teachers known as Educators Rising and providing research support for K-12 STEM outreach programs through the Southwest Outreach Academic Research (SOAR) Center.

Objectives in the metrics form are:

- Increase the number of students involved in Educators Rising Activities.
- Provide professional development and technical assistance to meet the cultural, linguistic, and diverse needs of New Mexico students and teachers
- The Alliance staff will host conferences for students, teachers, and administrators, present at conferences, and publish articles relevant to Alliance Activities.
- To increase the amount and quality of outreach provided to include an increase in linking of resources, strengthening relationships, and creating new partnerships.
- Increase collaboration with state agencies to improve the quality and quantity of professional development and technical assistance provided by Alliance staff and Alliance affiliates.
- Increase the number and type of opportunities created for networking and dialogue about important education issues, the amount and type of research provided and the number of opportunities created for education advocacy.
- The Alliance will assist faculty at NMSU and partner school districts with grant writing support.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Educators Rising:

- 1) The first New Mexico home grown Teacher Academy professional learning workshop for Educators Rising teacher leaders.
- 2) Translation of Educators Rising competition guidelines and rubrics into Spanish. New Mexico is the first state to recognize bilingual chapters and the national office does not provide the translation. This is something we have decided to do in-state to provide support and recruitment for bilingual educators. After continued push for bilingual competitions at the national office. We are finally in talks of starting with two competitions in Spanish at the national level for 2022-23 academic year.
- 3) First year with State Ambassadors. These collegiate students created relationships and were mentors for high school students throughout the year.
- 4) This year we held two state conferences to accommodate travel restrictions in place at the district levels.
- 5) We lost a few chapters and teachers due to post COVID internal changes. Some teachers were reassigned to teach CORE subjects for their schools. This leaving schools only to sponsor an after-school program, if that.
- 6) We had 28 state qualifiers who competed at the national conference. Out of those, a few students came in as a top 10 national qualifier and one 1<sup>st</sup> Place Winner from V. Sue Cleveland in Lesson Planning & Delivery – Arts. There were over 1000 competitors at the national conference.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- 7) Awarded 6 Educators Rising national delegate seats for the 2022-23 academic year. These delegates are high school students representing New Mexico students at a national level.
- 8) Working with NMPED/CTE to create CANVAS professional learning courses for Teacher Leaders who need support throughout the academic year.

SOAR also had a number of accomplishments in FY22:

- 1) Brought in over \$130,000 in grant funding for evaluation work across many projects in and outside of campus.
- 2) Supported three doctoral students and one master’s student and a new postdoctoral researcher.
- 3) Worked with the state 21<sup>st</sup> Century Community Learning Centers office at the NM Public Education Department to conduct the first of a five year statewide evaluation of this afterschool program.
- 4) Published the 2021 Educator Vacancy Report, which garnered a great deal of media attention.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

Educators Rising is a critical component of creating a solid pipeline of K-12 educators and addressing the teacher shortage in the state. This organization creates a pipeline of teachers, including elementary and math and science teachers, which help address the Governor’s initiatives of elementary and STEM education. Additionally, the Educators Rising state office provides a relationship between middle/high school pathway programs guiding them into EPPs. These relationships are starting to be seen in the schools.

For SOAR, our evaluations impact thousands of students, educators, social service providers, community members, and other stakeholders across the state. Our evaluations have shown the impact of different professional development and educator support programs on their pedagogy and attitudes that are important for student outcomes, improvements in student math engagement and achievement, interest in career and technical education, and research skills in several different disciplines. In terms of STEM education in particular, SOAR supports individuals in New Mexico who are involved in the different areas under this umbrella. The SOAR Center provides valuable information for leadership and stakeholders about impacts of these programs/grants, what needs to improve for them to achieve their goals, and key information they need to consider for scaling up their efforts.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

External support for the state office has grown over the years for Educators Rising. Funding for the 2021-22 fiscal year has come from New Mexico Public Education Department (Perkin V) funds, Cooperative Educational Services (CES), New Mexico Oil and Gas Association, New Mexico Activities Association, and Eastern New Mexico University. At this time we are also working with the Foundation office in talks with the Kellogg Foundation for additional funding. Reorganization of grant projects under the LANLF has redirected that funds go directly to the chapters and not through the state office. We continue to look for additional avenues for funding and support of the state office.

For FY22, SOAR was active on several different evaluations with funders that included the National Science Foundation, the New Mexico Public Education Department, the National Institutes of Health, the Bridge of Southern New Mexico, the Kellogg Foundation, and the United States Department of Agriculture, bringing in over

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

\$130,000 for our evaluation components of these grants alone. We have several continuing projects next year and are on a number of pending grants as of this report date. These funds support the Director’s salary, our full time postdoctoral researcher’s salary, and graduate students who help with our many projects.

**9. Accomplishment/ Highlights (bullet form)**

Educators Rising:

- 1) The first New Mexico home grown Teacher Academy professional learning workshop for Educators Rising teacher leaders.
- 2) Translation of Educators Rising competition guidelines and rubrics into Spanish. New Mexico is the first state to recognize bilingual chapters and the national office does not provide the translation. This is something we have decided to do in-state to provide support and recruitment for bilingual educators. After continued push for bilingual competitions at the national office. We are finally in talks of starting with two competitions in Spanish at the national level for 2022-23 academic year.
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-Published the 2021 Educator Vacancy Report, which garnered a great deal of media attention.

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Alliance for Teaching and Learning Advancement	<b>FY24 Request</b>
<b>Contact Name:</b> Dr. Rachel Boren; Crystal Chavez	<b>\$211,400</b>
<b>Contact Email:</b> <a href="mailto:rboren@nmsu.edu">rboren@nmsu.edu</a> ; <a href="mailto:crychave@nmsu.edu">crychave@nmsu.edu</a>	

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** To increase enrollment in the Educator Preparation Programs (EPPs) through Educators Rising efforts.

RPSP Objective 1: Increase the number of students involved in Educators Rising Activities		Measure Results				Measure Targets					Comments (Briefly state your case)	
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23		FY24
<b>RPSP Measures:</b>												
1	Number of students enrolled in Educators Rising	575	543	549	560	600	700	700	750	750	750	Post COVID membership is rising as chapters are reorganizing in schools. Many districts are reaching out to inquire about the organization and how they can start a chapter. This coming fiscal year will include middle school chapters as well.
2	Number of students attending the Educators Rising State Conference.	320	446	193	200	175	250	350	400	400	400	Educators Rising State Conference number increased in FY21 due to virtual conference. Additional students were able to attend the conference because of virtual flexibility and lack of fundraising requirements needed through an online platform but still many student were overwhelmed by this point and chose not to attend.
3	Number of students attending the National Educators Rising Conference.	0	0	11	12	50	30	35	40	30	35	Due to COVID the National conference was held virtually for FY21. This decrease the number of students who participated.
4	Number of Educators Rising students enrolled in a dual credit course at an HED in NM	77	100	185	190	30	25	100	125	125	200	Access to more dual credit courses has increase
5	Number of students enrolled in Educators Rising who register at NMSU in the College of Education.	14	10	11	15	25	20	25	30	30	25	Numbers of students who indicated that they were part of a EdRising high school chapter at NMSU is 11 but many graduating students start off at DACC which is not included in this number. Additional high school students graduating have registered for notifications with the collegiate chapter.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Alliance for Teaching and Learning Advancement	<b>FY24 Request</b>
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**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**  
**RPSP Goal: To increase community and parent engagement**

RPSP Objective 2: Provide professional development and technical assistance to meet the cultural, linguistic and diverse academic needs of all children and youth in the PK-12 school system. *		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual		FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	Number of community members to whom professional learning is provided.	40	28	31	65	200	220	60	70	40	200	Educators Rising professional learning opportunities offered monthly and seasonally through PD sessions. There are plans for additional sessions in collaboration with the PED.
2	Number of community members impacted by Alliance activities, focusing on STEM outreach and Educators Rising.	600	700	650	700	200	230	720	750	800	850	SOAR evaluations for grants that focus on teacher professional development; Educators Rising outreach includes State Conference, Professional Learning Workshops, Service Learning Projects, Educators Rising Week

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**  
**RPSP Goal: To Produce and present relevant research findings.**

RPSP Objective 1: The Alliance staff will host conferences for students, teachers and administrators, present at conferences, and publish articles relevant to Alliance Activities.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of conferences hosted by Alliance staff.	1	1	2	2	2	2	2	6	2	2	The 2022 Educators Rising State Conference was held in two locations due to accomadating COVID district travel restrictions in place at the time. With limited staff additional events are sometimes difficult but we do participate in many conferences not hosted by our organization.
2	Number of articles published by Alliance staff and student employees.	1	1	2	3	5	5	2	3	2	4	SOAR article with Partnership for Advancement of Cancer Research about student education program and Educator Vacancy Report
3	Number of state, regional and national conference presentations given by Alliance staff about Educators Rising or STEM Outreach at NMSU.	1	2	5	6	5	5	5	3	4	6	SOAR presentation at American Society for Engineering Education, EdRising presentations at state conference, campus tours, Teacher Academy, NMPD events

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Alliance for Teaching and Learning Advancement

**FY24 Request**

**Contact Name:** Dr. Rachel Boren; Crystal Chavez

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**\$211,400**

**NMSU LEADS 2025 Goal:**

**3 - Amplify Extension and Outreach**

**RPSP Goal:** To increase the amount and quality of outreach provided by the Alliance.

RPSP Objective 1: To increase the amount and quality of outreach provided to include an increase in linking of resources, strengthening relationships, and creating new partnerships.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of Alliance Districts	40	25	40	42	35	38	47	50	35	35	Districts involved with SOAR evaluation projects and Educators Rising.
2	Number of linkages between Alliance Partners	50	5	30	35	50	53	52	55	10	10	Non-profit groups across the state, Educators Rising, NMCEL, CES, LANLF, Golden Apple of NM plus the links with our STEM Outreach Efforts; overlap in SOAR evaluation projects
3	Number of Alliance Districts added through Educators Rising and STEM Outreach efforts.	6	2	5	5	10	5	8	10	6	8	New SOAR partnership with NM Highlands University plus EdRising districts Hobbs Municipal Schools, Lovington Municipal, Jemez Valley Public Schools
4	Number of linkages created between Alliance Partners.	6	2	11	15	15	18	9	10	6	10	

RPSP Objective 2: Increase collaboration with state agencies to improve the quality and quantity of professional development and technical assistance provided by Alliance staff and Alliance affiliates.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of events coordinated with NMPED.	3	3	3	4	2	3	4	4	5	6	SOAR collaborates with NMPED for regular statewide meetings with 21st CCLC site directors and the Educators Rising State Conference, summer professional learning workshops, plus CTE events coordinated through PED.
2	Number of events coordinated with an REC.	0	0	0	0	1	1	0	0	1	1	
3	Number of educators to whom professional development was provided	500	30	429	450	500	525	510	520	500	550	Additional Educators Rising professional development opportunities will be provided in collaboration with NMPED/CANVAS. Inquires about our PD had increase post COVID.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

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**\$211,400**

RPSP Objective 3: Increase the number and type of opportunities created for networking and dialogue about important education issues, the amount and type of research provided and the number of opportunities created for education advocacy.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of opportunities for networking and policy discussions about education.	1	1	3	4	5	4	5	2	2	3	SOAR sponsored the annual undergraduate research and creative arts conference; networking opportunities with NM representatives and PED. Educators Rising is working on returning to its quarterly meetings with superintendents.
2	Number of networking and policy discussions coordinated by Alliance efforts.	2	1	1	2	5	4	3	3	1	3	The national EdRising office and the EdRising NM state office had discussions with the Kellogg Foundation regarding a planning grant and state policies. We also networked with PED liaisons in Santa Fe during our presentation at the Roundhouse in December.

**NMSU LEADS 2025 Goal:**

**4 - Build a Robust University System**

**RPSP Goal:** To increase the number of grant funded projects at NMSU.

RPSP Objective 1: The Alliance will assist faculty at NMSU and partner school districts with grant writing support.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of grants submitted by Alliance staff.	3	2	8	10	5	5	4	4	3	12	SOAR does not PI and submit grants but this number reflects the amount of grants we helped to write this year. EdRising received grant funding from NMPED and was able to use the remaining funds from the Robert Palmer grant we received last year for Luna County and LANLF. Due to COVID many of our grants reorganized their grants qualifications and who could apply.
2	Number of grants awarded where Alliance staff is listed as a PI or Co-PI.	2	2	3	3	2	2	3	3	3	3	SOAR does not PI or co-PI as that would stretch us too thin and is not the role evaluators take. However, we are on over 15 active sponsored projects this year. Ed Rising is the PI on their grants.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

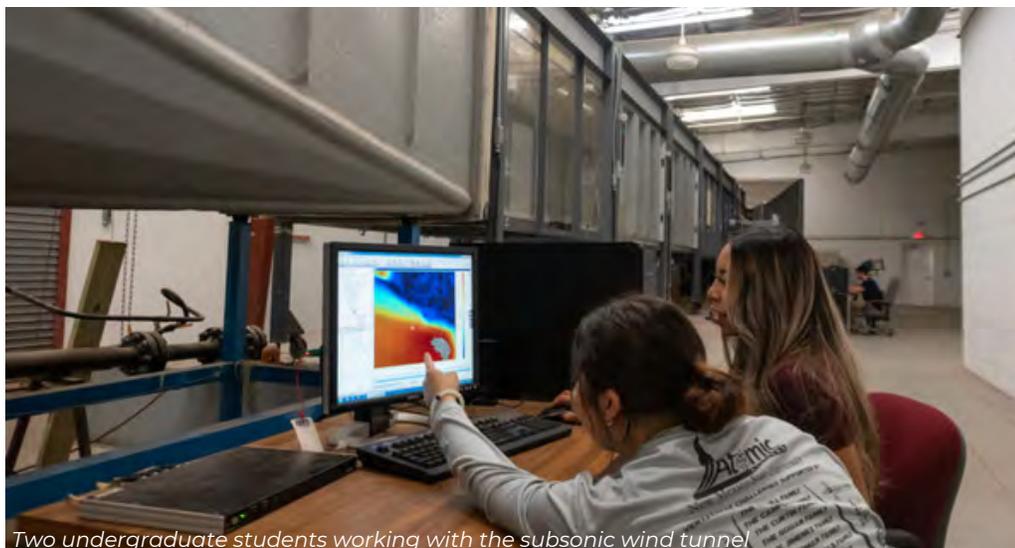
RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments			
<b>Revenue and Transfers</b>							
<b>Beginning Fund Balance</b>	\$ 74,205.00	\$ 7,700.00	\$ 81,905.00				
<b>Appropriations</b>							
Federal		\$ -					
State plus Tobacco Settlement Fund	\$ 211,400.00	\$ -	\$ 211,400.00				
Local		\$ -					
<b>Total Appropriations</b>	\$ 211,400.00	\$ -	\$ 211,400.00				
<b>Grants and Contracts</b>							
Federal		\$ -					
State		\$ -					
Local		\$ -					
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -				
<b>Private Gifts, Grants and Contracts</b>		\$ -					
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -					
<b>Tuition and Fees</b>		\$ -					
<b>Endowment</b>		\$ -					
<b>Sales and Services</b>		\$ -					
<b>Other Sources - Detail in Comments</b>		\$ -					
<b>Total Revenues</b>	\$ 211,400.00	\$ -	\$ 211,400.00				
<b>Transfers (to) from</b>							
Instruction and General		\$ -					
Student Social and Cultural		\$ -					
Research		\$ -					
Public Service		\$ -					
Internal Service		\$ -					
Student Aid		\$ -					
Auxiliary Enterprises		\$ -					
Athletics		\$ -					
Independent Operations		\$ -					
Capital Outlay		\$ -					
Renewal and Replacement		\$ -					
<b>Total Transfers</b>	\$ -	\$ -	\$ -				
<b>Expenses</b>							
	FY23 FTE		Change FTE		FY24 FTE		
Faculty Salaries	0.09	\$ 8,000.00	0.16	\$ 14,000.00	0.25	\$ 22,000.00	Ed Rising 2 - Regional Coordinators support, faculty director stipend
Professional Salaries	1.30	\$ 81,594.00	0.20	\$ 12,731.00	1.50	\$ 94,325.00	30% SOAR Director, 100% EdRising Director, 25% Program Coordinator
Other Staff Salaries	1.08	\$ 37,000.00	(0.42)	\$ (14,500.00)	0.66	\$ 22,500.00	Ed Rising Admin Asst.
Student Salaries (GA/TA)			0.00	\$ -	0.00		
Other Salaries	0.35	\$ 12,000.00	(0.10)	\$ (3,300.00)	0.25	\$ 8,700.00	Ed Rising Student Employee
<b>Total All Salaries</b>	2.82	\$ 138,594.00	-0.15	\$ 8,931.00	2.67	\$ 147,525.00	
Fringe Benefits		\$ 42,126.00		\$ 4,681.00		\$ 46,807.00	37.5% faculty and professional; 22.5% part time; .06% student
Travel		\$ 500.00		\$ 500.00		\$ 1,000.00	EdRising Travel to visit chapters & present at conferences
Utilities				\$ -			
Institutional Support Charges		\$ 7,300.00		\$ 3,270.00		\$ 10,570.00	5% of FY23 allocation
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 15,180.00		\$ (9,682.00)		\$ 5,498.00	Ed Rising office supplies, PSC's, membership/conference fees, Training Allowances/Scholarships, food for PD, meetings or conference
Equipment				\$ -			
Other Expenditures				\$ -			
<b>Total Expenditures</b>	2.82	\$ 203,700.00	-0.15	\$ 7,700.00	2.67	\$ 211,400.00	
<b>Ending Fund Balance</b>		\$ 81,905.00		\$ -		\$ 81,905.00	

**FY23 Actual:** \$ 0  
**FY24 Request:** \$594,027  
**\$ Change:** \$594,027

## Top Objectives

- Expand funded research expenditures and educational experience by hiring a gap-topic faculty member in hypersonics.
- Hire two new graduate students.
- Expand NMSU's recognition through archival publications and conference presentations and attract industrial partners with direct engagement and dialogue.
- Increase enrollment of graduate and undergraduate students in aerospace engineering.
- Collaborate closely with New Mexico federally funded research and development centers (FFDRC's)
- Facilitate the creation of new aerospace business opportunities that diversify the state economy.
- Attract outside aerospace industry to New Mexico.
- Inspire the next generation of NM aerospace engineers and prepare/ retain them for professional positions in NM.



Two undergraduate students working with the subsonic wind tunnel

## Overview

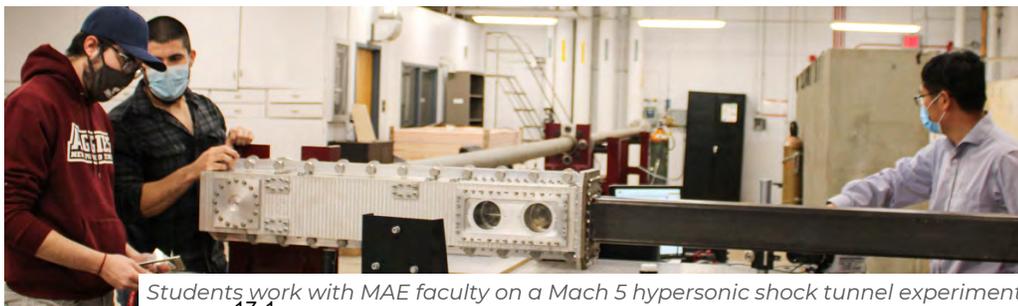
Hypersonics relates to speeds of more than five times the speed of sound (Mach 5). As a rapidly-evolving area, hypersonics requires a crucial core of disciplines for future space exploration and high-speed commercial airliners while solidifying U.S. national defense-related needs. Through Hypersonics, NMSU's HypRC will lead to state-wide growth, stability, and societal benefits.

NM currently has a formidable presence in the aerospace industry through its Federally Funded Research and Development Centers that includes Sandia National Laboratories (SNL) and Los Alamos National Laboratory (LANL), making it ideally suited for hypersonics. New Mexico State University's existing Hypersonics Roadmap with SNL will produce numerous scientific, educational, and economic benefits.

## Potential

The HypRC vision has the potential to create many new opportunities for NM, including:

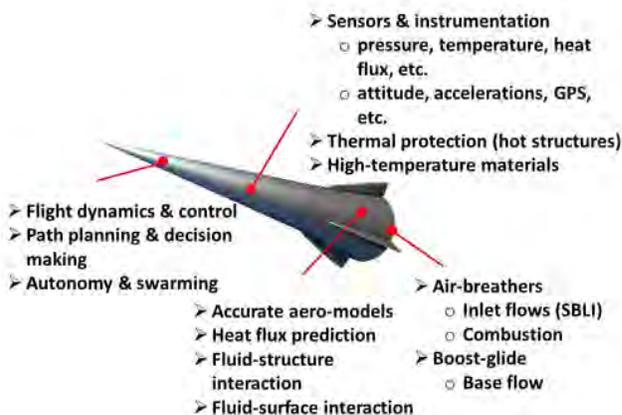
- Attracting new high-income jobs and revenue streams that will improve the lives of all New Mexico residents.
- Promoting economic development through new aerospace opportunities.
- Supporting education and retaining a diverse student population with in-demand degree programs.
- Contributing to the expanding NM aerospace workforce with state-of-the-art engineering education and a hypersonics work pipeline.
- Developing a reputation as a leader in hypersonics, leading to numerous national and international opportunities for growth and collaboration.



Students work with MAE faculty on a Mach 5 hypersonic shock tunnel experiment

## Hypersonics Research Benefits

1. Multi-disciplinary yet encompasses many current NMSU research topics
2. Additional faculty will expand capabilities through diverse talents and attract competitive talent
3. More diversity and competition leads to more interest
4. Increased interest means more opportunities to educate NM students



**"The future of NM hypersonics will rely on home-grown, educated students instilled with hard-working ethics and values"**

## Impact on Research, Education, and State Economy



The HypRC has national interest and will have lasting impacts. A few impacts to note are:

- **Create** a unique 'niche' at NMSU; no research or facilities will be duplicated.
- **Transform** NMSU into an advanced hypersonics 'hub' contributing to NM's economic growth.
- **Create** interest and attract industry to NM through HypRC's distinctiveness.
- **Leverage** enormous growth potential with minimal environmental impact.
- **Positively impact** NM's growing aerospace economy through new research and industry partnerships.
- **Educate** the state's future workforce and create much-needed high-paying jobs for rural NM.
- **Present** unprecedented career opportunities in aerospace to NMSU's diverse student population leading to a more diverse workforce.

## Leveraged Funds

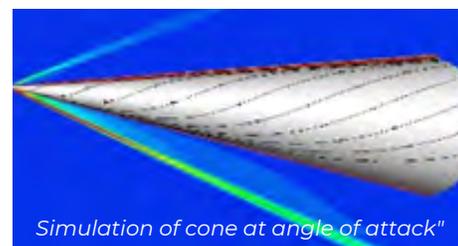
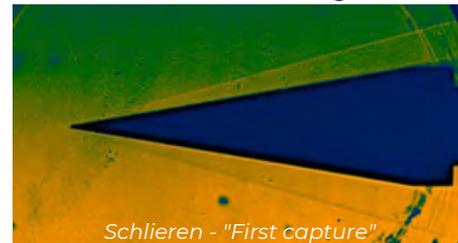
- \$193k from \$1.5M subcontract with the University Consortium for Applied Hypersonics with AF Academy (lead) and two Australian Universities (FY 2023)
- \$194k from \$770K subcontract with Notre Dame (FY 2023)
- \$1M from DoD EPSCoR Capacity Building Program (FY 2023)
- \$594k RPSP funds - Allows HypRC to hire new faculty & students and purchase HypRC-related materials (FY 2023)

## The MAE Department at NMSU

The Mechanical and Aerospace Engineering (MAE) Department at NMSU offers the only aerospace engineering degree granting programs (BS, MS, ME and Ph.D.) in NM while being designated as a Land- and Space-Grant Institution. Having the largest student population in the College of Engineering, the MAE department has demonstrated its leadership role in educating tomorrow's engineers.

## Capacity Building

May 2021 - The MAE Department at NMSU acquired a Mach 5 shock tunnel to improve numerous research capabilities, including hypersonics. This tunnel was brought online in record time. A Schlieren image from the first successful "capture" in January 2022 reveals an oblique shock wave over a cone (see images below). Cone shaped geometries are being considered for hypersonic gliders. A successful March 2022 open house, which offered a demonstration of these capabilities, was well-received and well-attended. This shock tunnel is a cost-effective way to generate hypersonic flow environments while being small enough for cost-effective student education and training.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	New Mexico State University Hypersonic Research Center (HypRC)

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

<b>FY24 Funding Request (\$XXX,XXX):</b>	\$594,027
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<b>If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):</b>	\$0
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Type of Project (X for Type)			
Research <input checked="" type="checkbox"/>	Public Service <input type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	0
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**2. Project Description / Executive Summary:**

The State of New Mexico (NM) has an extensive, well-documented, and rich history in aerospace engineering. The aerospace industry is rapidly expanding across the nation as near-Earth space utilization increases and geopolitical security concerns grow. Hypersonics is a significant core discipline in space exploration and defense. This project provides crucially needed support for expanding the New Mexico State University (NMSU) hypersonics research and workforce development initiatives that are under the umbrella of an emerging Hypersonics Research Center (HypRC). The HypRC, situated in the Mechanical and Aerospace Engineering (MAE) Department, works closely with government labs and agencies, industry and quintessential universities for expanding research and training opportunities. NMSU has the only aerospace degree conferring program in NM. NMSU and Sandia National Labs have recently created a Hypersonics Roadmap that encourages substantial engagement. Faculty from the MAE are receiving substantial federal grants based on identifying technical and workforce gaps. The HypRC is striving for national strength by solving “gap” problems using small-to-medium test facilities while supporting rapid, on-the-floor workforce development. This center embraces the goals of NMSU LEADS 2025 for producing nationally recognized research and highly sought workforce outcomes. The Center will support and accelerate growth of

**2. Project Description / Executive Summary:**

aerospace research and economic activity in the State, and attract outside high-tech industry, both of which will lead to the creation of new high-income jobs, national coverage, and revenue.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

This RPSP project will support one (1) full-time AE faculty (\$95,000), one (1) postdoctoral research associate (\$80,000), two (2) graduate students (\$50,298), and necessary supplies for hypersonics research (\$300,000). The total requested budget fringe benefit and student tuition & insurance is \$594,027

**4. Program Mission (include population served, other demographic info):**

The program mission involves serving the State of New Mexico and its constituents by promoting, supporting, and growing research and discovery, economic activity, and workforce development in hypersonics. New Mexico has a long history and strong presence in hypersonics through its federally-funded research and development centers. This puts the state in an ideal position to actively develop and attract (from outside the state) aerospace-related assets with the goal of providing a thriving business environment. Federal and private space and defense programs, as well as government labs, are crucially dependent on academic partners for research and facilities, and a steady workforce pipeline. New Mexico State University (NMSU) is a member of the “New Space NM Initiative” which supports growing hypersonics assets and research. Interactions with SpacePort America are underway for attracting industry to this region as well as working with local companies such as SpinLaunch to increase hiring NMSU graduates while promoting collaborative research. These connections and others make NMSU well poised to act as catalyst for research and high-revenue economic activity in hypersonics that will produce high-income jobs in the state. The proposed hypersonics program will support one of the largest (by student numbers) and most diversified (Hispanics, Native American) programs at NMSU. The program will educate future aerospace engineers that will remain committed to the State. It is estimated that thousands of engineers will be needed in NM over the next 5 years. The resulting high-paying jobs and high-revenue economic activity will improve lives for local, regional, and state constituents while bringing national recognition to the State.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The key program objectives are:

1. Hire new faculty to strengthen and expand research, and educational initiatives,
2. Procure national and international recognition, and attract federal and industry funding,
3. Increase enrollment of graduate and undergraduate student population in aerospace engineering,
4. Collaborate closely with New Mexico’s federally-funded research and development centers (SNL, LANL, NASA, AFRL, ARL)
5. Help NMSU achieve highest Carnegie research status (R1) by doing its departmental part in the university effort,
6. Create new aerospace business opportunities that help diversify the State’s economy in a highly visual and positive framework,
7. Attract outside aerospace industry to New Mexico and provide professional development opportunities that augment hypersonics education (online professional Masters, Certificates, etc.) to form a showcase study in action,
8. Support forums and conferences in hypersonics held at NMSU that will increase public awareness and produce a new stream of local commerce that supports the City and expands the local tourist industry,
9. Further support economic activity with SpacePort America through joint presentations,
10. Inspire the next generation of aerospace engineers through demonstrated student immersion,
11. Seek follow-up support (Professorships, student fellowships, donorships) and develop a diversified plan that may include counter-hypersonics, autonomy, clustering or swarming, structures and materials for high-temperature applications, morphing behavior, etc., and

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

12. Produce a futuristic, 10-year vision and actionable effort that assures continual southwest leadership.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

The top objectives for the first FY are:

1. To bolster funded research and education by supporting the hiring of a new faculty member in hypersonics in an area that is presently not covered by MAE faculty (e.g., high-temperature materials, fluid-surface interactions, heat transfer experimentalist). Challenge: High competition for hypersonic graduates and Post Doc due to national shortage; hence, the reason to have such a Center of Excellence.
2. To strengthen and accelerate research by hiring two new graduate students. Challenge: Top universities offer larger financial packages (salary and tuition), and have more and extensive facilities with backers for glamorizing their hypersonic programs. Note these graduating PhD students will be highly competitive in the national market; however, it is desired to retain such talent in the NM (SNL, LANL, NASA, ARL, AFRL, NM Tech, UNM, NMSU).
3. To attract new federal and industry funding. Challenge: Most grants (even multi-million dollars) do not provide \$2-5M per test facility. NMSU is presently in “catch-up mode” with other state and private universities. This challenge is being addressed through other means.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The project provides crucially needed momentum for turning NMSU into a hypersonics hub that will attract large federal grants while serving industry and federally-funded research and development centers both inside and outside the state. Ultimately this will foster the creation of new aerospace businesses and attract outside industry, all of which will help alleviate often tight fiscal budgets. The potential for growth is enormous and the impact on the environment is minimal. The resulting high-paying jobs in often deprived rural areas will support the local economy. Aerospace is perceived positively by most of the New Mexico constituents and growing economic activity in aerospace is a declared goal of the New Mexico Government. By working with government labs and already established industry (such as at Spaceport America), synergisms will multiply the positive outcomes of individual activities. New Mexico State University has a large percentage of minority students (Hispanics and Native Americans). The project will offer unprecedented career opportunities in aerospace to a highly inclusive student population. NM is the “place for space” and reinforces the goals of the HypRC.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The MAE faculty are highly proactive and aggressively seeking competitive funding from other sources as both a single entity submitter or working with faculty from other major research institutions as either proposal leader or partner. The Department of Defense (DoD) recently established the University Consortium in Applied Hypersonics (UCAH, JHTO-Pentagon) which is managed by and directed through Texas A&M University. The MAE Department is a member of UCAH and presently has one funded, subcontracted project resulting from collaboration with US AF Academy in partnership with two Australian universities. Currently, National Science Foundation is supporting another hypersonics study involving advanced data reduction. In May 2022, NMSU won a highly competitive & impactful capacity building and research grant from the DoD. This \$1M DEPSCoR Capacity Building program grant supports the development of a hypersonics research center within the MAE Department at NMSU. The Office of

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Naval Research (ONR) granted Notre Dame University a substantial grant with NMSU as a partner (\$770,000). The MAE hired an Assistant Professor (URM) with expertise in computational hypersonics that will start January 2023. It should also be noted that several major proposals led by NMSU reached the final rounds consisting of 3-4 finalist (ex. AFOSR-ULI with 5 university partners). Other proposals are presently in review (ex. AFOSR/ONR) or development. The MAE faculty are developing strong research collaborations within the State (SNL, LANL, AFRL) and outside the State (Lawrence Livermore National Labs). The requested RPSP funds will provide additional momentum for the emergent hypersonics program at NMSU by supporting the hire of additional tenure track faculty members, graduate students, and purchasing of facility related items.

**9. Accomplishment/ Highlights (bullet form)**

- NMSU was awarded highly competitive DoD capacity building proposal (\$1 million) for growing hypersonics program. As required by the contract, the VPR serves as the administrative Principal Investigation..
- MAE team with US AF Academy and two universities in Australia was successful securing \$1.5 million project from UCAH
- MAE team with Notre Dame University was successful securing \$770k proposal from ONR
- Developed Roadmap document with Sandia National Labs for research and workforce development in hypersonics
- Acquired Mach 5 shock tunnel and had first successful “shot” in January 2022
- Publications in hypersonics and related areas are already in MAE publication portfolio with several in preparation for submittal
- Hired one new faculty in hypersonics from underrepresented group and presently has an open advertisement and well positioned to hire a new faculty member in support of this proposal effort.
- PhD students are in pipeline for hypersonics and seeking additional students at the present time.

**Medical Projects**

<b>10. How many graduates stay in practice in New Mexico</b>	N/A
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**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b>	<b>FY24 Request</b>
<b>Contact Name:</b>	<b>\$594,027</b>
<b>Contact Email:</b>	<a href="mailto:jfrankel@nmsu.edu">jfrankel@nmsu.edu</a>

**NMSU LEADS 2025 Goal:** **1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** The goal of this RPSP is to increase student enrollment, inspire the next generation NM aerospace engineers, and prepare them for professional positions in NM.

<b>RPSP Objective 1: Enhance student enrollment and involvement in hypersonics</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of graduate students supported by RPSP	NA	2	Two well defined problems of national importance
2	Number of graduate students in career pathways in hypersonics	NA	2	National Shortage of Hypersonics Experts
3	Number of undergraduate students participated in hypersonics research	NA	5	Workforce and graduate pipeline are nationally needed
4	Number of new courses in hypersonics	NA	2	New courses are important for start-of-art dissemination
5	Number of students participated in Atomic Aggies rocket club	NA	50	Highly competitive group that excites students

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b>	<b>FY24 Request</b>
<b>Contact Name:</b>	<b>\$594,027</b>
<b>Contact Email:</b>	<a href="mailto:jfrankel@nmsu.edu">jfrankel@nmsu.edu</a>

**NMSU LEADS 2025 Goal:** 2 - Elevate Research and Creativity  
**RPSP Goal:** Expand funded research expenditures and NMSU's recognition through archival publications in hypersonics

RPSP Objective 1: Increase funded research		Measure Targets		Comments <i>(Briefly state your case)</i>
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Number of submitted proposals	NA	8	Already aggressively pursuing topic, demonstrating group dynamic is in place
2	Number of funded proposals	NA	2	DEPSCoR (1M, 24mn), University Consortium for Applied
3	Number of postdoctoral research associates supported	NA	1	
4	Number of tenure track faculty supported	NA	1	

RPSP Objective 2: Increase NMSU recognition through archival publications and conference presentations		Measure Targets		Comments <i>(Briefly state your case)</i>
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Number of published journal papers	NA	4	Important to disseminate results nationally for NMSU reputation
2	Number of conference presentations	NA	8	Real time interaction with domestic colleagues for teaming
3	Number of reports produced	NA	4	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b>		<b>FY24 Request</b>
<b>Contact Name:</b>		<b>\$594,027</b>
<b>Contact Email:</b>	<a href="mailto:jfrankel@nmsu.edu">jfrankel@nmsu.edu</a>	

**NMSU LEADS 2025 Goal:** 3 - Amplify Extension and Outreach

**RPSP Goal:** Attract students to fast-growing aerospace area.

<b>RPSP Objective: Foster students' interest in hypersonics</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of meetings with potential undergraduate students	NA	50	
2	Number of specialty conferences/workshops offered	NA	4	
3	Number of participants at specialty conferences/workshops	NA	80	Inverse Problem Symposium (IPS, April 2023) will have Hypersonics Sessions (Las Cruces, NM)

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:

Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ -	\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ 594,027.00	\$ 594,027.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ -	\$ 594,027.00	\$ 594,027.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ -	\$ 594,027.00	\$ 594,027.00	

Transfers (to) from				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

Expenses							
	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries			1.00	\$ 95,000.00	1.00	\$ 95,000.00	One 9-mo full-time faculty
Professional Salaries			1.00	\$ 80,000.00	1.00	\$ 80,000.00	One 12-mo post-doc
Other Staff Salaries			0.00	\$ -			
Student Salaries (GA/TA)			0.00	\$ 50,298.00		\$ 50,298.00	2 graduate students
Other Salaries			0.00	\$ -			
<b>Total All Salaries</b>	<b>0.00</b>	<b>\$ -</b>	<b>2.00</b>	<b>\$ 225,298.00</b>	<b>2.00</b>	<b>\$ 225,298.00</b>	
Fringe Benefits				\$ 51,178.00		\$ 51,178.00	
Travel				\$ -			
Utilities				\$ -			
Institutional Support Charges				\$ -			
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses				\$ 300,000.00		\$ 300,000.00	
Equipment				\$ -			
Other Expenditures				\$ 17,551.00		\$ 17,551.00	Student insurance and tuition, IDC.
<b>Total Expenditures</b>	<b>0.00</b>	<b>\$ -</b>	<b>2.00</b>	<b>\$ 594,027.00</b>	<b>2.00</b>	<b>\$ 594,027.00</b>	
<b>Ending Fund Balance</b>		<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>	



# Manufacturing Development Sector

## Aggie Innovation Space and Economic Development

FY24

Title: Manufacturing Development Sector

FY23 Actual: \$647,800

FY24 Request: \$947,000

Change: \$300,000

### The Need

As a direct result of strategic efforts by the New Mexico Economic Development Department, manufacturing is experiencing a renewed interest in communities across the state. Driven by national efforts to re-shore, near shore and foster a sustainable green supply chain, the state is aggressively pursuing collaborations to grow this critical industrial sector.

Building on institutional and infrastructural assets, NMSU is well positioned to lead higher education's engagement by supporting businesses with technology expertise, and to develop an aligned workforce to support this growing economic sector.

### The Opportunity

1. Transform traditional educational programs to meet today's multifaceted learning environments, while preparing a highly competitive workforce.
2. Ensure laboratory equipment and educational facilities are state-of-the-art to support high-tech learning.
3. Expand outreach programming to accelerate economic development, technical assistance to businesses, and entrepreneurship.
4. Enhance cross-disciplinary research opportunities that support tech-to-market applications.



### Serving New Mexico

- Design, prototype and evaluate manufacturing processes, components and systems.
- Provide manufacturing support for local industry.
- Develop manufacturing-aligned education and outreach programming.
- Foster sustainable green supply chain and service sector through energy efficient and waste minimization technical services.
- Advance cutting-edge tech-to-market research to support business development.
- Build entrepreneurship capacity among students and faculty.
- Prepare students who are career-ready.
- Support career pathways in manufacturing through K-12 outreach.



## ON THE PATHWAY TO SUCCESS

### Where we are

- Growing demand for services and programming by industry, university students, and K-12 stakeholders, Post COVID
- National and state emphasis on re-shoring, near shoring and green shoring of manufacturing sector.
- Growing demand for sustainable green manufacturing and service sector assistance.
- Unproven concepts and ideas requiring design for manufacturing assistance.

### Where we are going

- Increase assessment services to businesses.
- Increase number of businesses served through energy efficiency and waste minimization assistance to foster sustainable green supply chain and service sector.
- Create micro-credential courses in collaboration with industry to upskill workforce.
- Increase student and faculty engagement in high-tech manufacturing.

### Budget Increase Justification

The \$300,00 request in additional funding will be used to support additional personnel i.e., technical staff and students in the AIS to support on-demand courses and professional staff to support delivery of pollution prevention and energy efficiency assessment services to NM businesses.

- Assessment services will expand beyond current EPA National Emphasis Areas.
- Continue to grow our outreach educational programming which serves over 500 businesses, with 17 onsite assessments completed and 14 requests pending.
- Grow our micro-credential courses with industry to upskill workforce. This has tremendous potential

### 2022 Programmatic Outcomes

#### Student Projects

- 41 capstone projects with over 170 students
- Projects funded by industries such as PNM, Honeywell, SNL, LANL, and others.
- WERC – annual design competition.
- Over 40 student course, organization, and personal projects
- Management of NM Technology Student Organization (NMTSA).

#### Research Projects

- Supported over 39 student and faculty research projects
- Worked with faculty to secure \$250,000 metal powder printer funded by AFRL



- Worked with faculty and LANL to secure funding for \$647,743 CMM machine and software

#### Community-based Projects

- Green Business Resource Fair with NMEDD
- Green Business Webinar Series with NMED & NMEDD
- Clean energy business accelerator – 8 businesses
- Energy efficiency and pollution business assistance – 10 businesses (2 receiving LEDA funding)
- Arrowhead Center Foster Innovation Exchange (FIX) program - 13 projects
- Industry outreach projects – 7 projects
- Arrowhead Center NMSBA program – 8 projects
- K-12 STEM Outreach – over 1500 student participants

#### Workforce Development

##### Workshops and Trainings

- 3D printing, Advanced 3D Printing
- Solid Works – Basic, Drafting and Assemblies
- Python, MATLAB
- Fusion 360 – Basic, Intro to CAM
- Energy Efficiency
- Pollution Prevention
- Raspberry Pi, Arduino

##### On-Demand Courses

- Innovation and Product Development
- Model Based Systems Engineering
- Applied Model Based Systems Engineering
- Entrepreneurship
- Manual Mill Operation
- Manual Lathe Operation
- CNC Machining

#### Secured Funding

- NM PED funding - \$70,000
- Corporate grant funding for STEM Outreach and Design Contest - \$50,000
- WERC design contest - \$35,500
- Tech Fee Funds for computer upgrade and project management software - \$20,000

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Manufacturing Sector Development Program

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$947,800

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$647,800.00

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	24
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**2. Project Description / Executive Summary:**

New Mexico is home to a growing manufacturing base driven by shifts in the global supply chain and the emergence of entrepreneurial and business start-ups. A report by Deloitte Consulting estimates that 3.5 million manufacturing jobs will likely be needed over the next decade, with 2 million positions expected to go unfilled. With the Southwest comprising the fastest growing region in the U.S., state leaders are aggressively pursuing manufacturing enterprises. Additionally, the resurgence in North American manufacturing, proximity to Mexico’s maquiladoras and Santa Teresa’s extensive manufacturing distribution hub, New Mexico-based manufacturers are well-positioned for success. NMSU’s College of Engineering is focused on supporting the businesses (manufacturers, supply chain and related service industries) through technical assistance and working with the State and employers to filling ensure a robust, highly-skilled and aligned workforce in four strategic areas:

1. Foster partnerships with industry and national labs to prepare an aligned workforce - degreed programs, micro-credentials, workshops, webinars);
2. Provide technical expertise in manufacturing-related areas to ensure businesses remain competitive within the supply chain and related service sectors - prototype development and validation, operational assistance for adoption of energy efficiency and waste minimization practices)
3. Increase economic development - collaboration with Arrowhead Center, NM Economic Development Division, industry trade associations and Chambers of Commerce; and

## 2. Project Description / Executive Summary:

4. Engagement of all stakeholders – students, faculty, industry, government agencies, entrepreneurs and NGOs.

The MSDP program effectively prepares engineers to support the State's growing manufacturing sector. Recent investments at NMSU by the State, industry, and alumni have resulted in state-of-the-art manufacturing facilities, open workspaces, and expanded capabilities to support manufacturing-based needs through teaching, research, and public service. Over the past several years, manufacturing capabilities at NMSU have literally transformed from 1960's equipment and technology to one of the most state-of-the-art in facilities the region. The MSDP program has elevated manufacturing as an integral component across all majors as automation and robotics, computer and process technologies, control systems, high-precision technologies are the future of advanced manufacturing. These facilities have allowed a direct alignment with statewide businesses and national labs to meet both manufacturing needs and foster careers in high-demand areas. Complimentary educational and outreach programs have been developed to support the state's target economic sectors of intelligent manufacturing, sustainable and green energy, aerospace, and global trade. Outreach services for existing businesses in the area of energy efficiency and waste minimization have enhanced economic viability while contributing to a robust supply chain and service sector. Lastly, partnerships with the national labs have provided additional access to high-tech equipment and technical expertise to develop on-demand courses to upskill, reskill, and new-skill university students and the current workforce. These efforts directly address a need for employer alignment providing opportunities for high paying careers in NM and retaining graduates within the state.

## 3. Budget Narrative (Overview only – Relates to separate Budget Form)

NMSU manufacturing-related programs are poised for growth and are on track to position the College of Engineering as the lead academic program in NM for creating an aligned high-tech workforce, research and partnerships. Recent investments of over \$1.3 million in facility and equipment renovations have propelled this leadership role into reality, with ongoing partnerships that include NM Economic Development Department, NM Environment Department, NM Public Education Department, Sandia National Labs, Los Alamos National Lab, National Renewable Energy Laboratory, SpacePort America, BorderPlex Trade Alliance, Border Industrial Alliance, NM Green Chamber of Commerce, NM Manufacturing Extension Program, Albuquerque Hispano Chamber of Commerce, Mesilla Valley Economic Development Alliance, Permian Basin Strategic Partnership, 4 Corners Economic Development Alliance, and ReNewMexico.

This growing demand on program services and facilities, post COVID, has now exceeded current funding, and our ability to meet this demand is now constrained by staffing limitations. **The requested program funding and expansion in additional funding is directly focused on building capacity to serve these partnerships by:**

1. increasing access to high-tech equipment and technical expertise,

Through funding from AFRL we have acquired a new \$250k metal printer: Metal additive manufacturing is now a new capability within the College that is expected to contribute to growing demand on services over the next few years. Metal additive manufacturing provides a unique manufacturing capability and research resource to southern New Mexico and will allow local industry to leverage this capability to grow their business and allow researchers a resource to expand their research effort and seek funding in the metal additive manufacturing area. Additional staffing is needed to support and grow this area.

Through funding from LANL, the College is in the process of acquiring a \$650,000 coordinate measurement machine (CMM) and laser scanner. Installation of this machine is expected in August 2022. This new capability will allow for staff to scan and reverse engineer parts as well as state-of-the-art quality control capabilities of manufactured parts. This is a unique resource to southern New

### 3. Budget Narrative (Overview only – Relates to separate Budget Form)

Mexico and will allow local industry to leverage this capability to grow their business and allow researchers to expand their research effort and seek funding in the area of quality control. Note that this equipment complements the metal additive manufacturing capability as it allows researchers to investigate the quality of 3D printed metal parts. Additional staffing is required to support this growth area.

2. expanding related on-demand courses to upskill, reskill, and new-skill university students and the current workforce,

Several micro-credential courses and workshops have been developed in partnership with NMSU On-Demand to augment the engineering academic curriculum and has proven highly effective in engaging students to utilize state-of-the-art manufacturing resources irrespective of major. The AIS continues to work with faculty to update the courses to integrate the manufacturing capabilities of the AIS into their courses. This is an ongoing effort as the capabilities continue to grow. Additional funding is need to support this growth and to develop other on-demand courses to upskill, reskill, and new-skill university students and the current workforce.

3. expand access to technical services for businesses on sustainable green practices through energy efficiency and waste minimization, and

Partnerships with NM Economic Development, NM Energy Minerals and Natural Resources, and NM Environment Department have resulted in a new Green Business Webinar series that showcases businesses that have effectively adopted Lean and Green manufacturing processes via a Case Study model. Webinars focus on Best Practices for integrating green products and practices into the manufacturing process to improve employee health, product recyclability, integration of renewable energy, all of which contribute to a greening of the supply chain and service sector. These webinars have led to increased interest among businesses to seek services from the program for energy efficiency and waste minimization Best Practices. Current services are limited by staffing and travel-related funding for on-site assessments.

4. elevate manufacturing as an integral component of STEM education – K-16.

Expand STEM outreach programming to K-12 schools that incorporates manufacturing skills and knowledge– automation and robotics, 3D printing, programming, design for manufacturing concepts, computer aided design (CAD), electronics and sensors. Additional funding is required to increase materials and supplies required for “kits” for in-school and on-campus activities to a broader number of schools, travel for in-school visits, and undergraduate student employment for the summer NM PREP Academy program for middle and high school students.

The \$300,00 request in additional funding will be used to support additional personnel i.e., technical staff and students in the AIS to support on-demand courses and professional staff to support delivery of pollution prevention and energy efficiency assessment services to NM businesses. Focus areas for assessment services will expand beyond current EPA National Emphasis Areas. Through a partnership with NMED and NMEDD, NMSU has provided outreach educational programming to over 500 businesses, with 17 onsite assessments completed and an additional 14 requests pending.

#### **4. Program Mission (include population served, other demographic info):**

The collective mission of the Aggie Innovation Space and associated outreach and economic development initiatives fulfill NMSU's Land Grant mission and provide relevant engineering programming and services to students, support research endeavors, and foster economic development and job creation for stakeholders across New Mexico. In particular, this mission focuses on the development of advanced manufacturing education and entrepreneurship. As a recognized leader in transformational engineering, the College of Engineering assists government and industry partners to deliver innovative technology solutions required of today's global economy and has developed an aligned and effective workforce development effort to bridge business and industry needs with experiential and entrepreneurial learning. Building on institutional strengths through NMSU On-Demand and Arrowhead Center, the Program is expanding its role as a leader in providing an aligned high-tech workforce, research and partnerships

##### Populations Served

- \*Undergraduate and graduate engineering students from all disciplines (~2,100);
- \*under-represented minority students (~50 percent of the student population), particularly Hispanic and first-generation students;
- \*faculty researchers across campus from multiple disciplines in engineering, business, agriculture, and arts and sciences;
- \*individual entrepreneurs in the region and state;
- \* small and medium-sized businesses in New Mexico; and
- \*high-tech employees statewide involved in advanced manufacturing sectors.

Specific goals of the MSDP program encompass the following:

Economic Development: Entrepreneurs working with the Arrowhead Center, an NMSU initiative that helps regional businesses develop into viable companies, bring their ideas to the AIS to connect with researchers and students who can transform entrepreneurial ideas into reality. Together with researchers and students, they build and test their products and effectively contribute to economic development in the region and the state with a particular emphasis on the advanced manufacturing sector. Projects would include the use of high-technology to develop solutions for New Mexico-based industries, such as agriculture, water, computer engineering and defense.

The collective mission of the Aggie Innovation Space and associated outreach and economic development initiatives fulfill NMSU's Land Grant mission by providing relevant engineering programming and services to students and faculty, while fostering economic development and job creation for stakeholders across New Mexico. This mission focuses on the development of advanced manufacturing education across K-16 pipeline, aligned outreach services to the business community, and serves as a resource for entrepreneurs. As a recognized leader in transformational engineering, the College of Engineering assists government and industry partners to deliver innovative technology solutions required of today's global economy and has developed an aligned and career-ready workforce by integrating manufacturing-related experiential and entrepreneurial learning across educational programs. Building on institutional strengths through NMSU On-Demand and Arrowhead Center, the Program has expanded its role as an academic leader in providing an aligned high-tech workforce, research and partnerships to support the State's focus on target industrial sector growth.

##### Populations Served:

- Undergraduate and graduate engineering students from all disciplines (~2,100);
- Under-represented minority students (~50 percent of the student population), particularly Hispanic and first-generation students;
- Faculty researchers from multiple disciplines in engineering, business, agriculture, and arts and sciences;
- Individual entrepreneurs in the region and state;
- Small and medium-sized businesses from across the state; and
- High-tech employees at industry and national labs associated with advanced manufacturing and green manufacturing areas.

Specific goals of the MSDP program are:

#### **4. Program Mission (include population served, other demographic info):**

1. Education: Engage students by integrating manufacturing-related knowledge and skills in class projects, senior design projects, and team projects requiring hands on learning. Engage faculty and regional entrepreneurs as mentors to guide students in making connections between classroom knowledge, real-world projects, and professional innovation. Bridge technical and soft skills concepts necessary to succeed as employees and entrepreneurs. Foster relationships between students and employers to advance knowledge of high wage employment opportunities in NM.
2. Research: Provide faculty with access to state-of the-art facilities to develop cutting-edge and commercially viable research in advanced manufacturing, computer engineering, and materials development, green manufacturing, and others.
3. Economic Development:
  - a) Collaborate with state agencies and industry trade organizations to advance sustainable manufacturing practices among the businesses within related supply chain and service sectors.
  - b) Serve as the technical resources for entrepreneurs working with the Arrowhead Center to assist in design, prototype and evaluation of products. Projects would include the use of high-technology to develop solutions for New Mexico-based industries, such as agriculture, water, computer engineering and defense.
4. STEM Outreach: Expand STEM outreach programming to K-12 schools that incorporates manufacturing skills and knowledge– automation and robotics, 3D printing, programming, design for manufacturing concepts, computer aided design (CAD), electronics and sensors.

#### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The project objective is to position the College of Engineering as the lead academic program in NM for creating an aligned high-tech workforce, research and partnerships in the area of advanced manufacturing. This objective specifically focuses on building capacity within the College to support the State’s focus on growing a robust manufacturing sector, support current and new businesses to remain competitive within the supply chain and service sectors, support growing entrepreneur-based business development, and foster integrated educational opportunities K-16 for students to learn and refine skills in manufacturing-based areas. Specific program objectives are listed below:

- Broaden educational capabilities and knowledge in advanced manufacturing areas that both align educational programming and integrates opportunities for direct engagement by students in real-world and hands-on activities.
- Develop expertise in the State’s target economic sectors – intelligent manufacturing, sustainable green energy, aerospace, and global trade.
- Increase number of manufacturing-related businesses served via energy efficiency and waste minimization assessment services, including supply chain and service sectors.
- Increase engagement by industry, government agencies and national labs in senior design projects.
- Increase the number of design challenges, workshops, and courses focused on interdisciplinary hands-on learning to increase student engagement from all engineering disciplines, with emphasis on current needs and challenges in advanced manufacturing.
- Prepare students so they are uniquely positioned to tackle advanced manufacturing challenges in the state of New Mexico and are therefore retained as job creators within the state.
- Teach students how to use modern manufacturing techniques, tools, and software.
- Collaborate with K-12 administrators and educators to increase enrollment in the dynamic and high-tech areas of manufacturing. Support student competitions, workshops, demonstrations, and summer immersion STEM outreach activities.
- Support student organizations to enhance their ability to efficiently and effectively form teams to design, build, test and compete. This will provide them with hands-on technical experience and soft skills needed to become successful entrepreneurs.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

- Support interdisciplinary and collaborative research by increasing research collaborations within the college and across the university to advance cutting-edge technology and commercially viable research, leveraged by external funding sources.
- Nurture research excellence by providing services to faculty members that enable them to realize their vision in the advanced manufacturing areas.
- Continually identify and fill meaningful gaps in manufacturing techniques, equipment, and new subdisciplines in advanced manufacturing.
- Build interdisciplinary communities of faculty and students to increase engagement in new and evolving themes of manufacturing.
- Strengthen ties with Los Alamos National Laboratory and Sandia National Laboratories to help ensure our students are learning the right skills and our researchers are aware of collaboration opportunities in various sub-disciplines of advanced manufacturing.
- Enhance economic development and technology in New Mexico by developing an increased number of partnerships to support all types of product-based businesses through design, analysis, prototyping, and testing of manufacturing processes. Expand ties with Arrowhead Center and Studio G in increased number of manufacturing areas to transform our students and faculty members into entrepreneurs, as well as spark economic development within the state.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

**Student Projects**

- 41 capstone projects with over 170 students
- Projects funded by industries such as PNM, Honeywell, Sandia National Labs, Los Alamos National Laboratory, Jacobs Technology, General Dynamics, X2NSat, and others.
- WERC – annual design competition supported by 9 corporate sponsors and 36 judges from industry, and over 120 university student participants.
- Over 40 student course, student organization, and personal projects
- Assumed management of NM Technology Student Organization (NMTSA) under MOU with NM Public Education Department with an expanded focus on STEM-based student competitions.

**Research Projects**

- Supported over 39 student and faculty research projects
- Worked with faculty to secure \$250,000 metal powder printer funded by AFRL –located in AIS
- Worked with faculty and LANL to secure funding for \$650,000 CMM machine and software – to be located in AIS (to be installed in August)

**Community-based Projects**

- Green Business Resource Fair with NMEDD
- Green Business Webinar Series with NMED & NMEDD
- Clean energy business accelerator – 8 businesses
- Energy efficiency and pollution business assistance – 10 businesses (2 receiving LEDA funding)
- Arrowhead Center Foster Innovation Exchange (FIX) program - 13 projects
- Industry outreach projects – 7 projects
- Arrowhead Center NMSBA program – 8 projects
- K-12 STEM Outreach – over 1500 student participants

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

**Workforce Development**

- Held 16 workshops on Solid Works, program languages, manufacturing software, and hardware programing.
- Created and taught 4 on-demand micro-credential courses, developed another 3 another courses to be taught when we have more staff

**Secured Funding**

- Over \$170,000 in funding secured to support the efforts of the program.

**Obstacles and Issues**

Limitations on Growth: Increased growth and expansion will be achieved with the addition of more full-time staff and student employees to help grow our outreach efforts. We have already add a full time staff member to the AIS. With this addition we are just able to meet the current demands of the AIS. The pandemic hit at a time when the renovations of the AIS were completed which limited our capabilities to work with local manufacturing businesses. Now that the restrictions of the pandemic have been lifted, we can now concentrate our efforts on meeting the demands of local industry.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The MSDP program has statewide impact and directly supports the Governor’s initiatives in advancing economic development and fostering development of a competitive workforce.

Student use of the MSDP’s Aggie Innovation Space will give them the technical and soft-skills that employers require. They will graduate having hands-on real-world experience. Additionally, they will have project management, teamwork, communication, and reporting experience which will enable them to enter the workforce as well-rounded employees ready to navigate the business world and help meet the workforce needs of the state. Increased collaborative efforts with state businesses will allow them to advance economically. Emphasis of the MSDP on entrepreneurship will open their horizons to new possibilities. They will be job creators in the region and the state as opposed to job seekers. In addition, the proposed growth areas have an amplified impact on economic development in the state readily by engaging local industries in its research and education programs. It fulfills the spirit of Land-Grant mission of the university by making service in the manufacturing sector as an integrated component of the MSDP program.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The college of engineering has been successful in leveraging broad support from industry, government, and the community.

In 2020, the College worked with the NMSU Foundation to launch a campaign to gain financial support from donors to support the development of the new integrated Aggie Innovation Space. Through these efforts the AIS received over \$120,000 in private funding. Through the Capstone Design Program, the AIS receives approximately \$40,000 in company sponsored capstone project. Consultations are ongoing with several companies to become active partners in the expanded mission of AIS.

Additionally, the MSDP program has received varying degrees of state support since its inception in 2000 and has garnered numerous contracts to support business ventures. Noteworthy projects include:

**Community-based projects funded from Federal CARES Act**

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

- Personal Protective Equipment (PPE) manufactured and provided to Dona Ana County Emergency Management Operations for distribution (i.e. Las Cruces medical providers, Las Cruces Public Schools, Emergency Response personnel, Dona Ana Early Childhood Care program)
- Design and manufacture of disinfecting mister for COVID-19 response

**Funded Student capstone projects**

- Electrostatic Discharge Study (Los Alamos National Laboratory)
- NASA Optical Communications (NASA)
- Mobile HF Communication with SDR (Honeywell)
- Method to Characterize Sensor Performance (General Dynamics Mission Systems)
- Ocean water temperature measurement (X2NSat)

**Funded Research projects**

- Clean Energy Manufacturing and Workforce Development grant for U.S. Economic Development Administration (\$750k)
- Self-Extracting Annelid Inspired Geoprobe
- Prototype testing of bio-inspired radially expansive pile systems
- Solar desalination for produced water

**Arrowhead Center NMSBA projects**

- Engineering design consultation, modeling and analysis, manufacturability for evaporative cooler valve (Chavez Plumbing)
- Material analysis, 3-D printing, simulations of exposed weather conditions (Concrete Impressions New Mexico LLC)
- Magnetic Hook and Strap System (Dankart Inc.)

The MSDP program has statewide impact and directly supports the Governor's initiatives in advancing economic development and fostering development of a competitive workforce.

Serving the Needs of New Mexico:

From an initial enrollment of just five students in 1891, NMSU's College of Engineering now annually prepares more than 2,100 undergraduate and graduate students for careers in civil, mechanical, electrical, computer, chemical, aerospace, and industrial engineering. Engineers proudly call themselves problem-solvers, and NMSU's graduates enthusiastically find solutions to some of the world's most complex challenges. A few highlights of our program follow.

Enhanced Education: Student success is our primary goal. When they leave us, our graduates are ready not only for employment or furthering their education, but to provide leadership and service and contribute to the enhancement of human welfare.

\*We have expanded our programs to provide students with hands-on experiential learning.

\*In conjunction with the NM Professional Surveyors Association, the college has revamped its surveying program into a state-of-the-art geomatics program. We have recently receive over \$70,000 in scholarship funding for students in the geomatics program.

\*The new Aggie Engineering Capstone Design Program will provide students with a capstone experience that is interdepartmental and is more attuned to real-life experience.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

\*Launched a year ago, the Eloy Torrez Family Learning Communities provides a one-stop shop for tutoring, advice for financial assistance or academic programs, to get involved with other students, or just to have someone listen to them.

\* This past year we also received \$12,000 in private funding with additional funding over the next 5 years for a total of \$60,000 to build an Engineering Entrepreneurship Program for students in the college of engineering.

\*Each of these programs was devised with the purpose of retaining our student population, helping them graduate in a timely manner with 100 percent placement in jobs.

Broadened Research: Research is the lifeblood of our educational programs, sustaining their relevance to new technology and societal needs. With a state-of-the-art manufacturing facility faculty can leverage the capabilities of the AIS to help their research proposals be more successful.

**9. Accomplishment/ Highlights (bullet form)**

New Economic Development Opportunities: As a land-grant institution, one of our main functions is to serve the state of New Mexico. We have achieved success on this front over the years providing engineering assistance. We now have increased focus on growing entrepreneurial ventures.

\*The college has provided long-term support of the state’s agricultural industry by designing and manufacturing harvesting and processing equipment and provided design and prototyping support for advanced ranching.

\*More than 600 New Mexico-based companies have received engineering design services, prototyping and manufacturing process development from the college.

\*Students, faculty, alumni and New Mexico businesses and entrepreneurs have access to support with NMSBA grants, entrepreneurial endeavors, and intellectual property licensing through a strong and ongoing partnership with NMSU’s Arrowhead Center. Currently, there is a faculty project and student project going through the patent process now. In both projects the Aggie Innovation Space played a key role in design and manufacturing of a prototype.

\*The state of New Mexico and beyond are the benefactors of an ongoing pipeline of engineering graduates geared toward meeting and growing manufacturing needs.

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Manufacturing Sector Development Program  
**Contact Name:** Lakshmi N Reddi  
**Contact Email:** [lnr@nmsu.edu](mailto:lnr@nmsu.edu)

**FY24 Request**  
**\$ 947,800**

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility  
**RPSP Goal:** Facilitate innovation, student success, economic development in the manufacturing sector

RPSP Objective 1: Increase student engagement in Aggie Innovation Space (AIS)		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of Pop-Up workshops offered	20	20	14	16	15	18	20	20	25	16	
2	Number of Design Challenges offered	1	2	2	2	8	10	2	3	3	3	
3	Number of students utilizing AIS	558	910	1,226	1,300	1,300	1,500	1,500	1,500	1,500	1,500	
4	Number of senior capstone project utilizing AIS	16	29	27	30	30	50	50	50	30	30	

RPSP Objective 2: Accelerate technology commercialization & transition to Arrowhead Studio G		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	Number of student-based technologies transitioned to Arrowhead Center	7	7	3	7	30	35	6	6	7	6	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Manufacturing Sector Development Program  
**Contact Name:** Lakshmi N Reddi  
**Contact Email:** [lnr@nmsu.edu](mailto:lnr@nmsu.edu)

**FY24 Request**

**\$ 947,800**

**NMSU LEADS 2025 Goal:** 3 - Amplify Extension and Outreach

**RPSP Goal:** Drive economic and educational development

RPSP Objective 1: Increase number of individuals/entrepreneurs served		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of individuals/entrepreneurs served through technology business assistance	59	21	19	19	400	120	75	150	30	26	
2	Number of individuals served through professional development short-courses/workshops	673	456	137	150	900	1,200	1000	1250	600	150	
3	Number of individuals served through career development	1,145	1,230	575	625	1,600	1,800	1500	1750	1500	800	
4	Number of K-12 students participating in STEM outreach activities*	4,596	900	1500	2352	5,000	5,000	5000	6500	2000	1700	
5	Number of educational insitutions participating in the contest (NEW FY22)	NA	NA	12	12	NA	NA	NA	NA	22	15	This is a new measurement as of FY22
6	Number of undergraduate students participating in STEM outreach activities (WERC Environmental Design Contest) - (NEW FY22)	NA	NA	116	112	NA	NA	NA	NA	135	125	This is a new measurement as of FY22
7	Number of tasks offered - (NEW FY22)	NA	NA	5	5	NA	NA	NA	NA	6	6	This is a new measurement as of FY22
8	Number of industries engaged - (NEW FY22)	NA	NA	7	10	NA	NA	NA	NA	24	12	This is a new measurement as of FY22
9	Number of judges mentoring students - (NEW FY22)	NA	NA	36	29	NA	NA	NA	NA	36	36	This is a new measurement as of FY22
10	Dollars leveraged through sponsorships - (NEW FY22)	NA	NA	\$ 23,000	\$ 38,000	NA	NA	NA	NA	\$ 35,000	\$ 28,000	This is a new measurement as of FY22

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Manufacturing Sector Development Program  
**Contact Name:** Lakshmi N Reddi  
**Contact Email:** [lnr@nmsu.edu](mailto:lnr@nmsu.edu)

**FY24 Request**

**\$ 947,800**

RPSP Objective 2: Expand geographic impact of outreach services		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actuals		FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of cities served by technology business assistance	17	10	10	9	25	28	20	30	15	12	
2	Number of school districts served by STEM outreach services	31	35	11	12	40	63	45	60	40	15	

RPSP Objective 3: Expand economic sectors impacted by technology business assistance outreach services.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actuals	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of entrepreneurial start-ups served through technology business assistance	12	11	8	8	30	35	35	20	20	20	
2	Number of small businesses served (less than 50 employees)	22	0	10	14	15	18	25	35	22	20	
3	Number of other businesses served	4	2	3	4	15	18	7	10	15	5	

**NMSU LEADS 2025 Goal: University System**

**RPSP Goal:** Optimize resources to effectively support service

RPSP Objective 1: Leverage state resources to expand impact of services		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Dollar value of grants/contracts leveraged	\$840,353	\$393,721	\$480,000	\$550,000	\$ 500,000	\$750,000	\$750,000	\$750,000	\$750,000	\$800,000	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Manufacturing Sector Development Program Total: **\$ 947,800.00**

Budget verses Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 13,088.00	\$ (9,218.00)	\$ 3,870.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 647,800.00	\$ 300,000.00	\$ 947,800.00	\$300 Expansion Request
Local		\$ -		
<b>Total Appropriations</b>	<b>\$ 647,800.00</b>	<b>\$ 300,000.00</b>	<b>\$ 947,800.00</b>	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ 70,000.00	\$ 70,000.00	NM PED funding for TSA
Local		\$ -		
<b>Total Grants and Contracts</b>	<b>\$ -</b>	<b>\$ 70,000.00</b>	<b>\$ 70,000.00</b>	
<b>Private Gifts, Grants and Contracts</b>		\$ 50,000.00	\$ 50,000.00	Corporate grant funding for STEM Outreach and Design Contest
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ 20,000.00	\$ 20,000.00	Replace outdated computers and project management software
<b>Endowment</b>		\$ 35,000.00	\$ 35,000.00	WERC Design Contest Endowment
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	<b>\$ 647,800.00</b>	<b>\$ 475,000.00</b>	<b>\$ 1,122,800.00</b>	

<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research	\$ (106,973.00)	\$ -	\$ (106,973.00)	
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	<b>\$ (106,973.00)</b>	<b>\$ -</b>	<b>\$ (106,973.00)</b>	

<b>Expenses</b>						
	FY23 FTE		Change FTE	\$	FY24 FTE	
Faculty Salaries	0.23	\$ 20,000.00	0.12	\$ 10,000.00	0.35	\$ 30,000.00
Professional Salaries	1.59	\$ 100,000.00	4.38	\$ 275,000.00	5.97	\$ 375,000.00
Other Staff Salaries	1.90	\$ 65,000.00	0.94	\$ 32,000.00	2.84	\$ 97,000.00
Student Salaries (GA/TA)	5.21	\$ 127,245.00	(1.99)	\$ 2,755.00	3.22	\$ 130,000.00
Other Salaries	0.97	\$ 33,000.00	(0.00)	\$ -	0.97	\$ 33,000.00
<b>Total All Salaries</b>	<b>9.90</b>	<b>\$ 345,245.00</b>	<b>3.44</b>	<b>\$ 319,755.00</b>	<b>13.34</b>	<b>\$ 665,000.00</b>
Fringe Benefits		\$ 76,800.00		\$ 119,655.00		\$ 196,455.00
Travel		\$ 2,000.00		\$ 13,000.00		\$ 15,000.00
Utilities				\$ -		
Institutional Support Charges		\$ 26,200.00		\$ 11,712.00		\$ 37,912.00
Plant Operation and Maintenance Charges				\$ -		
Supplies and Expenses		\$ 99,800.00		\$ 5,530.00		\$ 105,330.00
Equipment				\$ -		
Other Expenditures				\$ -		
<b>Total Expenditures</b>	<b>9.90</b>	<b>\$ 550,045.00</b>	<b>3.44</b>	<b>\$ 469,652.00</b>	<b>13.34</b>	<b>\$ 1,019,697.00</b>
<b>Ending Fund Balance</b>		<b>\$ 3,870.00</b>		<b>\$ (3,870.00)</b>		<b>\$ -</b>

# STEM Alliance for Minority Participation (STEM AMP)

FY 23 Actual: \$357,900

FY 24 Request: \$357,900

Change: \$0



BE BOLD. Shape the Future.

## Background of STEM AMP

Established in 1993, the STEM AMP program is a partnership of the state’s two- and four-year colleges and universities, with a primary goal of increasing the number of B.S. STEM degrees awarded to underrepresented (URM) students in New Mexico. Funded by National Science Foundation (NSF), with support from the New Mexico Legislature and NMSU, STEM AMP helps prepare students for academia and industry. Managed by NMSU, the Lead Institution, STEM AMP supports students with stipends for research- and transfer-related programs; professional development; and teaching, learning, and mentoring.



SCORE Program – Field Trip

### Purpose of Request and Program Rationale:

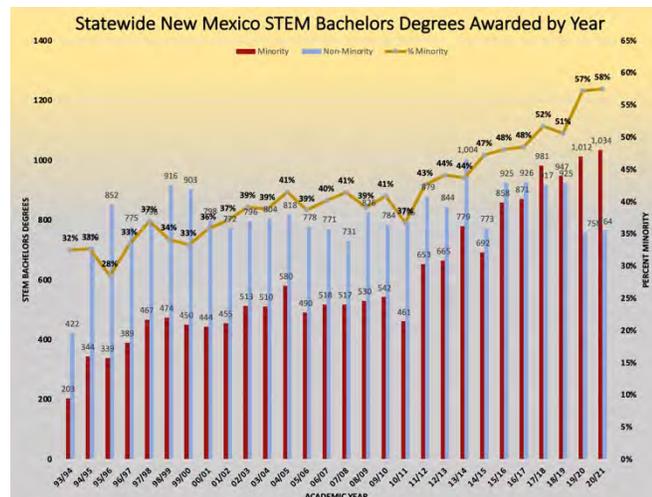
- Change and development in the educational fabric of New Mexico facilitated through state-level contributions.
- STEM student retention through research and transfer programs, encouraging social mobility for URMs.
- Research-focused programs [Undergraduate Research Scholars (URS), Summer Community College Opportunity for Research Experience (SCCORE)], create opportunities with implications for New Mexico, our nation and world.
- Economic and personal benefits of STEM AMP training, meeting the challenges of the STEM workforce for URMs.

## Student Success

- **Dominick Martinez**, Student from Northern New Mexico College (NNMC): Book Stipend Award (Fall 2020); URS Award (Spr 21, Spr 22); IDeA Networks of Biomedical Research Excellence (IMBRE); Sustainable Research Pathways High Performance Computing (SRP-HPC) Internship at Lawrence Berkeley National Lab.
- **Andrea Loya Lujan**, Student from New Mexico State University (NMSU): Former SCCORE participant (Su 2019); NM AMP Transfer Stipend Award (Fa 2020); URS Award (Fa 2021, Spr 2022, Su 2022); Presenter at Undergraduate Research Creative Arts Symposium (URCAS) (Spr 2022); Hadley Honors Scholarship, S-STEM STAR Program (Fa 2021 and Spr 22).

### Program Impact:

Collaborations with many statewide STEM programs have resulted in significant increases in number & percentage of B.S. STEM degrees earned by URM students in New Mexico. Numbers have risen from 203 (32%) in 1993-94 to 1,034 (58%) in 2020/21. A linear regression shows that over the life of STEM AMP, the number of URM STEM degree recipients have grown by an average of 25 students per year, reflecting most of the growth of STEM degrees produced.



**STEM AMP Quick Facts:**

- **B.S. STEM Degree Graduates, 2016-2021:** N=353 (avg. 70 per yr.)
- **STEM AMP Retention Rate, 2016-2021:** 97%
- **In 2021-2022,** Direct Support: N=192; Indirect Support: TBD; Graduates with B.S. STEM Degrees: N=105, with those matriculating to graduate school: N=28
- **In 2020-2021,** Direct Support: N=216; Indirect Support: N=141; Graduates with B.S. STEM Degrees: N=79, with those matriculating to graduate school: N=18
- **In 2019-2020,** Direct Support: N=198; Indirect Support: N=133; Graduates with B.S. STEM Degrees: N=110, with those matriculating to graduate school: N=5

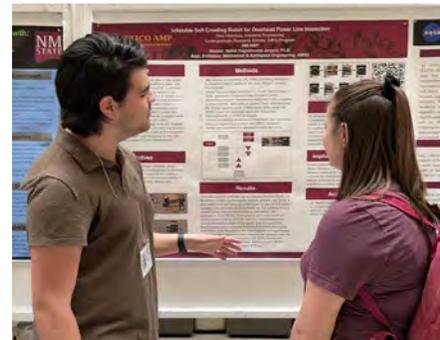
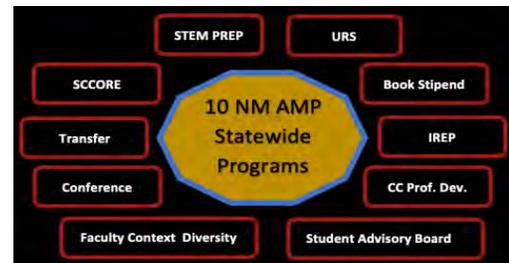
**STEM AMP Alliance Includes 13 Institutions:**

**Universities**

- ENMU NM Tech
- NMSU
- NMHU UNM WNMU
- NNMC

**Community Colleges**

- Central New Mexico CC
- Luna CC
- NMSU-Alamogordo CC
- NMSU-Dona Ana CC
- Santa Fe CC
- San Juan CC



**How STEM AMP impacts NMSU:**

- *Research evidence shows that undergraduate research experiences in academic/professional socialization activities help cultivate scientific identity and facilitate URM STEM persistence (Thiry, H., et al.; Graham, M., et al.)*
- NMSU STEM AMP research-related student program involvement (N=97), includes URS (81), STEM PREP (12), SCCORE (4) Stipends.
- NMSU Student participation in internships (N=24), STEM AMP Conference (N=49), & other conferences (N=35), Total N= 108 students.
- NMSU 2021 STEM AMP Student Research Conference student participation (N=49); Total NMSU attendees at conference (N=87).
- NMSU students' scholarships (N=26); awards and accomplishments (N=44): Some of these include Dean's List, Crimson Scholar, Aggie Achiever Sch.
- Eleven (11) NMSU faculty in diverse STEM disciplines participated in the Social Science Research Project, the STEM AMP Faculty Context Diversity Workshops, to learn more about Multicontext Theory and different approaches to teaching URM minority students. The feedback from faculty and interviews showed that faculty learned and some are practicing different approaches in their classrooms and labs.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	STEM Alliance for Minority Participation (STEM AMP)

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$357,900

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$357,900

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	27
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**2. Project Description / Executive Summary:**

STEM AMP is a statewide National Science Foundation (NSF) organization that serves underrepresented minority (URM) students in STEM. State funding provides critically important leverage for securing federal dollars to expand support for student interventions and stipends that focus on high impact practices of undergraduate research and intensive faculty mentoring, both in 2-year and 4-year partner institutions. STEM AMP also provides transfer-related experiences and stipends that encourage the community college student to progress to and remain in university to achieve the B.S. STEM degree, and to gain experience, confidence, and self-efficacy by attending and presenting at national and statewide conferences, including STEM AMP’s annual Student Research Conference, and participating in internships. STEM AMP collaborates with 13 alliance partners, including the Lead Institution, NMSU, and six other New Mexico university institutions and six New Mexico community colleges. The university partners include New Mexico Highlands University, NMSU, Univeristy of New Mexico, New Mexico Institute of Mining and Technology, Eastern New Mexico University, Northern New Mexico College, and Western New Mexico Univeristy. The Community Colleges in the STEM AMP alliance include Central New Mexico Community College, Luna Community College, Santa Fe Community College, San Juan Community College, Dona Ana Community College, and NMSU-Alamogordo Community College. STEM AMP values its collaborations with other STEM-focused programs in the state, including NM EPSCoR, NMSU CAMP, the New Mexico Mathematics, Engineering, Science Achievement program (NM MESA), the NMSU TRIO Upward Bound Gadsden and Las Cruces High School Program, Indian Resource Development (IRD), the NMSU NSF S-STEM program, the NMSU NSF STAR S-STEM program, the NMSU Dept. of Education SSS STEM-H program, the Quality

**2. Project Description / Executive Summary:**

Control of Additive Manufacturing (Q-CAM) Program, and the NASA Minority University Research and Education Project (MUREP) Advancing Regolith-related Technologies and Education (MARTE) Program, the Brookhaven National Laboratory, and others. Our primary focus is research and research-related programs that give students knowledge that can be transferred to coursework and one day, the workplace. Our goal is to increase the numbers of underrepresented minority (URM) students to succeed and to graduate with the B.S. STEM degree.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Support is provided for faculty, staff, and student assistant salaries, which support project administration. Graduate students' support assists with data collection and analysis used to complete annual reporting. Also supported is the project administration portion of the Summer Community College Opportunity for Research Experience (SCCORE) program held for community college students in the STEM AMP alliance. In addition, the state funding supports SCCORE students' travel during the program, such as costs of rental of vans for field trips and networking meetings with other SCCORE students. State funding also supports student dorm housing and meals for nonlocal SCCORE students; and associated costs for the four-week SCCORE residential program held annually in June. Additional State funding supports conference travel for statewide students and staff, including travel to NSF Conferences; other national conferences and meetings with the purpose of presenting research, networking, and training; and visits to partner campuses statewide for symposiums our students and staff attend at some of our partner universities (for example, the NM Tech Symposium and the Northern New Mexico College Symposium in the spring). STEM AMP helped with sponsorship of the Undergraduate Creative Arts Symposium (URCAS) held by the NMSU Center for Undergraduate Research and Creative Activity (CURCA) this Spring 2022, and 31 of the STEM AMP Undergraduate Research Scholars (URS) NMSU students presented at the event. At times, State funding assists with Undergraduate Research Scholars (URS) who are able to only participate part-time because of hardships occurring in their lives that require them to also work outside of research programs (NSF only supports full-time students). Further, state support funds insurance costs for students who participate in the Aggies Without Limits program. These students travel internationally to complete engineering projects to provide solutions for infrastructure and potable water solutions. Other funding needs are also supported for the program. NSF highly values State funding because it demonstrates the strong investment of the State legislature, and this provides credibility for future Federal and State funding. Importantly, NSF provided reduced funding for the alliances in existence for over 10 years in this funding cycle (STEM AMP has been in existence for 29 years), and NSF has informed us that alliances over 10 years will have even more reduced funding in the next cycle of funding, so we will have an even greater need for the state support.

NOTE: Some of the activities were curtailed at partner institutions, in particular, for community college participation, because of the pandemic and the spring 2022 fires in the state which have burned more than 600,000 acres across NM this spring. Hermits Peak and Calf Canyon fires, reported to be the largest fire in the U.S. so far this year and the largest ever recorded in NM., have forced evacuations from students in Las Vegas, NM, areas and areas east of Santa Fe, and other mostly rural communities in the Sangre de Cristo Mountains, damaging or destroying more than 350 homes by June 1, 2022. Also, other wildfires across NM, such as the Black fire in Gila National Forest and another springtime 2022 wildfire near Ruidoso destroyed or damaged more than 200 structures and left two people dead. (NY Times 6/1/22). See the end of #7 in this document that evidences the decline of university and community college enrollment throughout the nation since the pandemic.

**4. Program Mission (include population served, other demographic info):**

-STEM AMP was established in 1993-94 as an undergraduate organization whose focus is on increasing the number of degrees awarded to Science, Technology, Engineering, and Mathematics (STEM) underrepresented minority (URM) students. This mission aligns with the 2025 LEADS Mission Statement, "to serve the needs of New Mexico's diverse population through education, research, and service. . ." NMSU, the Lead Institution of STEM AMP, is the state's land-grant and space-grant university and is recognized as an Hispanic-Serving Institution (HSI). Eleven of our thirteen alliance partner institutions are also recognized HSI's, and our alliance includes a total of seven universities (including NMSU) and six community colleges (two of which are in the NMSU system.) STEM AMP looks to the LEADS 2025 Mission, Vision, Values, and Strategic Goals to align the purposes, values, mission, and goals of our organization and its programs and activities. Importantly, STEM AMP aligns with NMSU's 2025 Mission to foster diversity, learning, inclusion, social mobility, and service to the broader community, which has provided the vision for the ongoing development of our programs. Our STEM AMP statewide programs reflect this stated

#### **4. Program Mission (include population served, other demographic info):**

mission and our program aligns with the LEADS goals that follow: Goal 1: To enhance student success and social mobility; Goal 2: To encourage leadership through the highest level of excellence in research, scholarship and creative activity; Goal 3: To amplify outreach; and Goal 4: To build a robust university by advancing equity, inclusion and diversity; by cultivating faculty and staff excellence, and by responding to a dynamic higher ed environment. These statewide programs that strive to fulfill the mission of STEM AMP and LEADS 2025 include the following (Later in this document the major program outcomes and numbers are highlighted):

Research-related Programs that Relate Primarily to Goals 1 and 2:

- The Undergraduate Research Scholars (URS) Program: In the URS, students are provided with a faculty-mentored research assistantship experience, professional development training, and opportunities to develop poster presentations and present research at professional symposiums. This program leads to retention by providing a learning community in which students can belong and be accepted and further, the URS research program leads to engagement with relevant research. It also provides social mobility with statewide and national internships, leading to future careers. Many studies have been conducted to show the important connection between participation in the research experience and retention and student success. For example, Thiry, H. et al and Graham, M., et al, and other researchers evidence that undergraduate research experiences in academic/professional socialization activities help cultivate scientific identity and most importantly, facilitate URM STEM persistence.

- The STEM-PREP Program: This program allows participants who are Freshmen 2nd-semester or Sophomore 1st- or 2nd-semester to participate in research activities, training, and an opportunity to locate a faculty mentor that prepares them for the URS and internships. STEM PREP provides an introduction to research at an earlier point in the student's academic career, often leading to retention in STEM and providing the confidence and vision of the possibility of progression to the B.S. STEM degree.

- The International Research and Education Participation (IREP) Program: In this program, students are provided global perspectives by directing them to available international research experiences and providing small stipends to complete the total funding needs.

- STEM AMP Student Research Conference: The annual STEM AMP Student Research Conference brings together students in Science, Technology, Engineering, and Mathematics (STEM) from statewide alliance partner community colleges and universities to present research and to participate in professional development workshops and networking activities.

- The Summer Community College Opportunity for Research Experience (SCCORE) program: SCCORE provides community college students with research opportunities, fosters academic success, and assists in the transition to the university to which they want to transfer. With a residential program at alliance partner universities, SCCORE orients community college students to university life and the culture of research. Because most community colleges do not offer the opportunity for research, this program is key for encouraging student retention and progression to university and, eventually, progression to the B.S. STEM degree, offering a 4-week residential program. Community college students are allowed to attend SCCORE two times.

- The Community College Professional Development Workshops at the STEM AMP Conference: The STEM AMP Student Research Conference includes pre- and post-conference workshops the day before and the day after the conference to help community college students navigate the conference; learn to read abstracts, so they can select the most relevant presentations to attend at the conference; learn more about transfer to the 4-year institution; and reflect on the conference experience.

Other Programs That Lead to Recruitment, Transfer, and Retention in STEM : (Relate to Goals 1, 2, 3, and 4):

- Book Stipend Award: This award is offered annually in the fall only, and is intended as a recruitment tool to attract non-AMP students who are interested in or uninformed about NM AMP and its programs. Students are required to attend the STEM AMP Conference and other STEM AMP activities, all of which inform the students experientially and stimulates interest in STEM AMP programs and opportunities.

#### **4. Program Mission (include population served, other demographic info):**

- The Student Advisory Board: Comprised of one representative from each of the 13 partner institutions on a rotating basis, the Student Advisory Board represents the institution's STEM AMP program and influences other students to participate. In addition, the Student Advisors' valued perspectives assist the leadership of STEM AMP with possible improvement of the programs, events, and activities offered by STEM AMP. This program is on a volunteer basis, which allows the Student Advisors to give back to the program what the STEM AMP program has provided them and to serve the STEM AMP community.
- Transfer Stipend Award: Transfer stipends for students are available for STEM AMP participants in the first semester of transfer from partner 2-year institutions to 4-year partner institutions. Institutional Coordinators at the university of transfer follow-up with advising and guidance to assist the students' transition to university, and they inform these students of the research opportunities and other activities and events that STEM AMP provides.
- The Community College Professional Development Workshops (see more details above in the Research-Related Program section) is also a pathway for transfer to the 4-year institution for community college students.

The following component of the STEM AMP program is a required social science research project that leads to more understanding about the impact of our program and an improved approach to assisting our URM students. LEADS Goals 1, 2, and 4 are primarily the goals that align with this research component:

- Social Science/Education Research Component: National Science Foundation (NSF) requires that all Louis Stokes Alliances for Minority Participation (LSAMP organization of which STEM AMP is an alliance) who have existed 10 years or over, perform a social science research/education study led by Social Science experts (STEM AMP is in its 29<sup>th</sup> year). A study is being performed by NMSU Sociology faculty experts on scientific identity in science and engineering. To share the findings and outcomes of the research study, the sociologists are presenting at various national conferences and writing manuscripts for journal publication, which contributes to the overall research of NMSU and to the STEM disciplines.
- Social Science Context Diversity Workshop Program: In Spring 2021 of Year 3 and Fall 2022 of year 4, STEM AMP offered eleven STEM faculty the opportunity to participate in a workshop program that introduces a different way to view diversity and inclusion through focus on the academic culture rather than on the individuals. Though the workshop covers inclusion for many aspects in academic life, the program focused on Multicontext Theory, which forms the core of a larger institutional level organizational learning model and explains the implication of the cultural imbalance by offering a new understanding of diversity in valid ways of knowing and doing. At the end of this program, faculty were 1) introduced to Multicontext Theory and Context Diversity; 2) assisted to see how Context Diversity may influence their teaching, research, and academic careers; 3) provided with a \$1200 stipend for attending the 2 workshops; and 4) provided with examples of how to activate Context Diversity concepts in their departments and classrooms. The workshop program was facilitated by two of STEM AMP UNM partner institution faculty, one in the discipline of Sociology, and the other, in the discipline of Earth and Planetary Science, and the workshops were presented as a pilot program or model that we will hope to use at other partner institutions in the future. The outcomes of the workshop, reflected in the interviews with attendees, appear later in this report in Sections 6 and 9.

#### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Project Objectives focus primarily on the increase of the number of STEM B.S. degrees awarded to Underrepresented Minority (URM) students in New Mexico through quality STEM-specific services and programs, including undergraduate research, professional development, and transfer support, with a primary focus on student research. As previously stated, aligning with the NMSU LEADS 2025 Strategic Plan and Goals 1-4 and some of their Objectives, STEM AMP's project goals and objectives focus on this increase of URM numbers by assisting statewide students with research-focused experiences, professional development training and experiences, and guidance and support to assist 2-year students with transfer to the 4-year institution. Explaining the NMSU LEADS 2025 goals more thoroughly and how they align with our program goals, STEM AMP has a primary focus on LEADS Goal 1) Enhancing student success and social mobility; LEADS Goal 2) Elevating research and creativity and offering programs and opportunities in research that develop confidence, knowledge, and self-efficacy; Goal 3: Amplifying Outreach (STEM AMP, by its statewide composition and nature, amplifies outreach beyond its Lead Institution's

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

borders); and Goal 4: Building a More Robust University. These goals and some objectives of the goals are recognized in the Research and Public Service Projects (RPSP) Reporting in the Performance Measures (PM) form and are discussed below:

As a performance measure, these goals are carried out by the specific objective of increasing student retention and degree attainment (LEADS Goal 1 Enhancing Student Success and Social Mobility, Objective 1.3), especially through our Undergraduate Research (URS) Program, The Summer Community College Opportunity for Research Experience (SCCORE) Program and our transfer-related programs that provide a pathway for transfer, the STEM PREP program that exposes students to research and assists students to find a faculty research mentor for their next research experience of the URS. The STEM AMP URS strengthens career pathways through experiential learning and research engagement that address local and global challenges (LEADS Goal 2: Elevating Research and Creativity, Objective 2.1) and encourages progression to graduate school (LEADS Goal 2: Elevating Research and Creativity, Objective 2.1). Students are also encouraged by all of our programs and our STEM AMP Student Research Conference to become leaders by valuing the inclusion of diverse participants by viewing diversity as an asset among minority-serving institutions (Goal 4: Build a Robust University, Objective 4.1). Our focus on faculty’s understanding of how to assist all students to thrive in an inclusive environment, attract a diverse population, and value a broad view of success in STEM was the focus of STEM AMP’s Virtual Faculty Culture and Context Diversity Workshop. The workshop, entitled “A New Paradigm to Help Everyone Thrive in STEM” that STEM AMP held in Year 3 (Spr 2021) and Year 4 (Fa 2021) was one way to meet the objective of cultivating faculty and staff excellence (Goal 4: Build a Robust University, Objective 4.2). STEM AMP provided stipends for 11 STEM faculty for these workshops, and the final focus groups and interviews with those attendees reflected growth and more understanding. Also, in Goal 4: Building a Robust University System, STEM AMP works hard at streamlining methods and approaches of collecting and maintaining data (Obj. 4.3.4). STEM AMP’s database that includes REDCap that provides an efficient method of student application and archiving data securely, T-Tracker that maintains up-to-date tracking of students, and Power-BI that generates reports (T-Tracker and Power BI are still in progress of development at STEM AMP, with the help of ICT) establishes operational excellence through a metric-driven, service-oriented approach to those who need the data (NSF, the State, the STEM AMP External Evaluator, the Institutional Coordinators statewide, and administration of STEM AMP who do reporting). NSF requires of STEM AMP and all other LSAMPs in existence for over 10 years to complete an educational/social science research project.

As stated in section #4 above, there is strong evidence from the research literature and the evaluation STEM AMP has done that undergraduate research experiences and professional socialization activities help cultivate scientific identity and facilitate STEM persistence for URM students. For our focused social science project for this funding period of 2018-2023, social science experts funded by STEM AMP are studying the factors that lead to scientific identity development and subsequent success in STEM. Understanding the mechanisms underlying the success of broadening participation programs, such as STEM AMP, remains incomplete. To elucidate these mechanisms, our social science research project is focusing on these factors leading to students’ scientific identity development and STEM success. This social science study aligns with LEADS Goals and Objectives, particularly those that enhance student success, social mobility, and that achieve comprehensive excellence while learning from social scientists how to improve our programs for our target URM student populations. This may lead to more understanding about the needs of URMs and successful outcomes for them. Our Context Diversity Workshop Program for STEM faculty, described previously, is a component of the Social Science Research Study. This aligns with Goal 2 of Elevating Research, Objective 2.1 by addressing local and global challenges of understanding differences of diverse groups and creating best practices to do this. This research component also aligns with Goal 4, Objective 4.1 and Objective 4.2, which both focus on advancing equity, inclusion and diversity and effectively supporting students, faculty, and staff, in addition to cultivating faculty and staff excellence and enhancing productivity.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

(NOTE: The primary obstacle to our increase of numbers of URMs has been the pandemic and its affects on student participation. However, even during the pandemic, we continued to recruit students and run our programs as successfully as possible. Also, New Mexico has experienced several serious fires in the northern part of the state by which several of our institutions are located; therefore, students were displaced from their homes and institutions, resulting in less STEM AMP participation.)

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Major Accomplishments are the following:

- STEM AMP impacted students throughout the state of New Mexico through outreach, research mentoring, orientations, workshops associated with the research-related Undergraduate Research Scholars program (URS), STEM PREP program, the STEM AMP Student Research Conference in fall 2021, the International Research Education Program (IREP), and a credit-bearing course (SMET 201): Research for Visiting Community College Students) associated with the Summer Community College Opportunity for Research Experience (SCCORE) Program in Su 2022. Transfer-related programs include the Transfer Stipend Award for 2-year students transferring to a 4-yr institution; the Community College Pre- and Post-Conference Professional Development Workshops, Materials are regularly disseminated to students, and activities and opportunities that inform students about the opportunities STEM AMP offers are consistently held, such as Brown Bag lunch meetings, STEM Club meetings, peer tutoring activities, and other outreach venues. The Student Advisors from the institutions help the Institutional Coordinators with recruitment.

- Graduation Outcomes: 105 STEM AMP students graduated in 2021-2022; of these graduates, 27% (N=28) progressed to graduate school.

Research-related Outcomes: For Fall 2021, Spring and Summer 2022:

- Fa 2021, Spr 2022, and Su 2022 URS: 167 Undergraduate Research Scholars stipends provided to 117 students (Students may receive a URS stipend more than one semester). Two programs of faculty grants collaborated with the URS by partial funding support: The Quality Control of Additive Manufacturing (Q-CAM) Program and the MUREP (Minority University Research and Education Project) Advancing Regolith-related Technologies and Education (MARTE) Program.

- Fa 2021 and Spr 2022 STEM PREP: 50 STEM PREP stipends were provided to 50 students, which helped prepare them for the URS and other research experiences. Of these 50 STEM PREP participants, 20% (N=10) students progressed to the URS.

- Su 2022 SCCORE: 6 community college students from Central New Mexico CC and Dona Ana CC participated in the Summer Community College Opportunity for Research Experience (SCCORE) program in Summer 2022 at host university institutions, NMSU and UNM. The Quality Control of Additive Manufacturing (Q-CAM) program collaborated with SCCORE with partial funding of a student. The students were provided the following: Orientations by the host university; two field trips, one in which the Co-PI and professor of Civil Engineering provided a tour of his research in the southern part of NM and one in which the students visited NM Tech and networked with other SCCORE students and NM Tech students; participated in a program-end symposium at which they presented their SCCORE research. SCCORE students worked in the mornings with their research mentors and in the afternoons, they attended the SMET 201 class that provided the following: panel discussions on transfer and graduate school, lab tours, training on how to develop a research poster and how to write an abstract and personal statement, opportunities each day to develop confidence by presenting progress on their research in front of the entire class, and to present their research at a formal symposium. Some students had the opportunity to stay in a dorm and discover what university campus life is like, which was helpful because students had the opportunity to select the SCCORE host university at the institution to which they wanted to transfer. This tends to encourage students to transfer earlier because the idea of university life is less daunting and more familiar.

One of the primary purposes of SCCORE is to keep students retained in STEM. The Retention Rate for Su 2021 SCCORE is the following:

- 100% (N=13) of the Su 2021 SCCORE participants remain in STEM

- 38% (N=5) of the 13 Su 2021 SCCORE students transferred to a NM university in STEM fields

- Internships and Co-Ops: Forty-nine (49) STEM AMP statewide students participated in state or national Internships and 2 state or national Co-Ops in 2021-2022. The students were from the following partner institutions: NMHU (3 internships), NNMC (2 internships), UNM (15 internships), NM Tech (5 internships), NMSU (24 internships and 2 co-ops).

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- Publications: Four STEM AMP students published in Conference Proceedings. The students who co-authored in these proceedings were from NMSU (2 students), NM Tech (1 student), and WNMU (1 student).

STEM AMP Virtual Student Research Conference:

- 255 attendees were present virtually for the fall 2021 NM AMP Virtual Student Research Conference that was held on October 8, 2021 (87 attendees from NMSU).

- At the STEM AMP Conference, there were 62 pre-recorded student presentations (53 university student presentations, 6 community college student presentations, and 3 high school students in the NMSU REinWEST Program), followed by Virtual Lightning Round 2-minute speeches presented by 9 students, and a Question and Answer session. There were First-Place, Second-Place, and Third-Place Poster Award Winners in both the university and community college categories and also two Lightning Round winners. Faculty, graduate assistants, and administrators also attended the conference, and some served as Judges for the competitions.

- The honorable Raymundo Lara, NM House of Representatives and long-time educator, served as the Keynote Speaker for the Conference. His talk centered around his own experience and journey into education and politics. He highlighted the type of opportunities for students in New Mexico, including entrepreneurship; career options created by the New Mexico/Mexico border development and commerce; Sandia and Los Alamos National Labs; the opportunities of serving the people of New Mexico through STEM opportunities, such as development of water resources; the promise of renewable energy; and other unlimited potential in New Mexico. He discussed the needs of small towns and villages in New Mexico and how the students can apply their knowledge to rebuild, repair, and develop these communities. Representative Lara offered the sage advice to pay forward what students have been provided by asserting that all of us have been assisted by someone, whether a teacher, parent, sibling, friend, or others. He recommended to the students that they create a pathway in life built on support and caring for others; so just as someone was there for them to spark their curiosity, they could create those opportunities for others. He talked about the importance of participating and investing in their own communities. With the role modeling of his own grandfather and father as farmers of pecans and onions, Representative Lara learned how to work hard and to focus not on the achievement but the service to others. He closed with the theme of his talk: to always be there to support others and give back what we have been provided.

- Attendees of the conference were provided a choice of two of three workshops: The first workshop was entitled, "Developing Your Professional Network: LinkedIn," with Hayden Randall, Civil Engineering Graduate Student and STEM AMP Graduate Assistant, presenting. With the emphasis on networking and finding employment after graduation, this workshop was very relevant to student's needs. The second workshop was presented by Lucas Rivera, a Master's student in the Civil Engineering program at NMSU and former STEM AMP undergraduate, and Holly Olivarez, a Ph.D. student in Environmental Studies at the University of Colorado Boulder and former STEM AMP undergraduate at University of New Mexico (UNM). Their workshop was entitled, "I Am Studying a STEM Field! Now What?!!," which focused on their greatest successes as well as the lessons they wished they had learned earlier. The talk offered time for discussion, questions, and student input. The third workshop was presented by Dr. Miriam Chaiken, a cultural anthropologist with more than three decades of experience working in both leadership in higher education and international economic development and humanitarian response. She also served NMSU as the Dean of the William Conroy Honors College. Dr. Chaiken presented "Applying for Graduate School: Strategies for Success."

- 13 Community College students participated in the STEM AMP Virtual Conference Community College Professional Development Workshops. These workshops were held the day before and the day after the Virtual STEM AMP Conference. At the workshops, the students learned how to navigate the conference, how to read abstracts so they could more knowledgeably select the presentations they wanted to visit at the conference, and they logged in their notes in a prepared booklet about all the events and activities in which they participated at the conference. On the day after the conference, the students had the opportunity to work in groups and present the impact of the conference on their future decisions and their lives.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- Several faculty members from STEM AMP partner institutions participated at the conference on a Faculty Panel, chaired by Dr. Catherine Brewer, Professor of Chemical and Materials Engineering at NMSU. Panelists included Dr. David Hanson, Interim Associate Vice President for Research and Professor of Biology at UNM; Dr. Amanda Ashley, Professor of Biochemistry, NMSU; Dr. Curtis O'Malley, Assistant Professor in the Department of Mechanical Engineering at New Mexico Institute of Mining and Technology (NM Tech); Dr. David Torres, Department Chair of Mathematics and Physical Science, at Northern New Mexico College (NNMC); and Dr. Jose Cerrato, Associate Professor at UNM. The panel presented a discussion entitled, "Best Practices for Mentoring Undergraduate Researchers," and faculty and staff were invited to attend.

- The Advisory Board met virtually for their annual meeting at the Conference to discuss ways their organizations/agencies/companies can assist STEM AMP (i.e., providing internships for students, etc.) and the advisors offered their perspectives of ways STEM AMP can improve development of the program. A Working Group was formed at the meeting, and they have been meeting regularly to discuss diversity and inclusion and how to improve the recruitment of more ethnicities, such as the population of Native Americans and Black students. With a large population of Hispanics in New Mexico, STEM AMP tends to have more Hispanic students than any other ethnicity, and we want to increase the numbers of other ethnicities by better approaches of recruitment, so this group's purpose is very important. Serving on the Working Group are two directors of Native American programs and a woman of color who serves as Vice President of Diversity and inclusion at a partner institution.

- Institutional Coordinator Meeting at the Student Research Conference took place in the afternoon, See details below in the section that discusses the IC Meetings of the year.

- Attendance/Presentations at Other Conferences Besides the STEM AMP Conference:

In 2021-2022, some STEM AMP URS statewide students attended/presented at more than one conference besides the STEM AMP Conference. 70 students attended a total of 99 conferences throughout the U.S., and of the 70 students who attended these, 58 students presented.

- The Undergraduate Research and Creative Arts Symposium (URCAS) presented by the Center for Undergraduate Research and Creative Activity (CURCA) was held on April 29, 2022 and attended by students in STEM and the Creative Arts. Thirty-one STEM AMP URS students presented at the URCAS event. The event was held from 8:30 a.m.-4:30 p.m., and the Poster Session was from 11:00 a.m.-1:00 p.m. There were also five Oral Presentation sessions, and two of the STEM AMP URS students presented orally. The purpose of the URCAS is to get undergraduates involved in research and creative scholarship. Serving all NMSU students, the CURCA Center is a hub for connecting students with faculty mentors and opportunities, posting resources for student researchers, and organizing events to feature student and faculty research, art, and collaborations.

Transfer-related Programs:

-18 Book Stipend Awards were provided to better inform non-AMP students about STEM AMP, its purposes, programs, and opportunities

- 5 students were awarded Transfer Stipends (1 UNM-Taos to NMSU; 1 NMSU-Carlsbad to NMSU; 1 DACC to NMSU; 1 SFCC to UNM; and 1 CNM to UNM)

- The Community College Professional Development Workshops at the STEM AMP Virtual Conference were attended by 13 community college students from partner community colleges. See a more detailed description of the workshops above in #6 Research-related Outcomes. This program is both a research-related and transfer-related program.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Institutional Coordinator (IC) Events:

- The Virtual Institutional Coordinator (IC) Coffee Hours, held once a month, provided training and clarified processes of programmatic concerns. The Coffee Hours help ICs network and form collaborations and provide AMP leadership with feedback that helps develop and improve activities, events, and programs.

- NM AMP provided two training and networking meetings for the 14 NM AMP Institutional Coordinators (ICs) at the Conference IC Meeting in Fa 2021 and at the Spring IC Meeting in Spr 2022. At the Fall 2021 Conference IC Meeting, the External Evaluator gave a talk on the continuation of the URS and knowledge gained as well as a discussion of future plans and growth for the URS program. The Database Analyst, Sr. updated the latest data and how this is used in our primary reporting documents. The Director updated events, workshops, and discussed the proposal for the next cycle. The Social Science Expert Team gave a brief updated on the NSF-required Social Science Research Component. At the Spring 2022 Conference IC Meeting, the External Evaluator presented Reporting Outcomes and facilitated a discussion on programmatic improvements and distinction between institutionalization, sustainability, and impact, which the ICs were assigned to discuss further in Break-out Rooms. ICs also were assigned to discuss examples of institutionalization, sustainability, and impact, and to think of creative ways to broaden the way they think about these regarding their institutions. The ICs reported out to the larger group afterwards. The External Evaluator also facilitated a discussion about accomplishments, grants, opportunities for collaboration, symposiums, and other good news or challenges. In addition, the Database Analyst, Sr. gave a presentation of data for 2021-2022 and update on portal. The STEM AMP Director introduced several dignitaries and new ICs and discussed the proposal and NSF's focus for the next funding cycle of STEM Pathways Research Alliances (SPRA). Other speakers were Dr. Salim Bawazir, NMSU Civil Engineering Associate Professor and NM AMP Co-PI, and Claudia Trueblood, Director of Indian Resource Development (IRD). The Social Science expert team also presented the latest updates on their research activities and findings.

Economic Impact Statement:

- The Economic Impact of STEM AMP that Professor Jay M. Lillywhite, Academic Department Head of Ag Econ and Ag Business authored in May 2021, has been disseminated to various dignitaries, including the new President of NMSU who is the Principal Investigator for STEM AMP. STEM AMP also includes this Economic Impact Statement on the STEM AMP website (see nmamp.nmsu.edu). To review, this Economic Impact Statement performed an analysis of the majors of the direct and indirect impact of STEM AMP on the State of New Mexico. The direct and Indirect Impact includes the following:

Direct Impact:

1. STEM degrees to underrepresented minorities increased by total of 8,883 degrees after factoring out the baseline of 253 degrees per year over the lifetime of the program. 2. Based on the 2019 American Community Survey, the differential for STEM versus non-STEM occupations was \$34,752. 3. Using NMSU alumni data as a reasonable estimate, we assume that 53% of STEM graduates reported in (1) above reside in New Mexico. 4. The Labor Force Participation Rate of college graduates, ages 25-64 in New Mexico is 82.43%. This rate is drawn from the 2019 report referenced in (2) above. 5. Based on the earnings differential of \$34,752, we estimate that STEM graduates residing in NM had \$134,768,993 in higher earnings than would have been the case without a STEM degree. The earnings of graduates who have left the state of NM are not included in this conservative estimate.

Indirect Impact:

To measure the indirect impact of STEM AMP, Dr. Lillywhite using similar methodology that was used by Dr. Peach and his colleagues in 2013 with the IMPLAN economic modeling software to estimate that an additional 661 jobs resulted from the higher earnings of STEM graduates, producing an addition \$27,702,271 in labor income in the state attracting Addition Resources to Support NM Students. In addition to the economic impact described above, the STEM AMP has leveraged \$8.6 million to date from the NM Legislature (from 1996-2020) to support the goals of the program. This Economic Impact study was funded by State funding for the purpose of justification and credibility of our program for future Federal and State funding.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Summary of the Social Science/Education Component of the STEM AMP Program:

NSF requires that all alliances in existence for over 10 years, participate in a research study. For our focused social science project for this funding period of 2018-2023, social science experts funded by STEM AMP are studying the factors that lead to scientific identity development and subsequent success in STEM. Understanding the mechanisms underlying the success of broadening participation programs such as a STEM AMP remains incomplete. To elucidate these mechanisms, our social science research project is focusing on these factors leading to students' scientific identity development and STEM success. This social science study aligns with LEADS Goals and Objectives, particularly those that enhance student success, social mobility, and that achieve comprehensive excellence while learning from social scientists how to improve our programs for our URM student population, which points to align with the goal of diversity and inclusion.

During Year 3 of the grant, the social science experts surveyed approximately 950 additional early career STEM majors, followed 1450 respondents from Year 1 and 2 using institutional data and follow-up surveys, and conducted additional student interviews. The social scientists continued collecting, cleaning and disseminating the data and results from the longitudinal survey data. Faculty interview data collected in Year 2 was analyzed and presented at the American Educational Research Association (AERA) Conference. Student interviews of Latina community college students are ongoing. Starting in spring 2019, the social science research team has been administering baseline questionnaires to a sample of early academic career STEM majors from four STEM AMP institutions, two 2-year and two 4-year: Dona Ana Community College, Central New Mexico Community College, New Mexico State University, and the University of New Mexico. Since 2018 when the study began, the social scientists have made eleven presentations at national conferences, and they have published in one conference proceedings publication. They are working on two manuscripts for peer-reviewed journal publications, to be submitted in Year 4 (2021-22).

During year 4 (2021-22) of the grant, the social science research team continued to administer surveys, collect institutional data and conduct interviews with undergraduate and community college STEM students in New Mexico. Preliminary observations and findings from both the survey and interviews were presented at 4 conferences this past year. In addition, four manuscript drafts are currently being prepared to submit to peer reviewed journals and will be ready for submission in the next few months. Details provided below. The team surveyed approximately 1100 additional early career STEM majors this year. The baseline survey questionnaire was administered to a new cohort of students in Fall 2021 (cohort 6) and Spring of 2022 (cohort 7). In addition, the team also resumed surveying students from the University of New Mexico in Spring 2022. Approximately, 200 surveys were collected from UNM students. All New Mexico AMP program participants at NMSU and UNM were invited to participate in the survey. We also continued to follow the approximately 2400 respondents from year 1, 2 and 3 using institutional data and follow-up surveys. Two ASEE conference proceedings (2020 and 2021) reported on preliminary findings from the survey data collected from early cohorts. In year 4, we have updated the analyses and reported the findings in two articles. One article examines how factors such as first generation status, low-income, gender and race/ethnicity are related to engineering identity, while the other explores the potential impact of identity on retention and GPA. The team also made significant progress on the research examining the experiences of Latina community college STEM majors. An article addressed the question of how Latinas recognize and mobilize STEM capital on their academic pathway. The paper is the result of data analysis of 29 interviews with community college STEM students and those who had transferred to the 4-year institution. The paper will provide recommendations for both research and practice in STEM higher education, particularly at institutions that serve Hispanic populations. An article based on the findings from faculty interviews collected in year 2 and presented at the American Educational Research Association (AERA) conference in year 3, this study sought to illuminate the high-context learning strategies employed by STEM faculty mentors at a Hispanic Serving Institution to increase underrepresented minority (URM) participation. Findings of the semi-structured interviews (n=11) revealed that high context teaching strategies are likely to offset the sterile academic environment associated with STEM and force students to engage with their peers and faculty in non-conventional ways that may be more appealing to minoritized students and females. Additionally, these explore motivation of faculty mentors to be engaged in this way.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- The Faculty Context Diversity Workshop Program, held in spring of Year 3 and fall of Year 4 at NMSU, the Lead Institution, may serve as a pilot program which may be presented in the future at other partner institutions. The training on Multicontext Theory and Context Diversity may influence the teaching, research, and academic careers of the eleven STEM NMSU faculty who participated. Participants earned a stipend for attendance at the workshops and participation on a private online space where faculty shared information, ideas, and experiences related to implementing what was learned in the workshops, with support from the workshop facilitators. The External Evaluator interviewed and surveyed participants for outcomes of the project.

STEM AMP had held an Informational Meeting for STEM faculty unfamiliar with STEM AMP and its opportunity to mentor students. Twenty-four faculty members attended and many of them were interested in how STEM AMP's research programs work and how to serve in STEM AMP as a mentor. The following colleges and departments were represented at the meeting: College of Engineering; Astronomy; Physics; the Honors' College Dean and the Honors' College Center Director; Agriculture, Consumer, and Environmental Sciences; and Biology. This meeting was held on April 20, 2022, from 4:00 p.m. to 5:00 p.m. in the Center for Undergraduate Research and Creative Activity (CURCA). It was a successful event, with several of the faculty members signing up to be research faculty mentors.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

**Economic Impacts of STEM AMP:**

Dr. Jay M. Lillywhite, Academic Department Head of Ag Economics and Ag Business, authored a document in May 2021 for STEM AMP focusing on the Estimated Economic Impacts of STEM AMP and Related Programs on New Mexico's Economy. STEM AMP has disseminated this document and used it in many reports, so it is a valuable document for STEM AMP's credibility. Dr. Lillywhite's assumptions, calculations, and results associated with the analysis included the following: 1) increases in underrepresented minority STEM degree graduates, above the baseline, 253 STEM degrees awarded in 1992-93 (the year before the organization of STEM AMP) can be attributed to efforts by STEM AMP and related programs. Using this assumption and STEM AMP records, 8,883 underrepresented minority students have earned STEM degrees since 1992-93 that would not have received the degree without STEM AMP and other STEM programs in the state. 2) Using the U.S. Census Bureau's 2019 American Community Survey for NM, differential earnings between individuals who hold STEM degrees and individuals who hold non-STEM college degrees, regardless of occupation, were calculated. The difference between earning for STEM degree holders (any occupation, \$104,272.86) and non-STEM degree holders (any occupation, \$69,520.67) i.e., \$34,752.19 was used to represent the earning differential between STEM and non-STEM degree holders. 3) NMSU's Foundation (Alumni Relations) reports that 52.95% of all living graduates currently live in New Mexico. This percentage was applied to the 8,883 net graduates of the NM AMP program (net of annual 253 baseline graduates to estimate the number of underrepresented STEM degree graduates, attributed to the work of STEM AMP and other STEM programs, live in New Mexico. That is, the analysis assumes that 4,704 (8,883 (Net STEM AMP graduates x 0.5295) (percent of NMSU alumni living in NM) underrepresented minorities associated with the STEM AMP program live in NM. Other findings by Dr. Lillywhite can be found in the document "Economic Impact on New Mexico AMP" on the STEM AMP website at nmamp.nmsu.edu.

**Student Outcomes:**

- Student Data Outcomes for 2021-22 show that STEM AMP students were awarded 259 stipends. Research-related Programs: URS: 167 Stipends; STEM PREP: 50 Stipends; CC SCCORE: 6 Stipends; Conference CC Professional Development Workshops: 13 Stipends; Book Stipends: 18 Stipends; and Transfer Stipends: 5 Stipends.

**Internships In Which Students Participated:**

STEM AMP students participated in 49 internships and 2 co-ops throughout the U.S.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

STEM AMP Conference Outcomes and Other Conferences Besides the STEM AMP Conference:

- 62 STEM AMP students presented at the STEM AMP Virtual Conference in Fa 2021, and 9 students presented in the Lightning Rounds (2 minute research presentations). In addition, 70 students attended other conferences besides the STEM AMP Conference. Out of the 70 who attended other conferences throughout the U.S., 58 presented research.

STEM AMP Impacts Aligning with Governor Initiatives:

- The STEM AMP program impacts that address the Governor of New Mexico’s primary higher education initiatives are the following:

- Because there has been a large decrease of numbers of students returning to the university and community college, Governor Michelle Lujan Grisham has tried to attract students back to institutions of higher education with the Opportunity Scholarship that offers free tuition and fees. STEM AMP has continued our programs, even through the difficulties of the pandemic and the NM fires, but the numbers of students in our programs have decreased. We are continually developing new approaches to reach students who are enrolled in STEM fields. STEM AMP’s mission is to increase the number of underrepresented minorities in our partner institutions.
- One initiative that the Governor has discussed is providing high speed internet and broad bandwidth for all regions. This will make a real difference to many of our students, especially those who live on the Native American reservations who do not have this technology. We lost many of our students in the pandemic who dropped out of their institutions because they could not virtually attend classes due to the lack of internet service.
- Another important item that the Governor has discussed is to improve educational outcomes in higher education that connect more closely to the workforce by providing skills and knowledge needed in the workplace. STEM AMP’s research and research-related programs assist students’ retention in STEM that leads to the B.S. degree and eventually, being a part of a strong STEM workforce.
- Governor Lujan Grisham is very focused on helping the underrepresented minorities (URMs) in the state, with a real focus on the Native Americans. She has mentioned that the native peoples have a strong conviction about the preservation of our environment and lands. We have many students who research in the environmental sciences and geology, and civil engineering and who research water solutions, especially for the Native American reservations that do not have potable water.

NOTE: STEM AMP has experienced a lower number of participants because of the effects of lower enrollment at our partner institutions, especially at our community colleges, that have resulted from COVID and the recent fires. According to national averages, this lower rate of community college enrollment is occurring throughout the U.S. In fact, a persistent decline in the number of Americans going to college is down by nearly a million since the start of the pandemic, according to newly released figures (qtd. in the Hechinger Report by John Marcus, 22 Jan, 2022, The Washington Post). A Report out of the National Clearinghouse reports that “ in spring 2022, undergraduate transfer enrollment dropped another 6.9% over last year, resulting in a total two year decline of 16% since the beginning of the pandemic. Non-transfer enrollment also continued a downward trend, but the one-year declines were not as steep as among transfer students (-33.8% for non-transfer students ).

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Since 1993 when STEM AMP was established, over \$45.7 million (actual: \$45,749,609 million) in funding has been leveraged against state funding. It cannot be stressed enough that State funding is critical in securing future NSF funding because NSF factors sustainability into their perspectives of successful programming and Best Practices. The value NSF gives to the funding commitment of the State and the NMSU institution cannot be overstated. We are beginning to work on the proposal for the next phase of funding, and it is crucial to the granting of this funding that we reflect this sustainability. Further, NSF has announced that the next phase of funding for alliances over 10 years is to be reduced considerably, so the commitment of State and institutional funding bears even more significance. STEM AMP funding included the following: STEM AMP Phase VI funding, awarded in August, 2018, \$4 million (2018-2023) from the National Science Foundation LSAMP program; two NSF S-STEM programs and the U.S. Department of Education SSS STEM H are housed in the STEM AMP area and benefit from

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

administrative help from STEM AMP. The following provides details about these programs: National Science Foundation S-STEM program (2016-2022), \$1 million; Department of Education TRIO SSS STEM-H program (2020-2025), \$1,309,430; and NSF STAR S-STEM program (2020-2025), \$3.7 million.

**9. Accomplishment/ Highlights (bullet form)**

In addition to the significant program data outcomes presented in #6 of this form, the most significant highlights and accomplishments of FY 22 from #6 are presented in this section:

-Outcomes for the Social Science/Education Component of the STEM AMP Program: As reported earlier in this report, NSF requires that all alliances in existence for over 10 years, participate in a research study. For our focused social science project for this funding period of 2018-2023, social science experts funded by STEM AMP are studying the factors that lead to scientific identity development and subsequent success in STEM. Understanding the mechanisms underlying the success of broadening participation programs such as STEM AMP remains incomplete. To understand these mechanisms, our social science research project is focusing on these factors leading to students' scientific identity development and STEM success. During Year 4 (21-22) of the grant, the social science research team continued to administer surveys, collect institutional data, and conduct interviews with undergraduate and community college STEM students in New Mexico. Findings and observations from the interviews/surveys were presented at four conferences in Year 4. The team surveyed approximately 1100 additional STEM majors this year. The baseline survey questionnaire was given to a new cohort of students in Fall 2021 (cohort 6) and Spring 2022 (cohort 7). The team also surveyed students from the University of New Mexico in Spring 2022. Approximately 200 surveys were collected from UNM students. All program participants at NMSU and UNM were invited to participate in the survey. The team continued to follow the approximately 2400 respondents from Years 1, 2, and 3, using institutional data and follow-up surveys. The team presented at two conferences (2020 and 2021) to report on preliminary findings that were included in two articles, one examining how factors like first generation status, low-income, gender, and race/ethnicity are related to engineering identity and the other article exploring the potential impact of identity on retention and GPA. Progress was made on the research examining the experiences of the Latina community college STEM majors. An article to be submitted in August, 2022 addresses how Latinas recognize and mobilize STEM capital in their academic pathways. The article is a result of data analysis of 29 interviews with community college STEM students and those who had transferred to the 4 year institution. The paper provides recommendations for both research and practice in STEM higher ed, particularly those that serve Hispanic students. Other findings from faculty interviews collected in Year 2 and presented at a conference in Year 3 focused on the high-context learning strategies employed by STEM faculty mentors at a Hispanic Serving Institution to increase URM participation. These strategies may offset an often sterile environment in STEM and encourage students to engage with their peers and faculty in non-conventional ways more appealing to URM students and females. It will also open exploration of motivation of faculty mentors to be engaged that way. The social science team will present at a conference in August 2022, and have presented at 3 other conferences in Spring of 2022. Four Manuscripts will be submitted to Peer Reviewed Journals in 2022.

- The Faculty Context Diversity Workshop Program: The Faculty Context Diversity Workshop Program in Years 3-4 at NMSU, the Lead Institution, serves as a pilot program which may be presented at other partner institutions. The training on Multicontext Theory and Context Diversity may influence the teaching, research, and academic careers of the eleven (11) STEM NMSU faculty who are participating. Participants earn a State-funded stipend for attendance at the workshops and participation on a private online space where faculty can share information, ideas, and experiences related to implementing what is learned in the workshops, with support from the workshop facilitators. The External Evaluator will interview and survey participants for outcomes of the project.

- The Virtual Institutional Coordinator (IC) Coffee Hours, held once a month, provided training and clarified processes of programmatic concerns. The Coffee Hours help the ICs network and form collaborations and help AMP leadership with feedback that assists with development and improvement of activities, events, and programs.

## 9. Accomplishment/ Highlights (bullet form)

- NM AMP provided two training and networking meetings for the 14 NM AMP Institutional Coordinators (ICs) at the Virtual Conference IC Meeting and at the Virtual Spring IC Meeting. 1) At the IC Meeting, the External Evaluator presented Reporting Outcomes and also provided a discuss of the importance of sustainability and institutionalization of STEM AMP; she also facilitated a discussion of this with the ICs after they divided into Break-Out groups. In addition, the Director facilitated a discussion of programs statewide and approaches of recruitment, and she also facilitated a discussion of Best Practices in a Challenging time because of what we are experiencing with the residual effects of the NM fires and the pandemic, which has decreased enrollment numbers at our institutions and also our programs. The Data Analyst presented a model of spreadsheets to capture what is needed for WebAMP and other data reporting. The last part of the meeting allowed the Social Science experts to provide a brief update on the NSF-required Social Science research and study. 2) At the Spring IC Virtual Meeting, the External Evaluator presented updates on outcomes of NM AMP student interviews; she also facilitated a Feedback Session to allow ICs to share what is happening at their institutions and the possibilities for collaboration with others, such as other partner institutions, with other institution's AMP programs, grants, and other leveraging opportunities. The Director reviewed reporting dates for the WebAMP, our NSF institutional and alliance reporting that the administration uses for the NSF reporting, and the state reporting. She also detailed the Faculty Context Diversity Workshop Program that was held in Spring of 2021 and Fall of 2022 in virtual format with the NMSU faculty that could be seen as a potential program that could be presented at our other institutions in years to come. .

- STEM AMP staff member Gaspard Mucundanyi has been co-author in three journal publications.

- STEM AMP had held an Informational Meeting for STEM faculty unfamiliar with STEM AMP and its opportunity to mentor students. Twenty-four faculty members attended and many of them were interested in how STEM AMP's research programs work and how to serve in STEM AMP as a mentor. The following colleges and departments were represented at the meeting: College of Engineering; Astronomy; Physics; the Honors' College Dean and the Honors' College Center Director; Agriculture, Consumer, and Environmental Sciences; and Biology. This meeting was held on April 20, 2022, from 4:00 p.m. to 5:00 p.m. in the Center for Undergraduate Research and Creatie Activity (CURCA). It was a successful event, with several of the faculty members signing up to be research faculty mentors.

- Student Outcomes for 2021-22 show that STEM AMP students were awarded 259 stipends. Research-Related Outcomes of Statewide Programs and Events: URS: 167 Stipends; STEM PREP: 50 Stipends; SCCORE: 6 Stipends; CC Professional Development Workshops at the Conference: 13 Stipends. Transfer-Related Outcomes: Transfer: 5 Stipends; Book Award: 18 Stipends. Event Ourcomes: Conference: 255 attended the Conference; 62 Student Presented, 9 Students Presented in Lightning Rounds. STEM AMP students participated in 49 internships and 2 co-ops. 62 STEM AMP students presented at the STEM AMP Virtual Conference in Fa 2021, and 9 students presented in the Lightning Rounds (2 minute research presentations). The Conference was a Virtual Conference attended by 255 attendees. The Virtual Conference required more technical skills from STEM AMP staff team, the judges, and student presenters. 62 students presented pre-recorded presentations and 9 students presented 2-minute live Lightning Round research presentations. The Conference included three workshops for students and a workshop for faculty. Also, we had a legislative speaker, Rep. Raymundo Lara, and Dr. Jessica Houston, a former Bridge to the Doctorate and STEM AMP student, who now serves as a Chemical Engineering professor. This year in Fa 2022, we hope to hold an in-person workshop if COVID is not pervasive in our area.

In addition, 70 students attended other conferences besides the STEM AMP Conference. Out of the 70 who attended other conferences throughout the U.S., 58 presented research.

- STEM AMP has named two new Co-PI's and a new PI to the organization. Dr. Dan Arvizu is our new PI and new President of NMSU, the Lead Institution, and Dr. Salim Bawazir is the new Co-PI from NMSU; he is Associate Professor of Civil Engineering at NMSU. Dr. Assata Zerai has been named as a new Co-PI from UNM; Dr. Zerai is a Vice President at the Department of Equity and Inclusion, and she serves as Professor of Social Science at UNM.

- Jeanne Garland was named Director of STEM AMP in July 2021, replacing the former director who retired.

**9. Accomplishment/ Highlights (bullet form)**

- Dr. Gaspard Mucundanyi has been named as the new Associate Director of STEM AMP. Dr. Mucundanyi has been with STEM AMP since 2019 and will continue to serve as the Database Analyst, Sr. in charge of collecting and maintaining the data for STEM AMP.

- STEM AMP has a new Program Specialist, Sr. on its staff team. Dr. Maluka Munoz coordinates the Undergraduate Research Scholars (URS) program, the Summer Community College Opportunity for Research Experience (SCCORE), and the STEM AMP Conference.

- One of the STEM AMP Institutional Coordinators, Dr. Vincente Lombrana retired after almost 30 years of serving STEM AMP and New Mexico State University- Alamogordo Community College. Andres Noguez, Department of Mathematics, will serve as Dr. Lombrana's replacement.

- Although the pandemic and the fires in NM in spring of 2022 have had residual effects on the enrollments of our institutions and our programs, STEM AMP continues to think of new approaches to reach STEM URMs and to develop STEM AMP programs, guided by our leadership and the LEADS mission, goals, and values. With the new Opportunity Scholarship that higher ed students in NM have been provided, we hope our enrollments increase.

One of the primary purposes of SCCORE is to keep students retained in STEM. The Retention Rate for Su 2021 SCCORE is the following:

- 100% (N=13) of the Su 2021 SCCORE participants remain in STEM

- 38% (N=5) of the 13 Su 2021 SCCORE students transferred to a NM university in STEM fields

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** STEM Alliance for Minority Participation  
**Contact Name:** Jeanne Garland, Director  
**Contact Email:** [garland@nmsu.edu](mailto:garland@nmsu.edu)

**FY24 Request**

**\$357,900**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** Increase the number of STEM B.S. degrees awarded to underrepresented minority (URM) students.

RPSP Objective 1: Increase graduation of URM STEM students.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Number of STEM B.S. degrees awarded to New Mexico URM students	947	1,012	1,034	1,040	1,025	1,075	993	1,016	1,030	1,045	FY21: 79 statewide STEM AMP students graduated with a B.S. STEM degree, and of this number, 35% (N=28) were from NMSU.

RPSP Objective 2: Increase graduation of URM STEM students		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Percentage of NMSU STEM students who have been retained in the STEM AMP program	NA	NA	100%	96%	NA	NA	NA	96%	97%	97%	FY21: 123 students were reported. Of the 123 students, 83 received stipends (direct support), and 40 received no stipend (indirect support); the programs/events/activities in which the 40 participated did not offer a stipend. Of the total 123 students, no student dropped-out .

RPSP Objective 3: Disseminate availability of supportive services and opportunities		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Number of contacts made to New Mexico students through program outreach (includes mentoring, tutoring, etc.)and dissemination (listserves, recruitment meetings, etc.)	NA	NA	5,745	5,800	NA	NA	NA	9,000	9,200	6,000	FY21: Contacts by dissemination of University Institutional Coordinators (ICs): (3,432) and by Community College ICs: (2,313). Contacts were made through listserves, program meetings and workshops, STEM AMP Conference, student clubs, emails, and faculty.

RPSP Objective 4: Enhance the quality of the educational experience with delivery of STEM-specific programs and services		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Number of students served through transfer-related services and scholarships	140	123	87	90	100	100	85	100	125	93	FY 21: Due to COVID, no CC Prof. Dev. Workshops; (6) Transfer; (14) SCCORE; (7) CC Conf Attendees; (15) Book CC Stipend; (45) Outreach.
2	Number of New Mexico students who presented in the STEM AMP Student Research Conference and other research conferences	NA	NA	93	110	NA	NA	NA	80	85	115	FY 21: (39) students presented at the STEM AMP Student Research Conference and (54) students presented at other conferences.
3	The number of stipend awards provided to New Mexico STEM AMP students	NA	NA	303	304	NA	NA	NA	300	305	307	Fy 21: Due to COVID, no CC Prof. Dev. Workshops; (185) URS; (54) STEM PREP; (6) Transfer; (44) Book Stipend Award; (14) SCCORE.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** STEM Alliance for Minority Participation  
**Contact Name:** Jeanne Garland, Director  
**Contact Email:** [garland@nmsu.edu](mailto:garland@nmsu.edu)

**FY24 Request**  
**\$357,900**

RPSP Objective 5: Increase the diversity of STEM graduates		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	STEM B.S. degrees awarded to New Mexico URM students as a percentage of total STEM B.S. degrees awarded	51%	57%	58%	59%	52%	54%	53%	54%	58%	60%	FY21: B.S. STEM degrees awarded to URM: N= 1,034 and the B.S. STEM degrees awarded non-minority: N= 764.

RPSP Objective 2: Increase the diversity of STEM graduates		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Total number of URM students that participate in the program (statewide)	370	325	357	359	330	330	330	330	350	362	FY21: 216 students received direct support (stipends) and 141 students received indirect support (no stipends).

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Provide engaging research experiences in STEM AMP and inform participants about research experiences outside of STEM AMP.

RPSP Objective 1: Increase the diversity of STEM graduates		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Number of research assistantships and internships provided to New Mexico students	192	199	235	236	175	175	205	205	245	238	FY 21: COVID reduced our numbers for internships. Research Assistantships include (185) URS and (14) SCCORE. Internships: (36).
2	Number of New Mexico students attending the annual New Mexico AMP Student Research Conference	240	275	156	160	200	200	200	200	245	180	FY 21: Due to COVID, STEM AMP held a virtual conference. (112) Undergraduate Students; (8) Upward Bound; (36) NM MESA.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:

Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 501,610.00	\$ (34,568.00)	\$ 467,042.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 357,900.00	\$ -	\$ 357,900.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 357,900.00	\$ -	\$ 357,900.00	
<b>Grants and Contracts</b>				
Federal	\$ 1,290,000.00	\$ (900,000.00)	\$ 390,000.00	No cost extension from
State		\$ -		NSF Grant HRD-1826758
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ 1,290,000.00	\$ (900,000.00)	\$ 390,000.00	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 1,647,900.00	\$ (900,000.00)	\$ 747,900.00	
<b>Transfers (to) from</b>				
Instruction and General	\$ 100,000.00	\$ (100,000.00)		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ 100,000.00	\$ (100,000.00)	\$ -	
<b>Expenses</b>				
	<b>FY23 FTE</b>	<b>Change FTE</b>	<b>FY24 FTE</b>	
Faculty Salaries	0.09 \$ 7,500.00	0.58 \$ 50,320.00	0.67 \$ 57,820.00	
Professional Salaries	6.28 \$ 394,529.00	(1.80) \$ (113,179.00)	4.48 \$ 281,350.00	
Other Staff Salaries	0.35 \$ 12,000.00	(0.35) \$ (12,000.00)	0.00	
Student Salaries (GA/TA)	5.10 \$ 205,740.00	(4.07) \$ (164,290.00)	1.03 \$ 41,450.00	
Other Salaries	0.35 \$ 12,000.00	(0.35) \$ (12,000.00)	0.00	
<b>Total All Salaries</b>	<b>12.17 \$ 631,769.00</b>	<b>-6.00 \$ (251,149.00)</b>	<b>6.17 \$ 380,620.00</b>	
Fringe Benefits	\$ 197,439.00	\$ (85,657.00)	\$ 111,782.00	
Travel	\$ 11,133.00	\$ (6,569.00)	\$ 4,564.00	
Utilities		\$ -		
Institutional Support Charges	\$ 14,900.00	\$ 1,000.00	\$ 15,900.00	
Plant Operation and Maintenance Charges		\$ -		
Supplies and Expenses	\$ 927,227.00	\$ (919,612.00)	\$ 7,615.00	
Equipment		\$ -		
Other Expenditures		\$ 290,354.00	\$ 290,354.00	Fed & State Exp:Part. Cost, PSC, Subawards, Services, IDC
<b>Total Expenditures</b>	<b>12.17 \$ 1,782,468.00</b>	<b>-6.00 \$ (971,633.00)</b>	<b>6.17 \$ 810,835.00</b>	
<b>Ending Fund Balance</b>	\$ 467,042.00	\$ (62,935.00)	\$ 404,107.00	



<b>FY22 Actual:</b>	<b>\$265,900</b>
<b>FY23 Request:</b>	<b>\$265,900</b>
<b>Change</b>	<b>\$0</b>

The Indian Resources Development (IRD) program began in 1977 when NMSU was awarded a W.K. Kellogg Foundation grant to encourage Navajo students to pursue degrees in agriculture and business. Before the grant expired, the New Mexico State Legislature approved the Development of Indian Resources Act (1978) which:

- a) Continued the objectives of the Kellogg Foundation grant;
- b) Expanded the scope of participants to include all New Mexico tribes and expanded the disciplines to include engineering sciences, natural resources, and economic development;
- c) Provided an annual budget to IRD.

**IRD carries out its mission by connecting Native American students in New Mexico with opportunities for higher education, internships and research in the fields of agriculture, natural resources, engineering, energy, and business; and promoting self-directed and self-sustaining economic development and management of resources by Tribal Nations in NM.**



## Indian Resources Development Highlights

- Provides high school students and their families with informational resources to aid their exploration of higher education opportunities in New Mexico.
- Offers presentations, workshops, research experiences, and internships as career exploration opportunities.
- Supports college students in finding internship, research experiences, and other professional development opportunities that sharpen their skills and expand their technical knowledge.
- Presents students and families with potential sources of financial aid.
- Supports tribal entities in New Mexico in developing their agricultural, natural, recreation, energy, and business resources, and associated technical and managerial expertise, as a way to promote their economic development.
- Invites tribal, education, and industry leaders to meet with students to discuss education paths, career opportunities, industry trends, and leadership approaches.
- Leverages capital, human, academic, and cultural resources by identifying potential partners that could help achieve the mission of IRD of being a state-wide program that:
  - offers educational and professional development opportunities for Native American students, and
  - supports tribal nations in New Mexico in developing their own technical and managerial expertise in agriculture, natural resources, engineering, energy, and business.



2022 Spring AISES Region 3 Conference with IRD Partners UNM, NTU, Santa Fe Indian School, and Mescalero Apache School

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Indian Resources Development

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    265,900

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    265,900

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	44
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**2. Project Description / Executive Summary:**

Indian Resources Development (IRD) at NMSU is a statewide program that offers educational and professional development opportunities for Native American students from NM who are in high school and college; and supports Tribal Nations in New Mexico in developing their own technical and managerial expertise in agriculture, natural resources, engineering, energy, and business. IRD emphasizes collaborations and network building that promote self-directed and self-sustaining economic development and management of resources by Tribal Nations in New Mexico.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

IRD is requesting \$265,900 of continued level funding to serve the educational needs of students from the Pueblos, Tribes and Nations of New Mexico, and to assist New Mexico Native communities in advancing their economic development goals.

**4. Program Mission (include population served, other demographic info):**

IRD's mission is to assist New Mexico tribal youth in becoming professional agriculturalists, business people, engineers, resource managers, and scientists prepared to contribute to the effective development and management of tribal resources in their own culturally appropriate manner. The other part of the mission is to work with Native communities in New Mexico in advancing their economic development goals

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

IRD has 2 key objectives that arise out of the statutory mandate:

- To assist in the education and training of Native American students in New Mexico through career discovery camps and presentations, professional development opportunities, and internships/apprenticeships/research experiences in agricultural and environmental sciences, engineering, energy, and business for the purpose of ensuring the successful development and management of tribal resources.
- To work with tribes in developing agricultural, natural and business resources, and associated technical and managerial expertise as a way to promote their economic self-sufficiency.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Note: When this document refers to “students,” it means Native American students.

In FY 2022, IRD was able to advance its mission by providing research and internship experiences for high school and college students, offering emergency scholarships and financial aid information, supporting the participation of college students in professional development conferences and meetings, and – most importantly – by serving as connector between partners and collaborators. In 2021, IRD secured funding in collaboration with other higher education institutions including tribal colleges, to offer agricultural and entrepreneurial camps and professional development workshops, as well as internships that aid in keeping college students interested and focused on staying in college and graduating. Internally, IRD put together a communications plan, published the first issues of its newsletter, added informational resources to its web site, hosted its first graduate student assistant, and continued the work of expanding tribal advisory groups for the program.

**Enhance Student Success and Social Mobility**

In collaboration with, and with funding support from Indian Resources Development (IRD):

- The New Mexico Institute of Mining and Technology (New Mexico Tech) gave 6 scholarships to New Mexico Tech students and hosted 2 research experiences via a \$6,000 dollar subcontract with IRD. The new contract is for \$20,000 to support research experiences, scholarships, and the promotion of coding and robotic curriculum for high schools serving Native American students.
- The Native American STEM program (NA-STEM) at the University of New Mexico (UNM) gave 8 scholarships to UNM students, placed 1 student in an internship and 3 in research experiences, and supported the participation of 26 Laguna Middle school students in Energy Day to introduce the concepts of renewable energies to pre-college students. A new contract is being prepared for FY23.
- The Center for Student Careers and Employment at San Juan College offered 2 internship opportunities to their students. An extension of the contract is being prepared since they were unable to offer all the internships they had projected to offer.
- The division of Equity and Inclusion at UNM sponsored 3 research experiences. An extension of the contract is being prepared since they were unable to offer all the research experiences they had projected to offer.
- Native American Community Academy offered communication workshops during junior seminar and IRD facilitated two one-hour workshops for 22 junior high school students.
- New Mexico Alliance for Minority Participation invited IRD to give a presentation to a cohort of 36 NMSU undergraduate research scholars about IRD resources and opportunities.
  - The department of education of Pueblo of Zuni offers informational career and college presentations called Zuni HS for College Nights. IRD presented to a group of 8 high school students about resources for Native American students at colleges and universities in New Mexico (<https://ird.nmsu.edu/na-resources.html>).
- IRD, Future Focus Education, and the NM Department of Public Education College & Career Readiness Bureau organized an information session for tribal nations interested in applying for the NMPED 2022 Summer Enrichment Internship Program grants. In attendance were 25 tribal reps from 16 tribal nations and 10 of them applied for grants: Pueblos of Acoma, Nambe, Ohkay Owingeh, Picuris, Pojoaque, Kewa, Ysleta del Sur, Zia, Zuni; and Jicarilla Apache Nation. The previous year, 6 tribal nations applied for the grant: Jicarilla Apache Nation and the Pueblos of Ohkay Owingeh, Laguna, Picuris, Pojoaque, and Kewa, however neither Ohkay Owingeh nor Laguna could complete the internships. Based on PED’s feedback, the increased number of tribal nations participating in the grants this year was due to IRD’s work and relationship with the Nations. In addition, IRD

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

provided an opportunity for Pueblos of Tesuque and Laguna to have internship support without applying for the grant. The total number of high school internships offered by the Tribes via the PED grant is 225.

- IRD, Navajo Technical University, Innoventure and American Indian Business Enterprise at Arrowhead Center offered a four-day career exploration camp related to beef management in which 9 high school students participated.
- The departments of education and employment from Kewa (Santo Domingo) Pueblo, and IRD offered a two-day college and career exploration workshops for middle and high school students, and parents. Each day 18 people participated.
- IRD placed 5 NMSU students, 1 Navajo Tech student, and 1 Dine College student in summer internships. In addition, 3 Diné College students were supported to attend the U.S. Beef Academy in Corona at the NMSU Corona Range and Livestock Research Center. An NMSU doctoral student of economic development received IRD funding support to attend the 2021 Reservation Economic Summit. From the contacts she made at the conference, she secured a job with the economic development department of the Navajo Nation. IRD funded 2 internship placements for a high school student and scholarships for 4 high school students to participate in the Spring 2022 4H Senior Leadership Retreat.

**Goal 2: Elevate Research and Creativity**

- Navajo Technical University, New Mexico Institute of Mining and Technology, NM Bureau of Geology and Mineral Resources, Petroleum Recovery Research Center, IRD and New Mexico State University-Center of Excellence in Sustainable Food and Agricultural Systems, organized the N4WPP Water Symposium. The Symposium brought together colleges, industry, and government labs to interact with 15 high school students and to extend educational and professional opportunities. Schools invited: Farmington HS (host), Piedra Vista, Rocinante, San Juan College HS, Bloomfield, Navajo Prep, Aztec, Crownpoint, and high schools under the Central Consolidated School District.
- IRD attended the 2022 Senior Honors Project Symposium at Santa Fe Indian School to begin supporting SFIS with identification of additional mentors, internship and research experiences, and higher education opportunities in NM. SHP provides seniors with guidance through a yearlong and thorough process of topic identification and development, and formal research. [https://www.sfis.k12.nm.us/senior\\_honors\\_symposium](https://www.sfis.k12.nm.us/senior_honors_symposium).
- The American Indian Business Enterprise at Arrowhead Center and IRD collaborated to promote, via group trainings like the Digital Media & Marketing and Native American Sprint, the entrepreneurial and educational opportunities offered by both organizations.

**Goal 3: Amplify Extension, Outreach, and Economic and Community Development**

- IRD continues to work closely with the Tribal Liaison and Director of the Indian Education Division of the NM Higher Education Department to help promote each other's resources and support the work of tribal education departments across the state.
- In response to the interest expressed by tribal communities about green and hoop houses, a series of six workshops related to extending the season production were offered as a collaborative of IRD, Flower Hill Institute, Indian Pueblo Cultural Center, NMSU Cooperative Extension Service – Pueblo Extension, Pueblo of Jemez Natural Resources Department, Santa Ana Pueblo, and Dancing Butterfly Naturals. The average number of participants was 28 to 30 per session.
- IRD attended six Jemez farmers meetings to offer information about IRD services, learn about topics of interest or concern to the group, and request feedback about economic challenges faced during the worse of the COVID pandemic. The average number of attendees was 36 per meeting.
- University of New Mexico invited IRD to have an information table at the precollege session and AISES region 3 conference. At the precollege event there were 26 high school students representing Mescalero High School and Santa Fe Indian School.
- NMSU Agricultural, Consumer and Environmental Sciences invited IRD to have an informational table at the Spring 2022 Open House. Besides sharing information about IRD, there were summaries of food sovereignty efforts from Pueblos, Jicarilla Apache Nation and Mescalero Apache Tribe, and Navajo Nation; and other food sovereignty collaborative efforts. The number of people who attended was 750 and IRD spoke to about 50 of them.
- IRD met with institutional contacts from 14 higher education institutions that are part of NM Alliance for Minority Participation (<https://nmamp.nmsu.edu/>) to present about IRD and report on the work of a subgroup of the advisory committee. The goals of the subgroup are to create a plan that could increase diversity of student and faculty participation in AMP programing, and implement ways in which students interested in AMP feel more at ease about speaking with AMP faculty.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- In Fall 2021, Dulce High School organized a college fair for which IRD provided the college contacts and had an information table. Approximately 34 high school students stopped at the IRD table.
- In Spring 2022, La Cueva High School organized a career fair at which IRD had an information table. Approximately 12 students visited with IRD representatives.
- IRD collaborated with FEMA Region 6 Interagency Recovery Coordination New Mexico Field Team and the Pueblos of Acoma, Picuris and Kewa to gain a better understanding of the COVID-19 recovery issues affecting these communities to begin identifying resources available to assist the impacted communities.
- Together with NMSU faculty and staff from various academic and student support programs, IRD presented to the tribal education department of Pueblo of Acoma about resources and opportunities for their members. The presentation was recorded so they could show it to high school students and their parents/guardians.
- IRD offered 20 presentations to high school tribal liaisons or advisors to Native American students, and 2 presentations to groups of tribal education departments regarding IRD services and offerings. IRD also met with the education director of Eight Northern Pueblos and with the All Pueblo Council of Governors regarding IRD and its Tribal Advisory Committee.
- IRD attended the presentations of 27 Native entrepreneurs who completed a course on Financial Basics offered by New Mexico Community Capital for American Indian Business Enterprise Center clients. IRD was invited to the event to partake in the accomplishments of the participants, to be recognized for serving as connector between the two organizations, and for partially funding the effort.
- In partnership with Navajo Technical University, IRD was awarded supplemental funds on the amount of \$122,000 from the United States Department of Agriculture’s National Institute of Food and Agriculture to develop experiential learning opportunities to increase retention and graduation of Native American students at New Mexico land-grant institutions. <https://news.nmsu.edu/2021/07/nmsu,-navajo-technical-university-receive-grant-funds-to-support-native-american-students-at-states-land-grant-institutions.html>
- IRD convened and facilitated meetings of faculty and staff from NMSU-Agricultural, Consumer and Environmental Sciences, Santa Fe Community College, and San Juan College to explore collaboration opportunities related to hydroponics. IRD is acting as the convener and facilitator of the conversation so more educational and work opportunities in agriculture are available for Indigenous people in New Mexico.
- IRD and Central New Mexico Community College (CNM) explored collaboration related to internships and research experiences as well as opportunities to support CNM, in collaboration with the American Indian Science and Engineering Society –region 3, in reviving the AISES chapter at CNM.

**Goal 4: Build a Robust University by Implementing College-Wide, Mission-Supporting Strategic Initiatives**

- In 2020 IRD branched out to North Central New Mexico, where one of the IRD staff members was located, and in 2021, after finishing its first geographical expansion plan, IRD opened a second office in Albuquerque, NM. From the Albuquerque office it is easier to reach 22 of the 23 Tribal Nations, 32 of the 35 districts identified by the NM Public Education Department-Indian Education as those serving the majority of Native American students in the State, and 11 of the 12 higher education institutions in New Mexico identified by the NM Higher Education Department-Indian Education as those serving the majority of Native American college students in the State.
- IRD produced its first 3 issues of the IRD newsletter, which is broadly distributed to partners and collaborators in education, economic development, business, agriculture, and natural resources.
- IRD expanded the Tribal Advisory Committee to include 3 members of the Navajo Nation, 2 of the Pueblos, 1 of Mescalero Apache Nation, and 1 of Jicarilla Apache Nation.

Some of the obstacles encountered during the fiscal year were the difficulty to identify IRD tribal advisory committee members from the Southern and Northern Pueblos, and Jicarilla Apache Nation; and to have to close IRD staff positions due to lack of applicants or qualified candidates.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The statewide impact of the IRD program is that it extends the opportunity to pre-collegiate students from a specific minority group in New Mexico, namely, Native Americans, to explore higher education opportunities in critical areas for their communities, and once in school it supports them by providing professional development opportunities in the form of internships, research experiences, and participation in relevant professional and academic conferences.

The educational efforts and economic development endeavors of the IRD are aligned with the Governor’s priorities because Governor Lujan-Grisham works to ascertain the respect, welfare, and progress of Indigenous groups in New Mexico. Lujan-Grisham has demonstrated her commitment to the Indigenous peoples of New Mexico and her interest in working in a collaborative and respectful manner.

Another statewide impact of the IRD relates to the community and economic development work it does with Tribal Nations so the economic growth and public welfare of New Mexico will be promoted. The program promotes self-directed and self-sustaining economic development and management of resources by Indigenous peoples on tribal lands in New Mexico. Governor Lujan-Grisham’s administration, like IRD, emphasizes and acts on the importance she places on economic development for New Mexico, and recognizes and respects the sovereignty of tribal entities.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Funding received:

- In partnership with Navajo Technical University, IRD received a four-year, \$372K grant from the United States Department of Agriculture’s National Institute of Food and Agriculture to develop experiential learning opportunities to increase retention and graduation of Native American students at New Mexico land-grant institutions.
- In collaboration with the Agricultural Experiment Station, Cooperative Extension Service, and IRD, the Department of Agricultural Extension Education at NMSU received for a \$271K grant titled “Impacting Career Engagement in Agricultural, Consumer and Environmental Sciences.” The project will enhance post-secondary instruction for undergraduate students in agricultural degree programs by providing experiential learning experiences through research and extension-based fellowship opportunities while also developing needed agriculturally based workforce skills.

Pending applications:

- In collaboration with Navajo Technical University, Innoventure, and IRD, the American Business Enterprise center at Arrowhead Center applied for 40K to offer a one-week career exploration camp related to entrepreneurship in agriculture and natural resources for high school students.

**9. Accomplishment/ Highlights (bullet form)**

- 37 research experiences, internships, emergency scholarships, and other professional development opportunities supported
- \$643,000 funding secured with partners in higher education
- 24 number of tribal nations (15) and higher education institutions (9) with whom IRD collaborated
- 437 number of people who attended workshops, presentations, and information sessions
- 3 IRD program locations in New Mexico

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**RPSP Title:** Indian Resources Development  
**Contact Name:** Claudia Trueblood  
**Contact Email:** [cmt@nmsu.edu](mailto:cmt@nmsu.edu)

**FY24 Requested**  
\$265,900

**LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Educational Assistance

RPSP Objective 1: Provide Funding and broader collaboration to UNM & other NM Higher Ed institutions, among them NASTEM and AIP.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY 20	FY 21	FY 22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Amount of funds to UNM NA-STEM School of Engineering	\$16,448	\$19,500	\$35,000	\$27,860	\$50,000	\$30,000	\$11,000	\$4,000	\$40,000	\$40,000	The second unit of UNM with whom IRD established a contract could not use all the research placements since initiative was new and took time to develop understanding from faculty
2	Number of students funded for professional development (conferences and exchanges)	12	29	4	4	30	26	10	10	5	8	Supported 1 graduate student and 3 high school students
3	Number of students supported to participate in undergraduate internships and research experiences	0	2	5	19	5	5	5	5	20	20	The potential number of high school internship placements via PED grants to tribal nations is 225 for end of FY22

**LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Diversity Engagement

RPSP Objective 2: Expose Tribal Leadership Opportunity		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY 20	FY 21	FY 22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of tribal leader speaking engagements	9	25	38	40	10	15	20	20	40	50	This count (FY 21 actual) includes the interactions IRD staff had with tribal representatives, including tribal leadership, directors, liaisons.

**LEADS 2025 Goal:** 3 - Amplify Extension and Outreach

**RPSP Goal:** Community Engagement

RPSP Objective 1: Engage Community Through Series Events		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY 20	FY 21	FY 22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of Business Leader speaking engagements	7	15	27	20	3	20	30	30	25	25	In collaboration with American Indian Business Enterprise Center, IRD offered Digital Media and Marketing Basics classes and Native American Sprint.
2	Number of student participants in the DreamKeepers program	36	13	14	437	40	40	35	35	NA	NA	DK will no longer be offered due to COVID risks. Instead IRD collaborates with higher education institutions, tribes, and high schools in offering workshops and presentations throughout the year. The number reflects that.
3	Number of students reached with workshops and presentations	NA	NA	NA	NA	NA	NA	NA	NA	120	200	New for FY23
4	Number of visits to tribal communities in New Mexico	3	7	18	18	6	6	6	6	18	20	Visits with tribal nations include in-person, which IRD was able to do, and remote contact. The count does not duplicate even if IRD met tribal nations several times.

**RPSP Title:** Indian Resources Development  
**Contact Name:** Claudia Trueblood  
**Contact Email:** [cmt@nmsu.edu](mailto:cmt@nmsu.edu)

**FY24 Requested**  
 \$265,900

**LEADS 2025 Goal:** 3 - Amplify Extension and Outreach

**RPSP Goal:** Community Engagement

RPSP Objective 2: Inventory needs and interests of Native American communities		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY 20	FY 21	FY 22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of completed inventories, as described by the objective, and given to the tribes for their use	1	4	13	15	6	3	5	5	15	20	In FY2021, IRD met with tribal education, workforce development and training, and natural resource representatives to learn about their efforts and interests, and find opportunities for collaboration. With established relationships only meeting notes and follow-ups are kept.

RPSP Objective 3: Inventory services and programs that higher ed institutions in NM offer and that relate to the areas listed in the goal		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actual	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY 20	FY 21	FY 22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Number of higher ed instituions in NM identified and that can help fulfill the objective	13	6	9	9	15	3	6	6	10	12	IRD nurtured the relationships it had, and established new ones especially with institutions that serve the majority of Native American students in the State, that is 12.
2	Number of matches made between Native American Communities and higher ed instituion programs related to the areas listed in the goal	2	2	7	9	15	4	6	10	11	12	IRD also worked at connecting higher education institutions with each other, and tribes with each other, thus IRD is counting those connections as well as the work IRD does with HEDs in NM.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Indian Resources Development Total: **\$ 265,900.00**

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
Beginning Fund Balance	\$ 204,855.00	\$ (163,547.00)	\$ 41,308.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 265,900.00	\$ -	\$ 265,900.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 265,900.00	\$ -	\$ 265,900.00	
<b>Grants and Contracts</b>				
Federal	\$ 62,000.00	\$ -	\$ 62,000.00	
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ 62,000.00	\$ -	\$ 62,000.00	
Private Gifts, Grants and Contracts		\$ -		
Land & Permanent Fund or Local Property Taxes		\$ -		
Tuition and Fees		\$ -		
Endowment		\$ -		
Sales and Services		\$ -		
Other Sources - Detail in Comments		\$ -		
<b>Total Revenues</b>	\$ 327,900.00	\$ -	\$ 327,900.00	

**Transfers (to) from**

Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

**Expenses**

	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries			0.00	\$ -	0.00		
Professional Salaries	2.65	\$ 166,616.00	0.00	\$ -	2.65	\$ 166,616.00	
Other Staff Salaries			0.00	\$ -	0.00		
Student Salaries (GA/TA)	1.59	\$ 41,500.00	(0.56)	\$ -	1.03	\$ 41,500.00	
Other Salaries			0.00	\$ -	0.00		
<b>Total All Salaries</b>	4.24	\$ 208,116.00	-0.56	\$ -	3.68	\$ 208,116.00	
Fringe Benefits		\$ 62,731.00		\$ -		\$ 62,731.00	
Travel		\$ 7,500.00		\$ -		\$ 7,500.00	
Utilities				\$ -			
Institutional Support Charges		\$ 13,100.00		\$ -		\$ 13,100.00	
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 200,000.00		\$ (140,000.00)		\$ 60,000.00	
Equipment				\$ -			
Other Expenditures				\$ -			
<b>Total Expenditures</b>	4.24	\$ 491,447.00	-0.56	\$ (140,000.00)	3.68	\$ 351,447.00	
Ending Fund Balance		\$ 41,308.00		\$ (23,547.00)		\$ 17,761.00	



# Center for Research and Education with Equity in STEM (CREES)

FY24

## Center for Research and Education with Equity in STEM (CREES)

FY23 Actual: \$0  
FY24 Request: \$300,000  
\$ Change: \$300,000

In October 2021, NM’s Economic Development Department released a multi-year strategic plan that outlines strategies and opportunities to diversify the state’s economic sector in nine targeted industrial sectors. Foundational to the successful implementation of this statewide plan is the need to build a strong pipeline of students prepared to enter the STEM workforce, which in turn requires a strong cadre of STEM educators.

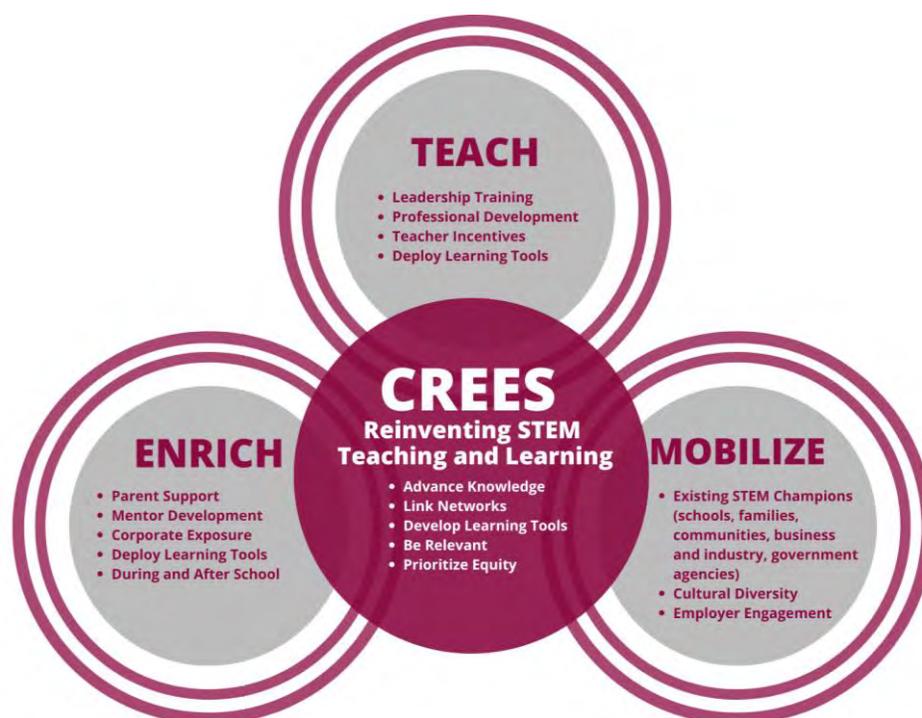
In response to this challenge to broaden and increase students with STEM-based knowledge and skills, the **Center for Research and Education with Equity in STEM (CREES)** is proposed as a statewide resource to develop strategies for STEM teaching and learning that can be scaled and replicated for long-term sustainability and integrated impact for K-16 student success. CREES will serve as an interdisciplinary resource for educators to advance common interests in STEM teaching and learning through research, teaching and public service. A key objective of CREES is the creation of an inclusive community that fosters a commitment to scholarly teaching and learning to effectively broaden participation in STEM. CREES will focus on creation of a **Community-based** ecosystem comprised of educators, employers, and community entities to ensure students are not excluded from future career opportunities due to a lack of awareness or misalignment in culturally and demographically responsive educational offerings.



### MISSION

Serving the educational needs of New Mexico’s population through culturally, geographically and demographically responsive research in STEM teaching and learning. CREES – a *Spanish term meaning “to think or to believe”* - will elevate STEM education across the K-16 pipeline as follows:

- (1) Broaden and increase student participation in K-16 STEM-based cross-curricular and problem-solving activities to foster awareness of STEM-based career options.
- (2) Foster multi-disciplinary research in STEM teaching and learning that builds on and unifies “pockets of excellence” currently in place across the K-16 educational pathway; and
- (3) Foster participatory engagement that brings together students, educators, employers, and community members to elevate and enhance access to quality STEM teaching and learning statewide.



## METRICS FOR SUCCESS



### Increase number of students engaged in STEM

- Number of undergraduate students participating in STEM-based experiential learning activities.
- Number of students participating in experiential learning that align with NM target industry sectors.
- Increase in STEM identity – confidence and interest in STEM career fields.
- Increase demographic diversity.



### Foster Best Practice in STEM teaching and learning that can be scaled and replicated

- Number of graduate students participating in STEM teaching and learning research.
- Number of faculty actively participating in CREES.
- Number of STEM teaching and learning proposals submitted.



### Elevate engagement across all stakeholders in STEM teaching and learning

- Number of participating schools.
- Number of K-12 students participating in STEM outreach programming.
- Increase demographic diversity.
- Number of teachers participating in STEM teaching and learning professional development.
- Number of participating employers.



## Statewide Impact

As evidenced in Yazzie-Martinez vs the State of New Mexico, the “vast majority of New Mexico’s at-risk children finish each school year without the basic literacy and math skills to pursue post-secondary education or a career.” There is a critical need to foster *Community-Based* participatory engagement that brings together students, faculty, employers, and community members to elevate and enhance access to quality STEM teaching and learning statewide, and broaden awareness about career options for New Mexico’s youth.

CREES directly addresses these concerns, and supports additional challenges outlined in the multi-year NM Economic Development Strategic Plan (*Empower and Collaborate: New Mexico’s Economic Path Forward*) to increase and broaden participation in STEM-based education and degree attainment as a means of elevating high-wage employment in the state.

## PROGRAM GOALS AND OBJECTIVES

- (1) CREES will enhance the learning experience for K-16 students through participation in cross-curricular, problem-solving activities that augment classroom learning.
- (2) CREES will focus on fostering multi-disciplinary research in STEM teaching and learning by building on and unifying “pockets of excellence” currently in place through varied funded research grants and/or philanthropic resources.
- (3) CREES will serve as an institutional resource for proposal writing, inspiring peer support for innovation and exploration of issues related to culturally and demographically responsive teaching and learning that can broaden participation in STEM, and sharing of *Best Practice* for program assessment and evaluation.
- (4) CREES will advance scholarly proposals, publications, and activities that elevate STEM education as *inclusive* as opposed to *elusive*, fostering opportunities to create targeted support pathways for academic growth to ensure all students thrive.
- (5) CREES will cultivate and nurture partnerships and collaborations with K-16 educational institutions to collectively build capacity and engagement in STEM teaching and learning.
- (6) CREES will develop STEM-based professional development modules, delivered via NMSU On-Demand, for teachers in STEM fields and/or CTE.
- (7) CREES will broaden statewide participation and alignment of STEM outreach programming, curricular and co-curricular, in partnership with schools, employers, and community networks.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Center for Research and Education with Equity in STEM (CREES)

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    300,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    [Click or tap](#)

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

[Click or tap here to enter text.](#)

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	N/A
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**2. Project Description / Executive Summary:**

The proposed Center for Research and Education with Equity in STEM (CREES) will serve as an interdisciplinary resource for faculty, staff and other organizations across campus to advance common interests in STEM teaching and learning through research, teaching and public service. A key objective of CREES is the creation of an inclusive community that fosters a commitment to scholarly teaching and learning to effectively broaden participation in STEM through the creation of a connected and networked K-16 educational ecosystem. CREES will enhance the learning experience for K-16 students through engagement in cross-curricular, problem-solving activities that augment classroom learning. CREES will focus on fostering multi-disciplinary research in STEM teaching and learning by building on and unifying “pockets of excellence” currently in place through varied funded research grants and/or philanthropic resources. CREES will serve as an institutional resource for proposal writing, inspiring peer support for innovation and exploration of issues related to teaching and learning that can broaden participation in STEM, assistance with IRB submissions, and sharing of Best Practice for program assessment and evaluation. Through informal mentoring and participation, CREES will advance scholarly proposals, publications, and activities that elevate STEM education as *inclusive* as opposed to *elusive*, fostering opportunities to create targeted support pathways for academic growth to ensure all students thrive. Further, CREES will cultivate and

## **2. Project Description / Executive Summary:**

nurture partnerships and collaborations with K-16 educational institutions to collectively build capacity and engagement in STEM teaching and learning. As evidenced in the Yazzie-Martinez vs the State of New Mexico, lawsuit, which states that the “vast majority of New Mexico’s at-risk children finish each school year without the basic literacy and math skills to pursue post-secondary education or a career,” there is a critical need to foster *Community-Based* participatory engagement that brings together students, faculty and community members to elevate and enhance access to quality STEM teaching and learning statewide. Co-curricular STEM-based outreach activities will be elevated as Best Practice for scale and adoption via in-school and out-of-school engagement. Professional development modules, leveraging NMSU On-Demand, will be created for emerging and current STEM educators to improve depth and breadth of knowledge in STEM concepts, skills and use of related equipment and programming.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

In October 2021, NM’s Economic Development Department released a multi-year strategic plan that outlines strategies and opportunities to diversify the state’s economic sector in nine targeted industrial sectors. Foundational to the successful implementation of this plan is the need to build a strong pipeline of educators who can help educate the state’s future workforce, particularly in STEM fields. The state plan also calls for stronger alignment and collaboration between higher education, communities, and employers to ensure students are not excluded from future career opportunities due to a lack of or misalignment in educational offerings. In response to this challenge to broaden and increase students with STEM-based knowledge and skills, the Center for Research Education in Equity in STEM (CREES) is proposed as a resource whose mission is to advance community-based research in STEM teaching and learning with a focus on elevating STEM education across the K-16 pipeline. The scope of this mission is threefold: (1) broaden and increase student engagement in STEM-based cross-curricular and problem-solving activities, (2) foster multi-disciplinary research in STEM teaching and learning that builds on and unifies “pockets of excellence” currently in place, and (3) foster Community-Based participatory engagement that brings together students, faculty and community members to elevate and enhance access to quality STEM teaching and learning statewide. As a statewide resource, CREES will develop strategies for STEM teaching and learning that can be scaled and replicated for long-term sustainability and integrated impact on K-16 student success. The requested funding is proposed as follows:

- Program Director: Operational lead for CREES and will serve as point of contact for the broader external community-based engagement with schools, employers and other stakeholders. Will assist in providing direction for identifying, leveraging, and developing educational resources for use by faculty, staff, and students.
- Faculty support: Summer support for engaged faculty to develop and/or implement CREES-related teaching and learning proposals, research publications, or outreach programming.
- Other salaries (Program Coordinator, Post Doc, Graduate Students, undergraduate students): Support for researchers to advance proposals and publications in evidence-based STEM teaching and learning. Support for teacher professional development, via NMSU On-Demand, in STEM and Career Technical Education (CTE) areas of interest/need. Support for alignment of current and future outreach programming with state workforce needs in targeted industrial sectors.
- Travel: Meetings and program development/delivery with schools, employers, and state agencies. Presentations of research at educational conferences where applicable.
- Supplies, Expenses and Equipment: General supplies and materials for program development and delivery, business-related meals/food items, and computer equipment for CREES personnel.
- Other expenditures: Subcontract funding for NMSU SOAR Lab for program evaluation and assessment.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

**4. Program Mission (include population served, other demographic info):**

The Center for Research Education in Equity in STEM (CREES) is proposed as a resource whose mission is to advance community-based research in STEM teaching and learning with a focus on elevating STEM education across the K-16 pipeline. The scope of this mission is threefold: (1) broaden and increase student engagement in STEM-based cross-curricular and problem-solving activities, (2) foster multi-disciplinary research in STEM teaching and learning that builds on and unifies “pockets of excellence” currently in place, and (3) foster Community-Based participatory engagement that brings together students, faculty and community members to elevate and enhance access to quality STEM teaching and learning statewide. As a statewide resource, CREES will develop strategies for STEM teaching and learning that can be scaled and replicated for long-term sustainability and integrated impact on K-16 student success.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The scope of this mission is threefold: (1) broaden and increase student engagement in STEM-based cross-curricular and problem-solving activities, (2) foster multi-disciplinary research in STEM teaching and learning that builds on and unifies “pockets of excellence” currently in place, and (3) foster Community-Based participatory engagement that brings together students, faculty and community members to elevate and enhance access to quality STEM teaching and learning statewide.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Click or tap here to enter text.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

CREES directly addresses challenges outlined in the multi-year NM Ecomic Development strategic Plan (Empower and Collaborate: New Mexico’s Economic Path Forward) tp increase and broaden participation in STEM-based education and degree attainment as a means of elevating high-wage employment in the state. Anticipated outcomes include: (1) increased engagement by under-represented and under-served populations across K-16, (2) advancement of STEM teaching and learning research to foster Best Practice that can be adopted, scaled, and replicated, (3) development of STEM-based professional development modules, delivered via NMSU On-Demand, for teachers in STEM fields and/or CTE, (4) broaden engagement and alignment of STEM outreach programming, curricular and co-curricular, in schools districts statewide.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

There are currently various federal NSF STEM-based grants in place at NMSU that will be leveraged, connected, and elevated as Best Practice to advance STEM teaching and learning strategies. Additional philanthropic and state funding for STEM outreach programming from NM PED will also be leveraged to broaden engagement across underserved school districts statewide.

**9. Accomplishment/ Highlights (bullet form)**

Click or tap here to enter text.

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

FY23 Request

**RPSP Title:**

Center for Research and Education with Equity in STEM (CREES)

**Contact Name:** Phillip Post

**Contact Email:** [ppost@nmsu.edu](mailto:ppost@nmsu.edu)

**\$300,000**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** Broaden Participation in STEM

RPSP Objective 1: Increase number of students engaged in STEM		Measure Targets		Comments (Briefly state your case)
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Number of undergraduate students participating in STEM-based experiential learning activities at NMSU	NA	250	
2	Number of students participating in experiential learning that align with NM target industry sectors	NA	150	
3	Increase in STEM identity	NA	80%	Based on post-program survey of participating students

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Advance STEM teaching and learning research

RPSP Objective 1: Foster Best Practice in teaching and learning that can be scaled and replicated		Measure Targets		Comments (Briefly state your case)
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Number of faculty actively engaged in CREES	N/A	15	Develop networked community to advance STEM teaching and learning, with a particular focus on under-served populations.
2	Number of STEM teaching and learning proposals submitted	N/A	4	
3	Number of graduate students engaged in STEM teaching and learning research	N/A	10	

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal:** Advance Community-based Research

RPSP Objective: Elevate engagement across all stakeholders in STEM teaching and learning		Measure Targets		Comments (Briefly state your case)
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Number of public schools engaged	N/A	15	
2	Number of students participating in STEM outreach programming	N/A	3500	
3	Number of employers engaged	NA	10	
4	Number of teachers participating in STEM teaching and learning professional development	NA	25	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>		\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ 300,000.00	\$ 300,000.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ -	\$ 300,000.00	\$ 300,000.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ -	\$ 300,000.00	\$ 300,000.00	

Transfers (to) from				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

Expenses						
	FY23 FTE		Change FTE	\$	FY24 FTE	
Faculty Salaries			0.25	\$ 28,000.00		\$ 28,000.00
Professional Salaries			1.00	\$ 65,090.00		\$ 65,090.00
Other Staff Salaries			0.50	\$ 35,000.00		\$ 35,000.00
Student Salaries (GA/TA)			1.00	\$ 30,000.00		\$ 30,000.00
Other Salaries			0.50	\$ 20,000.00		\$ 20,000.00
<b>Total All Salaries</b>	0.00	\$ -	3.25	\$ 178,090.00	0.00	\$ 178,090.00
Fringe Benefits				\$ 52,714.00		\$ 52,714.00
Travel				\$ 15,000.00		\$ 15,000.00
Utilities				\$ -		\$ -
Institutional Support Charges				\$ 12,000.00		\$ 12,000.00
Plant Operation and Maintenance Charges				\$ -		\$ -
Supplies and Expenses				\$ 7,196.00		\$ 7,196.00
Equipment				\$ 5,000.00		\$ 5,000.00
Other Expenditures				\$ 30,000.00		\$ 30,000.00
<b>Total Expenditures</b>	0.00	\$ -	3.25	\$ 300,000.00	0.00	\$ 300,000.00
<b>Ending Fund Balance</b>		\$ -		\$ -		\$ -

Summer support  
 Program Director  
 Post Doc  
 2 Graduate Students  
 Program Coordination  
 In-state and conference travel  
 4% Institutional Support Fee  
 General supplies and Materials  
 Computers/laptops/other technology  
 Subcontract to SOAR Lab for evaluation



# STEM K-12 Career Pipeline

2023-2024



## STEM K-12 Pipeline

FY23 Actual: \$100,000

FY24 Request: \$100,000

Change: \$0

Research demonstrates that it is crucial for students to engage in career exploration early on, including building self-awareness, learning about multiple careers, and developing a pathway towards reaching a career goal in middle and early high school, (ACTE, 2022). Experience-based STEM exploration helps students form positive identities about their ability and interest in STEM fields and integrating career and STEM exploration helps students make connections between STEM and high-value careers.

The STEM K-12 Career Pipeline's **Mission** is to:

**Increase middle and high school students' awareness of high-value STEM careers, and the pathways available to them to attain those careers, through post-secondary certificates, community college, and college pathways.**

The STEM K-12 Career Pipeline will support 200+ students in the border region who are underrepresented in post-secondary education.



Middle school students engaging in Chemistry, June 2022



Gadsden High School students, Career Exploration camp, June 2022

**Establish school-based programs in middle and high schools that engage students with a career exploration curriculum that supports career exposure, evaluation, and preparation in relation to student career interests.**

The curriculum will include opportunities to visit and experience NMSU, DACC, and other programs that are available, including assistance with financial aid, admissions process, and understanding the benefits of dual credit courses. Students will explore their interests and skills and will connect with post-secondary students and professionals in their interest field who can help them get authentic exposure to various careers.

**Provide professional learning opportunities for K-12 teachers to increase STEM content knowledge and support inquiry-based instructional practices in mathematics and science courses.**

The STEM K-12 Career Pipeline will support 50+ K-12 teachers to increase their exploration and understanding of fundamental STEM concepts, connections to careers, implementation of interactive STEM exploration activities in their classrooms, and multicultural practices to help students see themselves in STEM fields.



Santa Teresa High School teachers, Career Exploration Camp, June 2022

**Evaluate program impact on student and teacher outcomes through regular data collection, analysis, and utilization.**



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# STEM K-12 Career Pipeline Overview

This new program sits within the **Institute for Excellence in Math and Science Education (IEMSE)** in the **College of HEST** to improve STEM learning for teachers and students in grades K-12 and prepare students with the knowledge and skills necessary for success in post-secondary education and careers in high-need STEM fields.

**The program will support 50+ teachers and 100+ students in grades K-12<sup>th</sup>** who have historically been underserved by our education system. Hispanic and Native American students and students experiencing poverty are disproportionately less likely to pursue STEM careers due to a lack of opportunity, access, and resources to STEM experiences. In alignment with the Martinez and Yazzie v. NM lawsuit, the STEM K-12 Pipeline Program is committed to providing students with rigorous and culturally relevant STEM and career exploration experiences that prepare them to make informed decisions about their post-secondary pathways, connect them with resources that will help them success and complete post-secondary courses, and be prepared to enter a competitive workforce.

K-12 teachers in New Mexico have limited access to high-quality STEM learning and resources to increase their STEM content and pedagogical knowledge that leads to low levels of student excitement and interest in STEM fields. The program will increase teachers' exploration and understanding of fundamental STEM concepts, connections to careers, and implementation of interactive STEM exploration activities to meet the needs of students K-12.

## Leveraged Funds

The funds will be used to provide career exploration and pathways curriculum, experience-based STEM outreach opportunities, and high-quality resources for students. The funds will also allow for the professional development for K-12 teachers to remedy historical inequities and promote a future career-ready workforce that can meet the state's economic challenges while embracing and valuing the strength of our diverse cultures and population.

The recurring funds provide K-12 students STEM and career-readiness opportunities as long-term solutions to address the underlying issues with equitable student access to high-quality STEM learning.

## Partnerships

As part of the STEM K-12 Pipeline, NMSU/DACC and community organizations and businesses will collaborate to expand career exploration efforts to K-12 students through career-focused and experience-based learning environments, interest exploration, and understanding of scholarship opportunities. Partners will focus on helping all K-12 students see themselves in STEM careers, including mentorships with professionals from similar demographics.

The partnership will also facilitate the exploration of the post-secondary education including understanding the time and cost benefits of dual-credit, certification, technical, and undergraduate/graduate degree programs.



Contact Erika Acosta | [ejacosta@nmsu.edu](mailto:ejacosta@nmsu.edu) | 915-588-2078

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New Mexico State University is an equal opportunity/affirmative action employer and educator.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	STEM K12 Career Pipeline

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$100,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$100,000

<b>Type of Project (X for Type)</b>			
Research <input type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	1
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**2. Project Description / Executive Summary:**

This new program sits within the Institute for Excellence in Math/Science Education in the College of HEST to improve STEM learning for teachers and students in grades K-12 and prepare students with the knowledge and skills necessary for success in post-secondary education and careers in high-need STEM fields. The funds will support K-12 students who have historically been under-served by our education system. Hispanic and Native American students and students experiencing poverty are disproportionately less likely to pursue STEM careers due to a lack of opportunity, access, and resources to STEM experiences. In alignment with the Martinez and Yazzie v. NM lawsuit, the STEM K-12 Pipeline Program is committed to providing students with rigorous and culturally relevant STEM and career exploration experiences that prepare them to make informed decisions about their post-secondary pathways, connect them with resources that will help them success and complete post-secondary courses, and be prepared to enter a competitive workforce.

Furthermore, K-12 teachers in New Mexico have limited access to high-quality STEM learning and resources to increase their STEM content and pedagogical knowledge that leads to low levels of student excitement and interest in STEM fields. The funds will be used to provide career exploration and pathways curriculum, experience-based STEM outreach opportunities, and high-quality resources for students. The funds will also allow for the professional development for K-12 teachers to remedy historical inequities and promote a future career-ready

**2. Project Description / Executive Summary:**

workforce that can meet the state's economic challenges while embracing and valuing the strength of our diverse cultures and population.

The recurring funds provide K-12 students STEM and career-readiness opportunities as long-term solutions to address the underlying issues with equitable student access to high-quality STEM learning.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Salaries are necessary for the STEM Specialists to implement the STEM/Career Exploration program. Fringe is calculated and assessed at our negotiated and approved rates set by our cognizant agent. Travel funds will be disbursed to reimburse the STEM Specialists for the numerous site visits to participating schools 30 or more miles away from NMSU. The Specialists will provide support to the teachers, facilitators, students and staff for current and future programmatic content needs. We are requesting budget for supplies which will provide the educational materials necessary for the hands-on, experiential learning opportunities. Meals and snacks will be provided for the K-12 participants during the campus visits and the teacher workshops. Printing and reproduction will be utilized for the training materials for both the students and teachers alike. Training allowance and/or scholarships will be given to the teacher participants to support the STEM content knowledge professional development.

**4. Program Mission (include population served, other demographic info):**

The mission of the STEM K-12 Pipeline is the following:

- Increase middle and high school students' awareness of high-value STEM careers, and the pathways available to them to attain those careers, through post-secondary certificates, community college, and college pathways. Focus will be on students in the border region who are underrepresented in post-secondary education.
- Establish school-based programs in middle and high schools that engage students with a career exploration curriculum that supports career exposure, evaluation, and preparation in relation to student career interests. The curriculum will include opportunities to visit and experience NMSU, DACC, and other programs that are available, including assistance with financial aid, admissions process, and understanding the benefits of dual credit courses.
- Provide professional learning opportunities for K-12 teachers to increase STEM content knowledge and support inquiry-based instructional practices in mathematics and science courses.
- Evaluate program impact on student and teacher outcomes through regular data collection, analysis, and utilization.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

RPSP Objective 1: Increase the number of 6<sup>th</sup> -12<sup>th</sup> students participating in career exploration and STEM fields.

RPSP Objective 2: Increase K-12 teachers' 1) exploration and understanding of fundamental STEM concepts, connections to careers, and 2) implementation of interactive STEM exploration activities to meet the needs of all students in the K-12 school system.

RPSP Objective 3: The STEM K-12 Pipeline staff will present at conferences, and publish articles related to the findings in the collaboration efforts and student engagement activities relevant to the project.

RPSP Objective 4: The STEM K-12 Pipeline staff will collaborate with NMSU/DACC departments and community organizations to expand career exploration efforts to K-12 students through career-focused learning environments, interests exploration, an understanding of scholarship opportunities, as well as the benefits of dual-credit, certification, and technical/ undergraduate/graduate degree programs.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

RPSP Objective 1: Increase the number of 6th-12th students participating in career exploration and STEM fields.

Challenges

- Too many students in the border region have never been on campus, have no mental models for college life, have no idea how to access financial aid, and have not envisioned a career pathway that involves STEM options. They are unaware that 4-year college is not the only option or way to enter STEM – they do not know about certificate programs, community college, etc., that would give them an attainable entry point into post-secondary education and ease the way into more traditional 4- to 6-year programs.
- Lack of career exploration curricula that is accessible to students. Work must be done to modify the curricula to meet the needs of students.
- Determining the logistics to get maximum participation is a challenge in any summer program, particularly one that involves high school students. While participation in the pilot Summer Camp was satisfactory, it could be improved.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

- More students in the border area who are typically underserved in post-secondary education will successfully transition into post-secondary STEM education and career preparation pathways.
- Increase in teacher content knowledge of STEM and connections to career pathways → more impactful instruction in K-12 STEM classrooms that develops student identities → more students successfully entering into the STEM pipeline and exit into high-value careers.
- Lessons learned from the project will be investigated and the results disseminated so that similar projects and the broader community will be able to use the ideas and move them forward.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

No

**9. Accomplishment/ Highlights (bullet form)**

We piloted a two-week Career Exploration Summer Camp in June 2022 where 15 high school teachers/counselors/administrators and 60 high school students participated. When students first arrived to the NMSU/DACC campuses, they did not have a vision for education after high school. The university campus visits included interactions with current NMSU/DACC students and student organizations, small group experience-based sessions in various departments from NMSU and DACC, as well as 2 whole group presentations by financial aid/admissions departments. After 8 days, the students were able to complete a presentation that highlighted their career interests and the secondary/post-secondary pathway they would take to get there.

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> STEM K12 Pipeline</p> <p><b>Contact Name:</b> Erika Acosta Dr. Wanda Bulger-Tamez</p> <p><b>Contact Email:</b> <a href="mailto:ejacosta@nmsu.edu">ejacosta@nmsu.edu</a> <a href="mailto:wguzman@nmsu.edu">wguzman@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;"> <p><b>\$100,000</b></p> </div>
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**NMSU LEADS 2025 Goal:** **1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** Enhance K-12 student understanding of STEM careers, personal discovery of interests and skills, high-value careers, and post-secondary education opportunities through engagement with K-12 students, including underrepresented minorities and first generation college students.

<b>RPSP Objective 1:</b> Increase the number of 6th-12th students participating in career exploration and STEM fields.		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Number of students using career exploration curriculum, resources, and tools.	100	150	
2	Number of students engaged in experience-based interactions with professionals in diverse fields and paths.	100	150	
3	Number of students supported through guided planning for college and career pathways in secondary and post-secondary education.	100	150	
4	Number of students participating in STEM related activities and programs	100	150	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> STEM K12 Pipeline	<b>FY24 Request</b>
<b>Contact Name:</b> Erika Acosta Dr. Wanda Bulger-Tamez	<b>\$100,000</b>
<b>Contact Email:</b> <a href="mailto:ejacosta@nmsu.edu">ejacosta@nmsu.edu</a> <a href="mailto:wguzman@nmsu.edu">wguzman@nmsu.edu</a>	

5	Number of family and community members impacted by STEM K12 pipeline family engagement and information activities	100	150	
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**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> STEM K12 Pipeline</p> <p><b>Contact Name:</b> Erika Acosta Dr. Wanda Bulger-Tamez</p> <p><b>Contact Email:</b> <a href="mailto:ejacosta@nmsu.edu">ejacosta@nmsu.edu</a> <a href="mailto:wguzman@nmsu.edu">wguzman@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; margin-top: 10px;"> <p><b>\$100,000</b></p> </div>
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<b>NMSU LEADS 2025 Goal:</b>	<b>1 - Enhance Student Success and Social Mobility</b>
<b>RPSP Goal:</b>	To optimize K-12 teacher professional development in STEM content and Career Exploration

<p><b>RPSP Objective 2:</b> Optimize K-12 teachers' exploration and understanding of fundamental STEM concepts, connections to careers, and implementation of interactive STEM exploration activities to meet the needs of all students in the K-12 school system.</p>	<b>Measure Targets</b>		<b>Comments (<i>Briefly state your case</i>)</b>
<b>RPSP Measures:</b>	<b>FY23</b>	<b>FY24</b>	
1 Number of K-6th educators receiving interactive hands-on learning experiences and professional development	25	25	
2 Number of 6th-12th educators receiveing interactive hands-on learning experiences, professional development, and support for implementation	50	50	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> STEM K12 Pipeline</p> <p><b>Contact Name:</b> Erika Acosta Dr. Wanda Bulger-Tamez</p> <p><b>Contact Email:</b> <a href="mailto:ejacosta@nmsu.edu">ejacosta@nmsu.edu</a> <a href="mailto:wguzman@nmsu.edu">wguzman@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; margin-top: 20px;"> <p><b>\$100,000</b></p> </div>
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**NMSU LEADS 2025 Goal:** 2 - Elevate Research and Creativity

**RPSP Goal:** To produce and present relevant research findings.

<p><b>RPSP Objective 3:</b> The STEM K12 Pipeline staff will present at conferences, complete, and publish articles related to the findings in the collaboration efforts and student engagement activities relevant to the project.</p>	<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>	<b>FY23</b>	<b>FY24</b>	
1 Number of state, regional, and national conference presentations given by STEM K12 Pipeline staff about the STEM and Career Exploration Outreach.	1	2	
2 Number of articles completed by STEM K12 Pipeline staff and student employees	1	2	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> STEM K12 Pipeline</p> <p><b>Contact Name:</b> Erika Acosta Dr. Wanda Bulger-Tamez</p> <p><b>Contact Email:</b> <a href="mailto:ejacosta@nmsu.edu">ejacosta@nmsu.edu</a> <a href="mailto:wguzman@nmsu.edu">wguzman@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;"> <p><b>\$100,000</b></p> </div>
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<b>NMSU LEADS 2025 Goal:</b>	<b>3 - Amplify Extension and Outreach</b>
<p><b>RPSP Goal:</b> To develop and implement an outreach and extension program between NMSU, DACC, community organizations, local businesses, and local school districts that connects K12 students with STEM and career exploration experiences.</p>	

<p><b>RPSP Objective 4:</b> Collaborate with NMSU/DACC departments and community organizations to expand career awareness and exploration efforts to K-12 students through career-focused learning environments, interests exploration, and an understanding of scholarship opportunities and the benefits of dual-credit, certification, and technical/ undergraduate/graduate degree programs.</p>	<b>Measure Targets</b>		<b>Comments (<i>Briefly state your case</i>)</b>	
<b>RPSP Measures:</b>	<b>FY23</b>	<b>FY24</b>		
<table border="0" style="width: 100%;"> <tr> <td style="width: 20px; text-align: center; vertical-align: top;">1</td> <td style="padding-left: 5px;">Number of NMSU/DACC departments and community organizations collaborating in joint STEM K12 Pipeline efforts.</td> </tr> </table>	1	Number of NMSU/DACC departments and community organizations collaborating in joint STEM K12 Pipeline efforts.		10
1	Number of NMSU/DACC departments and community organizations collaborating in joint STEM K12 Pipeline efforts.			

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>		\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 100,000.00	\$ -	\$ 100,000.00	
Local		\$ -		
<b>Total Appropriations</b>	<b>\$ 100,000.00</b>	<b>\$ -</b>	<b>\$ 100,000.00</b>	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	<b>\$ 100,000.00</b>	<b>\$ -</b>	<b>\$ 100,000.00</b>	

**Transfers (to) from**

Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**Expenses**

	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries			0.00	\$ -	0.00		
Professional Salaries	0.80	\$ 50,000.00	0.00	\$ -	0.80	\$ 50,000.00	
Other Staff Salaries			0.00	\$ -	0.00		
Student Salaries (GA/TA)			0.00	\$ -	0.00		
Other Salaries			0.00	\$ -	0.00		
<b>Total All Salaries</b>	<b>0.80</b>	<b>\$ 50,000.00</b>	<b>0.00</b>	<b>\$ -</b>	<b>0.80</b>	<b>\$ 50,000.00</b>	
Fringe Benefits		\$ 18,250.00		\$ -		\$ 18,250.00	
Travel		\$ 2,000.00		\$ -		\$ 2,000.00	
Utilities				\$ -			
Institutional Support Charges		\$ 5,000.00		\$ -		\$ 5,000.00	
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 13,750.00		\$ -		\$ 13,750.00	
Equipment				\$ -			
Other Expenditures		\$ 11,000.00		\$ -		\$ 11,000.00	
<b>Total Expenditures</b>	<b>0.80</b>	<b>\$ 100,000.00</b>	<b>0.00</b>	<b>\$ -</b>	<b>0.80</b>	<b>\$ 100,000.00</b>	
<b>Ending Fund Balance</b>		<b>\$ -</b>		<b>\$ -</b>		<b>\$ -</b>	



# Preparing Native Teachers for Tomorrow (PNTfT)

2022-2023

## Preparing Native Teachers for Tomorrow

FY22 Actual: \$200,000

FY23 Request: \$200,000

\$ Change: \$0

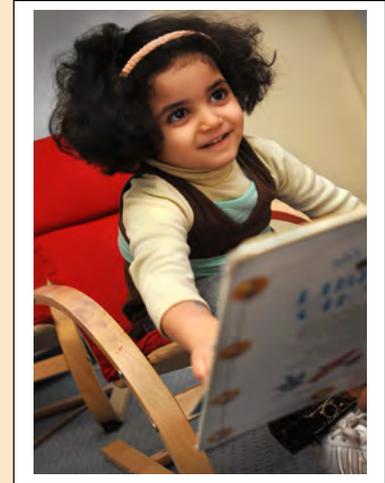
New Mexico State University (NMSU) enrolled 336 Native American Students, approximately 2.0 percent of the total student population. Such students major in numerous programs at NMSU, with approximately twelve students seeking majors leading to teacher education certification.

NMSU offers undergraduate and graduate teacher preparation programs with majors in Early Childhood Education (licensure and non-licensure), Elementary Education, Special Education and Secondary Education. Further, NMSU offers a master's plus licensure program, alternative licensure programs, as well as a master's program with alternative licensure and Special Education. The State of New Mexico is in desperate need of teachers who are reflective of the state's population, this includes a dire need for Native American teachers.



NMSU received the Tribal Education funding for the first time in fiscal year 2023. As a result, the inaugural year activities will have a dual focus of recruiting a cohort of Native students interested in the teaching profession in elementary and early childhood education, while intentionally redeveloping the curriculum. A culturally responsive curriculum and pedagogy is necessary, and its delivery will reflect a learning community cohort approach, progressing through the sequence of courses delivered in a blended model both at/with Tribal communities and on-line.

A program advisory committee will be recruited by October 1, 2022. The purpose of the committee is to provide guidance on program activities, curriculum revisions, and key performance indicators. The program committee will meet at least once each semester and summer.



## MISSION

The mission of the Preparing Native Teachers for Tomorrow (PNTfT) program is to support, retain and graduate Native American students in teacher education licensure programs. Using a learning community model with first-time undergraduate and graduate Native American students, and conducting outreach to Native communities, the PNTfT program will seek to enhance the retention and completion rates of Native students pursuing teacher licensure in New Mexico.

## RECRUITMENT ACTIVITIES 2022-2023

For the Fall 2022, the PNTfT program will begin by reaching out to all Native American students at the university to form a cohort of participants.

PNTfT faculty and professional staff will also extend efforts into Native communities or school communities serving a high percentage of Native students to assist Native Nations or Native-serving schools to “grow their own.” That is, provide support for individuals in the Nations or school-communities who have

acquired college course credits to move toward the completion of their ECED and ELED degrees, and apply for and achieve teacher licensure.

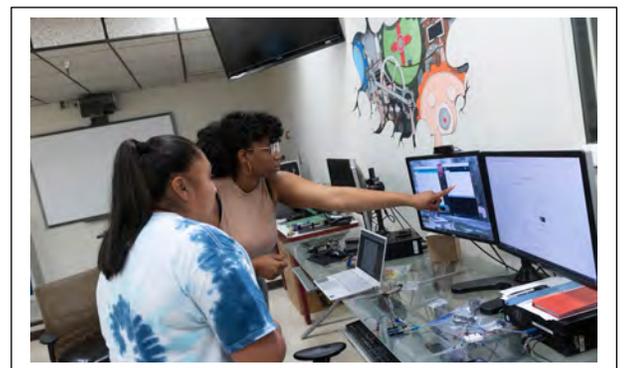
- Participation goal: 20
- Develop a website for the program
- Develop an application for interested individuals to apply to the PNTfT program
- Develop recruitment materials to highlight the PNTfT program
- Assistance with admission to NMSU
- Assistance with financial aid (i.e. FAFSA; interface with tribal higher education offices and NMPED; appeal family contributions assessment; look at obstacles to financial aid execution;)
- Once admitted to NMSU, evaluation of transcripts by TEP advisors/advisement to identify (transferable) credits that count toward a ECED and ELED licensure program requirements.

## PROGRAM DEVELOPMENT ACTIVITIES 2022-2023

- Develop and incorporate Native-focused content into the Teacher Education Program (TEP) coursework to prepare education majors and TEP candidates to (1) work with Native students and families, and (2) teach accurately and appropriately about Native Peoples.
- Modify and Indigenize present Teacher Education Program education coursework to be applicable and relevant to Native students and communities (and as remedy to the *Martinez/Yazzie* decision)
- Modify and Indigenize present Alternative Licensure coursework to be applicable and relevant to Native students and communities (and as remedy to the *Martinez/Yazzie* decision)
- Explore and incorporate pedagogically appropriate methods for Native American TEP candidates and the students they will teach
- Re-examine Teacher Education Program advisement to ensure a strengths-based and affirmative approach to advising Native students.
- Identify and mediate Teacher Education Program policies that may be obstacles to degree completion (i.e., 7-year rule on coursework) and make recommendations for modification as necessary.
- Identify and modify Teacher Education Program programming that may be obstacles to degree completion (i. e., 15 credits for Block coursework)
- Explore how *Starlink* could be a resource for Native communities/students participating in the program to access the Internet.

## EXPECTED PROGRAM DELIVERY 2023-2024

- Offer courses in Native communities in a blended format (F2F first meeting, online synchronous/asynchronous, and return of faculty to F2F at midterm or end of course). Plan resources for faculty travel time, per diem, and mileage.
- If extending the blended courses to multiple communities, students from the various Native communities will be invited to attend the face-to-face class meeting in a “host” community. In the spirit of tribal culture exchange, the “host” community will share aspects that are central to their Pre-K-12 students’ learning in that tribal (serving) school community.



**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Tribal Education RPSP/Preparing Native Teachers for Tomorrow (PNTFT)

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$200,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$200,000

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	1
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**2. Project Description / Executive Summary:**

This project is designed to increase the number of American Indian students majoring in teacher preparation programs. Further, the project is designed to support, retain and graduate a higher percentage of American Indian students majoring in teacher preparation in order to provide a well prepared teacher education pipeline for New Mexico

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The initial budget is designed to add necessary staff, support curricular redesign and recruit the first cohort of participants. NMSU is contributing \$3,000 in year one and \$40,000 in year two to directly support American Indian students with laptops and vouchers. Operating expenses will allow for travel to recruit Native American students and prepare recruitment material as well as support office supplies for employees. NMSU will also provide office space for the two employees.

**4. Program Mission (include population served, other demographic info):**

The mission of the program is to expand the number of American Indian teachers in New Mexico and support the expansion of American Indians completion programs within higher education

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

1. Increase the number of American Indian students attending NMSU while increasing the number of American Indian students seeking to complete teacher preparation programs at NMSU. 2. Increase retention rates of American Indian students at NMSU while closing the gap in American Indian retention rates compared to the general student body. 3. Increase the percentage of American Indian students graduating from NMSU while closing the percentage gap between American Indian students and the general student body.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

First Year of Implementation – no measures yet

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The project addresses the state’s need to address the teacher shortage. Specifically, the project seeks to expand diversity within the teacher demographics to address the need for culturally responsive pedagogy within public education

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Seeking federal and private grants will be part of the work of the planning committee during this first year.

**9. Accomplishment/ Highlights (bullet form)**

First year of the program – no accomplishments or highlights at this time.

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Main Campus Tribal Education	<b>FY24 Request</b>
<b>Contact Name:</b> Renay Scott	<b>\$200,000</b>
<b>Contact Email:</b> <a href="mailto:mscott@nmsu.edu">mscott@nmsu.edu</a>	

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Increase Native student enrollment and completion in teacher preparation program

<b>RPSP Objective 1: Develop culturally relevant curriculum</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of TEP courses modified/Indegenized	100%	100%	
2	Number of TEP policies modified	10%		Audit will be needed to help determine # that need modification

<b>RPSP Objective 2: Increase access and educational opportunities for first-generation native students</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Total number of Native students enrolled	350	360	
2	Number of Tribal high schools contacted	3	4	
3	Number of Tribes, pueblos and Native American recruitment events attended/visited	4	5	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Main Campus Tribal Education <b>Contact Name:</b> Renay Scott <b>Contact Email:</b> <a href="mailto:mscott@nmsu.edu">mscott@nmsu.edu</a>	<b>FY24 Request</b> <span style="background-color: yellow; border: 1px solid black; padding: 2px;"><b>\$200,000</b></span>
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<b>RPSP Objective 3: Support and retain Native American first time students, particularly those in teacher preparation</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Number of graduate & undergraduate Native American students who are education majors	20	25	
2	Number of Native American first-time freshman majoring in teacher preparation programs	5	8	
3	Percentage of Native freshman in Teacher Preparation participating in <b>workshops</b> /seminars/events	70%	75%	
4	Number of freshman exposed to STEM Education Opportunities	70%	75%	
5	Admission to teacher preparation program	NA	NA	Data Available in FY25

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Main Campus Tribal Education	<b>FY24 Request</b>
<b>Contact Name:</b> Renay Scott	<b>\$200,000</b>
<b>Contact Email:</b> <a href="mailto:mscott@nmsu.edu">mscott@nmsu.edu</a>	

<b>RPSP Objective 4: Support and Retain Native American First Time students beyond first year until graduation</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Percent of first year Native students with TEP major who persisted (fall to spring)	70%	75%	
2	Percentage of first year Native students majoring in teacher preparation retained	50%	55%	
3	Native Students Praxis Core passing rate	N/A	N/A	Antcipate FY 25 as first year for first cohort to take test
4	Percentage of Native students graduating with a Bachelor's degree in Teacher Education	N/A	N/A	It will take 4 years before first cohort has opportunity to graduate
5	Praxis education program passing rates	N/A	N/A	It will be 4 years before first cohort has opportunity to take Praxis Exam,

**NMSU LEADS 2025 Goal:** **3 - Amplify Extension and Outreach**

**RPSP Goal:** Increase Native teachers teaching in New Mexico

<b>RPSP Objective: Strengthen and diversify workforce in NM</b>		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Number of Native American students employed as teachers in NM	N/A	N/A	First opportunity to measure this will be in year 5 of the program

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments					
<b>Revenue and Transfers</b>									
<b>Beginning Fund Balance</b>	\$ -	\$ -	\$ -	Initial Year of Program					
<b>Appropriations</b>									
Federal		\$ -							
State plus Tobacco Settlement Fund	\$ 200,000.00	\$ -	\$ 200,000.00						
Local	\$ 3,000.00	\$ 37,000.00	\$ 40,000.00	Committed by VPSS					
<b>Total Appropriations</b>	\$ 203,000.00	\$ 37,000.00	\$ 240,000.00						
<b>Grants and Contracts</b>									
Federal		\$ -							
State		\$ -							
Local		\$ -							
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -						
<b>Private Gifts, Grants and Contracts</b>		\$ -							
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -							
<b>Tuition and Fees</b>		\$ -							
<b>Endowment</b>		\$ -							
<b>Sales and Services</b>		\$ -							
<b>Other Sources - Detail in Comments</b>		\$ -							
<b>Total Revenues</b>	\$ 203,000.00	\$ 37,000.00	\$ 240,000.00						
<b>Transfers (to) from</b>									
Instruction and General		\$ -							
Student Social and Cultural		\$ -							
Research		\$ -							
Public Service		\$ -							
Internal Service		\$ -							
Student Aid		\$ -							
Auxiliary Enterprises		\$ -							
Athletics		\$ -							
Independent Operations		\$ -							
Capital Outlay		\$ -							
Renewal and Replacement		\$ -							
<b>Total Transfers</b>	\$ -	\$ -	\$ -						
<b>Expenses</b>									
	FY23 FTE		Change FTE				FY24 FTE		
Faculty Salaries	0.58	\$ 50,000.00	0.00	\$ -	0.58	\$ 50,000.00			Stipends
Professional Salaries	0.00		1.00	\$ -	0.00				
Other Staff Salaries	1.60	\$ 54,800.00	1.00	\$ -	1.60	\$ 54,800.00			Student Success Mentor Salary
Student Salaries (GA/TA)	0.00		0.00	\$ -	0.00				
Other Salaries	0.00		0.00	\$ -	0.00				
<b>Total All Salaries</b>	2.18	\$ 104,800.00	2.00	\$ -	2.18	\$ 104,800.00			
Fringe Benefits		\$ 20,276.00		\$ -		\$ 20,276.00			Student Success Mentor Fringe
Travel		\$ 24,000.00		\$ -		\$ 24,000.00			recruitment
Utilities				\$ -					
Institutional Support Charges				\$ -					
Plant Operation and Maintenance Charges				\$ -					
Supplies and Expenses		\$ 35,924.00		\$ (5,000.00)		\$ 30,924.00			
Equipment		\$ 3,000.00		\$ 37,000.00		\$ 40,000.00			Laptops for students/2 computers for employees
Other Expenditures		\$ 15,000.00		\$ 5,000.00		\$ 20,000.00			\$1000 voucher for 20 participants
<b>Total Expenditures</b>	2.18	\$ 203,000.00	2.00	\$ 37,000.00	2.18	\$ 240,000.00			
<b>Ending Fund Balance</b>		\$ -		\$ -		\$ -			

# Anna Age Eight Institute

BE BOLD. Shape the Future.



2022

FY 23 Actual:	\$2,077,000
FY 24 Request:	\$2,500,000
Change:	\$423,000

**The problem:** Adverse Childhood Experiences (ACEs), trauma, and social adversity lead to costly challenges including mental and medical health problems, substance misuse, low educational achievement, and lack of job readiness.

**The solution:** Our goal is simple. 100% of county residents have access to ten vital services when they need them. The Anna, Age Eight Institute's initiative, 100% New Mexico is the first of its kind in the nation, using the decades of research focused on the social determinants of health and the social-ecological model to provide to each county the skills, knowledge and resources to ensure all families have access to ten vital services in order to prevent adverse childhood experiences, family trauma and social adversity.

**The ten vital services are medical/dental care, behavioral health care, food security programs, housing security programs, transport to vital services, parent supports (home visitation, respite care, education), early childhood learning programs, fully-resourced community schools, youth mentor programs and job training aligned with the present and future job market.**

Our institute's far-reaching goal is ensuring that 100% of Community Members have access to ten vital services.

The Anna, Age Eight Institute was funded by the New Mexico state legislature in 2019. Our hypothesis guiding the 100% New Mexico Initiative is: **By empowering county leadership, through a data-driven capacity-building process, we can identify and address barriers to ten vital services, resulting in an increase in family health, safety and self-sufficiency.**

## IMPACT OF PANDEMIC ON SERVICES AND FAMILIES

Our anecdotal data, based on the development of family services directories, is that many services have been diminished, resulting in a greater need for an effective "reboot" of vital services, as well as a thorough assessment of which of the ten vital services exist in each county. Joblessness and business closures must also be assessed in each county, as lack of livelihoods impact the health of children and family self-sufficiency.

## WHERE WE WORK

The 100% New Mexico Initiative is currently active in 15 counties in New Mexico including: Dona Ana, Otero, Roosevelt, Curry, McKinley, San Juan, San Miguel, Socorro, Taos, Rio Arriba, Valencia, Otero, Catron, Santa Fe, and Bernalillo



## Top Three Goals

- 100% Community Schools – Every school in NM is a community school
- 100% Family Centers – Every community has access to family centers
- 100% Internet Access – Every family has access to the internet

# ANNA, AGE EIGHT INSTITUTE

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Anna Age Eight Institute

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY23 Funding Request (\$XXX,XXX):    \$2,500,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$2,077,000

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	4
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**2. Project Description / Executive Summary:**

Decades of research on Adverse Childhood Experiences (ACEs), Social Determinates of Health, and Adverse Community Experiences in the form of racism and under resourced communities show that the environments in which kids grow up help shape a child's future. Adults who grew up in households with ACEs and communities with social adversity are more likely to struggle with substance abuse, economic stability, and physical health problems, among many other negative outcomes. In order to prevent both Adverse Childhood Experiences, and Adverse Community Experiences, research, including recommendations from the CDC indicate that it is vital for children and families to have access to services such as mentorship programs, stable housing and food supports, and behavioral health and medical care. The Anna, Age Eight Institute's initiative, 100% New Mexico is the first of its kind in the nation, using the decades of research focused on the social determinants of health and the social-ecological model to provide to each county the skills, knowledge and resources to ensure all families have access to ten vital services in order to prevent adverse childhood experiences, family trauma and social adversity. The ten vital services are medical/dental care, behavioral health care, food security programs, housing security programs, transport to vital services, parent supports (home visitation, respite care, education), early childhood learning programs, fully-resourced community schools, youth mentor programs and job training aligned with the present

**2. Project Description / Executive Summary:**

and future job market. Our goal is simple. 100% of county residents have access to the ten vital services when they need them. We use the frameworks of Collective Impact and Continuous Quality Improvement to empower counties to assess barriers to services, plan solutions to the barriers, implement their solutions, and evaluate progress.

**3. Budget Narrative (Overview only – Relates to Budget Form)**

The requested budget is to continue the work of the AAEI in fiscal year 2024 and expand our technical support to community schools and to research and innovation. In the current fiscal year, because of the additional funding provided by the legislature, the institute is supporting the counties that joined the previous year which we have been unable to support financially until this FY. In the current fiscal year, the institute plans to create new positions to increase the institute's capacity to support the 100% New Mexico Initiative with research and innovation – particularly around community schools. The National Education Association of New Mexico has proposed investing in the institute in order to partner on technical assistance for community schools. Additionally, the institute is proposing to create a foundation with a board of directors to transparently make grants to each county initiative depending on the county's unique needs to support activities ranging from survey collection, project planning and implementation, public awareness events, and coordination of initiative activities.

**4. Program Mission (include population served, other demographic info):**

Our mission is to prevent Adverse Childhood Experiences and Social Adversity by ensuring that 100% of residents have access to ten vital services by utilizing the 100% New Mexico Initiative. The initiative is county based, engaging city and county government, as well as school boards, community leaders, and representatives from each of the ten sectors. The ten vital services are: medical and dental care, behavioral health care, food, housing, transportation, community schools, parent supports (including home visiting, after school programs and parenting classes), early childhood learning programs (including pre-k), youth mentorship programs, and job training services.

**The hypothesis guiding the 100% New Mexico Initiative is: By empowering county leadership through a data driven capacity-building process with a clear goal of 100% of community members having access to ten vital services, barriers can be identified and addressed resulting in an increase in family health, safety, and self-sufficiency, and a decrease in the impact of adverse childhood trauma and social adversity.**

The 100% New Mexico Initiative is currently active in ten counties throughout the state.

We do not provide direct services to the public, instead we empower the county-based programs that are funded to meet the needs of the public to do so effectively. Our 100% New Mexico initiative is working to accomplish what no other county-based initiative has, ensuring the ten vital services shown to increase family health, safety, self-sufficiency.

Through our countywide assessment process, we work with stakeholders, including local elected officials and higher education institutions, to identify gaps in vital services and specific barriers. The barriers are then analyzed by county action teams, each representing one of the ten vital services to identify and implement solutions to the barriers.

**4. Program Mission (include population served, other demographic info):**

Our anecdotal data, based on the development of family services directories, is that many services have been diminished due to the Covid-19 pandemic, resulting in a greater need for an effective “reboot” of vital services, as well as a thorough assessment of the ten vital services in each county.

**5. Key Project Objectives (Overview only – relates to performance measure form)**

Our key objectives are to support counties in implementing the 100% New Mexico framework. This is measured through number of counties and communities completing the 100% Survey which assesses access and barriers to ten vital services, and the number of communities trained in the 100% New Mexico model, as well as number of people who visit our website which is designed to support public awareness about the initiative and the impact of trauma. Our short-term outcomes include more collaboration across services, increased use of data to identify gaps, and greater public understanding of Adverse Childhood Experiences, trauma and social adversity. Our long-term outcomes include greater access to the ten vital services, and lower rates of child maltreatment and neglect, as well as overall improvement in child and family wellbeing and self-sufficiency.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

AAEI completed the 100% New Mexico surveys and published reports in order to assess families’ access to ten vital services in the additional counties of: Bernalillo, Curry, Roosevelt, and Santa Fe. The survey was also implemented at New Mexico State University to assess barriers to services for students and staff. The survey provides a thorough assessment of barriers that residents face in accessing the ten vital services. This process is vital as it provides each county with data specific to their community members. Not only does the survey provide information about what percentages of residents who tried to access services had difficulty- for example, in Otero county, of those who tried to access transportation services 55% had difficulty. Additionally, transportation was a barrier to accessing other services including food, behavioral health care, and medical care. The survey also provides data on what the barriers were. Barriers include: doesn’t run during the times I need it, doesn’t go where I need it to go, and it’s too far to walk to the bus stop. In response, the transportation action team in Otero County is working on increasing the number of busses through state grants, creating a resource guide, and examining bicycle and walking pathways.

AAEI continued to offer technical assistance to the 100% New Mexico counties of: Dona Ana, Rio Arriba, Socorro, San Miguel, Valencia, Otero, Catron, Taos, Bernalillo, and Santa Fe including supporting the creation of 10 action teams focused on each of the 10 vital services, supported the creation of a directory of services as well as building county websites that serve to promote public awareness and initiative recruitment. (100nm.org).

AAEI hosted 21 power hour, county and regional meetings with 343 attendees, helping to educate community members on the key aspects of the initiative.

AAEI built relationships with partners in the counties of Grant, Mora, San Juan, Los Alamos, McKinley, Roosevelt, and Curry. These counties are in the process of partnering with the institute with the goal of having at least half of the counties in the state represented by the end of FY24.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

AAEI built and launched the official institute website (annaageeight.nmsu.edu) which houses our 100% New Mexico seven part Power Hour webinar series, as well as research on Adverse Childhood Experiences, Social Adversity, and innovations in ten family serving service sectors.

AAEI hired our first regional manager, as well as an associate director.

AAEI hosted and supported a summit in Dona Ana County, as well as the first 100% regional summit in Las Vegas, New Mexico which had over 100 participants.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The Anna, Age Eight Institute was funded by the New Mexico state legislature in 2019 with the mission of preventing adverse childhood experiences and social adversity. Our institute’s far-reaching goal is ensuring that our children, students and families are safe and thriving. The Institute’s flagship initiative is 100% New Mexico. The 100% New Mexico Initiative has one simple goal: Ensure that 100% of county residents have access to ten vital services. These ten vital services have been shown to increase resiliency, prevent adversity, and result in healthy thriving communities.

***The ten vital services are: medical care, behavioral health care, stable housing, food security, transportation to services, parent support, early childhood learning, community schools, youth mentors and job training.***

With alignment of all local leadership, both elected and informal, each county can become an engine for local problem-solving to ensure all residents are healthy, safe and resilient. The work of the initiative builds on current local efforts to improve systems of care, always committed to working in alignment with city government, county government and local nonprofit organizations.

By working on a county scale, with buy-in from local elected leadership and stakeholders, the institute provides county stakeholders the tools to build the capacity to ensure access to ten vital services. This can achieve groundbreaking results that include: increasing physical health, household stability and self-sufficiency, school achievement, higher education engagement, and job readiness.

With a system of care, counties can also reduce costly problems that include: adverse childhood experiences (ACEs), maltreatment, trauma, substance misuse, violence and untreated mental health challenges.

Childhood trauma in the form of ACEs and social adversity impacts every aspect of our state- including substance abuse, educational outcomes, job readiness, and economic stability. By preventing trauma, counties can empower residents to ensure that every child reaches their full potential.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

We are currently in the process of researching grant opportunities for the prevention of ACEs. We are also in conversations with the offices of Senator Ben Ray Lujan and Congresswomen Teresa Leger Fernandez to explore federal support.

**9. Accomplishment/ Highlights (bullet form)**

- 1) strengthened capacity (with book clubs, public awareness events, cultural gatherings) of county stakeholders to mobilize - focused on increasing the positive social determinants of health in the form of access to ten vital services;
- 2) provided professional development to 100% nm initiative members, including training on ending service barriers with assessment planning, action and evaluation; as well as an overview of the public health social ecological model and collective impact;
- 3) served as repository of research focused on evidence informed strategies to end service gaps;
- 4) provided to each county training on skills for local advocacy to engage local lawmakers in reducing adverse social determinants of health;
- 5) provided each county initiative with support in developing strategic plans to increase community schools;
- 6) developed a plan to launch a one stop service hub for parents- with navigation to local services and staff to grow vital family services on a county and regional level (our regions align w DOH);
- 7) published and made available free of charge the blueprint for initiative 100% Community: ensuring 10 vital services for surviving and thriving and to raise awareness of epidemic rates of childhood trauma, also made free of charge Anna, Age Eight: the data driven prevention of childhood trauma and maltreatment;
- 8) developed a model for regional work, promoting collaboration across five regions, alignment of services, sharing of resources, transfer of knowledge and innovation;
- 9) developed interactive websites for each county initiative to serve as repository for data, research, strategies, team membership, and capacity to share articles on relevant topics to increase knowledge;
- 10) developed collaboration with Chapin Hall at the University of Chicago to evaluate every component of the initiative- from statewide capacity of the institute to counties' capacity to set goals and make progress toward results, following a data driven framework for change;
- 11) developed a web based directory to ten vital services , with a process for county initiative leaders vetting all organizations- confirming services-- and proving capacity for family members to rate user friendliness services and address service barriers such as cost.

<b>9. Accomplishment/ Highlights (bullet form)</b>

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Anna Age Eight	<b>FY24 Request</b>
<b>Contact Name:</b> Katherine Courtney	<b>\$2,500,000</b>
<b>Contact Email:</b> <a href="mailto:koc@nmsu.edu">koc@nmsu.edu</a>	

<b>NMSU LEADS 2025 Goal:</b>		<b>3 - Amplify Extension and Outreach</b>										<b>Comments (Briefly state your case)</b>
<b>RPSP Goal:</b> Ensuring that our children, students and families are trauma-free and empowered to succeed in family life, school and the workplace												
<b>RPSP Objective 1:</b> Ensure that families have access to the five survival services and the five thriving services		<b>Measure Results</b>				<b>Measure Targets</b>						
<b>RPSP Measures:</b>		<b>FY19 Actuals</b>	<b>FY20 Actuals</b>	<b>FY21 Actual</b>	<b>FY22 Estimate</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>	<b>FY22</b>	<b>FY23</b>	<b>FY24</b>	
1	Counties/pueblos engaged in 100% Community Initiative	4	5	10	14	N/A	5	6	8	11	18	Growth in county partnerships is gaining traction with more than half of counties in NM expected to be associated with the institute by the end of FY24
2	Counties/pueblos completing 100% Community Survey	4	4	6	9	N/A	3	4	5	7	18	With new resources dedicated to research and innovation, the goal is to have every county engaged in the 100% community initiative completing the survey
3	Counties with an action team for each of the 10 vital services	NA	NA	NA	NA	NA	NA	NA	NA	5	10	Each team is focused on influencing the positive social determinants of health
4	Counties w/ Implementation Grants	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	Based on internal reviews by county initiative leadership focused on their local capacity
5	Counties meeting performance targets described in the grant application	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	Rubric aligned with AAEL framework
6	County Coalitions focused on the development of a strategic plan to increase community schools	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	Rubric aligned with AAEL framework
7	County Coalitions focused on the development of a strategic plan to increase family centers	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	Rubric aligned with AAEL framework
8	Counties with a Service Directory	NA	NA	NA	NA	NA	NA	NA	NA	NA	6	Based on asset mapping and qualitative data

RPSP Objective 2: Raise public awareness and training for the 100% New Mexico Initiative		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
RPSP Measures:												
1	Number of Power Hour Sessions held	N/A	N/A	7	21	N/A	N/A	N/A	28	30	30	Webinars focused on increasing stakeholder's capacity to assess, plan, act and evaluate, montly leaders meetings and regional meetings
2	Number of people who attended at least one Power Hour Session:	N/A	N/A	141	323	N/A	N/A	N/A	400	450	450	Expanded Power Hour Sessions now include Monthly Leader Meetings & Regional Summits-increasing engagement
3	Average number of visitors to annaageeight.nmsu.edu website per day	N/A	N/A	7	10	N/A	N/A	N/A	20	30	30	100NM.org - the companion site is averaging 31 unique visitors per day. Plan to increase engagement through increased eBlasts to stakeholders in each county
4	Number of people who participate in the self directed course: a child's right to survive and thrive	NA	NA	NA	NA	NA	NA	NA	NA		250	Completed 4 out of the 10 courses, all registered participants become part of a virtual community to support idea sharing and problem solving

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget	Change	Request	Comments
Revenue and Transfers	FY 23		FY 24	
<b>Beginning Fund Balance</b>	\$ 813,421.00	\$ 426,700.00	\$ 1,240,121.00	Create County Grant Fund Using Balance
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 1,727,000.00	\$ 773,000.00	\$ 2,500,000.00	SB1 includes 350,000 that was reclassified from non-recurring to recurring and budgeted in FY22. The total recurring base, including SB1 is \$2,077,000. We are requesting an increase of \$423,000.
Local		\$ -		
<b>Total Appropriations</b>	\$ 1,727,000.00	\$ 773,000.00	\$ 2,500,000.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 1,727,000.00	\$ 773,000.00	\$ 2,500,000.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	FY23 FTE	Change FTE	FY24 FTE	
Faculty Salaries	5.37	(5.37)	0.00	
Professional Salaries	0.37	19.63	20.00	Research, Evaluation, Community Schools
Other Staff Salaries		0.00	0.00	
Student Salaries (GA/TA)		0.00	0.00	
Other Salaries		0.00	0.00	
<b>Total All Salaries</b>	<b>5.74</b>	<b>14.26</b>	<b>20.00</b>	
Fringe Benefits				Total Salaries * (37.5%)
Travel				Related to Increased FTE
Utilities				
Institutional Support Charges				Related to Increased Revenue
Plant Operation and Maintenance Charges				
Supplies and Expenses				Move \$75K to Salaries
Equipment				
Other Expenditures				County Implementation Grants Fund
<b>Total Expenditures</b>	<b>5.74</b>	<b>14.26</b>	<b>20.00</b>	
<b>Ending Fund Balance</b>	\$ 1,240,121.00	\$ (1,240,121.00)	\$ -	

FY23 Actual: \$ 320,000

FY24 Request: \$ 320,000

Change: \$ 0

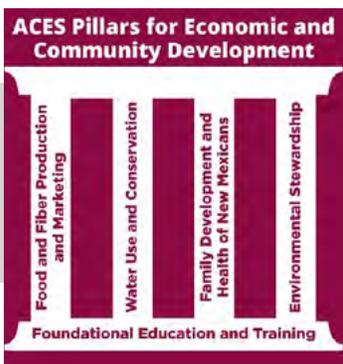
**Mission:** NMSU's Center of Excellence in Sustainable Food and Agricultural Systems (CESFAS) will be the leader in building a vibrant agricultural economy by conducting innovative, trans-disciplinary, collaborative research that facilitates and develops strong food and value-added agricultural businesses. The center will also provide interdisciplinary training and education to students to give value-added industries highly-skilled, workforce-ready employees. In partnership with industry, the CESFAS will help meet the complex challenge of feeding a growing global population using fewer natural resources.

## CESFAS GOALS

- **Increase the state's value-added processing industry**
- **Develop sustainable food supply chains and reduce/eliminate food deserts currently occurring in the state.**
- **Sustain New Mexico's vibrant food and agricultural systems long into the future.**



New Mexico is recognized as one of the older agricultural production areas in the U.S. and provides \$3.4 billion (USDA-NASS, 2019) to the state's economy. However, most of New Mexico's agricultural products are shipped out of state for processing before returning to New Mexico as consumer-available products. **Processors in other states are profiting from New Mexico's agricultural producers** and the lack of extensive value-added industries in New Mexico agriculture. To build a vibrant and sustainable food and agricultural industry in New Mexico, state-of-the-art value-added industries must be developed. **CESFAS, established at NMSU in 2019, is a critical component in New Mexico's ability to build and sustain a viable food and agricultural system to feed the population and to grow the state's economy.**



The College of Agricultural, Consumer, and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.

## FY22 HIGHLIGHTED ACCOMPLISHMENTS

- CESFAS in partnership with NM Tech, Navajo Tech, and the Indian Resource Development Program hosted an inaugural Water Symposium (2022) that focused on solving water challenges in NM and the Navajo Nation, with a specific emphasis directed toward high school students in the Four-Corners Region.
- Ribbon-cutting ceremony for container farm project hosted on the NMSU Grants campus.
- CESFAS directors worked with private and non-profit organizations to explore value-added agricultural production opportunities in the state
- CESFAS advisory committee was established in FY22

### Established Roadmap Teams

- Artificial Intelligence
- Carbon Sequestration
- Controlled environment agriculture
- Dairy efficiency and waste management
- Food, Water, and Energy
- Healthy Soils, plants, and people
- Hemp Production and Utilization

The CESFAS budget partially supports two faculty positions (food bioprocessing and microbial food safety) and roadmap team development and processes. Roadmap teams consist of CESFAS-affiliated faculty, who are comprised of faculty from ACES, NMSU's Colleges of Engineering Business, and Arts and Sciences. Roadmap teams and CESFAS leadership work directly with AES and CES to take critical issues faced by New Mexico agricultural producers and identify possible solutions or research focuses to directly support NM citizens. The funds also support increased and continued outreach for New Mexico producers.

### POTENTIAL IMPACTS



SUSTAIN HUMAN COMMUNITIES AND THE ENVIRONMENTS IN WHICH THEY LIVE



DEVELOP AND EXPAND VALUE-ADDED AGRIBUSINESS



CREATE JOBS



DEVELOP WORKFORCE READY GRADUATES

[aces.nmsu.edu](https://aces.nmsu.edu) • [lillywhi@nmsu.edu](mailto:lillywhi@nmsu.edu) • [edelgad@nmsu.edu](mailto:edelgad@nmsu.edu)

New Mexico State University is an equal opportunity / affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Sustainable Agriculture Center of Excellence

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$320,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$312,800

Type of Project (X for Type)			
Research <input checked="" type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

This is an interdisciplinary project at New Mexico State University that incorporates all aspects of the land-grant university mission: teaching, research and Extension.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	4
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**2. Project Description / Executive Summary:**

The Center of Excellence in Sustainable Food and Agricultural Systems (CESFAS), established in 2019 by New Mexico’s governor and legislature, is a critical component in New Mexico’s ability to build and sustain a viable food and agricultural system to grow the state’s economy and feed the population without comprising resources for future generations. While agriculture is an important industry in New Mexico, production cash sales of approximately \$3 billion annually, most agricultural products are shipped out of state for processing before returning to New Mexico as consumer-available products. Processors in other states are profiting from New Mexico’s agricultural producers and the lack of value-added industries for New Mexico agriculture. In order to build upon the dynamic agricultural industry in NM and create a more sustainable industry, state-of-the-art value-added industries must be developed. New Mexico State University, a land-grant, Hispanic-serving, research-based university located within 60 miles of the United States and Mexico border is uniquely positioned and equipped to meet the pressing needs of the value-added agricultural industry. Increasing the state’s value-added processing industry is a key goal of CESFAS, along with the development of a sustainable food supply chain and reduction/elimination of food deserts occurring in the state. CESFAS works closely with New Mexico’s Agricultural Experiment Station, Cooperative Extension Service, NMSU Colleges, other institutions, and other industry stakeholders in organizing trans-disciplinary teams that work to solve New Mexico agricultural challenges.

### **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The budget partially supports two faculty positions and roadmap team development and processes. Roadmap teams consist of CEFAS-affiliated faculty, who are comprised of faculty from ACES, NMSU's Colleges of Engineering Business, and Arts and Sciences. Roadmap teams and CEFAS leadership work directly with AES and CES to take critical issues faced by New Mexico agricultural producers and identify possible solutions or research focuses to directly support NM citizens. The funds also support increased and continued outreach for New Mexico producers.

### **4. Program Mission (include population served, other demographic info):**

The goal of agricultural sustainability is to meet society's food, fuel, feed and fiber needs in the present without compromising the ability of future generations to meet their own needs. Sustainability is a complex idea with three key facets. Food and agricultural systems should be environmentally sound, economically viable, and socially responsible. Broadly, the Center of Excellence in Sustainable Food and Agricultural Systems works to sustain communities and the environment through research, teaching, and Extension/outreach. CEFAS, established within the College of Agricultural, Consumer, and Environmental Sciences in collaboration with other NMSU colleges, is well-positioned to work across many disciplines with faculty, staff, and students on the main campus and at the Agricultural Experiment Stations and Cooperative Extension Offices located around the state. Beyond the campus community, it will collaborate with NGOs, growers, community members, industry, state and federal agencies. The Center's work focuses on applied research, academic education and practical training, community outreach.

### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The Center of Excellence in Sustainable Food and Agricultural Systems (CEFAS) is developing transdisciplinary collaboration among faculty with industry partners to identify and work on research, outreach, and educational needs identified in New Mexico. CEFAS assists in expanding value-added agricultural opportunities in the state by providing practical, research-based education to develop workforce-ready graduates. The Center fosters communication between industry and education to disseminate information that consistently serves as a resource on sustainable practices. Faculty affiliated with CEFAS are expected to develop highly productive, interdisciplinary, collaborative programs within research, Extension, or teaching. Center affiliated faculty establish externally funded programs through the submission of competitive grant proposals, publish peer-reviewed journals, extension journals, and mentor students.

### **6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- The Center worked with New Mexico Tech, Navajo Tech, and the Indian Resource Development program in hosting an inaugural Water Symposium (2022 Water Symposium) that focused on solving water challenges in New Mexico and the Navajo Nation, with a specific emphasis directed toward high schools students in the Four-Corners Region.
- A ribbon cutting ceremony was organized for the container farm project hosted on the NMSU Grants campus. Affiliated faculty members continued to work with University and state authorities in getting the container farm permitted and operational.
- Center directors communicated with various private and non-profit organizations exploring value-added agricultural production and other agricultural opportunities in the state, e.g., controlled environment agriculture, food insecurity, and hemp.
- Continued working with transdisciplinary, faculty roadmap teams focused on the following areas:
  - Artificial intelligence
  - Carbon sequestration
  - Controlled-environment agriculture/ food deserts
  - Dairy
  - Food, Energy, Water
  - Hemp Production and utilization
  - Soil, plant, and people health
- The Carbon Sequestration Roadmap team completed their roadmap that resulted, with Agricultural Experiment Station support and guidance, in federal earmark funding.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- Center directors have worked with New Mexico Tech and have had initial conversations with San Juan Community College, but need to reestablish the dialog between these Centers.
- The Center’s advisory committee was established and meetings held in FY22.
- Center directors have had conversations with external stakeholders regarding internship program. The program will be fully developed in FY23.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

CESFAS is a direct result of the Governor’s legislative initiative for New Mexico Centers of Excellence. The Center of Excellence at New Mexico State University is working toward meeting the Governor’s expectation of putting “New Mexico on the map worldwide and show we’re serious about the growth of research and development in key industries” (Lujan Grisham Press Release, February 2019) and the Chancellor’s goal that the center will “will allow us to build on our current work supporting innovations that create value-added alternatives and improving profitability while protecting our state’s land and water” (Lujan Grisham Press Release, February 2019). The Center’s direct impacts are creating well-functioning trans-disciplinary teams composed of NMSU researchers, staff and students as well as agricultural stakeholders within the state. These teams are creating roadmaps that outline future research, education, and outreach efforts needed to support sustainable agriculture in New Mexico. The roadmaps and team efforts are resulting in increased funding as roadmap teams seek external funding. Indirect impacts of the Center will be the development and expansion of value-added food and agricultural businesses, the creation of jobs related to these businesses, and increased economic and community development for New Mexico.

Several roadmap teams initial organized by the Center, after completing their roadmaps, having been successful in obtaining external funding. Additionally, several researchers who have received CESFAS mini-grants have been successful in leveraging that funding/research with external funds.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Center faculty and affiliated faculty consistently seek opportunities to obtain external funding. Examples provided in the previous major accomplishment section, e.g., several roadmap teams have been successful in obtaining external funds. Additionally, some affiliated faculty who have received CESFAS mini-grant funding have been successful in leveraging that funding/research with external funds.

**9. Accomplishment/ Highlights (bullet form)**

Additional accomplishments not noted in #6 above:

- Continued to generate awareness of the Center across NMSU campus and industry partners
- Center directors and two supported faculty were successful in publishing 9 academic articles and gave 7 presentations.
- The Center funded two seed grants to affiliated faculty in FY22. One proposal focused on the development of value-added ingredients in the dairy industry. The second proposal focused on hemp production.

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	NA

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

Center of Excellence in Sustainable Food and <b>RPSP Title:</b> Agricultural Systems <b>Contact Name:</b> Jay Lillywhite <b>Contact Email:</b> <a href="mailto:lillywhi@nmsu.edu">lillywhi@nmsu.edu</a>	<b>FY24 Request</b>
	<b>\$320,000</b>

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** The CEFAS will provide practical, research-based education to students to develop work-force ready graduates with training and skills needed to support food and value-added agricultural industries.

RPSP Objective 1.3: Develop robust experiential learning, service-learning and research experiences that engage students and contribute to the development of essential skills.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Sustainable Steward Student Internship Program	N/A	0	0	0	NA	NA	1	2	2	0	This measure is being replaced by the "student internship" measure below. The new measure is more inclusive.
2	Student internships (NEW)	N/A	N/A	2	0	NA	NA	N/A	10	20	10	CEFAS directors are developing guidelines for the new student internship program, including visits with industry stakeholders. They are exploring ways that recent state funding can be leveraged by industry contribution to increase the number of student internship opportunities.
3	Graduate student transdisciplinary team participation (Assistantships) (NEW)	N/A	N/A	1 (as of now)	2	NA	NA	N/A	4	4	6	CEFAS funded two graduate students (working with the Carbon Sequestration roadmap team), one from the Department of English (roadmap editor) and one working with the roadmap director.
4	Undergraduate transdisciplinary team participation (NEW)	N/A	N/A	12	10	NA	NA	N/A	8	8	12	Over 15 students were impacted.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p align="center">Center of Excellence in Sustainable Food and RSPSP Title: Agricultural Systems Contact Name: Jay Lillywhite Contact Email: <a href="mailto:lillywhi@nmsu.edu">lillywhi@nmsu.edu</a></p>	<p align="right"><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;"> <p><b>\$320,000</b></p> </div>
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**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** The CESFAS will develop transdisciplinary collaborations among university faculty with industry partners to identify and work on research and educational needs in the areas of sustainable food and agricultural systems.

RPSP Objective 2.1: Align research strengths across academic units to create an integrated research center supported with strategic investment and interdisciplinary hires.; 2.3 Amplify impact of research findings by addressing local needs that align with global challenges, specific to sustainable agriculture.		Measure Results				Measure Targets						Comments <i>(Briefly state your case)</i>
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Research Development Faculty Planning Workshops	N/A	2	6	4	NA	NA	4	4	4	4	Includes roadmap team development (workshops to start roadmap teams). Co-organizer of the "Multi-Institutional Food Engineering Seminar Series"(Advances in thermal processing for improving quality and safety, Advances in Non-thermal processing for improving quality and safety; Understanding and sensing food quality and safety).
2	Publications (Extension, AES, Peer-reviewed) (NEW)	N/A	N/A	16	10	NA	NA	N/A	10	15	15	Numbers reported include all publications, including industry publications, for CESFAS directors and faculty. It does not include publications made by affiliated faculty.
3	Grant/External Funding Proposals (NEW)	N/A	N/A	9	0	NA	NA	N/A	3	3	5	Nine grant proposals approved.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

FY24 Request

Center of Excellence in  
Sustainable Food and  
RSPSP Title: Agricultural Systems  
Contact Name: Jay Lillywhite  
Contact Email: [lillywhi@nmsu.edu](mailto:lillywhi@nmsu.edu)

**\$320,000**

**NMSU LEADS 2025 Goal: 3 - Amplify Extension and Outreach**

**RPSP Goal:** The CEFAS will become a connection unit for collecting and dissemination agricultural research findings and value-added food and agribusiness entrepreneurship information and training. Additionally, CEFAS will foster communication between industry and education to serve as a resource of information (in partnership with AES and CES) to the agricultural industry, the community and the K-20 educational system.

RPSP Objective 3.4: Develop an integrated process for private sector engagement to support and grow public-private partnerships. Promote CEFAS strengths to current and prospective private sector partners.;		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Community Engagement through the implementation of a Sustainable Steward Invited Speaker Series	N/A	0	0	0	NA	NA	2	2	3	2	Discontinuing this measure for the present time. Center directors and faculty will focus on outreach making presentations to industry and community members.
2	Stakeholder engagement through advisory boards	N/A	0	2	2	NA	NA	2	2	2	2	A advisory committee was organized in 2021 with two online meetings held during the year. The Center's management expects to continue the process of holding two advisory committee meetings annually.

RPSP Objective: 3.5: Leverage CES programs and facilities to benefit economic development and community outreach.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Community outreasearch presentations (NEW)	N/A	N/A	6	5	NA	NA	N/A	6	12	10	Center directors made various presentations to community and industry stakeholders, including members of different churches with members interested in sustainable agriculture, industry associations, and other sustainability-focused organizations/groups, e.g., Earth Day Symposium.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**FY24 Request**

Center of Excellence in  
Sustainable Food and  
RPSP Title: Agricultural Systems  
Contact Name: Jay Lillywhite  
Contact Email: [lillywhi@nmsu.edu](mailto:lillywhi@nmsu.edu)

**\$320,000**

**NMSU LEADS 2025 Goal: 4 - Build a Robust University System**

**RPSP Goal:** The CESFAS will establish strategic alignment with the NMSU Foundation to raise, manage, and steward private resources in support of sustainable agriculture.

RPSP Objective 4.5: Build endowments to support long-term academic and priority needs in response to value-added and sustainable agriculture.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actual	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Gift revenue	N/A	0	0	0	NA	NA	25,000	25,000	10,000	10,000	The Center did not receive gift revenue in FY21, but Center directors will continue to work with foundation staff to develop connections that will lead to revenue. Center directors had discussions with non-profits foundations and are scheduling additional meetings for FY 23.

RPSP Objective: 4.2: Develop robust network for cross-disciplinary faculty and staff engagement.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures:</b>												
1	Transdisciplinary roadmap teams	N/A	N/A	2	4	NA	NA	N/A	6	6	4	The Center continues to support exiting roadmap teams and is organizing new teams. Two teams have been identified for development in FY 23. Four teams have completed roadmaps and have received external funds to continue on some aspects of their roadmap. Two teams completed their roadmaps but have yet to receive external funding.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments			
<b>Revenue and Transfers</b>							
<b>Beginning Fund Balance</b>	\$ 80,517.00	\$ (11,650.00)	\$ 68,867.00				
<b>Appropriations</b>							
Federal		\$ -					
State plus Tobacco Settlement Fund	\$ 320,000.00	\$ -	\$ 320,000.00				
Local		\$ -					
<b>Total Appropriations</b>	\$ 320,000.00	\$ -	\$ 320,000.00				
<b>Grants and Contracts</b>							
Federal		\$ -					
State		\$ -					
Local		\$ -					
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -				
<b>Private Gifts, Grants and Contracts</b>		\$ -					
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -					
<b>Tuition and Fees</b>		\$ -					
<b>Endowment</b>		\$ -					
<b>Sales and Services</b>		\$ -					
<b>Other Sources - Detail in Comments</b>		\$ -					
<b>Total Revenues</b>	\$ 320,000.00	\$ -	\$ 320,000.00				
<b>Transfers (to) from</b>							
Instruction and General		\$ -					
Student Social and Cultural		\$ -					
Research		\$ -					
Public Service		\$ -					
Internal Service		\$ -					
Student Aid		\$ -					
Auxiliary Enterprises		\$ -					
Athletics		\$ -					
Independent Operations		\$ -					
Capital Outlay		\$ -					
Renewal and Replacement		\$ -					
<b>Total Transfers</b>	\$ -	\$ -	\$ -				
<b>Expenses</b>							
	FY23 FTE		Change FTE		FY24 FTE		
Faculty Salaries	0.87	\$ 75,000.00	(0.00)	\$ -	0.87	\$ 75,000.00	
Professional Salaries	0.40	\$ 25,000.00	(0.00)	\$ -	0.40	\$ 25,000.00	
Other Staff Salaries		0.00	\$ -	\$ -		0.00	
Student Salaries (GA/TA)	1.76	\$ 55,000.00	(0.40)	\$ -	1.36	\$ 55,000.00	
Other Salaries		0.00	\$ -	\$ -		0.00	
<b>Total All Salaries</b>	3.03	\$ 155,000.00	-0.40	\$ -	2.63	\$ 155,000.00	
Fringe Benefits		\$ 59,650.00		\$ -		\$ 59,650.00	
Travel		\$ 5,000.00		\$ -		\$ 5,000.00	
Utilities				\$ -			
Institutional Support Charges		\$ 12,000.00		\$ -		\$ 12,000.00	
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 100,000.00		\$ (11,650.00)		\$ 88,350.00	
Equipment				\$ -			
Other Expenditures				\$ -			
<b>Total Expenditures</b>	3.03	\$ 331,650.00	-0.40	\$ (11,650.00)	2.63	\$ 320,000.00	
<b>Ending Fund Balance</b>		\$ 68,867.00		\$ -		\$ 68,867.00	



# Teacher Pipeline Initiative

2022

Title: Teacher Pipeline

FY23 Actual: \$250,000

FY24 Request: \$250,000

The objective of the New Mexico Teacher Pipeline Initiative (NMTPI) is to systematically and significantly reduce the number of educator vacancies in high-needs areas throughout the state through targeted efforts in recruitment, preparation, and retention.

*The NMTPI will accomplish this vision by housing and facilitating the following three program tracts:*

**Tract 1: Recruitment:** recruiting new, diverse candidates into the teaching profession

**Tract 2: Preparation:** preparing highly qualified educators to enact culturally and linguistically responsive curricula

**Tract 3: Retention:** retaining existing educators and improving pedagogical practices.

The NMTPI aims to recruit, prepare, and retain for New Mexico a highly qualified, justice-oriented, historically underrepresented pipeline of educators who are equipped with the theoretical knowledge, cultural competency, and practical applications necessary to provide New Mexico students with quality educational experiences and successful academic and professional outcomes.

## Budget

**\$40,816 Faculty Salaries:** Funds will support faculty salaries at NMSU to oversee the research associated with the NM Teacher Pipeline program.

**\$40,816 Professional Salaries:** Funding will be used to provide stipends for school district administrations, district leaders, and faculty in other higher education teacher preparation programs.

**\$16,236 Support Staff Salaries:** The funds will cover part-time administrative assistants to help coordinate the various tracks, process hires/stipends, schedule, and other related duties.

**\$39,763 Graduate Assistants:** Funds will support two graduate students for 20 hours a week to work on the initiative, help with research components, data collection, and writing research reports.

**\$22,279 Fringe Benefits:** Total amount covers fringe for faculty salaries, professional salaries, support staff salaries, and graduate assistants.

**\$10,000 Travel:** Will be used for the PI and faculty travel to school districts and other teacher preparation programs throughout the state.

**Other Supplies and Expenses \$70,000**



## Key Project Objectives

**Research:** NMTPI will support New Mexico school districts, communities, and educators, along with NMSU faculty, graduate students, and stakeholders to collaboratively examine issues related to teacher recruitment, preparation, and retention in the state.

**Public Service:** For years the state of New Mexico has experienced an increasingly challenging teacher shortage throughout the state, particularly in rural and high needs areas. If the aims of this program are realized, more individuals will choose to become educators in New Mexico, reducing the number of educator vacancies and ensuring a brighter set of educational and professional outcomes and social mobility.

**Teaching:** The preservice training, licensure coursework, and educator preparation for New Mexico's teachers will be enhanced via multiple undergraduate and graduate pathways at NMSU. The grant provides opportunities for school district leaders and teacher preparation programs to collaborate to ensure curriculum and training standards are preparing teachers for today's classroom environment.

## Tract 1: Recruitment

Tract 1 focuses on providing access to the teaching profession and attracting new, diverse preservice teachers into our educator preparation programs at NMSU.

Teacher vacancies have been an ongoing problem in the state over the past several years. The 2021 New Mexico Educator Vacancy report indicated that the number of teacher vacancies in public schools rose from 571 in 2020 to just more than 1,000 in 2021 (<https://alliance.nmsu.edu/publications/2021-New-Mexico-Educator-Vacancy-Report.pdf>).

These vacancies are further compounded by NM workforce solutions 2018-2028 job growth expectations. Specifically, NM workforce solutions predict that the number of education positions will grow by over 2,500 between 2018 and 2028. Given these projected trends in teacher vacancy totals, the state needs to take immediate and sustained action to expand its teacher pipeline. In response, NMSU will work with our increasing number of partnering school districts throughout the Southern region of the state to understand the precise needs across the region.

Recruiting efforts will ensure that NMSU not only addresses New Mexico's teacher shortage but does so in a way that is representative and responsive to the demographics and contexts of our state's population.

## Tract 2: Preparation

Tract 2 focuses on enhancing and enriching the preservice training, licensure coursework, clinical experiences, and teacher competencies of new educator majors in our educator preparation programs. Our educator preparation standards and practices will be directly informed initially by the work completed within Tract 1, by understanding the complex vacancy needs at district levels in terms of desired specialized skills, professional aptitudes, and educator dispositions; our programmatic decisions will be research-based and responsive to our partners.

Efforts within Tract 2 will be geared toward solidifying our preparation programs through collaborative research and scholarly activities aligned with district vacancies so that new teachers in the pipeline are uniquely suited to provide immediate impact for classrooms throughout the region.

Within our state-accredited and nationally accredited licensure programs, NMSU utilizes research to prepare teachers to excel in several areas critical to New Mexico schools, such as working with English language learners, promoting bilingual education, celebrating multicultural education, and implementing effective instruction using technology. Tract 2 creates research clusters through which NMSU faculty will collaborate with district and community partners to enhance our programming across multiple stages, including introductory coursework, subject areas, practicum placements, and student teaching interactions.

## Tract 3: Retention

Tract 3 will focus on retaining existing educators in high-needs areas across Southern New Mexico. Tract 3 supports ensuring that these efforts in enhancing our teacher pipeline are successful and sustainable.

Discussions surrounding the teacher shortage often highlight barriers that prevent potentially interested preservice candidates from pursuing careers in education; equal attention must be paid to factors contributing to educators leaving the profession. Teacher attrition criteria, societal conditions, workforce standards, policy mandates, media narratives, school-community relationships influence teachers' decisions to leave the profession. Identifying, understanding, and mediating these complex factors are crucial to approaching the educator retention issue in New Mexico. In continued collaboration and connectivity with our district partners, Tract 3 will establish a familiar road map of partnership, whereby NMSU will utilize a variety of methodologies and instruments to clearly understand the kinds of retention issues our districts see playing out in their buildings and communities, all of which may be collectively contributing to educator vacancies. Establishing the baseline data at the district level will then transition to efforts to increase retention that are short-term and long-term. Short-term responses to retention issues will focus on immediate and impactful professional development that NMSU can provide for school districts. While our mission is to serve our partnering districts with educator preparation programming, we also want to be their most vital and trusted source for continued excellence and training.

Individual districts are likely to highlight specific issues they are observing and respondent strategies that can be pursued to retain their teachers. These aspects may include writing instruction, STEM enrichment, lesson planning workshops, classroom management approaches, family and community literacy, and more.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Teacher Pipeline Initiative

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$250,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    \$250,000

Type of Project (X for Type)			
Research <input checked="" type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	Click or tap here to enter text.
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**2. Project Description / Executive Summary:**

The overarching objective of the New Mexico Teacher Pipeline Initiative (NMTPI) is to systematically and significantly reduce the number of educator vacancies in high-needs areas throughout the state through targeted efforts in recruitment, preparation, and retention. The NMTPI will accomplish this vision by housing and facilitating the following three program tracts: Tract 1) Recruitment: recruiting new, diverse candidates into the teaching profession; Tract 2) Preparation: preparing highly qualified educators to enact culturally and linguistically responsive curricula; and Tract 3) Retention: retaining existing educators and improving pedagogical practices. These aims will be met through collaborations with our partnering school districts and community organizations throughout the Southern New Mexico and Western Texas regions. The initiative will prioritize public service, educational outreach, scholarship, and creative activity designed to address the specific education workforce needs and precise contexts of

## **2. Project Description / Executive Summary:**

individual school campuses and communities. RPSP funding will provide support for these efforts by affording the NMTPI opportunities to engage in collaborative data collection and analysis, which will illustrate exact educator vacancy needs within local schools, generate responsive recruiting measures, identify and carry out appropriate redesigns in licensure coursework, and sustain a robust a diverse teacher workforce.

Tract 1 Recruitment will focus on providing access to the teaching profession and attracting new, diverse preservice teachers into our educator preparation programs at NMSU. Teacher vacancies have been an ongoing problem in the state over the past several years. The 2021 New Mexico Educator Vacancy report indicated that the number of teacher vacancies in public schools rose from 571 in 2020 to just more than 1,000 in 2021 (<https://alliance.nmsu.edu/publications/2021-New-Mexico-Educator-Vacancy-Report.pdf>). These vacancies are further compounded by NM workforce solutions 2018-2028 job growth expectations. Specifically, NM workforce solutions predict that the number of education positions will grow by over 2,500 between 2018 and 2028. Given these projected trends in teacher vacancy totals, the state needs to take immediate and sustained action to expand its teacher pipeline. In response, NMSU will work with our increasing number of partnering school districts throughout the Southern region of the state to understand the precise needs across the region. Identifying high-needs areas in grade levels, subject matter disciplines, and licensure expertise will create an intentional framework through which purposeful, data-driven recruiting can occur. Recruiting activities will begin in K-12 settings at local levels by contributing to districts' pre-existing career-prep pathways and exploratory courses designed to promote the teaching profession to K-12 students interested in pursuing careers in education. This outreach will include a suite of information about the opportunities and benefits of becoming an educator, various developmental and disciplinary specializations available within the teaching profession, and numerous career advancement and professional development opportunities. NMSU will then assist each district with expanding those recruiting measures on a community-wide scale through education fairs and marketing campaigns publicizing educator workforce opportunities for community members, school district personnel (i.e., grow your own scholarship), business sectors, civic leaders, and more. This collaboration will position NMSU as the ideal educator preparation program to help districts address their contextualized teacher vacancies because we will be actively recruiting new education majors into demonstrated high-needs areas and increasing enrollment across our licensure pathways. Helping districts attract new teachers who are racially and socially representative of the communities they serve is a critical component within Tract 1, especially given that nearly 60% of K-12 educators self-report as White despite much higher percentages of students and families who are Hispanic and/or Latinx (<https://newmexicoschools.com/districts>). Tract 1 Recruiting efforts will ensure that NMSU not only addresses New Mexico's teacher shortage but does so in a way that is representative and responsive to the demographics and contexts of our state's population.

Tract 2 Preparation will focus on enhancing and enriching the preservice training, licensure coursework, clinical experiences, and teacher competencies of new educator majors in our educator preparation programs. Our educator preparation standards and practices will be directly informed initially by the work completed within Tract 1, by understanding the complex vacancy needs at district levels in terms of desired specialized skills, professional aptitudes, and educator dispositions; our programmatic decisions will be research-based and responsive to our partners. NMSU offers numerous pathways and specializations across educator preparation, including licensure and certification tracts at the undergraduate level for bachelor's degrees and minor programs, as well as a plethora of offerings at the

## **2. Project Description / Executive Summary:**

graduate level, including endorsements, graduate certificates, master's degrees, and doctoral degrees. Efforts within Tract 2 Preparation will be geared toward solidifying our preparation programs through collaborative research and scholarly activities to align with district vacancies so that new teachers in the pipeline are uniquely suited to provide immediate impact for classrooms throughout the region. Within our state-accredited and nationally accredited licensure programs, NMSU utilizes scholarship to prepare teachers to excel in several areas critical to New Mexico schools, such as working with English language learners, promoting bilingual education, celebrating multicultural education, and implementing effective instruction using technology. Helping preservice educators attain best practices in teaching and supporting them as they cultivate pedagogies for optimum learning scenarios is a steadfast benchmark in NMSU programs. Our success depends on cutting-edge research methods and access to the most current and contextualized populations and settings. This spirit of scholarly discovery will drive. Tract 2 Preparation creates research clusters through which NMSU teacher education faculty will collaborate with our district and community stakeholders to enhance our programming across multiple stages, including introductory coursework, subject areas, practicum placements, student teaching interactions, and more. NMSU faculty members' research and areas of scholarly expertise are diverse, interdisciplinary, and in service to the daily challenges experienced by districts, schools, teachers, and students. Research clusters spanning numerous specialty areas in the field of education will be created via the underlying theme of inclusivity, allowing for rich collaboration between district leaders, classroom teachers, support staff, graduate students, state-level representatives, and more. Faculty are already engaged in innovative research areas that will impact the clusters within Tract 2, including the explorations of remedies requested in the Yazzie/Martinez v. State of New Mexico Decision, New Mexico's Tribal School Framework, New Mexico's Year of Literacy, New Mexico's new Social Studies Standards, educational forums on Critical Race Theory, Culturally and Linguistically Responsive Curricula, and Structured Literacy. These research collaboratives with partnering school districts will allow NMSU to enhance its educator preparation programs to align with district needs, reflect state-level initiatives, and contribute to a meaningful and sustainable New Mexico teacher pipeline.

Tract 3 Retention will focus on retaining existing educators in high-needs areas across Southern New Mexico. Tract 3 creates spaces and supports for ensuring that these efforts in enhancing our teacher pipeline are successful and sustainable. While investigations and subsequent discussions surrounding the teacher shortage often highlight barriers that prevent potentially interested preservice candidates from pursuing careers in education, equal attention must be paid to factors contributing to educators leaving the profession. Teacher attrition criteria, societal conditions, workforce standards, policy mandates, media narratives, school-community relationships, and more contribute to myriad reasons for teachers deciding to leave the field. Identifying, understanding, and mediating these complex factors are key to approaching the educator retention issue in New Mexico. In continued collaboration and connectivity with our district partners, Tract 3 will establish a familiar road map of partnership, whereby NMSU will utilize a variety of methodologies and instruments to clearly understand the kinds of retention issues district see playing out in their buildings and communities, all of which may be collectively contributing to educator vacancies. Establishing the baseline data at the district level will then transition to efforts to increase retention that are short-term and long-term. First, short-term responses to retention issues will focus on immediate and impactful professional development that NMSU can provide for school districts. While our mission is to serve our partnering districts with educator preparation programming, we also want to be their most vital and trusted source for continued excellence and training. Individual districts

## 2. Project Description / Executive Summary:

are likely to highlight specific issues they are observing and respondent strategies that can be pursued to retain their teachers. These aspects may include writing instruction, STEM enrichment, lesson planning workshops, classroom management approaches, family and community literacy, and more. NMTPI will leverage programmatic components and research cluster topics to provide data-driven professional development modules designed to increase the likelihood that teachers will continue in their position year after year. Currently, many of our partnering districts have already reached out to NMSU for ideas about coordinating professional development activities for their teachers, and many districts do not presently rely on a standardized set of professional practices. Scripted modules, on-off workshops, micro-credentials, on-demand training, and more have all been suggested by our partners. Tract 3 will provide these retention supports in a systematic, effective manner. Second, long-term responses to retention issues will focus on broader-scale topics and challenges to retaining educators. Many of our partnering districts experience similar retention issues that transcend individual communities.

Programmatic and research cluster efforts within Tract 3 Retention will seek to understand and address these larger retention challenges from a statewide perspective. Interdisciplinary initiatives targeting best practices and policies will be devised surrounding mental health advocacy, trauma-informed pedagogies, racial and social justice education, critical digital literacies, social and emotional learning, physical health campaigns, and more. Educator retention will be studied and addressed holistically, with active engagement from state leaders, school district administrators, educational institutions, and community organizations for continued collaboration on improving educational outcomes in New Mexico. NMSU will harness the power of the Land-Grant, Hispanic-Serving, Minority-Serving Institutional charge to leverage existing programs and partnerships across the School of Teacher Preparation, Administration, and Leadership within the College of Health, Education, and Social Transformation to carry out critical missions in teacher retention for New Mexico.

The NMTPI aims to recruit, prepare, and retain for New Mexico a highly qualified, justice-oriented, historically underrepresented pipeline of educators who are equipped with the theoretical knowledge, cultural competency, and practical applications necessary to provide New Mexico students with quality educational experiences and successful academic and professional outcomes. The NMTPI's three tracts above address significant issues and objectives at the heart of New Mexico school and community needs. The program overall situates NMSU as a state leader in education and advocacy.

## 3. Budget Narrative (Overview only – Relates to separate Budget Form)

The New Mexico Teacher Pipeline Initiative (NMTPI) is requesting recurring funding of \$250,000, which will cover faculty salaries, staff, graduate research assistants, professional salaries, and other expenses for operations to Tracts 1) Recruit new, diverse New Mexico educators into the profession; 2) Prepare highly qualified New Mexico teachers for culturally and linguistically responsive curricula; and 3) Retain historically underrepresented educators in high needs areas across New Mexico.

**\$40,816 Faculty Salaries:** Funds will support faculty salaries at NMSU to oversee the research associated with the NM Teacher Pipeline program. Specifically, funds will cover course buyouts and summer funding to enable faculty to assess state-wide needs and meet with other teacher education programs through the state to develop curriculum standards for teacher educator programs.

**\$40,816 Professional Salaries:** Funding will be used to provide stipends for school district administrations, district leaders, and faculty in other higher education teacher preparation programs. The funds will support these

### 3. Budget Narrative (Overview only – Relates to separate Budget Form)

professionals work to assist with the state needs assessment, curriculum discussions, retention barriers, and development policy to reduce the teacher shortage in the state.

**\$16,236 Support Staff Salaries:** The funds will cover part-time administrative assistants to help coordinate the various tracks, process hires/stipends, schedule, and other related duties.

**\$39,763 Graduate Assistants:** Funds will support two graduate students for 20 hours a week to work on the initiative, help with research components, data collection, and writing research reports.

**\$22,279 Fringe Benefits:** Total amount covers fringe for faculty salaries, professional salaries, support staff salaries, and graduate assistants.

**\$10,000 Travel:** Will be used for the PI and faculty travel to school districts and other teacher preparation programs throughout the state.

**Other Supplies and Expenses \$70,000:** Funds will be used to purchase food for the initiatives meetings and at outreach events (i.e., teacher fair). \$10,000 Postage: Funds will be used to pay for advertising mailers and web fees. \$50,000: will be used to develop video and digital advertisements throughout the state. \$10,000: Will pay to print and re-produce program information for teacher education programs.

### 4. Program Mission (include population served, other demographic info):

The primary mission of the New Mexico Teacher Pipeline Initiative (NMTPI) is to address educator vacancies and combat high needs teacher shortages across the state of New Mexico. The NMTPI will accomplish this goal via the following three primary tracts: Tract 1 Recruitment will collaborate with school district leaders on identifying precise, contextualized areas of need across specific grade levels, subject areas, and specializations with recruiting measures, marketing campaigns, education fairs, and outreach efforts to publicize benefits and opportunities within the teaching profession and attract new preservice teachers into NMSU educator preparation programming. Tract 2 Preparation will leverage scholarship and creative activity to construct interdisciplinary research clusters designed to address demonstrated district needs in NMSU's licensure coursework and programmatic competencies, ensuring that new teachers are highly qualified and uniquely trained to impact our partnering districts using cutting-edge best practices and culturally and linguistically responsive pedagogies in teaching and learning. Tract 3 Retention will prioritize local and statewide initiatives and professional development strategies to understand and expand New Mexico teacher retention at local and state levels.

### 5. Key Project Objectives (Overview only – relates to separate performance measure form)

**Research:** New Mexico Teacher Pipeline Initiative (NMTPI) will support New Mexico school districts, communities, and educators, along with NMSU faculty, graduate students, and stakeholders to collaboratively examine issues related to teacher recruitment, preparation, and retention in the state. Interdisciplinary methodologies of collaborative research among educators and educational leaders will evaluate preservice training, school district needs, and alignment with educator preparation program standards and state policies. Findings and results from these assessments will enable the state to better understand current conditions, challenges, expectations, and best practices for new teachers entering New Mexico classrooms. Subsequently, this data will be used to devise coursework and programming for preservice teachers and provide professional development opportunities designed to retain highly qualified New Mexico educators in high needs areas across the state.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

**Public Service:** For years the state of New Mexico has experienced an increasingly challenging teacher shortage throughout the state, particularly in rural and high needs areas. If the three aims of this program (recruitment, preparation, retention) are realized, more individuals will choose to become educators in New Mexico, effectively reducing the number of educator vacancies and ensuring a brighter set of educational and professional outcomes and social mobility. Ultimately, the citizens of New Mexico will benefit from having highly qualified, culturally and linguistically responsive educators preparing the next generation of the state’s workforce. NMSU faculty who contribute to the research clusters will provide interdisciplinary expertise and areas of specialization which are poised to impact an array of different aspects that affect the education of learners throughout the state. Students and families have various critical needs at school beyond curriculum and instruction, and the NMTPI will create greater understanding and actionable intent around socioeconomic issues, which are of equal importance to traditional components of age and grade-level appropriate content. Mental health, trauma, food and housing insecurity, access to healthcare, drug addiction, crime, and discrimination based on race, gender, and sexual orientation represent only a handful of the factors contributing to challenges for our students. All the while, the state’s workforce continues to suffer from teacher attrition and educator vacancies which are compounded by many factors. The NMTPI will address these needs across New Mexico’s educational communities and situate NMSU as a state leader in education and advocacy.

**Teaching:** The preservice training, licensure coursework, and educator preparation for New Mexico’s teachers will be enhanced via multiple undergraduate and graduate pathways at NMSU. The grant provides opportunities for school district leaders and teacher preparation programs to coordinate their efforts to ensure curriculum and training standards are preparing teachers for today’s classroom environment. Successful training will enable entry-level teachers to be more effective instructors and be retained in the profession.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Top objectives for the New Mexico Teacher Pipeline Initiative (NMTPI) for FY23:

- Nurture and expand current formal partnerships with school districts in Southern New Mexico and West Texas regions, while continuing to establish new formal partnerships with school districts and community organizations across the region.
- Identify district contacts and initiative outreach and communication efforts to launch the new program.
- Plan initial data-gathering phases and survey instruments to understand educator vacancies at local, contextualized levels.
- Develop media content to promote the teaching profession and NMSU licensure pathways.
- Establish recruitment events to promote the profession of teaching and NMSU educator preparation programs.
- Assess district level needs on teacher preparation and retention issues.
- Plan for district gatherings, education fairs, marketing campaigns, and media tactics.
- Initiative goals specific to each tract (Recruitment, Preparation, Retention)
- Promote and advertise faculty participation in the Research Clusters (Trac 2: Preparation).
- Hire graduate students, faculty, and other professionals.

Challenges for FY23:

- Coordinating teacher preparation units and school districts to assess issues related to teacher preparation and retention.
- Ensuring that researchers are able to access school districts to conduct needs assessments.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

- Establishing research protocols to accurately assess issues related to teacher preparation and retention in the state.
- Getting buy in from regional and state school districts.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The New Mexico Teacher Pipeline Initiative (NMTPI) will provide statewide impact, address a number of the Governor’s Initiatives, and produce important student outcomes in New Mexico. The NMTPI houses and pursues three primary tracts: 1) Recruitment, 2) Preparation, and 3) Retention.

Tract 1 Recruitment will identify district needs in addressing educator vacancies and areas of high need across individual school community campuses. Understanding educator vacancies on a nuanced level will allow the NMTPI to reduce the number of teacher vacancies throughout the state in a purposeful and systematic manner. The number of teacher vacancies in public schools rose from 571 in 2020 to just more than 1,000 in 2021 (<https://alliance.nmsu.edu/publications/2021-New-Mexico-Educator-Vacancy-Report.pdf>). The state has implemented various funding initiatives and legislated various programs which are going to be key contributors to improved outcomes, such as Teacher Residency funding, salary increases, alternatives to licensure exams, and more. Using these models as a framework, NMSU will harness the power of our local partnerships to deliver new teachers for school districts in high need who are diverse, culturally and linguistically responsive, and highly qualified to provide immediate impact in specific locations across the state. Our efforts in recruiting will ensure that New Mexico’s teacher pipeline is robust and sustainable, and that historically underrepresented educators have access to the teaching profession. Student outcomes in K-12 settings will be improved as a result of experiencing the curriculum and instruction of highly qualified, socially responsive educators throughout their schooling. And in our educator preparation programs at NMSU, student outcomes are successful in that new teachers will graduate from their programs and enter the vital workforce prepared to impact lives into the future.

Tract 2 Preparation will leverage scholarship and creative activity to ensure that NMSU’s educator preparation programs adequately prepare new teachers to address demonstrated district level needs and contexts. Interdisciplinary research methodologies will be used in the creation of Research Clusters designed to take action on a number of New Mexico’s key education and initiatives and policy platforms, including the Yazzie/Martinez v. State of New Mexico Decision, Tribal School Framework, Year of Literacy, Structured Literacy, new Social Studies Standards, Culturally and Linguistically Responsive Curricula, Critical Race Theory, and more. Programmatic decisions such as offerings and redesign will be directly informed by the needs of districts, helping to prepare teachers for best practices in areas vital to New Mexico students and families, such as, English language learners, bilingual education, multicultural education, social and racial justice education, trauma-informed pedagogy, effective teaching with technology, and more. Our consortium with districts throughout the region will ensure that our partners can rely on NMSU for optimum educator preparation programming to meet their unique vacancy needs. By increasing the degree of program alignment with district needs in light of best practices and cutting-edge research, educator preparation student outcomes at NMSU will improve drastically. In turn, impactful educators entering K-12 classrooms will then help students in New Mexico achieve at higher rates as well.

Tract 3 Retention will utilize both a short-term and a long-term vision to retain educators across the state. New Mexico’s teacher shortage is multifaceted, and while numerous efforts are underway to help educator preparation programs increase the numbers of new teachers entering the profession, equal attention must be paid to the issue of teacher retention. Multiple societal factors have contributed to teachers leaving the profession across the state,

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

especially in some of our highest-need and rural areas. To immediately help our partnering districts address issues in teacher retention, the NMTPI will collaborate with district leaders on impactful professional development offerings designed to support current teachers to grow and develop within the district. As each district will have unique priorities related to keeping teachers on staff, our supports can be equally precise and impact student outcomes through a variety of instructional means. To plan for prolonged intervention on larger issues related to teacher retention, the NMTPI will leverage partnerships on a statewide level to ensure that teachers have proper support and training regarding ubiquitous challenges to the teaching profession such as mental health advocacy, food and housing insecurity, access to healthcare, and more.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The teacher pipeline program currently does not receive external awards or private donations. To this point the program has not sought out funding from other sources

**9. Accomplishment/ Highlights (bullet form)**

N/A

Medical Projects	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Teacher Pipeline Initiative</p> <p><b>Contact Name:</b> Phillip Post</p> <p><b>Contact Email:</b> <a href="mailto:ppost@nmsu.edu">ppost@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="background-color: yellow; border: 1px solid black; padding: 5px; text-align: center;"><b>\$250,000</b></p>
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**NMSU LEADS 2025 Goal:** **1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** To reduce the number of teacher vacancies within the state, by increasing the number of educator majors (graduate and

<b>RPSP Objective 1:</b> Increase the number of Education majors and students in teacher licensure pathways to fill teacher vacancies		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Increase number of undergraduate student education majors	547	560	With increases in teacher salary we believe more undergraduate students will be interested in becoming a teacher. These opportunities will be advertised.
2	Increase number of graduate student education majors	320	335	It is anticipated that with the increased salaries more teachers may seek out a Master's degrees to enhance pay and other professionals may seek out an alternative licensure pathway.
3	Increase number of students accepted into the teacher education preparation program, which leads to licensure	176	190	With the removal of the Praxis exam, it is anticipated that more students will be interested in becoming a teacher will be accepted into the teacher education preparation program.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Teacher Pipeline Initiative	<b>FY24 Request</b>
<b>Contact Name:</b> Phillip Post	<b>\$250,000</b>
<b>Contact Email:</b> <a href="mailto:ppost@nmsu.edu">ppost@nmsu.edu</a>	

**NMSU LEADS 2025 Goal: 2 - Elevate Research and Creativity**

**RPSP Goal:** Create research clusters to examine factors contributing to teacher vacancies within our region

<b>RPSP Objective 1:</b> Understanding the complex vacancy needs at district levels in terms of desired specialized skills, professional aptitudes, and education dispositions needed of new educators		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Develop research cluster to examine issues related to teacher vacancies and retention issues	1	2	Currently, no research clusters are established to examine factors related to teacher vacancies. Clusters will be established with current NMSU faculty and local school districts.
2	Develop research partnerships with local school districts in Southern NM to examine issues related to retention and preparation of future educators	3	6	Given the need to retain and recruit teachers into the profession we plan on forming established partnerships with all school districts in Southern NM to examine needs of each school districts, which will inform our instruction.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<b>RPSP Title:</b> Teacher Pipeline Initiative	<b>FY24 Request</b>
<b>Contact Name:</b> Phillip Post <b>Contact Email:</b> <a href="mailto:ppost@nmsu.edu">ppost@nmsu.edu</a>	<b>\$250,000</b>

**NMSU LEADS 2025 Goal:** 3 - Amplify Extension and Outreach

**RPSP Goal:** Advertise to our local community the benefits of becoming a teacher and offer training to existing teachers.

RPSP Objective: Recruit new, diverse candidates into the teacher profession and retain existing teachers.		Measure Targets		Comments <i>(Briefly state your case)</i>
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Hold teacher fairs throughout Southern NM to promote the teaching profession	3	6	Events will be held throughout Southern NM to promote pathways (undergraduate and alternative licensure) into the teaching profession. Benefits of entering the profession will be highlighted.
2	Direct mailers will be sent out to students and professional interested in teaching	1,000	1,500	Direct mailers with information on how to become a teacher will be sent out to students who have expressed an interested in an educational pathway at NMSU.
3	Commericals will be developed to target adults and studnets in Southern NM and West Texas to become NM teachers	2	4	Working with MARCOM, specific commericals will target individuals who are interested in becoming NM educators. These will be tailored to our region's demographics.
4	Develop professional development modules on NMSUO	0	4	After the school district needs-assessment is conducted in year one (FY 23), professional development modules will be developed through NMSUO to offer retraining opportunities for existing teachers in our local school districts throughout Southern NM.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:

Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
Beginning Fund Balance		\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 250,000.00	\$ -	\$ 250,000.00	
Local		\$ -		
<b>Total Appropriations</b>	<b>\$ 250,000.00</b>	<b>\$ -</b>	<b>\$ 250,000.00</b>	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	<b>\$ 250,000.00</b>	<b>\$ -</b>	<b>\$ 250,000.00</b>	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Expenses</b>				
	<b>FY23</b>	<b>Change</b>	<b>FY24</b>	
	<b>FTE</b>	<b>FTE</b>	<b>FTE</b>	
Faculty Salaries	0.85 \$ 40,816.00	(0.38) \$ -	0.47 \$ 40,816.00	
Professional Salaries	0.79 \$ 40,816.00	(0.14) \$ -	0.65 \$ 40,816.00	
Other Staff Salaries	0.58 \$ 16,326.00	(0.10) \$ -	0.48 \$ 16,326.00	
Student Salaries (GA/TA)	1.64 \$ 39,763.00	(0.65) \$ -	0.99 \$ 39,763.00	
Other Salaries		0.00 \$ -	0.00	
<b>Total All Salaries</b>	<b>3.86 \$ 137,721.00</b>	<b>-1.28 \$ -</b>	<b>2.58 \$ 137,721.00</b>	
Fringe Benefits	\$ 22,279.00	\$ -	\$ 22,279.00	
Travel	\$ 10,000.00	\$ -	\$ 10,000.00	
Utilities		\$ -		
Institutional Support Charges		\$ -		
Plant Operation and Maintenance Charges		\$ -		
Supplies and Expenses	\$ 20,000.00	\$ -	\$ 20,000.00	
Equipment		\$ -		
Other Expenditures	\$ 60,000.00	\$ -	\$ 60,000.00	
<b>Total Expenditures</b>	<b>3.86 \$ 250,000.00</b>	<b>-1.28 \$ -</b>	<b>2.58 \$ 250,000.00</b>	
<b>Ending Fund Balance</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	



FY23 Actual: \$N/A    FY24 Request: \$494,092    \$ Change: \$N/A

The Doña Ana Community College (DACC) Education Program Faculty Development and Retainment Project focuses on three major goals; faculty recruitment and retainment, faculty development, and pre-teacher candidate development; thus, addressing the aspects of New Mexico’s current critical educational needs for increasing the number of licensed educators, increasing training in relevant multicultural and linguistic teaching strategies, and retention of quality educators. Currently there are over 1,000 teacher education vacancies in the state of New Mexico. This project aligns with NMSU Leads 2025, New Mexico Governor Lujan Grisham’s goal of “making our education system a model for the rest of the country” (NM Public Education Department, Discussion Draft Action Plan, 2022), and NM Public Education Department’s Comprehensive Strategic Plan 2022 initiatives.



**Doña Ana Community College (DACC) – Educator Pipeline**

DACC plays a key role in being a teacher pipeline for pre-teacher candidates to professional educators. Students may complete an Associate Degree in Education or Early Childhood and enter the work force immediately as a paraprofessional in public schools or child care professional. Students may transfer to NMSU or any other four-year institution. Upon completion of a Bachelor’s degree

in Education or Early Childhood, pre-teacher candidates will be able to enter the work force as licensed educators in public schools in New Mexico where the need for teachers has reached a critical level, particularly in bilingual education.

**DACC Addresses NM Public Education Department Strategies**

DACC plays a key role in the overall success of two strategies of the New Mexico Public Education



Department Comprehensive Strategic Plan 2022 including: High Quality Teacher Preparation and Growth-oriented Professional Learning. DACC Education faculty will participate in professional development trainings and attend conferences focused on:

- ❖ teaching multicultural and linguistically relevant teaching strategies
- ❖ strategies to address diversity, equity, and inclusion
- ❖ effective strategies to increase engagement in online environments
- ❖ virtual learning experience development

Through the addition of HyFlex teaching technology, integration of iPads in the classroom, and increased professional development, DACC faculty are committed to providing quality instruction for pre-teacher candidates through a rich and comprehensive approach to curriculum focused on engagement.

## Pre-teacher Candidates embark on a Post-Pandemic Educational Journey

COVID-19 had a profound effect on the way educators approach classroom learning; technology became a primary method for delivery of instruction. Pre-teacher candidates must not only be proficient in teaching subject matter, they must be proficient in delivering instruction via technology. Pre-teacher candidates will be immersed in learning how to develop virtual learning experiences using iPads and software, and using the most effective strategies for online engagement to transition them from students using technology to educators teaching with technology.



### EARLY CHILDHOOD EDUCATION

**ASSOCIATE DEGREE:**

- Early Childhood Education

**CERTIFICATES:**

- Early Childhood Development
- Early Childhood Education Administration



Education Department, 2800 Sonoma Ranch Blvd.,  
 MSC 3 DA, P.O. Box 30001, Las Cruces, NM 88003-8001  
 575-527-7629 or EducationProgramInfo@dacc.nmsu.edu



Each backpack will be customized for grade/age level of pre-teacher Practicum or Field Experience.

List of Items in Backpacks:

- ❖ School supplies (scissors, glue, markers, colored pencils, tape, crayons, etc.)
- ❖ Manipulatives
- ❖ Multiculturally and linguistically relevant books
- ❖ Motivational stickers

## Pre-Teacher Candidates Immersed in Multicultural and Linguistically Relevant Teaching Practices

DACC's continual commitment to prepare pre-teacher candidates for the changing landscape of New Mexico's educational system includes instruction and modeling of multicultural and linguistically relevant teaching strategies and pedagogy. Pre-teacher candidates learn best practices and are expected to integrate the strategies as they prepare lesson plans and learning experiences for their future classrooms. These strategies are woven into the curriculum in all Education and Early Childhood courses at DACC.

## DACC Leveling the Playing Field

March 1, 2022 - Governor Lujan Grisham signed a bill placing the value of educators in New Mexico at the forefront by increasing teacher salaries by almost 20%. This bill changes the landscape of education. However, the unintended consequence of this bill left teacher education faculty at DACC facing the dilemma of choosing to continue to teach pre-teacher candidates or return to the classrooms in public education and earn higher salaries. The DACC Education Department is seeking funding to address the salary inequity in order to recruit bilingual faculty and retain the highly qualified faculty in the Education and Early Childhood programs.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Doña Ana Community College (DACC) Education Program Faculty

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    494,092

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    [Click or tap](#)

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

[Click or tap here to enter text.](#)

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	<a href="#">Click or tap here to enter text.</a>
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**2. Project Description / Executive Summary:**

The DACC Education Program Faculty Development and Retainment Project focuses on the following goals, thus addressing aspects of New Mexico’s current educational needs: faculty retainment; faculty development; and development of pre-teacher candidates.

Faculty Retainment:  
 According to the 2021 New Mexico Educator Vacancy Report, there were 1,048 teacher educator vacancies across the state of New Mexico in August 2021 (Boren, 2021). In addition, between 2010 and 2018, the enrollment in New Mexico teacher preparation programs suffered a significant decline of 36% thus exasperating the shortage (Myers, 2022). While many factors have contributed to the decline of teachers in New Mexico, teacher pay has been cited as a critical reason for teachers relocating to other states and for students to choose other careers. In 2018/2019, the average teacher salary was \$47,826 in New Mexico, as

**2. Project Description / Executive Summary:**

opposed to the United States average of \$61,730, with a difference of \$13,904 annually (LANL Foundation, 2020). As a response to the ‘critical need’ for educators in New Mexico, Governor Michelle Lujan Grisham signed priority legislation addressing the low pay scales for public school educators in March 2022. The minimum salary for each Tier in the New Mexico Public School salary scale was raised by at least \$10,000 annually (Legislative Updates, 2022). The new tier system for New Mexico resulted in an approximately 20% increase for each professional tier level:

Three Tier Licensure System	Tier 1	Tier 2	Tier 3
Minimum Salary Levels	\$50,000	\$60,000	\$70,000

While this historic legislation addressed the critical need for salary increases for public school educators, this legislation created an inequity for educators at the college level. According to the United States Bureau of Labor Statistics (2022) Educational Instruction and Library Occupations category, educational instruction in the College, University, and Professional Schools grouping have an annual mean wage of \$87,210. In the Junior College grouping, the annual mean wage for educational instruction is \$78,940. The most current Entry level Faculty Salary Scale for DACC is \$44,481 as shown in the table below:

DACC Rank	AS	BA	MA	PHD
Instructor	\$41,881	\$43,081	\$44,481	\$46,081
Assistant Professor	\$44,466	\$45,666	*\$47,066	\$48,666
Associate Professor	\$47,205	\$48,405	\$49,805	\$51,405
Professor	\$50,110	\$51,310	\$52,710	\$54,310

*\*if the candidate has a minimum of 3 years as a full-time faculty member in higher education as per: Changes to DACC Entry Level Faculty Salary Scale and Hiring Offer Guidelines for FY 2019-20 Memorandum*

All Education full time faculty at DACC are either former public-school teachers or former teachers in child care agencies or child care facilities. The DACC Education Department has regularly recruited public school teachers and administrators for all full time and part time positions. The promotion of these hiring practices has been critical for aligning practical knowledge and theory; students benefit from having instructors who understand the practical issues facing educators in classrooms, provide real world experience to the teaching of theoretical concepts, and prepare students for teaching in classrooms in a state that is ranked low in education.

While the qualifications for teaching in higher education differ from the qualifications for public education, comparisons can be made based on minimum qualifications. In higher education, applicants for the Education Department at DACC, must have a minimum of a Masters degree in Education or related field and three years teaching experience in public school and/or teaching in an agency or center-based care setting. This would be comparable to a minimum requirement for a Tier 3 public school teacher based on prior experience. All faculty hired at DACC enter at the rank of Instructor or Assistant Professor (if the candidate has a minimum of 3 years as a full-time faculty member in higher education as per *Changes to DACC Entry Level Faculty Salary Scale and Hiring Offer Guidelines for FY 2019-20 Memorandum*). This discrepancy is a \$25,519 discrepancy from the New Mexico public school teacher salary tiers for teacher preparation faculty. Further, with promotion of to higher ranks, teacher preparation education faculty at DACC will have salaries that fall far below the annual mean wages in both Junior Colleges and College, University, and Professional Schools groupings. DACC cannot be competitive in attracting highly qualified candidates and retain faculty with this discrepancy within the state of New Mexico and with the national comparisons.

## **2. Project Description / Executive Summary:**

A portion of this project would be to provide supplemental compensation for each faculty member in the Education Department for a retention incentive. There are currently 4 faculty line positions, including one Department Chair, in the Education Department and the retention incentive would be \$30,000 per faculty and \$35,000 for the Department Chair. The incentive would be used to attract and retain highly qualified educators at DACC in order to maintain a high-quality Education Department that prepares highly sought-after pre-teacher candidates in New Mexico.

### **Faculty Development**

As a response to the 2018 Yazzie/Martinez vs. State of New Mexico decision, the New Mexico Public Education Department published a Discussion Draft Action Plan 2022 and a Comprehensive Strategic Plan 2022 that addressed this lawsuit. Five strategies were identified as necessary in New Mexico moving forward: 1. Recruitment; 2. High Quality Teacher Preparation; 3. Induction for Early Career Teachers; 4. Growth-oriented Professional Learning; and 5. Leadership Development for Principals, District Leaders, and School Boards. DACC plays a key role in assisting in the overall success of strategies 2 and 4 in New Mexico. The DACC Education Department must have highly trained faculty to provide a high-quality teacher preparation program to prepare students for the dynamic teaching environments found in New Mexico for children and youth age zero through grade 12. Faculty training in the following areas are critical for preparing students to meet the demands of being a teaching in New Mexico: multicultural and linguistically relevant teaching strategies and pedagogy; strategies to address diversity, equity, and inclusion in classrooms; virtual learning experience development; and effective teaching strategies to increase engagement in online environments. Faculty development will consist of attending trainings and conferences that focus on quality instruction. Faculty have expressed interest in attending the WIDA conference and Teaching Professors Conference as both conferences typically have focused sessions on the topics of interest. Other conferences could be substituted for these based on the annual conference topics which have not been announced for FY 2023-2024. Other training opportunities that are of interest are the Apple Teacher Trainings for Kinder through Grade 12 teachers through the Apple Teacher Learning Center. Faculty from Higher Education institutions may take the same training as an option to train future educators. The request for \$3000 per faculty in funds will allow faculty to select the best trainings and conferences for attendance.

As an outcome of increasing full time faculty professional development, it will be an expectation that all full-time faculty will mentor the part time faculty in the Education Department to ensure that the best teaching strategies and practices will be implemented in all classrooms. This will allow the Education Department to have trained faculty for all courses that reflect best practices based on the most current and up to date research. As a result, student instruction will be more aligned across courses and students will be able to learn from the teaching that is being modeled through high quality instruction.

Additionally, the Education Department would like to add three separate HyFlex mobile carts with MacBook Air laptops, webcams, tripods, and small docking stations to be utilized in the Education Department courses for teaching purposes. This HyFlex cart will allow faculty to record lessons presentations and to record pre-teacher student teaching demonstrations in the courses for analyses and feedback by instructors and peers. One mobile cart will be placed at a secondary campus as course offerings are expanded to other campuses. The cost of each mobile cart would be approximately \$1,500. The three mobile carts will be available for full-time and part-time faculty use in classrooms. Four MacBook Pro Laptops will be purchased for the full-time faculty members at a cost of \$2048 per laptop.

### **Teacher Preparation Candidate Development**

## **2. Project Description / Executive Summary:**

In the New Mexico Public Education Department Comprehensive Strategic Plan 2022, strategy 2. High Quality Teacher Preparation is a key strategy to build a foundation for a stronger educational system in New Mexico. Pre-teacher candidates must be prepared to meet the demands in education as a result of the COVID-19 pandemic. Shifts in online learning and virtual learning environments require new strategies to effectively navigate the integration of technology and learning spaces. Additionally, pre-teacher candidates must be prepared to teach in diverse multicultural and linguistic environments utilizing culturally relevant teaching strategies and materials. Practicum and Field Experience kits (backpacks) including school supplies, art supplies, motivational stickers, manipulatives, multicultural books, and STEM books will be created for pre-teacher candidates to utilize during their observations so students can create learning experiences in their field experience and practicum placements appropriate for age/grade level. The Practicum and Field Experience backpacks will be provided to students in their first Practicum or Field Experience course and will be theirs to keep upon completion of the series of Practicums and Field Experiences. This \$100 per student investment will allow students the opportunity to begin building materials for their future classroom experience and consumables may be utilized as needed as they prepare lessons and learning experiences for their Practicums and Field Experiences.

As a result of the demand for virtual learning in Kinder through Grade 12 as a primary mode of instruction or as a secondary supplement to instruction, integration of iPads in college courses for pre-teacher candidates will allow them to become highly familiar with iPads and software and learn how to create authentic learning experiences using technology in their education coursework. The iPads will also be utilized in the Practicum courses for recording lesson plans for review and grading. This familiarity and skill development with technology will allow the pre-teacher candidates to build foundational technology skills and transfer from students using technology to educators teaching with technology. Student iPads will be distributed to incoming students and students who did not previously qualify for an iPad due to part time status each year, and they will have the applicable Microsoft Office software available to download for classroom use, as well as to use in their field experience and practicum courses. Each iPad package including iPad, iPad pencil, and iPad case is approximately \$687 per student.

Additional support for students in Practicum and Field Experiences would be the provision of fuel vouchers for Practicum and Field Experience observations that require students to travel, face masks and hand sanitizer for COVID safety requirements in Practicum and Field Placements, and background check fees for the Field Experience courses as necessary to facilitate to completion of observation requirements.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

This project has three main areas of focus, including faculty retention, faculty development, and pre-teacher candidate development. The faculty retention portion consists of a request for supplemental compensation as a retention incentive to address the inequities between public school teachers and instructors in Education programs in higher education created by the New Mexico tiered salary schedule implemented March 1, 2022. The request would be \$30,000 x 3 faculty positions (2 currently filled and 1 unfilled) and \$35,000 for the department chair position. Additionally, there is a request for \$3,000 for professional development for 4 positions within the department to attend training and conferences in specific subject matter considered a high priority within the state of New Mexico. This is a total salary differential of \$125,000 and a travel supplement of \$12,000 for a total of \$137,000.

The faculty development portion of this budget request includes purchasing of a MacBook Pro for each faculty member as well as the department chair, and two HyFlex teaching carts for classroom use. The HyFlex carts will have a cost of \$1,500 each for a total cost of \$4,500. The MacBook Pro laptops have a

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

cost of \$2,048 for four faculty with a total cost of \$8,192. This is a one-time technology cost with no required installation costs.

The pre-teacher candidate portion of this budget request includes iPads for the pre-teacher candidates to use throughout their education and into their career. The use will be especially important for preparation and record keeping in the practicum and field experience when designing and creating lesson plans. There are additional needs for students who are completing their Practicum and Field Experiences, which would include providing face masks for classroom observations which are still required in many of the placements,

fuel voucher stipends for students who will need to travel to complete Practicum and Field Placement observations, and fees for background checks that are required for students to complete their placements. Currently, students in the Field Placement courses are required to pay for their own background checks and vouchers to cover these fees would help facilitate course completion

**4. Program Mission (include population served, other demographic info):**

Doña Ana Community College’s (DACC) Education program is a dynamic program that prepares pre-teacher candidates for the workforce and for transfer to New Mexico State University or other four-year institution. DACC offers students options to obtain an Associate degree in Education in six different concentration areas and an Associate degree, and two Certificate options in Early Childhood Education. The myriad of options provided cater to students’ needs for completing certificates and degrees at DACC, as well as to complete coursework required for state credentialing within the field of education.

Education		Early Childhood
Associate in Education		Associate of Early Childhood
* Elementary Education	* Secondary Math	Certificates
* Elementary - Special Education	* Secondary Science	* Early Childhood Development
* Secondary Language Arts	* Secondary Social Studies	* Early Childhood Administrator

Upon completion of their Associate degree in Education, pre-teacher candidates may obtain practical employment as para professional assistants within the public-school setting. Upon completion of an Associate degree of Early Childhood Education students may enter the profession of early childhood education in the role of teacher, assistant teacher, or child care provider. Students may also transfer their fully aligned and fully transferable credits to either a Bachelor of Science in Education or a Bachelor of Science in Early Childhood Education program at New Mexico State University to complete their final two years of programming. Students may also transfer to any other four-year institution to complete either Bachelor degree.

DACC offers two certificate programs in Early Childhood that allow students to meet course requirements for state issued certifications. The fully embedded Certificate of Early Childhood Development is designed to meet the course requirements of the Child Development Certificate issued by the New Mexico Office of Child Development that allows child care workers in the field to meet the professional development requirements for employment. The Early Childhood Administrator Certificate of Completion at DACC meet the course requirements for the state awarded New Mexico Early Childhood Administrator’s Certificate issued by the New Mexico Early Childhood Education and Care Department. These certificate programs are vital to maintaining the professional skills of early childhood educators in New Mexico.

**4. Program Mission (include population served, other demographic info):**

Student enrollment in the Education Department has experienced some fluctuations, especially within the Education program. **These fluctuations are reflective of ...** The 2021-2022 enrollment number has almost returned to the former 2017-2018 numbers. The Early Childhood program experienced a significant increase of 28.9% between 2017-2018 and 2021-2022. It is expected that we will continue to see an expansion of both programs with the increase in scholarships provided by the state of New Mexico and the increase in salaries for entry level teachers.

Student Enrollment by Academic Year					
Program	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Education	221	193	196	201	215
Early Childhood	287	275	312	330	370

A further breakdown of data demonstrates that the enrollment in both the Associate of Early Childhood Education (ECED) and the Education (EDUC) programs have maintained steady increases Fall to Fall and Spring to Spring over the past 3 semesters.

Student Head Count by Semester (3 year with projection)						
Program	Term	Head Count	% Change	Term	Head Count	% Change
Education	Fall 2019	136		Spring 2020	129	
	Fall 2020	154	13.23%	Spring 2021	142	10.07%
	Fall 2021	166	7.79%	Spring 2022	154	8.45%
Projected	Fall 2022	183	10.00%	Spring	170	10.00%
Early Childhood	Fall 2019	232		Spring 2020	224	
	Fall 2020	245	5.60%	Spring 2021	237	5.80%
	Fall 2021	261	6.53%	Spring 2022	268	13.08%
Projected	Fall 2022	280	7%	Spring 2022	308	15%

The Education Department serves students from various demographic categories. Notably, we are serving more female students, especially in the Early Childhood program.

Student Enrollment in Education Department 5 Year Average by Gender			
Gender	Education	Early Childhood	Department Total
Male	28.88%	3.18%	13.38%
Female	71.12%	96.82%	86.62%

Student Enrollment in Education Department 5 Year Average by Age			
Age	Education	Early Childhood	Department Total
00-17*	0	0	1%
18-21*	52.66%	32.78%	40.16%
22-24	16.52%	17.68%	17.24%
25-34	21.06%	28.98%	25.98%

**4. Program Mission (include population served, other demographic info):**

35+	9.76%	20.54%	16.24%
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**Student Enrollment in Education Department 5 Year Average by Ethnicity**

Ethnicity	Education	Early Childhood	Department Total
Hispanic	81.16%	87.34%	84.90%
American Indian*			0.18%
Asian*			0.20%
Black*			0.98%
Hawaiian/Pacific*			
White	13.32%	9.76%	11.22%
Two or more*			0.74%
Unknown*			0.48%
Other*	5.52%	2.58%	1.32%

\*When there are less than five head count in Age and Ethnicity fields, they are combined within the "Other" category.

**Student Enrollment in Education Department 5 Year Average by First Gen**

Status	Education	Early Childhood	Department Total
First Gen	54.12%	62.34%	59.34%
Not First Gen	38.52%	25.32%	30.40%
Unknown	7.36%	12.28%	10.26%

Between the 2016-2017 and the 2020-2021 academic years, both the Education program and Early Childhood program had a 5-year average student persistence rate of 80% and a 5-year average student retainment rate between 65% - 69%.

Education Program Persistence/Retainment						
Rate	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	5 Year Avg.
Persistence	80%	75%	81%	84%	77%	80%
Retainment	69%	61%	69%	71%	73%	69%
Early Childhood Program Persistence/Retainment						
Rate	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	5 Year Avg.
Persistence	83%	82%	79%	78%	78%	80%
Retainment	64%	65%	64%	65%	68%	65%

The Education and Early Childhood programs are experiencing an increase in students attending and graduating with an Associate degree. Currently, both programs are on target to graduate a significantly higher number of students in 2021-2022. There has already been a 52.8% increase in students graduating with an Associate in Education degree and a 23.2% increase in students graduating with an Associate of Early Childhood degree from the prior year. In addition, the Early Childhood program awarded 15 students the Certificate of Early Childhood Development the first two semesters it was available.

Number of Awards (Graduates)

**4. Program Mission (include population served, other demographic info):**

Program	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Associate of Arts, Education	5	13	13	13	19
Associate of Science, Early Childhood	21	27	23	30	37
Certificate of Early Childhood Development	<i>Certificate became available Fall 2021</i>				15

Breaking down the data further reveals that the graduation rates for the Associate of Education and the Associate of Early Childhood did double or almost doubled between Spring 2021 and Spring 2022. Awards for the new Certificate in Early Childhood Development totaled 15 within the first year of implementation. The Early Childhood Administrator Certificate did not have awardees due to the COVID 19 pandemic and the lack of ability to complete internships in child care centers for the Practicum courses associated with that Certificate.

Program	Graduates: Number of Award Recipients			
	Spring 2021	Summer 2021	Fall 2021	Spring 2022
Associate of Education	7	3	5	14
Associate of Early Childhood	13	6	12	25
Certificate: Early Childhood Development	<i>Certificate Unavailable</i>		8	7

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Objective 1: To recruit and retain full time faculty in the Education Department at DACC to ensure that program is fully staffed and faculty are retained.

Objective 2: To train full time faculty in best strategies for teacher preparation education programming to support the strategies developed by the New Mexico Public Education Department in the Comprehensive Strategic Plan 2022.

Objective 3: To prepare pre-teacher education students to meet the needs of New Mexico’s culturally and linguistically diverse student population as professional educators.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

The 2022-2023 Fiscal Year will be quite challenging as the DACC Education Department has a vacancy for the one full time Education faculty member position. With the current DACC salary scale it will be virtually impossible to recruit a faculty member to fill the vacancy in the education program. DACC cannot compete with the public-school salary tiers when entry level faculty would be offered a salary of minimum \$15,519 discrepancy up to a \$25,519 discrepancy. Currently, there is not a plan at DACC to address this vast discrepancy and it appears that the Education Department will be forced to utilize part-time faculty and alter course offerings to address the vacancy for the 2022-2023 academic year. Further, all faculty members in the Education Department are either licensed educators and/or eligible to be licensed educators in New Mexico. Should any or all of the full-time faculty members choose to seek or return to employment in public education, the DACC Education Department would be forced to utilize part time faculty to offer courses and/or transition students to New Mexico State University for completion of degrees. Students could also choose to opt out of the NMSU system and attend other colleges in the regions, such as Western New Mexico University, Eastern New Mexico University, or

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Southeast New Mexico College based on lack of faculty to serve student needs. This would have a significant impact on the approximately 425 students enrolled at DACC in the Education and Early Childhood programs.

The Education Department faculty is committed to providing the best instruction for pre-teacher candidates. However, the faculty recognize that further training and education is necessary to keep up with the changes in instruction that have occurred as a result of the COVID 19 pandemic and with meeting the needs of students of diverse multicultural and linguistic backgrounds. With limited budgets for training and further education, the faculty have been extremely selective.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

Governor Grisham’s administration has a goal of “making our education system as model for the rest of the country” (NM Public Education Department. Discussion Draft, 2022). DACC Education faculty play a significant role in this initiative. As part of the New Mexico State University (NMSU) system, DACC plays a key role in being a pipeline for pre-teacher candidates to NMSU.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

Equity salary adjustments – Endowment

**9. Accomplishment/ Highlights (bullet form)**

Click or tap here to enter text.

Medical Projects	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Dona Ana Community College Education Program Faculty Development and Retainment Project</p> <p><b>Contact Name:</b> Kelly Brooks</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <div style="border: 2px solid black; background-color: yellow; padding: 5px; text-align: center; width: fit-content; margin: 0 auto;"> <p><b>\$494,092</b></p> </div>
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**NMSU LEADS 2025 Goal:** **1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** By the end of 2023-2024 AY, faculty will increase preparedness of pre-teacher education candidates to meet the needs of New Mexico's current educational initiatives and mandates.

<b>RPSP Objective 4: To prepare pre-teacher education candidates as professional educators to meet the needs of New Mexico's culturally and linguistically diverse student population.</b>		<b>Measure Targets</b>		<b>Comments (Briefly State your case)</b>
<b>RPSP Measures:</b>		<b>FY23</b>	<b>FY24</b>	
1	Develop multicultural and linguistically relevant curriculum woven through all Education and Early Childhood content courses.	NA	100%	Faculty in the Education Department will utilize research based strategies to develop curriculum to address the Comprehensive Strategic Plan 2022 and Discussion Draft Action Plan 2022 by NM Public Education Department to ensure alignment of multicultural and linguistically relevant curriculum.
2	Develop assessment tool(s) to measure knowledge of teaching strategies of multicultural and linguistically diverse students.	NA	100%	Faculty will develop assessment(s) tools to measure student success and utilize data to inform curriculum development and modifications as needed.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Dona Ana Community College Education Program Faculty Development and Retention Project</p> <p><b>Contact Name:</b> Kelly Brooks</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p align="center" style="border: 1px solid black; background-color: yellow;"><b>\$494,092</b></p>
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**NMSU LEADS 2025 Goal:** **1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** By the end of 2023-2024 AY, faculty will increase preparedness of pre-teacher education candidates to meet the needs of New Mexico's current educational systems.

RPSP Objective 5: To prepare pre-teacher education candidates to educate students in PreK-12 environments utilizing best practices for online teaching and virtual learning strategies.		Measure Targets		Comments (Briefly State your case)
		FY23	FY24	
<b>RPSP Measures:</b>				
1	Education and Early Childhood pre-teacher candidates will receive an iPad, Apple Pencil, and case within one year.	NA	100%	Pre-teacher candidates must be equipped with the appropriate technology to to create authentic learning experiences in their education coursework. Technology will also be utilized in the Practicum courses for recording lesson plans for review and assessment.
2	Pre-teacher candidates will be able to navigate the software tools on the iPads and utilize software products to create high-impact learning activities.	NA	100%	Pre-teacher candidates must be prepared to enter the Field Experiences and Practicum courses with the tools necessary to create virtual lesson plans, record observations, and create high-impact learning experiences in Pre K-12 environments.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Dona Ana Community College Education Program Faculty Development and Retainment Project</p> <p><b>Contact Name:</b> Kelly Brooks</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="border: 1px solid black; padding: 5px;"><b>\$494,092</b></p>
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**NMSU LEADS 2025 Goal:** **3 - Amplify Extension and Outreach**

**RPSP Goal:** By the end of 2023-2024 AY, faculty will develop strategies and skills based on trainings and conferences attended and will disseminate the strategies and skills learned to part-time faculty.

RPSP Objective 2: To train full time faculty in multicultural and linguistically relevant teaching strategies for pre-teacher preparation programming to support the strategies developed by the New Mexico Public Education Department in the Comprehensive Strategic Plan 2022.		Measure Targets		Comments (Briefly State your case)
		FY23	FY24	
RPSP Measures:				
1	Faculty will attend professional development conferences like the WIDA conference and Teaching Professors Conference.	NA	100%	Faculty will attend conferences focused on topics related to multicultural and linguistically relevant teaching strategies, High Quality Teacher Preparation, and Growth-oriented Professional Learning.
2	Full time faculty will provide professional development for part-time faculty.	NA	100%	Faculty will disseminate conference content focused on topics related to multicultural and linguistically relevant teaching strategies, High Quality Teacher Preparation and Growth-oriented Professional Learning.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Dona Ana Community College Education Program Faculty Development and Retainment Project</p> <p><b>Contact Name:</b> Kelly Brooks</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p align="center"><b>\$494,092</b></p>
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**NMSU LEADS 2025 Goal:** **3 - Amplify Extension and Outreach**

**RPSP Goal:** By the end of 2023-2024 AY, faculty will develop strategies and skills based on trainings and conference attended and will disseminate the strategies and skills learned to part time faculty.

RPSP Objective: Objective 3: To train full full time faculty in best practices for virtual learning strategies for students in		Measure Targets		Comments (Briefly State your case)
		FY23	FY24	
RPSP Measures:				
1	Faculty will become proficient in the use of HyFlex technologies, including the use of MacBook Air, Webcam, Tripod, and small docking stations.	NA	100%	Teacher preparation faculty will be trained in PreK-12 technologies in order to model best practices for pre-teacher candidates in the Education Department.
2	Faculty will participate in Apple Training for K-12 teachers.	NA	100%	Teacher preparation faculty will participate in the Apple Teacher Training program to prepare pre-teacher candidates for using technology in their future classrooms.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> Dona Ana Community College Education Program Faculty Development and Retainment Project</p> <p><b>Contact Name:</b> Kelly Brooks</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p align="center" style="background-color: yellow; border: 1px solid black;"><b>\$494,092</b></p>
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**NMSU LEADS 2025 Goal:** **4 - Build a Robust University System**

**RPSP Goal:** By the end of 2023-2024 AY, DACC will fully staff the DACC Education Department with highly qualified faculty.

RPSP Objective 1: To recruit one bilingual faculty and retain two faculty and Department Chair in the Education		Measure Targets		Comments (Briefly State your case)
		FY23	FY24	
RPSP Measures:				
1	DACC will hire one bilingual faculty member for Education program.	NA	100%	The DACC Education Department must fill one faculty line to be fully staffed.
2	DACC will retain two faculty and Department Chair in Education Department.	NA	100%	The DACC Education Department must retain two faculty and Department Chair to maintain high quality instruction and consistency for pre-teacher candidates.
3	DACC will utilize the project funds to institute a salary differential for teacher preparation faculty.	NA	100%	To eliminate disparities in salary, differentials will be instituted.
4	DACC will utilize the project funds to institute a salary differential for the Education Department Chair.	NA	100%	To eliminate disparities in salary, a differential will be instituted.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Education Faculty Development and Retainment Project Total: **\$ 494,092.00**

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
Beginning Fund Balance		\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ 494,092.00	\$ 494,092.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ -	\$ 494,092.00	\$ 494,092.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
Private Gifts, Grants and Contracts		\$ -		
Land & Permanent Fund or Local Property Taxes		\$ -		
Tuition and Fees		\$ -		
Endowment		\$ -		
Sales and Services		\$ -		
Other Sources - Detail in Comments		\$ -		
<b>Total Revenues</b>	\$ -	\$ 494,092.00	\$ 494,092.00	

**Transfers (to) from**

Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

**Expenses**

	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries			0.00	\$ -			
Professional Salaries			0.00	\$ -			
Other Staff Salaries			0.00	\$ -			
Student Salaries (GA/TA)			0.00	\$ -			
Other Salaries			0.00	\$ 125,000.00		\$ 125,000.00	Supplemental/Differential Pay \$30000 for 3 faculty, \$35000 for Department Chair
<b>Total All Salaries</b>	0.00	\$ -	0.00	\$ 125,000.00	0.00	\$ 125,000.00	
Fringe Benefits				\$ 46,875.00		\$ 46,875.00	
Travel				\$ 12,000.00		\$ 12,000.00	Professional Development \$3000 x 4 faculty
Utilities				\$ -			
Institutional Support Charges				\$ -			
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses				\$ 22,200.00		\$ 22,200.00	HyFlex Cart \$1500 x 3; Covid safety supplies for 220 students \$200; Prac Kit with books/school supplies \$100 x 175 students = \$17500
Equipment				\$ 214,592.00		\$ 214,592.00	MacBook Pro Laptops \$2048 x 4 = \$8192, Docking Stations \$75 x 4 = \$300, iPads with Apple pencil and case \$687 x 300 students
Other Expenditures				\$ 73,425.00		\$ 73,425.00	Fuel Vouchers \$.625 miles x 60 miles x 11 weeks x 170 students = \$70,125; Field Experience Background Checks x 75 students x \$44 = \$3300
<b>Total Expenditures</b>	0.00	\$ -	0.00	\$ 494,092.00	0.00	\$ 494,092.00	
Ending Fund Balance		\$ -		\$ -		\$ -	

**FY: 2023 ACTUAL - \$275,900**  
**FY: 2024 REQUEST - \$1,028,912**  
**FY: 2024 CHANGE – \$753,012**

## DACC Nursing Accomplishments

- Accepted over 40 Vista College Nursing Students due to Vista closing in October 2021
- 2021 pass rates for NCLEX (National Council Licensure Examination) RN 77.7%, and LPN 100%
- Graduation rates 82%
- 100% of graduates are gainfully employed within six months of licensure in the nursing area.
- 33 Associate Degrees and 38 LPN Certificates awarded in 2021
- Purchase of new EMS Simulation IQ System

## Plans for the Future:

- Add (3) FT Faculty, (2) PT Faculty, (1) pre-nursing advisor
- Simulation Lab expansion and accreditation
- Professional Development for faculty
- Collaboration with LCPS for early high school nursing



The Nursing Program is meeting DACC's mission, NMSU LEADS 2025 and responding to the changing healthcare environment by making three primary goals that include: providing nursing education to meet diverse patients' needs, functioning as community leaders, and advancing science that benefits patients and allows nurses to deliver safe, quality patient care.

In transforming nursing education to prepare nursing graduates to work collaboratively and effectively in a complex health care system, the program requests additional monies to support an expansion to Sunland Park Center.



At a Glance:

Class A.D.N	Enrollment (Projected)	Enrollment (Actual)	Retention	Graduated	Job Placement 6 months after licensure %
2014-2015	36	16	6	6	83%
2015-2016	36	32	30	30	100%
2016-2017	48	43	43	43	100%
2017-2018	56	58	52	52	100%
2018-2019	64	61	45	45	100%
2019-2020	72	72	65	65	100%
2020=2021	80	80	70	70	100%
2021-2022	84	80	74	74	100%
2022-2023	88	90 (fall 2022)	TBA	TBA	100%

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Dona Ana Branch – Nurse Expansion

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    1,028,912

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    275,900

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	10
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**2. Project Description / Executive Summary:**

The challenge of meeting the health care needs of the future continues to increase in complexity and size. As our community ages and life expectancy increases, patient acuity requiring hospitalization and associated health care needs are increasing at a rapid rate. In addition, technological advancements have created a demand for health care professionals to continually increase knowledge base and expertise to effectively respond to patient care needs. The nursing program at DACC has responded to successfully meet these growing challenges. In order to successfully meet the growing challenges, nursing students will need to be able to demonstrate clinical excellence in a variety of healthcare settings, effectively work within an integrated health care team, appropriately integrate technology into patient care, practice clinical efficiencies, and provide a high level of cultural awareness.

Funding will allow the nursing program to meet these challenges by allowing expansion for both the Espina Campus in Las Cruces, and at the Sunland Park Center. Both expansions will be located in Dona Ana County servicing the north and south ends of the county. The expansion project will lead the development and enhancement of educational opportunities that incorporate cutting edge models of instruction and practice such as with the use of simulation to respond to the local and national health care needs. Expansion allows the nursing program to continue the action plan to address the trajectory of LPN to RN students, by offering more seats to the current Career Ladder Program that has three different tracks (traditional, advanced placement, and LPN to RN track). In the past three years, 18 LPN to RN students have been admitted into the

## **2. Project Description / Executive Summary:**

program. Each track ensures that nursing graduates fulfill a crucial link in today's health care system that will continue to serve the public.

Funding will continue to allow the development and advancement in health care so that best practices are in use of technologies that help improve the teaching/learning experience. Funding also helps foster a synergistic partnership to advance education, science and practice. With the combination of an aging population, rising chronic diseases, technological advancements and increasingly complex health systems this has caused challenges for health care professional, RPSP funding would help the nursing program provide innovative solutions to improve teaching methods. For example, the program offers all didactic/lectures using hybrid method, that uses the HYFLEX method which allows the instructor to combine face-to-face (F2F), and online learning synchronously so that both students can attend and decide how to participate and be in charge of their learning.

To help students with the cost of completing clinical experiences, RPSP funding will fund gas vouchers, and lodging to allow for completion of clinical experiences outside of Dona Ana County, this will be a continuous funding request.

The nursing program has received funding to help with nursing faculty recruitment and retentions since 2002. Funding for recruitment and retention has allowed the program to meet the challenge of recruiting qualified nurses to the education sector, and keeping the full-time faculty for more than two years. One of the main areas to address when looking at recruitment is offering competitive salaries and job security, RPSP funding would help respond to that challenge.

### **Expansion Justification:**

Additional funding would allow the expansion project expand its services to the southern part of New Mexico and Dona Ana county, by adding additional three full-time nursing faculty and one full-time pre-nursing advisor. Offering services to the southern part of the state would tap into an area that is underserved, and currently has no other nursing schools in the area. Future goals would be to partner with local public high schools in the Gadsden district to provide a pathway into health care careers for high school students, and provide a nursing LPN certificate upon graduation of high school.

## **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Nursing retention in the form of differentials are funded by RPSP for eleven full-time faculty. The increase in budget includes salaries and fringe benefits for three additional full-time faculty to support the expansion of the Espina and Sunland Park Center Expansions.

The market differentials represent 10% of the full-time faculty's base salary and has a positive effect on the program's recruitment and retention efforts.

The budget would also support the current simulation program by offering both virtual and face-to-face simulation experiences for nursing students. Purchase of software and instructional tools are purchased using RPSP funding. Updating and expanding the current simulation program at Espina Campus as allowed the purchase of high-fidelity manikins, plus a simulation integrations system and software, that allows faculty to record, store, and use simulation teaching to enhance clinical experiences in a safe environment. The requests for equipment is a one time request, but yearly maintenance contracts will continue and RPSP money will be used for keeping maintenance of the equipment.

Continued accreditation and approval from the Accreditation Commission for Education in Nursing (ACEN) and the New Mexico Board of Nursing (NMBON) require that we offer the same learning experience at satellite/branch locations. As such, RPSP funding would help the program continue the same simulation initiatives for the Sunland Park Center for nursing students in that part of the country.

Funding would help students complete clinical experiences outside of Dona Ana County by offering gas and travel vouchers.

Funding helps the program meet the New Mexico Board of Nursing guidelines for simulation and clinical experiences and help meet the 8:1 ratio student to faculty ratio in clinical experiences. The funding also ensures that the program is meeting national accreditation for nursing programs by following the (ACEN) guidelines standards 1 Mission; 3 Students, 4 Curriculum, and 6 Outcomes.

### **Expansion Justification:**

### **3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The FY'24 budget will allow for three new full-time faculty positions, one full-time pe-nursing advisor, and continued professional development opportunities for faculty and staff as well as support expansion efforts for the Espina Campus, the new Sunland Park Center, and simulation programs at DACC. The budget will help the program meet accreditation status for the new center by ACEN which is scheduled fall 2023, and help progress the simulation program to meet continuing accreditation status with the NMBON. The budge will continue to help replace equipment, update software for equipment, purchase new software and equipment for Sunland Park Center

### **4. Program Mission (include population served, other demographic info):**

The mission of the nursing program is to provide educational preparation opportunities for a diverse group of students. The nursing program is responding the needs of the community by generating innovative approaches to educate the next generation of diverse professionals to advance nursing practice and science. According to the 2010 Future of Nursing IOM report an important goal for nursing programs to have is to train future nurses to work in interdisciplinary teams that will help facilitate the model of diverse professionals serving the public to resulting in improved healthcare outcomes for patients. The nursing program observes the recommendations of the Robert Wood Foundation, September 2009, Health Policy Snapshot article that discusses the importance that healthcare professionals including nurses must know how to collaborate with other members of the health care team to create interprofessional collaboration. The is done by scheduling the students to complete clinical experiences in various locations, work and interact with different disciplines while providing care to different demographics of patients across the life span of the patient. Simulation is another way the program increases interprofessional collaboration by having other disciplines present in the simulation experience, nursing students gain collaboration techniques to work with other healthcare team members.

Students served in Dona Ana County are largely non-traditional students' population, where over 70% of nursing students are members of an ethnic/racial minority. Over 60% of students enrolled at DACC meet the federal standards for classification as low income. The nursing program provides support to students by maintaining a low student to faculty ratio of 8:1 per NMBON rules in clinical settings and 9:7.1 per NM Joint House Memorial 40 guidelines). Support services include mentoring, tutoring, and one time with students to ensure student success.

#### **Expansion Justification:**

In keeping with the college's and program's mission of being a responsive and accessible learning-centered community college, the nursing expansion will accomplish the mission by educating each generation of nurse leaders, nursing scholars, and transforming healthcare practice while advancing the art of science and bettering health for all the community.

### **5. Key Project Objectives (Overview only – relates to separate performance measure form)**

Key project objectives support NMSU's LEADS 2025 Strategic Plan, DACC's Mission and Vision, and the Nursing Program's End of Program outcomes. Focusing on LEADS 2025 goals # 1 (Enhance Student Success and Social Mobility), and Goal # 4 (Build a Robust University System), the nursing expansion project began with a strategic planning process in 2021 that drew viewpoints and data from several activities. Along with discussions with faculty, students, staff and community partners, strengths, weaknesses, opportunities and threats were identified, which resulted in the DACC Nursing: Designing for the Future of Nursing Education and Healthcare for Southwest New Mexico Strategic plan.

Four goals were identified: # 1 Expansion would meet diverse patient needs in Southwest New Mexico; # 2 Advance nursing education; # 3 Campus and facilities support enhancement of student learning experience while advancing a culture of high performance, and # 4 DACC function as an education leader in the community.

#### **Expansion and Justification:**

Funding from RPSP will help the nursing program continue to meet current objectives and outcomes, as well as helping achieve new objectives, and goal outcomes. The expansion will help DACC align its resources and efforts to clearly focus on the work ahead.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Class A.D.N	Enrollment (Projected)	Enrollment (Actual)	Retention	Graduated	Job Placement %
2014-2015	36	16	6	6	83%
2015-2016	36	32	30	30	100%
2016-2017	48	43	43	43	100%
2017-2018	56	58	52	52	100%
2018-2019	64	61	45	45	100%
2019-2020	72	72	65	65	100%
2020=2021	80	80	70	70	100%
2021-2022	84	80	74	74	100%
2022-2023	88	90 (fall 2022)	TBA	TBA	100%

**Accomplishments:**

1. Cohort enrollment has grown from 16 to 18 traditional students in the 1<sup>st</sup> and 2<sup>nd</sup> levels of a four-level program
2. Cohort enrollment has grown from 16 to 24 advanced placement and LPN to RN students in the third level
3. Obtained approval from NMBON to accept over 40 Vista College Students who were displaced October 2021 into DACCs nursing Career Ladder Program and help displaced students finish their nursing degree.
3. Program awarded 33 RN degrees, and 38 LPN certificates for 2021
4. Purchase of simulation equipment to include Education Management System Simulation system
5. Updated software for “Victoria” high-fidelity mannikin
6. Obtained final approval from national accrediting agency, ACEN to offer instruction at the Sunland Park Center
7. Obtained final approval from national accrediting agency, ACEN to deliver instruction using 50% or greater in online instruction methods.

**Obstacles:**

1. Social distancing guidelines continue for COVID-19 at clinical sites, increasing part-time faculty costs to ensure compliance with NMBON 8:1 student/faculty ratio requirements
2. Recruitment for qualified full-time faculty
3. Retention of full-time faculty
4. Purchasing of Equipment for laboratory and simulation at the Sunland Park Center

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

Expansion of the nursing program will not only provide current maintenance of the existing nursing program’s enrollment and graduation/completion rates, but the project will also help meet the needs of the community by filling a gap left open by the closing of Vista College in Las Cruces New Mexico.

**Expansion and Justification:**

The New Mexico Coalition of nurses and educators met with NM legislatures to address the chronic shortage of nursing in Mexico January 27, 2022. Currently New Mexico faces a shortage of over 6,000 registered nurses, (UNM, 2021), expanding the program will address the demand for nurses. The Coalition pointed out that nurses usually stay to work where they are trained, making the expansion an important asset for southern New Mexico.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

No, the program does not receive awards or private donations. Carl Perkins is available to the program and has been utilized to purchase some equipment and pay for some faculty development. However, Carl Perkins funding is shared between multiple programs at DACC so there is not guarantee that the program will receive requested funds annually.

Yes, the program has sought funding from the New Mexico Higher Education Department RFA Nurse Expansion Appropriation and Faculty Endowment Fund for FY'23

**9. Accomplishment/ Highlights (bullet form)**

1. Program has continued to grow from 65 students in fall 2019 to over 85 students spring 2022.
2. Program continued instruction during the 2020 COVID-19 Pandemic
3. Program awarded 33 RN Degrees and 38 LPN degrees in 2021
4. 100% of graduates were gainfully employed in nursing within 6 months of licensure.
5. LPN licensure rates at 100%

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

88%

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

**RPSP Title:** DACC Nurse Expansion  
**Contact Name:** Kelly Brooks  
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**FY23 Request**  
**\$1,028,912**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal 1:** Increase Graduation Rates

RPSP Objective 1: Ensure sufficient current equipment and supplies are available to support student learning and Increase enrollment.		Measure Results				Measure Targets					Comments (Briefly state your case)	
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23		FY24
1	80% of nursing student academic related needs will be met by services provided through DACC each academic year (ACEN 2017, 3.4)	85%	100%	83%	89%	82%	85%	86%	87%	90%	92%	Graduate satisfaction surveys dipped to 83% in FY21, survey of nursing graduates were not satisfied with student academic related needs such as pre-nursing advising, and admissions. Both areas were experiencing transition in full-time personnel, but have since filled the vacancies.

RPSP Goal 2: Increase number of graduates from diverse backgrounds entering the nursing workforce.		Measure Results				Measure Targets					Comments (Briefly state your case)	
RPSP Objective 1: Retain enough faculty to support the outcomes of the program. Hire enough faculty to maintain student to faculty ratios. Provide tutoring and other support services that meet the needs of program students.		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23		FY24
1	A minimum of 52% of the faculty mix each academic year will be contracted for 9 or 12-month positions (ACEN 2017, 2.4)	65%	100%	80%	85%	52%	70%	75%	80%	90%	92%	The nursing program has shown continued growth in student cohort and contracted faculty. RPSP funding has helped retain full time faculty by offering a yearly stipend to compete with acute care settings in the community. Recruitment has helped bring the number of full time faculty to eleven. Full time faculty help keep the ratios of student to faculty low, ensure consistency with implementation of curriculum, and bring in expertise on various nursing specialties.

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2021-22 Report**

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**FY23 Request**  
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RPSP Objective 2: Support student achievement by ensuring faculty are available to support students.	Measure Results				Measure Targets						Comments (Briefly state your case)	
	FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24		
<b>RPSP Measures</b>												
1 Total program student to full-time faculty ratios will not exceed 9.7:1 [NM House Joint Memorial 40] each academic year.	10.9:1	7.8:1	8.9:1	7.8:1	9.7:1	9.7:1	9.7:1	8.7:1	8.7:1	8.7:1	8.7:1	Utilizing the NMHJM 40 recommendations for full-time faculty to student ratios the DACC program has been able to maintain the ratios for FY21. A total of eleven full time and four part-time faculty members during 2020-201 provided the support to meet the 9.7:1 ratio. (ACEN 2.5)
2 Faculty allocation of effort for teaching and related activities will be between 75 - 80% measured by total course / student contact hours per academic year 100% of the time (ACEN 2017, 2.5)	85%	100%	87%	90%	87%	90%	93%	95%	95%	95%	95%	Faculty workloads are set to allocate 75-90% to teaching and related activities such as mentoring. Review of eleven full time faculty promotion and tenure allocation efforts showed ten full time faculty had 75% or greater allocation to teaching efforts. (ACEN # 2.5). A slight dip in FY21 due to two faculty taking FMLA and two FT faculty needing to take overload to cover for the faculty on FMLA. Nursing director had less than 20% teaching allocation due to keeping compliance with NMBON rule that allocates 80% of workload for administrative work.

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RPSP Objective 3: Support student achievement by ensuring faculty are available to support students.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	Faculty allocation of effort for teaching and related activities will be between 75 - 80% measured by total course / student contact hours per academic year 100% of the time (ACEN 2017, 2.5)	82%	100%	90%	87%	86%	90%	93%	95%	90%	90%	Meeting end of program outcomes and student success, faculty workloads are set to allocate 75-90% to teaching and related activities such as mentoring. Review of eleven full time faculty promotion and tenure allocation efforts showed ten full time faculty had 75% or greater allocation to teaching efforts. (ACEN 2.5). Nursing director had less than 75% teaching allocation due to keeping compliance with NMBON rule that program directors allocate 80% to administrative work.

**NMSU LEADS 2025 Goal:** **3 - Amplify Extension and Outreach**  
**RPSP Goal 3.** Support graduates ability to obtain jobs in their field

RPSP Objective 1: Provide faculty development that supports currency in teaching materials.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	86.64% of licensed graduates seeking employment in role will be employed within 6 months of licensure (ACEN, 2014).	100%	n/a	87%	n/a	87%	87%	87%	n/a	n/a	n/a	Due to updating from 2014 to 2017 ACEN accreditation standards, Objective 1 will be phased out during FY21 and replaced with <b>Objective 2, Measure 1</b>

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RPSP Objective 2: The program assures that the degree or certificate programs it represents as preparation for advanced study or employment accomplishes the purposes it represents.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	86.64% of licensed graduates seeking employment in role will be employed within 6 months of licensure (ACEN 2017, 6.4)	100%	100%	87%	85%	87%	87%	90%	95%	90%	90%	DACC nursing graduates have been successful in gaining employment as a nurse within 6 months of licensure in various health care settings. (ACEN 6.3).
RPSP Objective 3: Support graduates ability to obtain gainful employment through attainment of national licensure. Support growth of the program.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	The A.D.N. programs first time licensure exam pass rate will meet or exceed 80%.	95%	88%	77%	80%	80%	80%	80%	82%	85%	87%	Licensure pass rates for the A.D.N program dropped for 2021 to 77%, various factors contributed such as transition to online instruction, limited clinical experiences during COVID, and some graduates waiting over one year to complete licensure exam all contributed to drop in pass rates. The Faculty have reviewed curriculum, and have implemented several interventions to bring up the scores above 80%.

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**NMSU LEADS 2025 Goal: 4 - Build a Robust University System**

**RPSP Goal:** Ensure faculty staffing is sufficient to meet program outcomes and the goals of instruction and to ensure quality of student instruction.

RPSP Objective 1: Maintain standards of quality set by national accreditation.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	100% of full-time nursing faculty will be credentialed with a minimum of a master's degree with a major in nursing; those who do not have a MSN will have an education plan on file and will complete within (5) years. (ACEN 2017, 2.1)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Current faculty include: Eleven Full time faculty that are; (2) Doctorate prepared faculty; (8) MSN faculty, and (1) BSN faculty, BSN faculty are enrolled in an MSN program and have their education plan on file. By offering competitive salaries and stipends, the nursing program is able to retain credentialed faculty (ACEN, # 2.1).

RPSP Objective 2: Maintain standards of quality set by national accreditation. Support program growth.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
<b>RPSP Measures</b>												
1	100% of temporary part-time nursing faculty will hold a minimum of a BSN; those who do not have a BSN will have an education plan on file and will complete within (5) years. (ACEN 2017, 2.2)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	(5) Part time faculty include (1) MSN member, (4) BSN faculty. By offering competitive salaries, the nursing program is able to retain credentialed faculty (ACEN, # 2.1).

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

**RPSP Title:** DACC Nurse Expansion  
**Contact Name:** Kelly Brooks  
**Contact Email:** [kbrooks@dacc.nmsu.edu](mailto:kbrooks@dacc.nmsu.edu)

**FY23 Request**  
**\$1,028,912**

RPSP Objective 3: Support student achievement by ensuring faculty are available to support student.		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	A minimum of 52% of the faculty mix each academic year will be contracted for 9 or 12 month positions [NLNAC, 2009].	67%	100%	100%	80%	52%	52%	75%	80%	90%	90%	The nursing program has shown continued growth in student cohort and contracted faculty. RPSP funding has helped retain full time faculty by offering a yearly stipend to compete with acute care settings in the community. Recruitment has helped bring full time faculty to eleven 12 month positions. Full time faculty help keep the ratios of student to faculty low, ensure consistency with implementation of curriculum, and bring in expertise on various nursing specialties.

RPSP Objective 4: Maintain faculty currency in their field of expertise to ensure quality		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	100% of faculty participates in one or more self-directed scholarly activity per year as defined by Boyer's model of scholarship.	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	Faculty show currency in their expertise and up to date on health care practices, and higher education processes. Faculty members are offered opportunities for faculty development to maintain licensure and maintain the latest up to date knowledge regarding nursing practice and teaching in higher education. Without the RPSP funding many opportunities for nursing faculty would not be available (ACEN, #'s 2.6 & 2.10).

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
Beginning Fund Balance	\$ 54,919.00	\$ -	\$ 54,919.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 275,900.00	\$ 753,012.00	\$ 1,028,912.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ 275,900.00	\$ 753,012.00	\$ 1,028,912.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 275,900.00	\$ 753,012.00	\$ 1,028,912.00	

**Transfers (to) from**

Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

**Expenses**

	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries	2.38	\$ 143,036.00	1.77	\$ 216,000.00	4.15	\$ 359,036.00	3 new faculty @ \$72,000
Professional Salaries			0.80	\$ 50,000.00	0.80	\$ 50,000.00	1 nursing advisor
Other Staff Salaries			0.00	\$ -	0.00		
Student Salaries (GA/TA)			0.00	\$ -	0.00		
Other Salaries			2.31	\$ 79,000.00	2.31	\$ 79,000.00	3 @ 8,000 & 11 @ 5,000
<b>Total All Salaries</b>	2.38	\$ 143,036.00	4.87	\$ 345,000.00	7.25	\$ 488,036.00	
Fringe Benefits		\$ 53,639.00		\$ 129,375.00		\$ 183,014.00	37.50%
Travel		\$ 16,000.00		\$ 24,000.00		\$ 40,000.00	Includes student lodging of \$24,000
Utilities				\$ -			
Institutional Support Charges				\$ -			
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 48,825.00		\$ -		\$ 48,825.00	
Equipment		\$ 14,400.00		\$ -		\$ 14,400.00	
Other Expenditures				\$ 254,637.00		\$ 254,637.00	Gas vouchers 90 stds-3 sems. & IDI
<b>Total Expenditures</b>	2.38	\$ 275,900.00	4.87	\$ 753,012.00	7.25	\$ 1,028,912.00	
<b>Ending Fund Balance</b>		\$ 54,919.00		\$ -		\$ 54,919.00	

# RESPIRATORY THERAPY PROGRAM



**BE BOLD.** Shape the Future. | **New Mexico State University** | 2022

**FY23 Actual:** **New Request Expansion Proposal/Application White Paper**

**FY24 Request:** **\$1,005,750**  
**Change:** **\$0**

The Doña Ana Respiratory Therapy Program began in 1991 and is fully accredited by Commission on Accreditation for Respiratory Care (CoARC).

While Respiratory Therapy (RT) has come to the forefront during the COVID pandemic, RT has always been on the frontlines of patient care when patients are in their most vulnerable circumstances when they are unable to breathe on their own. Respiratory conditions continue to emerge such as COVID, the flu, sepsis, and respiratory distress. A growing aging population, more emphasis on reducing readmissions to hospitals, and greater access to health insurance create a need for respiratory therapists.

The extensive demand for respiratory therapists in New Mexico is demonstrated by the fact there are 650 licensed respiratory therapists and there are over **250 open positions** as of the most recent review of job openings in the state. Furthermore, there are six respiratory therapy associate degree programs in NM, yet all have small numbers and we have seen over the last two years enrollment declines and faculty retirements. Respiratory Therapy education programs will

be facing shortages over the next 5 - 10 years. The American Association for Respiratory Care (AARC) Human Resource Survey reports that 63.9% of Respiratory Care Education Program Directors intend to leave academics, and 55% of Respiratory Care Education Directors of Clinical Education plan to retire (Shaw, 2020).

Expansion to the southern part of Doña Ana County at the Sunland Park satellite location for the following reasons

- Allows for partnerships with Gadsden ISD to provide access to health programs closer to home. Developing high school senior year dual credit pathways at Gadsden and Santa Theresa high schools.
- Many of the program clinical sites are located in El Paso, Texas and are in closer proximity to students living in the southern part of the county .
- We are able to recruit part-time and full-time faculty from the El Paso county area, the satellite campus opens up opportunities to expand our faculty pools.

Note: The program is cohort style model which spans across two years. The expansion would allow for doubling our current enrollment.



## EXPANSION

**The proposed program** (phases 1 and 2) support the Governor's initiatives to develop pathways for high school students and first-generation students to obtain a professional career and further degree attainment (Hoachlander, 2021) (Montoya, 2021 ) and to increase the number of healthcare professionals in the state of New Mexico.

**The key objectives:**

- Objective 1: Recruit and retain sufficient and qualified faculty
- Objective 2: Retention and Graduation
- Objective 3: National Board Exams and Licensure Credentials
- Objective 4: Workforce-Employment
- Objective 5: Sufficient current equipment, supplies, and staff are available to support the current program and proposed expansion

**Phase 1.** Expand the entry-level practice Respiratory Care program to the Sunland Park, NM campus as a satellite program

## Enrollment Projections\*

Cohorts	Projected	Actual Enrollment	Retention*	Graduated
2020	20	21	94%	13
2021	20	27	94%	14
2022	20	22	95%	13
2023	20	TBD	TBD	TBD
2024	40	TBD	TBD	TBD
2025	40	TBD	TBD	TBD

\*Please see expanded CoARC definition for Retention in HED Form Section 5- note that we are not penalized for attrition related to non-academic related performance. Many students start the program and choose not to proceed due to life issues and/or the intensity of serving in the role of RT.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Dona Ana Community College Respiratory Care Program Expansion

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    \$1,005,750

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    [Click or tap](#)

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

[Click or tap here to enter text.](#)

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	<a href="#">Click or tap here to enter text.</a>
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**2. Project Description / Executive Summary:**

Respiratory Therapy (RT) has come to the forefront during the COVID pandemic, all the while RT has always been on the front lines of patient care when patients are at their most vulnerable circumstances, when they are unable to breathe on their own. Respiratory conditions continue to emerge such as COVID, the flu, sepsis and respiratory distress. A growing aging population, more emphasis on reducing readmissions to hospitals, and greater access to health insurance create a need for respiratory therapist. Improved pharmacological and biologic agent use, sophisticated treatments and technology for diagnosing and treating cardiopulmonary diseases all require the specific skills of a respiratory therapist. The extensive demand for respiratory therapist in New Mexico is demonstrated by the fact there are 650 licensed respiratory therapist and there are over 250 open positions as the most recent review of job openings. Furthermore, there are six respiratory therapy associate degree programs in NM, yet all have small numbers and we have seen over the last two years enrollment declines and faculty retiring. We are proposing an expansion program, Become a RT to address the governors request to develop programs high school students can develop a pathway to a professional career and furthering degree attainment. We desire to increase enrollment, yet the challenge is to identify and hire faculty because they can earn a higher wage in the hospital setting and institutions of higher education are not competitive. To address this challenge we have developed a number of innovative

## 2. Project Description / Executive Summary:

mechanisms in this project to provide a competitive salary, with benefits, and incentive compensation for relocation, and retention of faculty. We propose three mechanisms to expand the Respiratory Care Program; Phase 1. Expand the entry level to practice Respiratory Care program to the Sunland Park, NM campus as a satellite program; Phase 2. Expand the curriculum to a Bachelor of Science in Respiratory Care degree and Phase 3. Expand the DACC campus to become a clinical site by offering a pulmonary rehabilitation to people who suffer from chronic respiratory diseases like COPD, asthma and COVID-long haul syndrome. These funds will support Phase 1 and lay the groundwork for these the next two phases and their activities to meet the Commission on Accreditation for Respiratory Care (CoARC) national standards, while allowing for expansion and growth of the respiratory care program.

## 3. Budget Narrative (Overview only – Relates to separate Budget Form)

This budget is solely for the implementation of Phase 1 of the proposed expansion project. The people of Dona Ana Country in Sunland Park are over 40 miles from the base Respiratory Care Program. By expanding the program to Sunland Park, we can increase the enrollment of graduates who stay in New Mexico for employment and contribute to New Mexico. Expanding requires hiring three faculty at the rank of Assistant, Associate, or Professor and benefits. Furthermore, for parity with the nursing program, the faculty would be compensated and incentivized for teaching in Sunland Park through a differential payment and signing bonus to commit to staying a minimum of two years with the program. Additionally, to recruit new faculty, we would provide relocation fees.

The budget also includes support for faculty development so that they may keep up to date on the best practices in respiratory therapy care. Support for students is also critical, particularly when inflation and the cost of fuel have become cost-prohibitive for our students; we have included gas vouchers for our students to be able to commute to the various clinical locations in the state as well as in El Paso, Texas.

In addition to faculty, teaching equipment is necessary and required by our accrediting body to have an equitable lab available to students in any satellite location. It should be noted that this would be a one-time cost and the maintenance and replacement costs associated with maintaining the lab up to standard will be requested through the Carl Perkins funding opportunities at the college. The following details the various pieces of equipment that mirrors what the DACC campus offers current students.

The equipment includes 6 oxygen and air systems, 6 - 8 ventilators (Avea, Servo, Draeger, PB980, Hayek chest cuirass, Bileve device and CPAP device), 4 - 6 mannikins with diverse ethnicity / race/ age/ gender for teaching and learning invasive and noninvasive procedures, communication, critical thinking and critical actions; airway clearance devices (4 - 6) (HFCWO, OPEP, IPV, Metaneb, Flutter, Aerobika, Inspiratory/expiratory muscle trainers, chest physical therapy device); intubation equipment (endotracheal tubes (adult, pediatric and neonatal sizes), oral and pharyngeal nasal airways (adult, pediatric, neonatal), stylets, laryngoscope blades (adult, pediatric, neonatal) and handles, video laryngoscope(1), devices to secure the endotracheal tube, suction catheters (adult, pediatric, neonatal), vacuum tubing), electrocardiogram (EKG) machine, 4 - 6 monitors for monitoring change in the simulated patient that can read blood pressure, heart rate, respiratory rate, oxygen saturation and capnography monitoring, arterial lab equipment, lung mechanics simulators, oxygen tanks (small and large 6 - 8 of each), air tanks (6 - 8 of each); portable suction vacuum machines (6); oxygen devices for adults, pediatric, neonates (nasal cannula, simple mask, air entrainment masks, high flow nasal cannulas); flow meters (air and oxygen at least 10 of each); high flow flow meter (4); oxygen and air blender (2); Electronic blenders deliver high flow oxygen (Vapotherm; Fischer Pakayl; Teleflex); lung ultrasound (1); chest tube devices (4-6); cuff manometer (3- 4); neonatal warmer; corrugated tubing (boxes); wye drainage bags (boxes); infection control attire (masks, gowns, shoe covers, hair covers, gloves); IV poles (4- 6); IV catheters, IV tubing; arterial blood gas syringes; syringes; tpae) computerized examinations and simulations for board examination preparation for each student; treadmills, monitoring devices, ergometer for arms and legs, free weight set (3 - 4); stethoscopes; student services (library, counseling, security, academic affairs, financial aid);

**Note: The equipment costs are a one-time cost and there are not installation or construction costs required.**

**4. Program Mission (include population served, other demographic info):**

The program's primary mission is to serve the Borderplex region and provide a better quality of life for the residents in Dona Ana County. The mission expands the Respiratory Care Program to the Southern area of New Mexico by expanding this program to Sunland Park, New Mexico. Sunland Park is in the most southern city in Dona Ana County, on the borders of Texas and Mexico. There are approximately 17.1K people and a median household income of \$17,266, with most of the population being White (Hispanic)(83.6%), Other (Hispanic) (10.7%), and White (Non-Hispanic)(4.44%). Furthermore, females between the ages of 25 and 34 live in poverty, yet healthcare and social assistance are the most common employment industry. Sunland Park, NM campus resides within the Gadsden Independent school district and its four high schools (Alta Vista Early College High School, Chaparral High School, Gadsden High School, and Santa Teresa High School.) Over 96% of the student population in these high schools are economically disadvantaged. The four High Schools are ranked between 9 - 83 by the US News and World Report in 2021 for college preparation. There is a great need for respiratory therapists in New Mexico. Employment of respiratory therapists is projected to grow 23% from 2020 to 2030 and much faster than other occupations. New Mexico has over 250 open positions, and salaries are lagging behind the rest of the country for practitioners and faculty. Recruiting faculty and minority faculty is a huge challenge for many reasons. Yet, the most significant challenge is that the salaries for faculty are much lower than practitioners, and to become faculty, a person must have a higher degree than that being taught and, in this case, a baccalaureate degree and eventually a master's degree. Therefore, we seek to provide a pathway for DACC respiratory care students to continue their education 100% online to pursue a Bachelor of Science in Respiratory Care. Once the student graduates from the BSRC program, NMSU has several graduate programs a graduate could attain. Furthermore, the 26,000 people in Dona Ana County who suffer from pulmonary diseases such as asthma, COPD, and long haul COVID, benefit from the pulmonary rehabilitation clinical services and education offered by the Respiratory Care faculty and students. Respiratory diseases disproportionately affect minorities, and the differences in disease patterns may be due to environmental factors, lack of access to healthcare or insurance, and a lack of cultural multifaceted programs for minorities offered by minorities.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The key objectives are

Objective 1: Recruit and retain sufficient and qualified faculty

Objective 2: Retention and Graduation

Objective 3: National Board Exams and Licensure Credentials

Objective 4: Workforce- Employment

Objective 5: Sufficient current equipment, supplies, and staff are available to support the current program and proposed expansion

**Enrollment Projections\***

Cohorts	Projected	Actual Enrollment	Retention*	Graduated
2020	20	21	94%	13
2021	20	27	94%	14
2022	20	22	95%	13
2023	20	TBD	TBD	TBD

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

2024	40	TBD	TBD	TBD
2025	40	TBD	TBD	TBD

*\*Please see expanded CoARC definition for Retention in HED Form Section 5- note that we are not penalized for attrition related to non-academic related performance. Many students start the program and choose not to proceed due to life issues and/or the intensity of serving in the role of RT.*

**CoARC Statement on Retention Reporting**

Students are not included in the retention definition who:

- leave the program by the last day they are eligible for 100% tuition reimbursement within the first term of fundamental respiratory care core coursework\*\*

**OR**

- are in good academic standing who leave the program due to: financial, medical, or family reasons, military deployment, a change in their course of study, relocation to a different community, or reasons other than those described under academic reasons;

**OR**

- are admitted to another educational program (same or different educational institution) prior to the scheduled graduation date of their RT class.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

NA

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

First, the proposed program (phase 1 and 2) support the Governor’s initiatives to develop pathways for high school students and first generation students to obtain a professional career and further degree attainment (Hoachlander, 2021) (Montoya, 2021 ) and to increase the number of healthcare professionals in the state of New Mexico. By expanding the DACC RC program to Sunland Park campus, prospective students are familiar with the campus and able to attend close to home while attending the respiratory care program. Upon graduation from the satellite program, the graduate would be able to pursue a degree completion/degree advancement Bachelor of Science in respiratory care program 100% online while working. The phase 1 and 2 pathway increase the degree attainment within 4 years of high school graduation. The student learning outcomes include graduating with an associate degree in respiratory therapy, passing a national board examination to earn the Registered Respiratory Therapist (RRT) credential, obtain a license to practice respiratory therapy in the state of New Mexico within a few weeks of graduation and employed as soon as the credential and license are obtained. Many graduates are employed prior to graduation or within a month or two of graduation. Furthermore, graduates are earning about \$60000 annually. Some employers will support employees to pursue a higher degree and pursue additional credentials. An earned BSRC degree makes a graduate eligible for leadership roles such as director and supervisor of a cardiopulmonary department or faculty within a college setting.

Last, the state will benefit from respiratory therapy graduates obtaining positions and contributing back to the community financially and economically. Also, the shortage of respiratory therapist will be addressed slowly by the increasing the number of graduates from this respiratory care program.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The Project receives equipment and professional training funding through the Carl Perkins funding competition annually.

**9. Accomplishment/ Highlights (bullet form)**

The DACC RC Program is the ONLY program in New Mexico to be recognized and awarded the Distinguished Registered Respiratory Therapy (RRT) Credentialing Success Award for nine consecutive years by the CoARC (Commission on Accreditation for Respiratory Care Awards, 2022). The program employment placement rates exceed the national average, and employers are 100% satisfied with the graduates from the DACC RC program (Commission on Accreditation for Respiratory Care, 2022).

**Medical Projects**

**10. How many graduates stay in practice in New Mexico**

95%

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> DACC Respiratory Therapy Expansion Project</p> <p><b>Contact Name:</b> Kelly Brooks, VP for Finance</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="border: 2px solid black; background-color: yellow; padding: 5px;"><b>\$1,005,750</b></p>
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**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Increase Student Enrollment to Main Campus and Expansion to Sunland Park

RPSP Objective 1: Recruit and retain sufficient and qualified faculty		Measure Targets		Comments ( <i>Briefly state your case</i> )
		FY23	FY24	
<b>RPSP Measures:</b>				
1	A minimum of five (5) faculty are required to ensure that the proposed expansion efforts are sufficiently staffed. In order to address a current short staffing issue, one faculty will need to be hired for the Espina campus and two for the Sunland Park satellite location.	NA	100%	Currently the program serves 35-40 students (2 cohorts) students with two faculty members and is sorely understaffed. Both faculty have been on overload for several years and the program struggles to find part-time clinical faculty. This has caused challenges in expanding enrollment due to the 1:3 clinical site faculty to student ratio required by CoARC
2	Retain enough faculty to support the outcomes of the program through a competitive salary, differential, and bonus structure that mirrors the Nursing faculty salary table.	NA	100%	The program will institute a new salary structure (\$72,000 base salary + \$8,000 annually and a \$4,000 signing bonus)

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> DACC Respiratory Therapy Expansion Project</p> <p><b>Contact Name:</b> Kelly Brooks, VP for Finance</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="border: 2px solid black; background-color: yellow; padding: 5px;"><b>\$1,005,750</b></p>
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3	<p>100% of full-time RRT Faculty will be credentialed with a minimum of a master's degree in a health adjacent field (ex: public health, nursing, etc). Those who do not currently hold a master's degree will have an education plan on file and will complete within five (5) years of being hired.</p>	NA	100%	<p>CoARC Standard 2.09, and 2.14 indicate the following minimum requirements: hold a valid RRT credential and current state license, min. of four years experience as an RRT with at least 2 years clinical respiratory care, minimum of two years experience teaching as either an appointed faculty member in a CoARC accredited respiratory therapy program as a clinical instructor/preceptor and complete Key personnel training programs. Additionally, it calls for satellite location to assign a faculty member as a site coordinator and at minimum this position must hold the degree equivalent to what the program requires. As programs nationwide begin to transition to bachelor's degree granting programs, we recognize the need to elevate the degree requirements to ensure attracting, recruiting and retaining qualified faculty.</p>
4	<p>100% of temporary part-time RRT clinical faculty will hold the minimum CoARC requirements for overseeing clinical instruction</p>	NA	100%	<p>See above explanation. As we increase the number of full-time faculty, our reliance on PT clinical faculty will lessen.</p>

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p><b>RPSP Title:</b> DACC Respiratory Therapy Expansion Project</p> <p><b>Contact Name:</b> Kelly Brooks, VP for Finance</p> <p><b>Contact Email:</b> <a href="mailto:kebrooks@nmsu.edu">kebrooks@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="background-color: yellow; border: 1px solid black; padding: 5px; text-align: center;"><b>\$1,005,750</b></p>
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**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** Increase Student Enrollment to Main Campus and Expansion to Sunland Park

RPSP Objective 2: Retention and Graduation		Measure Targets		Comments <i>(Briefly state your case)</i>
RPSP Measures:		FY23	FY24	
1	Increase current first year cohort enrollment at the Espina Campus by 5 students from 20 to 25 students	NA	25	The additional faculty member will alleviate the clinical faculty overload and the program can legitimately accept five additional students at our main campus.
2	Increase enrollment at the satellite campus from 0 to 15 students	NA	15	Two faculty and the addition of the administrative assistant will ensure that faculty have sufficient time, resources, etc. to add an yearly cohort of 15 students at the sunland park satellite location. By year 2, we will have 30 students enrolled at any given time, doubling our current pipeline of graduates to the industry.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

**FY24 Request**

**RPSP Title:** DACC Respiratory Therapy  
Expansion Project

**Contact Name:** Kelly Brooks, VP for Finance

**Contact Email:** [kebrooks@nmsu.edu](mailto:kebrooks@nmsu.edu)

**\$1,005,750**

3	To retain and graduate at least 80% of those who are admitted to the program	NA	80%	CoARC Standard 3.07 indicates that the threshold for retention is 70% across a three year cycle. On average, the current program exceeds this holding to a 94% retention rate for the last cycle, however, with the COVID-19 pandemic, we anticipate this to be a bit more challenging, given the increased risk to the students. <i>"Retention is defined as the number of students who were formally enrolled in a respiratory care program and graduated from the program after completing all programmatic and graduation requirements, calculated as a percentage of the total number of students initially enrolled in that class."</i>
4	At least 80% of the student graduating will complete exit surveys and out of those completed, 80% will be satisfied with their educational experience	NA	80%	The program currently completes surveys with students with a high rate of return, 97% annually.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>		\$ -	\$ -	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund		\$ 1,005,750.00	\$ 1,005,750.00	
Local		\$ -		
<b>Total Appropriations</b>	\$ -	\$ 1,005,750.00	\$ 1,005,750.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ -	\$ 1,005,750.00	\$ 1,005,750.00	

**Transfers (to) from**

Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	

**Expenses**

	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries			0.00	\$ 216,000.00		\$ 216,000.00	3 @ \$72,000 (1 DACC/2 at Satellite)
Professional Salaries			0.00	\$ -			
Other Staff Salaries			0.00	\$ -		\$ -	
Student Salaries (GA/TA)			0.00	\$ -			
Other Salaries			0.00	\$ 54,000.00		\$ 54,000.00	3 @ 8,000/2 @ 5,000/5 @ 4,000
<b>Total All Salaries</b>	0.00	\$ -	0.00	\$ 270,000.00	0.00	\$ 270,000.00	
Fringe Benefits				\$ 101,250.00		\$ 101,250.00	37.50%
Travel				\$ 7,500.00		\$ 7,500.00	Professional development
Utilities				\$ -			
Institutional Support Charges				\$ -			
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses				\$ -			
Equipment				\$ 500,000.00		\$ 500,000.00	
Other Expenditures				\$ 127,000.00		\$ 127,000.00	Accreditation/relocation/gas vouchers
<b>Total Expenditures</b>	0.00	\$ -	0.00	\$ 1,005,750.00	0.00	\$ 1,005,750.00	
<b>Ending Fund Balance</b>		\$ -		\$ -		\$ -	

# DENTAL HYGIENE PROGRAM



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2024

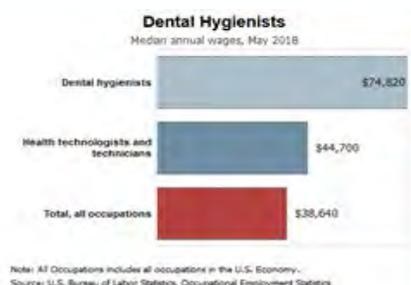
FY23 Actual: \$379,000  
 FY24 Request: \$379,000  
 Change: \$0

- The DACC Dental Hygiene program was established in 2007. Its first graduating class of 12 hygienists was in 2009. The Program has graduated over 120 dental hygienists who usually stay and work in Southern New Mexico or other areas in New Mexico.
- The program operates an on-site dental clinic open to the public where students, under faculty supervision, practice the craft of clinical dental hygiene while providing access to dental hygiene services to the community.
- The Dental Clinic is operated in support of the DACC Dental Hygiene Associate degree program. The clinic, operating since 2008, ensures that entry-level dental hygiene students gain practical experience in a controlled, clinical setting.
- The clinic provides low-cost dental care for citizens who do not have access to dental care or who do not have insurance to access dental care.
- On average, the clinic provides low-cost services to over 600 patients yearly and reaches over 3000 individuals through community outreach.
- The clinical hours prepare the students for the licensure exam required to become Registered Dental Hygienists.
- The vast majority of patients served by the clinic are uninsured or underinsured individuals from low-income families or are students on limited budgets from DACC or NMSU.
- People of all ages receive educational, preventive and therapeutic services such as: oral and general health assessments, oral cancer screening, dental examinations, dental radiographs, oral health instruction and counseling regarding nutrition and health life-style and their impact on oral and general health.



## OUTLOOK FOR DENTAL HYGIENE

- Because the Commission on Dental Accreditation (CODA) requires that dental hygiene students receive their training under the direct supervision and control of the Program, an on-site clinic is required.
- In addition, the DACC Dental Clinic is shared with the DACC Dental Assistant Program where students learn to work chair-side with practicing clinicians.
- The Program has established partnerships with other agencies such as Las Cruces Public Schools (Lynn Middle School), Amador Health, Jardin de Los Niños and the DACC Gadsden campus to improve access to oral health care services for patients at risk and those with no resources. The program reaches over 3,000 individuals annually.
- The DACC clinic helps to expand the services provided by other county public health agencies with the goal to improve the overall health of the county's citizens and thereby help reduce time lost from work and school due to oral/dental disease.
- The US. Bureau of Labor Statistics reports that the demand for Dental Hygienists will grow 11% from 2008 to 2028, much faster than the average for all occupations.
- The demand for hygienists is increasing as state laws allow dental hygienists to work at the top of their training.



Class	Enrollment (Projected)	Enrollment (Actual)	Retention	Graduation
2017-2019		12	12	11
2018-2020		12	12	12
2019-2021		12	12	11
2020-2022		12	6	6
2021-2023		12	12	10
2022-2024		12	12	
2023-2025		12		
2024-2026		12		

### Quick Facts

- 100% pass rate on clinical board examinations.
- 90-95% Avg. National Board pass rate within the last 3 years.
- 100% Employer Satisfaction on returned satisfaction surveys.
- 100% employability within 12 months after graduation.
- 92% Retention and Graduation
- 100% Student Participation in clinical activities to improve access to care in Southern NM.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Dona Ana Branch – Dental Hygiene Program

Indicate Type (X):    New     Continuing     Expansion     Final (Ending/Closing)

FY24 Funding Request (\$XXX,XXX):    379,000

If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):    379,000

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input checked="" type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input checked="" type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	9
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**2. Project Description / Executive Summary:**

The Dental Clinic is operated in support of the DACC Dental Hygiene Associate degree program. The clinic began operation in Fall 2008 after the Legislature provided funding for the program's start-up. The program prepares students to practice entry-level dental hygiene in private dental offices, hospitals, and public health agencies.

The program currently accepts cohorts of 12 students annually. Dental hygiene students are exposed to different areas of patient care techniques and management skills while working in the clinic and experiential learning activities as part of their academic and clinical education. Typically, a minimum of 12-16 hours a week of clinical is required to provide sufficient practice time for all students. This prepares them for taking their licensure examinations to practice as Registered Dental Hygienists. The clinical practice is necessary to provide students with the skills required to take national and state board examinations and to provide general preventative dental hygiene services to the public.

The Program within the last year has engaged in several community service-learning programs that have the following objectives:

- 1) To promote student learning and skill-building outside of the typical clinical setting in school.
- 2) To promote community and collaboration between the dental hygiene program and other community agencies.
- 3) To improve service-learning practices where students not only gain additional skills while working with the community but also improve access to preventive dental hygiene services and improve access to care of patients with limited or no resources and no insurance or under-insured.

**2. Project Description / Executive Summary:**

- 4) Promote overall health in the community by decreasing the cost of more complicated treatment due to lack of dental insurance or resources.
- 5) To provide school-based dental services at the schools so that students don't miss school.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The budget of \$379,000 serves to support the salaries of 4 FTE faculty and 1 administrative assistant, including fringe benefits.

**4. Program Mission (include population served, other demographic info):**

The Program is committed to creating an educational environment that will foster the development of learning as a lifelong process, providing students with the cognitive knowledge, psychomotor skills, and overall framework of affective values to provide dental hygiene care for a diverse, dynamic population. As part of the academic and clinical education of students in the Dental Hygiene Program, the DACC Dental Hygiene Program operates an on-site clinic that serves students and community citizens.

Approximately 600 individuals are provided with preventive dental hygiene services annually by students who work and practice dental hygiene under the supervision of licensed dentists and dental hygienists. The vast majority of patients served by the clinic are uninsured or under-insured individuals from low-income families or are students on limited budgets from DACC or NMSU. People of all ages receive educational, preventive, and therapeutic services such as oral and general health assessments, oral cancer screening, dental examinations, dental radiographs, oral health instruction, and counseling regarding nutrition and health lifestyle and their impact on oral and general health.

Students and faculty also participate in several community events and provide services accessible to the community. The program has its "Happy Smiles" free dental clinic. Students and faculty also participate in the annual Special Olympics. Most recently, the Dental Hygiene program has expanded its outreach efforts to improve access to dental hygiene services and prevention in under-served communities in Las Cruces and surrounding areas. We collaborate with Las Cruces Public Schools and have opened the first of its kind "Happy Smiles Dental Hygiene School-Based Clinic" at the Las Cruces Lynn Community School, the first community middle school in the Las Cruces area. All dental hygiene services are provided to the children at Lynn for free. The program also collaborates with Amador Health Center to provide dental hygiene services to individuals experiencing homelessness. The program also offers FREE services to the south part of the state at the DACC Gadsden campus dental hygiene clinic to improve access to dental hygiene services and reduce the amount of dental disease in communities at risk with limited or no access to preventive dental hygiene services.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

- Objective 1.
  - 90% of students taking national board examinations will pass.
- Objective 2.
  - 80% of students admitted to the program will finish the program successfully.
  - 90% of students graduating from the program will find employment within a year after graduation.
  - 90% of students will participate in service-learning and clinical activities to improve oral health promotion and disease prevention.
  - 90% of students will participate in clinical activities to improve access to dental hygiene services among those with limited to no access to preventive services.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

The Dental Hygiene Program successfully maintained enrollment, retention and graduation. In 2020, the program had to decrease enrollment to 6 students instead of 12 due to the pandemic and to accommodate clinical catching up for the previous class. It is expected that the program will continue to admit 12 students annually and will not increase enrollment due to limitations with clinical space, equipment and faculty ratios.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Class	Enrollment (Projected)	Enrollment (Actual)	Retention	Graduation
2017-2019	12	12	11	11
2018-2020	12	12	12	12
2019-2021	12	12	11	11
2020-2022	12	6	6	6
2021-2023	12	12	10	
2022-2024	12	12		
2023-2025	12			
2024-2026	12			

**Accomplishments:**

- Students in the class of 2021 and 2022 have passed their local anesthesia written board examinations. All classes have also taken and passed their clinical board examinations. All those of the class of 2022 who have taken the National Board have also passed.
- The program has a dual degree program pathway AAS to BSDH with the University of New Mexico, where DACC Dental Hygiene Students can enroll in a dual degree track to complete their AAS at DACC and shortly after complete their BSDH at UNM. The class of 2021 had the first two students enrolled in this dual degree program at DACC and UNM, and the class of 2022 had three students enrolled in the dual degree program. The class of 2023 currently has four students enrolled in the dual degree pathway.
- Improved access to oral health care in Las Cruces and surrounding areas by providing complete preventive services at satellite locations and participating in community events where we reached over 2,500 individuals

**Challenges:**

- Finding an adequate pool of patients for students to meet clinical requirements with patients who meet the requirements as established by the Commission on Dental Accreditation to demonstrate student competency in all patient categories and all different types of diseases.
- Recruitment of dentists to work in the clinic and complete dental examinations
- Recruitment of qualified dental hygiene faculty. As of July 1, 2022, the Commission on Dental Accreditation requires that all clinical faculty hold a minimum of a bachelor's degree and RDH license to teach in the clinic.

**7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?)**

The Dental Hygiene Program has had a significant impact in the Southwest and the State of NM overall. The program has provided quality and affordable education to many students who otherwise would not have been able to attend and afford the dental hygiene education at other institutions in the State or out of State. The Program is competitive, but the cost of tuition is very low compared to similar programs in the State. Students receive the opportunity to graduate with an Associate of Applied Science in Dental Hygiene and enter the workforce with great opportunities for a good salary (avg salary of a dental hygienist in NM is about \$65,000 annually). In addition, students can enroll in a Dental Hygiene baccalaureate

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

degree completion program. Another benefit of the program includes the services offered to patients and students. The service cost is very low compared to private practices and other community clinics.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

The Dental Hygiene Program receives some funding from the Carl Perkins grant. Some other grants have been sought and are being considered. Delta Dental of New Mexico has supported the outreach efforts since 2018, providing patients and students with great opportunities to improve access to oral health care and enhance their clinical skills. Other grants that have been secured include Blue Cross Blue Shield of New Mexico, Nusenda Credit Union, and the Community Foundation of Southern New Mexico.

- 9. Accomplishment/ Highlights (bullet form)**
- The program has provided strong clinicians to the community.
  - The program was reaccredited for seven years without recommendations. This is a significant accomplishment for DACC Dental Hygiene.
  - In 2021 and 2022, the program has successfully graduated 16 students.
  - 100% pass rate on clinical board examinations up to date.
  - The program continues to strive for excellence and keeps working with the community to provide not only different experiences to students but also provide the community with oral health awareness and prevention strategies.
  - The program continues to offer its "Happy Smiles" clinic to provide two days of free dental services to children in the community. The overall cost of the services provided totals over \$25,000 in clinical procedures given back to the community.
  - The program also participates yearly in the Special Olympics events and any other community events where there is an opportunity for the students to participate.
  - The program has a mobile dental hygiene clinic, "Happy Smiles Dental Hygiene School-Based Clinic," at Lynn Community School in Las Cruces, Jardin de los Niños, and Gadsden Campus.
  - The program provides FREE dental hygiene services to patients at Amador Health Center (homeless or nearly homeless individuals), Jardin de los Niños (children and families), and Gadsden Branch Campus (all patients from the southern part of Doña Ana).

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	10

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

**RPSP Title:** Dental Hygiene Program  
**Contact Name:** Kelly Brooks, VP for Finance  
**Contact Email:** [Kebrooks@nmsu.edu](mailto:Kebrooks@nmsu.edu)

**FY24 Request**

**\$379,000**

**NMSU LEADS 2025 Goal:** 1 - Enhance Student Success and Social Mobility

**RPSP Goal:** To track and achieve at least an 80% in retention, graduation, licensing and employment of those students who are admitted and graduate from the program.

RPSP Objective 1: Retention and Graduation		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	To maintain the number of students admitted to the program	12	12	11	12	12	12	12	12	12	12	
2	To graduate 80% of those who are admitted to the program	92%	100%	92%	92%	80%	80%	80%	80%	80%	80%	
3	To retain at least 80 % of those who are admitted to the program	92%	100%	92%	92%	80%	80%	80%	80%	80%	80%	
4	At least 80% of the students graduating will complete exit surveys and out of those completed, 80% will be well satisfied with the education received	100%	100%	92%	92%	80%	80%	80%	80%	80%	80%	It was a hard year for class of 2021 due to the pandemic and school closures. Although they were satisfied, some expressed a little dissatisfaction

RPSP Objective 2: Employment		Measure Results				Measure Targets						Comments (Briefly state your case)
RPSP Measures:		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	90% of students will find employment within a year from graduation	90%	100%	92%	90%	90%	90%	90%	90%	90%	90%	
2	90% employer satisfaction with DACC Dental Hygiene based on returned surveys	100%	100%	90%	90%	90%	90%	90%	90%	90%	90%	

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2021-22 Report**

**RPSP Title:** Dental Hygiene Program  
**Contact Name:** Kelly Brooks, VP for Finance  
**Contact Email:** [Kebrooks@nmsu.edu](mailto:Kebrooks@nmsu.edu)

**FY24 Request**

**\$379,000**

RPSP Objective 3: Board Exams and Licensing Credentials		Measure Results				Measure Targets						Comments <i>(Briefly state your case)</i>
		FY19 Actuals	FY20 Actuals	FY21 Actual	FY22 Estimate	FY19	FY20	FY21	FY22	FY23	FY24	
1	90% of students taking national boards will pass	100%	100%	100%	90%	100%	90%	90%	90%	90%	90%	
2	Out of the students who graduate, 90% will become licensed professionals	91%	100%	92%	90%	90%	90%	90%	90%	90%	90%	One student from class of 2021 is pending to be licensed

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution: New Mexico State University

RPSP Project: Doña Ana Branch - Dental Hygiene Program Total: **\$ 329,000.00**

Budget verses Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
<b>Beginning Fund Balance</b>	\$ 72,487.85	\$ (3,799.00)	\$ 68,688.85	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 329,000.00	\$ 50,000.00	\$ 379,000.00	SB1 included \$50,000 in non recurring funds and was reclassified to recurring and budgeted in FY22. The new recurring base is \$379,000 and requesting a flat budget for FY24.
Local		\$ -		
<b>Total Appropriations</b>	\$ 329,000.00	\$ 50,000.00	\$ 379,000.00	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	\$ 329,000.00	\$ 50,000.00	\$ 379,000.00	
<b>Transfers (to) from</b>				
Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	\$ -	\$ -	\$ -	
<b>Expenses</b>				
	<b>FY23</b>	<b>Change</b>	<b>FY24</b>	
	<b>FTE</b>	<b>FTE</b>	<b>FTE</b>	
Faculty Salaries	6.61	(4.24)	2.37	
Professional Salaries	\$ 205,077.00	\$ -	\$ 205,077.00	
Other Staff Salaries	1.71	(0.05)	1.66	
Student Salaries (GA/TA)	\$ 56,781.00	\$ -	\$ 56,781.00	
Other Salaries	0.29	(0.12)	0.17	
<b>Total All Salaries</b>	\$ 6,888.00	\$ -	\$ 6,888.00	
<b>8.61</b>	\$ 268,746.00	\$ -4.41	\$ 268,746.00	
Fringe Benefits		\$ -		
Travel	\$ 3,848.00	\$ -	\$ 3,848.00	
Utilities		\$ -		
Institutional Support Charges		\$ -		
Plant Operation and Maintenance Charges		\$ -		
Supplies and Expenses	\$ 60,205.00	\$ -	\$ 60,205.00	
Equipment		\$ -		
Other Expenditures		\$ -		
<b>Total Expenditures</b>	\$ 8.61	\$ -4.41	\$ 4.20	
<b>\$ 332,799.00</b>	\$ 332,799.00	\$ -	\$ 332,799.00	
<b>Ending Fund Balance</b>	\$ 68,688.85	\$ 46,201.00	\$ 114,889.85	



# NMSU Grants Student Veterans Resource Center

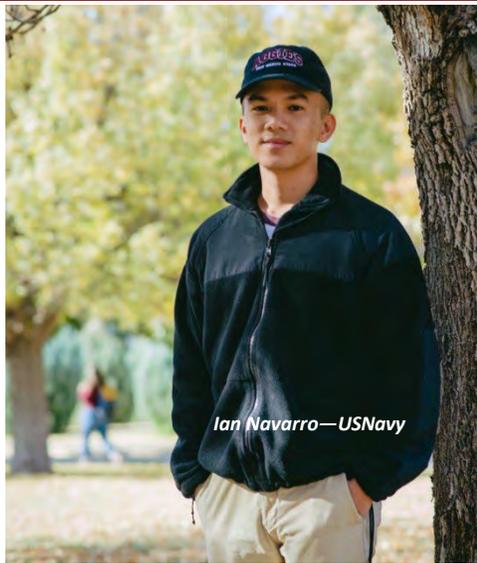
FY 23 Actual: \$45,600

FY24 Request: \$45,600

Change: \$0



Angela Meyer, Coast Guard Dependent



Ian Navarro—USNavy

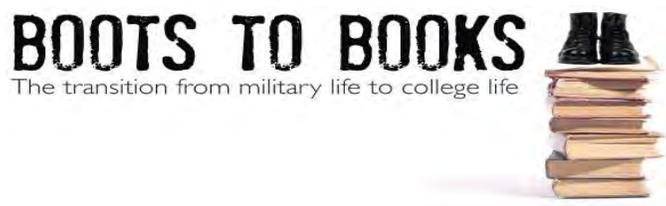


Courtland Tyler—US Army

NMSU Grants is requesting continued funding for Year 3 of the Student Veterans Resource Center (SVRC) on the Grants campus. Year 1 focused on the physical space and equipment for the SVRC, while the purpose of year 2 and 3 was staffing the center and providing professional development opportunities for the coordinator in the area of certification, financial aid, and veteran benefits.

With Year 4 requested funding in place, the priority will be to establish a meaningful partnership with the New Mexico Department of Veteran’s Services Field office in Cibola County. Our outreach efforts will center upon collaborating with the northwest region Veterans Outreach Specialist, consulting with the NM Department of Veterans Services for best practices in supporting our Veterans, and connecting benefit-receiving students with resources in, and outside, of, Cibola County. Funding will continue to employ a Veteran Programs coordinator at NMSU Grants with the remaining funds used for recruitment of student veterans, marketing materials, student travel, and Green Zone Training for all employees. The center will also employ a work study student funded at 100% through the Veteran Administration Work Study program.

It is NMSU Grants’ goal that all student veterans and dependents will receive wrap around services that support and assist them in meeting satisfactory academic progress at the end of each semester. Their success is our success!



NMSU Grants is currently receiving financial support from the New Mexico Legislature to provide a Student Veterans Resource Center in Cibola County.

### Student Veterans Resource Center Purpose

- Inform and raise a general awareness to veterans and dependents who have not established the use of any military education benefits (GI BILL®) to attend our college;
- Provide a veteran support system, and create an atmosphere of camaraderie to incoming and current student veterans;
- Continually seek to support the existing Student Veterans Association as a means to contribute to student life projects at our campus;
- Build a partnership with various organizations in the community to further expand Employment, Volunteer, and Health & Welfare opportunities for students to be involved in the NMSU Grants Campus and within our local community.

### FY22 Accomplishments

- Hired a Student Veterans Resource Coordinator November 2021
- On Campus opening of SVRC to students January 2022
- Maintained Student Veteran Enrollment despite overall enrollment decrease
- Alignment with NMSU Veteran Affairs Programs for seamless experience taking courses at other NMSU Campuses



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**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	NMSU Grants Veterans Resource Center

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$45,600

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$45,600

Type of Project (X for Type)			
Research <input type="checkbox"/>	Public Service <input checked="" type="checkbox"/>	Academic <input type="checkbox"/>	Athletics <input type="checkbox"/>
Clinical <input type="checkbox"/>	Economic Development <input type="checkbox"/>	Other (Explain Below) <input type="checkbox"/>	

*Please explain if other is marked:*

Click or tap here to enter text.

<b>1. Number of years the project has received General Fund support (Disregard if new program):</b>	3
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**2. Project Description / Executive Summary:**

The Student Veteran Resource Center (SVRC) provides a centrally located, easily accessible, and veteran-centered location on the NMSU Grants campus for students receiving VA Benefits to receive dedicated academic and student support, as well as other VA related services. The goal of the program is for all student veterans to make satisfactory academic progress by using the resources in the SVRC.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The budget for the project includes the salary (\$35,000) and fringe (\$12,775) for a 0.75 FTE Student Veterans Resource Coordinator, travel for coordinator and veteran students (\$10,000), and marketing/recruitment supplies (\$10,000).

**4. Program Mission (include population served, other demographic info):**

The SVRC aligns with the NMSU Grants mission (NMSU Grants provides an accessible quality education through innovative teaching and learning that promotes respect and service for our diverse students and community) by helping to support the academic and social success of our VA Benefit receiving students. This is achieved by providing a dedicated, safe space where veteran students can meet, study, and co-

**4. Program Mission (include population served, other demographic info):**

mingle with other veteran students around academic and non-academic topics. VA Benefit-receiving students have access to a VA Coordinator whose main function is to work exclusively with the target population to provide VA Certification, academic advising, and supplemental support as needed to ensure student success at all junctures of the academic journey.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The primary project objective is to increase head count enrollment for full-time and part-time enrollment for students at NMSU Grants who receive VA Benefits. The enrollment for FY 21 was 11 NMSU Grants students which was 55% of the performance measure target. If guest students (students who are certified at Grants but not full-time at Grants) are included then that performance would be 24 students or 120% of the performance measure. Moving forward, recruiting in partnership with the NW NM Veterans Center will be a priority and standard practice. This was not allowed during the first part of FY 21 as the pandemic created barriers for recruitment in Cibola County.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

Accomplishments:

100% of VA Benefit eligible students were certified for benefits on time  
SVRC opened to students both virtually and in-person  
Hired new coordinator January 2022  
Trained new Coordinator  
Met with student veterans despite COVID restrictions  
Certified documents remotely when needed  
Maintained student veteran enrollment numbers despite shrinking enrollment in other populations

Obstacles:

Limitations of campus activity due to COVID made recruiting/assisting veterans students difficult  
COVID related marketing disruptions  
COVID related recruitment disruptions  
Recruitment of Staff – Hiring during the pandemic in Cibola County was difficult given the position was only half-time.  
Retention of Staff – The Veterans coordinator resigned at the end of June, 2021 to pursue full-time employment.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The decline in our general student population are not reflected in our student veteran population, which has remained steady despite declines in other populations. Also, in light of all of the disruptions and changes due to COVID, our student veterans have not experienced a disruption in, or lack of, services. The SVRC has also provided an opportunity to align our services and procedures with those of the other VA programs in the NMSU system, thereby providing a more seamless experience for students who are taking courses at other NMSU campuses, and vice versa. The impact of the program is demonstrated by the number of veteran students who persist and finally complete a degree or certificate. It is the goal of

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

this program to have higher completion rates among our veterans students as a direct result of the targeted student support initiatives.

The impact of the program is to provide services to veterans who are trying to upskill or reskill which is a current initiative of the NM Governor and NM HED. At NMSU Grants, we will continue to create an open and friendly environment for military-connected students who visit the SVRC. This will include connecting with the students at the time of their visit, focusing on the needs of the students through focus groups and/or follow up surveys, and further discussing how the SVRC staff can contribute to the overall success and integration of the student into the college.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

N/A

**9. Accomplishment/ Highlights (bullet form)**

- Maintained all Student Veterans Enrollment
- Provided Virtual and in-person Support to Student Veterans
- Virtual Opening of Student Veterans Resource Center with in-person opening January 2022

<b>Medical Projects</b>	
<b>10. How many graduates stay in practice in New Mexico</b>	Click or tap here to enter text.

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

RPSP Title: GRANTS\_Veterans Center  
Contact Name: Dr. Marlene Chavez-Toivanen  
Contact Email: [marchave@nmsu.edu](mailto:marchave@nmsu.edu)

**FY24 Request**

**\$45,600**

**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

RPSP Goal: Enhance Student Success and Social Mobility for veterans

RPSP Objective 1 - 1.2 - Increase student learning, retention, and degree attainment		Measure Results				Measure Targets						Comments (Briefly state your case)
		FY19 Actuals	FY20 Actuals	FY21 Estimate	FY21 Actual	FY19	FY20	FY21	FY22	FY23	FY24	
1	Increase headcount enrollment of part- and full-time student veterans	NA	11	15	11	NA	18	20	20	20	15	NMSU Grants met 55% of its performance measure target for FY 21 as measured by Grants only students. If guest students (other campuses) are measured in addition to Grants students, then NMSU Grants exceeded the goal with 24 students or 120% of the performance measure. The goal will be to maintain or exceed FY 24 will be 15 Grants students and 5 guest.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments				
<b>Revenue and Transfers</b>								
<b>Beginning Fund Balance</b>	\$ 61,213.78	\$ (4,000.00)	\$ 57,213.78					
<b>Appropriations</b>								
Federal		\$ -						
State plus Tobacco Settlement Fund	\$ 45,600.00	\$ -	\$ 45,600.00					
Local		\$ -						
<b>Total Appropriations</b>	\$ 45,600.00	\$ -	\$ 45,600.00					
<b>Grants and Contracts</b>								
Federal		\$ -						
State		\$ -						
Local		\$ -						
<b>Total Grants and Contracts</b>	\$ -	\$ -	\$ -					
<b>Private Gifts, Grants and Contracts</b>		\$ -						
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -						
<b>Tuition and Fees</b>		\$ -						
<b>Endowment</b>		\$ -						
<b>Sales and Services</b>		\$ -						
<b>Other Sources - Detail in Comments</b>		\$ -						
<b>Total Revenues</b>	\$ 45,600.00	\$ -	\$ 45,600.00					
<b>Transfers (to) from</b>								
Instruction and General		\$ -						
Student Social and Cultural		\$ -						
Research		\$ -						
Public Service		\$ -						
Internal Service		\$ -						
Student Aid		\$ -						
Auxiliary Enterprises		\$ -						
Athletics		\$ -						
Independent Operations		\$ -						
Capital Outlay		\$ -						
Renewal and Replacement		\$ -						
<b>Total Transfers</b>	\$ -	\$ -	\$ -					
<b>Expenses</b>								
	FY23 FTE		Change FTE	\$		FY24 FTE		
Faculty Salaries		0.00	\$ -	0.00				
Professional Salaries	0.62	\$ 35,000.00	(0.06)	\$ -	0.56	\$ 35,000.00		VA Coordinator Position
Other Staff Salaries		0.00	\$ -	0.00				
Student Salaries (GA/TA)		0.00	\$ -	0.00				
Other Salaries		0.00	\$ -	0.00				
<b>Total All Salaries</b>	0.62	\$ 35,000.00	-0.06	\$ -	0.56	\$ 35,000.00		
Fringe Benefits			\$ 12,775.00			\$ 12,775.00		Fringe Amt . For VA Coordinator (36.5%)
Travel		\$ 5,000.00	\$ 5,000.00			\$ 10,000.00		Travel increase to include student travel
Utilities			\$ -					
Institutional Support Charges			\$ -					
Plant Operation and Maintenance Charges			\$ -					
Supplies and Expenses		\$ 9,600.00	\$ 400.00			\$ 10,000.00		Increase supplies
Equipment			\$ -					
Other Expenditures			\$ -					
<b>Total Expenditures</b>	0.62	\$ 49,600.00	-0.06	\$ 18,175.00	0.56	\$ 67,775.00		
<b>Ending Fund Balance</b>		\$ 57,213.78	\$ (22,175.00)			\$ 35,038.78		



# Tribal Education Initiative New Mexico State University Grants Community College

## Title: Tribal Education Initiative

**FY23 Actual: \$100,000**

**FY24 Request: \$100,000**

**\$ Change: \$0**

New Mexico State University Grants enrolled 411 Native American students during the 2021-2022 academic year representing about 35% of the student body. During this time, there were 28 Native American students pursuing either an Associate or Certificate degree in Education or Early Childhood. This enrollment accounts for 28% of the enrollment in the Education and Early Childhood programs. While these data appear promising, the critical issue rests in the completion and transfer rates for Native American students pursuing a bachelor’s degree in education or related field. These funds, available for the first time in FY 23, will be used to establish promising practices to support the recruitment, retention, and completion of Native American students who are pursuing an Associate or Certificate degree.



## Project Description

The first year (FY 23) will be a capacity building year with the priority directed to hiring an Outreach Specialist and professional tutors. The Outreach Specialist will work directly with our tribal communities of Acoma, Laguna, Zuni and the western part of the Navajo Nation as well as the local school districts to recruit Native American students into education programs at NMSU Grants. This position will also provide non-academic support to enrolled Native American students who are pursuing associate degrees in Education, Science, or Arts. Moreover, this position will work with NMSU Indian Programs and College of HEST to provide pathways for transferring into Bachelor of Education programs at the Las Cruces campus.

The ensure students are supported academically, professional tutors will be hired to support gateway courses in English, Mathematics, and Science. These tutors may be available on campus, virtually, or at the Outreach Centers located in Acoma, Laguna, or Prewitt (Navajo Nation).

The first year will also focus on training employees in best practices related to cultural and diversity awareness, tutoring, and NMSU policies and procedures.

## Project Impact

The Tribal Education Initiative has a direct impact on students from Cibola County and the surrounding tribal communities by providing the first two years of the pipeline for teacher education. Grants Cibola County Schools (GCCS) educates 3,131 students and employs 261 teachers, respectively, there are 1472 Native students and 32 teachers who identify as Native American. These data indicate that 47% of students attending GCCS are Native American which is not reflective of the Native American teachers which represent only 12% of the licensed teachers. This project would assist in closing the teacher-student diversity gaps for Native Americans by providing a homegrown solution to recruitment into the teaching profession at the Associate and Certificate level which also supports transfer into the bachelor’s degree. This project supports NMSU LEADS Goal 1: Enhance Student Success and Social Mobility for students in Cibola County who are pursuing a degree in Education.



## Project Goals and Performance Measures

The purpose of the Tribal Initiative Project is to support the pipeline and trajectory for Native American students who are pursuing a degree in teaching. NMSU Grants offers a certificate in Early Childhood and Associate degrees in both Elementary Education and Early Childhood. Since 2003, NMSU Grants also provided transfer assistance and practicum placement for preservice local practicum placement for student pursuing the Bachelor of Science in Education via distance and online learning.

### RPSP Goal 1:

Increase degree completion of Native American students in Education or Early Childhood

### Performance Measures

- Number of Native American Enrollment at NMSU Grants
- Number of Native American students majoring in Education or Early Childhood
- Increase persistence rate for all Native American students
- Increase retention rate for all Native American students
- Increase Associate and Certificate completion for Education and Early Childhood
- Increase transfer to bachelor's degree programs in Education



**Joseph Martin**

Associate in Education, 2005,  
NMSU Grants

Bachelor in Elementary Education, 2011,  
NMSU Las Cruces

### *Success Story*

#### *Joseph Martin, Pueblo of Acoma*

Joseph Martin, NMSU Grants (2005) and NMSU Las Cruces (2011), grew up on the Pueblo of Acoma and currently teaches for the Grants-Cibola County School District. He earned his Associate degree in Education from NMSU Grants and a bachelor's degree in Elementary Education via distance learning offered by the Las Cruces campus. Earning his degree while remaining on the pueblo was necessary for Joseph and his family as he was as able to work, go to college, and care for his elderly grandparents while living on the Pueblo of Acoma.

During his time at NMSU Grants, he thrived and showed great promise for becoming a great teacher and future leader. Through the Associated Student Government, he assumed leadership roles of secretary and then president and was a positive role model for other Native American Students. His involvement in various service learning activities solidified his love for teaching. He also was a student ambassador for the Student Services department and assisted the team with the development of different student engagement activities. Mr. Martin credits NMSU Grants for providing him wonderful learning opportunities and for giving him the tools necessary for success. As mentioned by Mr. Martin, "being able to earn my bachelor's degree without leaving my pueblo was convenient and I probably would not have finished my teaching degree if it wasn't offered at the Grants campus".

Joseph is currently working on obtaining his EMBA to begin a business for developing indigenous curriculum. His desire is to help tribal communities, like the Pueblo of Acoma, build a curriculum that will sustain and revitalize native languages for use in schools that serve Native American children.

**NEW MEXICO HIGHER EDUCATION DEPARTMENT  
Research & Public Service Projects (RPSP)  
FY 2024**

<b>Institution:</b>	NEW MEXICO STATE UNIVERSITY
<b>Name/Title of Project</b>	Tribal Education Initiative-NMSU Grants Campus

**Indicate Type (X):**    New     Continuing     Expansion     Final (Ending/Closing)

**FY24 Funding Request (\$XXX,XXX):**    \$100,000

**If Previously Funded, Amount that was awarded in FY23 (\$XXX,XXX):**    \$100,000

**Type of Project (X for Type)**

Research                       Public Service                       Academic                       Athletics   
 Clinical                       Economic Development                       Other (Explain Below)

*Please explain if other is marked:*

Click or tap here to enter text.

**1. Number of years the project has received General Fund support (Disregard if new program):**    1 year

**2. Project Description / Executive Summary:**

New Mexico State University Grants enrolled 411 Native American students during the 2021-2022 academic year representing about 35% of the student body. During this this time period, there were 28 Native American students pursuing either an Associate or Certificate degree in Education or Early Childhood. This enrollment accounts for 28% of the enrollment in the Education and Early Childhood programs. While these data appear promising, the critical issue rests in the completion and transfer rates for Native American students pursuing a Bachelor degree in teaching. These funds, available for the first time in FY 23, will be used to establish promising practices to support the recruitment, retention, and completion of Native American students who are pursuing an Associate or Certificate degree.

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

The project will consist of hiring an Outreach Specialist (\$40,377) who will work directly with our Tribal Communities and local school districts to recruit Native American students into the

**3. Budget Narrative (Overview only – Relates to separate Budget Form)**

Education programs at NMSU Grants. This position will also provide non-academic support to enrolled Native American students who are pursuing an Associate in Education, Science, or Arts. Another important responsibility of this position will be to work with NMSU Indian Programs and College of HEST to provide pathways for transferring into Bachelor of Education program at the Las Cruces campus.

To ensure students are supported academically, professional tutors (\$20,000) will be hired to support gateway courses in English, Mathematics, and Science. These tutors may be available on campus, virtually, or at the Outreach Centers located in Acoma, Laguna, or Prewitt (Navajo Nation).

The project will support the fringe benefits for both the Outreach Specialist and Professional tutors in the amount of \$19,590.

Travel (\$13,500) is included to support the transfer of NMSU Grants Native American students to Bachelor Programs in Education at any university in the state of New Mexico. It is the intention to work with the Indian Education Programs at each university to establish transfer support network for our students. The exposure to a larger university while still enrolled at a community college not only motivates them but provides incremental support for transfer.

Supplies (\$5,322) is included to support the Outreach Specialist and Professional Tutors. This may include software for tutoring, online training, technology equipment, and office supplies. This will also include basic school supplies (headphones, jump drive, notebooks, folders, and binders) for all Native American Education and Early Childhood students.

**4. Program Mission (include population served, other demographic info):**

The Tribal Initiative aligns with the NMSU Grants mission (NMSU Grants provides an accessible quality education through innovative teaching and learning that promotes respect and service for our diverse students and community) by helping to support the academic and social mobility success of our Native American students pursuing an Associate or Certificate degree in Education or Early Childhood. This achieved by providing strategic and intentional wrap-around support services to enrolled Native American students that increase persistence, retention, and degree completion.

**5. Key Project Objectives (Overview only – relates to separate performance measure form)**

The primary objective of this project is to increase the number of Native American students completing a degree in Education or Early Childhood. Intermediate benchmarks include increasing the number of Native American student enrolled at NMSU Grants, increasing the number of Native American students enrolled in Education or Early Childhood, increasing the persistence and the retention of Native American Students, increasing the persistence and retention of Native American students who major in Education or Early Childhood, and increase the transfer of Native American Students to Bachelor Programs.

**6. For EXISTING PROJECTS – Describe major accomplishments and/or obstacles encountered in the previous fiscal year. For NEW PROJECTS – Identify the top objectives and challenges for the current FY.**

The first year will be a capacity building year with the priority of hiring an Outreach Specialist and professional tutors. A challenge during the pandemic has been the ability to hire qualified personnel in Grants, NM as many residents in rural communities often do not have the skillset needed for the position. Another challenge has been gaining access to the tribal communities as they have strict executive orders from their tribal governments limiting visitor access to their communities. The first year will also focus on training employees in best practices related to cultural and diversity awareness, tutoring, and NMSU policies and procedures.

**7. Describe the project impact (Statewide impact, does it address the Governor’s initiatives, and/or what are the student outcomes?)**

The Tribal Education Initiative has a direct impact on students from Cibola County and the surrounding tribal communities by providing the foundation of the pipeline for teacher education. Grants Cibola County Schools (GCCS) educates 3,131 students and employs 261 teachers, respectively, there are 1472 students and 32 teachers who identify as Native American. These data indicate that 47% of students attending GCCS are Native American which is not reflective of the Native American teachers which represent only 12% of the licensed teachers. This project would assist in closing the teacher-student diversity gaps for Native Americans by providing a homegrown solution to recruitment into the teaching profession at the Associate and Certificate level which also supports transfer into the Bachelor degree. This project supports NMSU LEADS Goal 1: Enhance Student Success and Social Mobility for students in Cibola County who are pursuing a degree in Education.

**8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?**

N/A

**9. Accomplishment/ Highlights (bullet form)**

N/A

Medical Projects	
<b>10. How many graduates stay in practice in New Mexico</b>	N/A

**Research and Public Service Projects (RPSP)  
Performance Measures Longitudinal Report  
2022-23 Report**

<p style="text-align: center;">Tribal Education Initiative</p> <p><b>RPSP Title:</b> NMSU Grants</p> <p><b>Contact Name:</b> Marlene Chavez-Toivanen</p> <p><b>Contact Email:</b> <a href="mailto:marchave@nmsu.edu">marchave@nmsu.edu</a></p>	<p><b>FY24 Request</b></p> <p style="border: 1px solid black; background-color: yellow; padding: 5px; display: inline-block;"><b>\$100,000</b></p>
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**NMSU LEADS 2025 Goal: 1 - Enhance Student Success and Social Mobility**

**RPSP Goal:** Increase degree completion for Native American students majoring in Education and Early Childhood

<b>RPSP Objective 1:</b> Increase degree completion of Native American students in Education or Early Childhood		<b>Measure Targets</b>		<b>Comments (Briefly state your case)</b>
		<b>FY23</b>	<b>FY24</b>	
<b>RPSP Measures:</b>				
1	Number of Native American Enrollment at NMSU Grants	423	436	3% increase per year (base enrollment 411)
2	Number of Native American students majoring in Education or Early Childhood	30	35	The 2021-22 enrollment was 28 with achievable targets.
3	Increase Persistence Rate for all Native American students	65%	70%	Students often change majors at least twice, supporting persistence for all Native American students is beneficial as those students may transfer to and education field or pursue a Bachelor and alternative licensure. Persistence is defined as Fall to Spring
4	Increase retention rate for all Native American students	42%	50%	Students often change majors at least twice, supporting persistence for all Native American students is beneficial as those students may transfer to and education field or pursue a Bachelor and alternative licensure. Retention is defined at Fall to Fall
5	Increase Associate and Certificate completion for Education and Early Childhood	5 - Certificate; Associate	5 - 7 - Certificate; Associate	7 - Fall 2021/Spring 2022 4 Certificate; 4 Associate
6	Increase transfer to Bachelor degree programs in Education	2	5	

**NEW MEXICO HIGHER EDUCATION DEPARTMENT**  
**Research & Public Service Project (RPSP)**  
**Project Budget Sheet**

Institution:

RPSP Project:  Total:

Budget versus Actual	Budget FY 23	Change	Request FY 24	Comments
<b>Revenue and Transfers</b>				
Beginning Fund Balance		\$ 19,182.00	\$ 19,182.00	
<b>Appropriations</b>				
Federal		\$ -		
State plus Tobacco Settlement Fund	\$ 100,000.00	\$ -	\$ 100,000.00	
Local		\$ -		
<b>Total Appropriations</b>	<b>\$ 100,000.00</b>	<b>\$ -</b>	<b>\$ 100,000.00</b>	
<b>Grants and Contracts</b>				
Federal		\$ -		
State		\$ -		
Local		\$ -		
<b>Total Grants and Contracts</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
<b>Private Gifts, Grants and Contracts</b>		\$ -		
<b>Land &amp; Permanent Fund or Local Property Taxes</b>		\$ -		
<b>Tuition and Fees</b>		\$ -		
<b>Endowment</b>		\$ -		
<b>Sales and Services</b>		\$ -		
<b>Other Sources - Detail in Comments</b>		\$ -		
<b>Total Revenues</b>	<b>\$ 100,000.00</b>	<b>\$ -</b>	<b>\$ 100,000.00</b>	

**Transfers (to) from**

Instruction and General		\$ -		
Student Social and Cultural		\$ -		
Research		\$ -		
Public Service		\$ -		
Internal Service		\$ -		
Student Aid		\$ -		
Auxiliary Enterprises		\$ -		
Athletics		\$ -		
Independent Operations		\$ -		
Capital Outlay		\$ -		
Renewal and Replacement		\$ -		
<b>Total Transfers</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	

**Expenses**

	FY23 FTE		Change FTE	\$	FY24 FTE		
Faculty Salaries			0.00	\$ -	0.00		
Professional Salaries	0.71	\$ 40,377.00	(0.05)	\$ 1,211.00	0.66	\$ 41,588.00	Outreach Specialist (assumption 3 % increase)
Other Staff Salaries			0.00	\$ -	0.00		
Student Salaries (GA/TA)			0.00	\$ -	0.00		
Other Salaries	0.55	\$ 17,960.00	0.04	\$ 2,040.00	0.59	\$ 20,000.00	Tutors/Mentors
<b>Total All Salaries</b>	<b>1.26</b>	<b>\$ 58,337.00</b>	<b>-0.01</b>	<b>\$ 3,251.00</b>	<b>1.25</b>	<b>\$ 61,588.00</b>	(36.5% Outreach Specialist, 22.02% Tutors)
Fringe Benefits				\$ 19,590.00		\$ 19,590.00	
Travel		\$ 16,000.00		\$ (2,500.00)		\$ 13,500.00	Travel to visit 4 yr Universities
Utilities				\$ -			
Institutional Support Charges				\$ -			
Plant Operation and Maintenance Charges				\$ -			
Supplies and Expenses		\$ 6,481.00		\$ (1,159.00)		\$ 5,322.00	Supplies
Equipment				\$ -			
Other Expenditures				\$ -			
<b>Total Expenditures</b>	<b>1.26</b>	<b>\$ 80,818.00</b>	<b>-0.01</b>	<b>\$ 19,182.00</b>	<b>1.25</b>	<b>\$ 100,000.00</b>	
<b>Ending Fund Balance</b>		<b>\$ 19,182.00</b>		<b>\$ -</b>		<b>\$ 19,182.00</b>	