NEW MEXICO STATE UNIVERSITY

RESEARCH AND PUBLIC SERVICE PROJECTS

FISCAL YEAR 2025

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New Mexico State University
Research and Public Service Projects

Fiscal Year 2025 Overview

On September 7, 2023, the New Mexico State University Board of Regents will need to provide authorization for the university to submit its Research and Public Service Project requests for Fiscal Year 2025. These submissions are the result of a four-month process and review by a variety of university stakeholders, including the Regents Financial Strategies and Performance Budget Committee. The university intends to submit requests for twenty-one (21) Research and Public Service Projects on Main Campus as well as four (4) at its branch campuses. These requests total just over $17M, of which $2.1M is for expansion requests (increased funding for existing projects) and $1.8M is for new projects.

In addition to Research and Public Service Projects, the university also will submit its funding requests for its non-Instruction & General Entities, which do not receive funding through the state's higher education funding formula. These seven entities are requesting $73M in funding for Fiscal Year 2025, of which $13.4M is new or increased funding.

On the pages that follow are summaries of the instructions for Research and Public Service Projects as communicated by the Higher Education Department, the university's process for submissions, notes on the new and expansion requests, and a ranking of Research and Public Service Projects.

It is important to observe that the university's requests reflect a concerted effort to be responsive to the push by the legislative and executive branches to roll-up or consolidate projects. *Please note that where the state allowed for up to five new project submissions, the university is submitting only four for consideration. This comes as the result of a preemptive consolidation and a recognition that we should collaborate internally where possible and not duplicate efforts. Additionally, the university expects two to three Research and Public Service Projects to roll-up automatically as they fall under the $200,000 threshold established by the state (more details on this are within the communication from the Higher Education Department).*

NMSU FY 2025 Research and Public Service Projects Summary:
FY25 Total Request: 25 projects totaling $17,078,200
FY25 Total Expansion Requests: Increases to 3 projects totaling $2,145,000
FY25 Total New Requests: 4 projects totaling $1,843,400

NMSU FY 2025 Non-Instruction and General Summary:
FY25 Total Request: 7 entities, $73,703,000
FY25 Total Expansion Request: $13,395,200

Table of Contents

New Mexico State University FY 25 New and Expansion Research and Public Service Projects
University Recommendations

Expansion Requests	Final FY 24	FY 25 Request	$ Change	Project Description	Funding Use
Space Commercialization	50.0	650.0	600.0	Train faculty, staff and students in commercialization processes. Partner with research labs and industry.	Post-Doc researcher, staff, grad and undergrad support
Produced Water Consortium	130.0	1,200.0	1,070.0	Water treatment and water reuse research	Research support, grad and undergrad support, program manager, chemicals and supplies
Water Resources Research Institute	1,183.8	1,658.8	475.0	Water research in acequias and waterways to support community needs	Research support, field equipment, travel, research assistants and graduate support
	Total Expansion Requests		**2,145.0**		

New Requests	FY 25 Request	Project Description	Funding Use
Artificial Intelligence Alliance	606.6	Professional development in artificial intelligence, curricula development, support for K-12 in artificial intelligence	Staff support, travel statewide, curricala and professional development
Counseling & Educational Psychology	452.4	Establish a speicalty clinic for community members to target mental health needs while increasing research activities	Faculty coordinators, Post-Doc, grad assistant support, room and materials
STEM+ Center of Excellence	500.0	Statewide network of educators, professional development and curriculum development	Program director, faculty support, coordinators, outreach and travel
Women's and Gender Advocacy Center	284.4	Inclusive advocacy center, childcare center, support for individuals	Unit admin, social work coordinators, travel, supplies and expenses
	Total New Requests	**1,843.4**	

New Mexico State University
Research and Public Service Projects
Rankings and FY25 Request

Project	1	2	3	4	5	6	Rank based on total score	New or Existing	New or Expansion Request Amount
Space Commercialization	3.0	2.5	4.0	4	4.0	1.0	1	Existing	600.0
Produced Water Consortium	2.0	1.0	2.0	2	3.0	5.0	2	Existing	1,070.0
CAMP	1.0	4.0	5.0	1	2.0	6.0	3	Existing	-
Sunspot	4.0	11.0	1.0	3	1.0	2.0	4	Existing	-
WRRI	12.5	2.5	3.0	8	5.5	4.0	5	Existing	475.0
AI Alliance	7.0	12.5	8.0	8	10.0	3.0	6	New	406.0
Manufacturiung Sector Development	6.0	8.0	6.5	10	8.0	8.5	7	Existing	200.0
Autism	18.5	5.0	11.5	5	7.0	7.0	8	Existing	85.0
Nurse Anesthesiology	8.0	6.0	13.5	8	5.5	15.5	9	Existing	-
Nurse Expansion	5.0	7.0	18.0	6	9.0	20.0	10	Existing	-
Arrowhead	17.0	10.0	6.5	17	17.0	8.5	11	Existing	200.0
Center of Excellence in Sustainable Food and Ag Systems	14.0	14.0	10.0	15	16.0	10.0	12	Existing	200.0
Nurse Mental Health	9.0	9.0	11.5	14	14.0	18.0	13	Existing	-
Indian Resources Development	12.5	12.5	13.5	13	11.0	15.5	14	Existing	122.0
Young Women in Computing	16.0	19.0	15.0	11	13.0	14.0	15	New	171.0
Tribal Education	10.5	18.0	16.0	12	15.0	19.0	16	Existing	100.0
STEM AMP	15.0	23.0	9.0	22	19.0	12.0	17	Existing	-
Teacher Pipeline	10.5	16.0	23.0	16	12.0	22.0	18	Existing	50.0
Alliance for Teaching and Learning Advancement	24.0	15.0	17.0	19	18.0	21.0	19	Existing	-
Counseling & Educational Psychology (CEP)	20.0	20.0	20.0	18	20.0	13.0	20	New	452.0
STEM+ Center	18.5	21.0	19.0	21	22.0	11.0	21	New	500.0
STEM K12 Pipeline	22.0	22.0	22.0	20	21.0	17.0	22	Existing	-
NMLETS	25.0	24.0	21.0	24	25.0	23.0	23	New	550.0
Women's and Gender Advocacy Center	21.0	26.0	25.0	23	23.0	25.0	24	New	284.0
School of Social Work	23.0	25.0	24.0	26	26.0	26.0	25	New	653.6
Anna Age Eight	26.0	17.0	26.0	25	24.0	24.0	26	Existing	-

1.Assess the project's alignment with the NMSU mission. 1-10

2.Evaluate the project's impact on the state of New Mexico as a public service and/or research endeavor. 1-10

3.Assess the project's ability to leverage state funds for additional non-state funding sources such as federal funds, grants, industry support, philanthropic investment/partnerships, and venture capital. 1-10

4.Evaluate the project budget, considering its alignment with goals and intended impacts. 1-10

5.Rate the extent to which the project establishes or maintains meaningful performance level targets and budget efficiency, ensuring alignment with objectives. 1-10

6.Evaluate the project's potential to achieve self-sufficiency.

Non-Instruction and General (I&G) Requests					
Program	**FY24 Final**	**FY 25 Request**	**$ Change**	**% Change**	**Funding Use**
Athletics	7,675.0	9,675.0	2,000.0	26%	Nutrition, cost of attendance, summer aid
Department of Agriculture	15,200.7	23,865.9	8,665.2	57%	Compensation parity, acequia and ditch community fund, additional increase due to Land of Enchantment Legacy Fund
Agricultural Experiment Station	19,388.9	20,788.9	1,400.0	7%	3 faculty, 2 researchers, 10% operations increase
Cooperative Extension Service	16,370.4	17,330.4	960.0	6%	2 specialists, 3 4-H agents, 10% operations increase
Teacher Pipeline	250.0	300.0	50.0	20%	Additional supplies and expenses
Tribal Education	200.0	300.0	100.0	50%	Equipment
ED TV	1,222.8	1,442.8	220.0	18%	Journalism support, programming support, HEST partnerships
Total Non-I&G	**60,307.8**	**73,703.0**	**13,395.2**	**22%**	

New Mexico Artificial Intelligence Alliance – Education & Outreach

2024

New Mexico Artificial Intelligence Alliance

FY24 Actual: $0
FY25 Request: $606,042
$ Change: $606,042

The Need

- Over 400,000 technology jobs and 71,000 college graduates
- Over 2.3Million jobs in AI
- Critical gaps in K-14 AI education
  - o Convergence of K-12 CS curricula
  - o No agreement on K-12 AI curricula
- Gaps amplified by lack of diversity
  - o 15% of AI professionals are women
  - o 80% of AI faculty are men
  - o Less than 7% of UG AI degrees are Hispanic
- World Economic Forum – 1Billion jobs transformed by AI
- In May 2023, 5% of job losses caused by AI
- McKinsey & Co. role of primary education to transition jobs
  - o AI education broader than CS or STEM
  - o Early exposure, AI as problem solving, experiential learning

The Opportunity

- Early exposure to AI as a tool for critical thinking, problem solving is crucial to shape career trajectories
- Knowledge of beneficial and ethical uses of AI will become an essential skill - driving how most disciplines operate
- *New Mexico Computer Science Alliance* provides a dynamic and established network for PD of teachers in computing and in development of CS culturally responsive pedagogy K-12 pedagogy
- New Mexico PED has promoted adoption of computing and technology in the classrooms through funding and legislation
- The NM landscape is fertile to achieve national lead in K-12 AI education
- NM is rich in AI research & educational expertise, linkage to national initiatives and focused on the success of New Mexico students
- The team leads state-wide pilot efforts in K-12 AI PD (EdAI)
- The team is part of national networks (e.g., CAHSI) to promote dissemination and achievement of national leadership in K-12 AI

AI Alliance Mission & Vision

"Expanding Artificial Intelligence Education - one student, one teacher, one school, one partner at a time."

The **mission** of the *New Mexico AI Alliance* is to create access for all students across New Mexico to quality education in foundations, applications, and ethical uses of AI with particular emphasis on group traditionally underrepresented in AI.

The **vision** of the *New Mexico AI Alliance* is to achieve, by 2030, presence of AI educational opportunities in the majority of middle and high schools in NM, inclusive of equitable gender representation.

Benefit to New Mexico

- **K-12 Teachers –** create a sustainable network and programs to build K-12 teachers' skills in AI pedagogy, AI curricula and ownership of AI content
- **K-12 Students –** develop AI knowledge, curiosity, and confidence, ability to master AI as a critical and ethical problem solving tool – through formal and informal education opportunities
- **AI Knowledge –** lay the foundation for long-term AI knowledge creation, both foundational as well as applied
- **NM Economy –** early AI education contributes to Priorities 3.2, 3.3, 4.3 of EDD; AI underlies most industries named for Priority 6 (6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9)
- **Alignment with RPSP Priorities**
  - o Education & Teacher Preparation
  - o Centers of Excellence

New Mexico Artificial Intelligence Alliance

The NM AI Alliance is designed to promote K-12 artificial intelligence (AI) education in New Mexico. The alliance seeks to empower teachers and students with the knowledge, skills, tools, and ethical understanding necessary to navigate the evolving AI landscape. By bridging the AI skills gap and fostering innovation, the Alliance aims to prepare New Mexico's students to thrive in an AI-driven world and contribute to technological advancements. The Alliance places emphasis on integrating diverse expertise from public education, academia, industry and government to sustain the AI development of K-12 teachers. The Alliance places emphasis on ethics, ensuring that students develop a responsible approach to AI development and deployment. By promoting ***diversity and inclusion****, the Alliance aims to create equal opportunities for* ***all*** *students to engage with AI education. Particular emphasis will be placed on expanding successful efforts focused on early participation of women in computing to promote women participation in AI. Through collaboration among educators, policymakers, and industry leaders, the Alliance seeks to establish a network that shares best practices, resources, and expertise in K-12 AI education. The establishment of this Alliance in New Mexico signifies a proactive step towards future-proofing education, through teachers-focused professional development, curricula development and outreach programs, enabling students to become proficient in AI, and positioning the state at the forefront of AI education and innovation. The Alliance integrates with and expands the existing NM Computer Science Alliance, which has been instrumental in providing state-wide professional development for K-12 teachers in computer science and promoting state-level and national-level advocacy for the integration of computer science in K-12 schools.*

Team

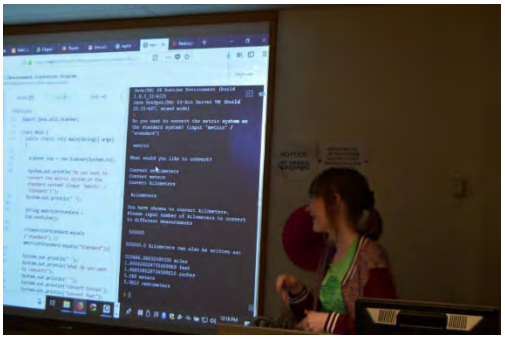
- **AI Leads:**
  - Huiping Cao, NMSU
  - Son Tran, NMSU
  - Enrico Pontelli, NMSU
- **Educational Experts**
  - Amanda Peel, NMSU
  - Irene Lee, MIT
  - Paige Prescott, NM Computer Science Alliance
  - Yolanda Lozano, NM Computer Science Teachers Association
- **Evaluation Team**
  - Sarah Hug, Colorado Research & Evaluation

AI Alliance Goals

- **Empower** New Mexico K 12 teachers from any discipline in mastering and teaching AI concepts and tools
- Develop a state wide **network** of educators, researchers, and practitioners to advance AI knowledge in K 12 audiences
- Develop, assess and disseminate culturally responsive **curricula** on AI and its ethical applications
- Establish New Mexico as a **National Leader** in K 12 inclusive AI education

First Year Activities

- **Launch Convening –** stakeholders engagement, initial network formation
- **AI K-12 Cohort Formation –** recruitment of 30 K-12 teachers across the state, virtual onboarding
- **AI Book Club –** bi-weekly meetings teachers meetings with facilitators
- **AI Practicum –** summer camps with K-12 teachers and students to develop and test AI modules
- **Summer Convening –** stakeholders network expansion, prepare for state-level advocacy; AI camps focused on Young Women
- **AI Classroom Deployment –** Fall semester deployment of AI modules, data collection
- **Spring Evaluation and National Dissemination –** evaluation and assessment, presentations at national meetings
- **Presentation to stakeholders –** final convening of stakeholders, development of sustainability plan, solidifying network structure



NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Projects (RPSP)
FY 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	New Mexico Artificial Intelligence (AI) Alliance

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

FY25 Funding Request ($XXX,XXX):	$606,642

If Previously Funded, Amount that was awarded in FY24 ($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.

1. Number of years the project has received General Fund support (*Disregard if new program):*	Click or tap here to enter text.

2. Project Description / Executive Summary:

The field of Artificial Intelligence (AI) has witnessed an explosive growth in recent years, fueled by the wide availability of diverse and large data sets, innovations in AI algorithms, and the development of affordable high-performance computing systems. AI has led to rapid delivery of innovations in a variety of domains, such as digital humanities, arts, public health, drug design, law enforcement, and digital agriculture. AI brings huge potential to transform modern society and it is already evident that AI is positioned to become an essential job skill in the immediate future, regardless of the desired field of study and career objectives.

This project will lead to the establishment of the New Mexico AI Alliance, as a network of educators, researchers and practitioners committed to promote K-12 AI education across the state of New Mexico. The AI Alliance is modeled after highly successful Computer Science Alliance and will initially build on its network. Nevertheless, it should be recognized that the scope, foundations, and implications of AI are well beyond the realm of computer science technology, and even beyond the scope of traditional STEM fields.

Recognizing the significance of AI in shaping the future, the AI Alliance seeks to advocate for AI training and education, and provide K-12 teachers from a diversity of disciplines with the tools to empower students with the knowledge, skills, and

2. Project Description / Executive Summary:

ethical understanding necessary to navigate the evolving AI landscape. By bridging the AI skills gap and fostering innovation, the AI Alliance aims to prepare New Mexico's students to thrive in an AI-driven world and contribute to technological advancements. The AI Alliance places a strong emphasis on ethics, ensuring that students develop a responsible approach to AI development and deployment. By promoting cultural-responsive AI pedagogy, the AI Alliance aims to create equal opportunities for all students to engage with AI education. Through collaboration among educators, policymakers, researchers, and industry leaders, the AI Alliance seeks to establish a network that shares best practices, resources, and expertise in K-12 AI education and provides professional development for teachers and administrators to advance the role of AI across New Mexico's K-12 schools. The establishment of this alliance in New Mexico signifies a proactive step towards future-proofing education, enabling students to become proficient in AI, and positioning the state at the forefront of AI education and innovation.

The New Mexico AI Alliance integrates with and expands the existing New Mexico Computer Science Alliance, which has been instrumental in providing state-wide professional development for K-12 teachers in computer science and computational thinking and promoting state-level and national-level advocacy for the integration of computer science in K-12 schools. The New Mexico AI Alliance avails of existing educational and outreach networks provided by the New Mexico Computer Science Alliance and by the New Mexico Chapter of the Computer Science Teachers Association (NM-CSTA).

The New Mexico AI Alliance provides also an evolution of the successful Young Women in Computing (YWiC) program, which has been in place at NMSU since 2006 to promote engagement, preparation and access to computing for K-12 women students; the Alliance will evolve YWiC into an AI-focused hybrid outreach program, serving women K-12 students across the state and providing a natural site for the comprehensive educational programs of the AI Alliance.

The efforts of the AI Alliance will be designed to promote both continuous innovation – e.g., through the formation of working groups exploring novel curricula and pedagogies - as well as sustainability – e.g., through the development of online microcredentials that could be disseminated across the state.

While the initial and primary focus of the New Mexico AI Alliance is on serving the K-12 population of teachers and students in New Mexico, in the long term we view the AI Alliance expanding its effort into two-year college programs and eventually providing accelerated, sustainable and realistic pathways into AI-focused college degrees (e.g., the novel Bachelor of Science in Artificial Intelligence currently being developed).

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

The budget requested will support the initial development of the New Mexico AI Alliance and the launch of an initial set of initiatives. The requested funds will support

* The creation of an initial professional development program, composed of a semester-long virtual AI book-club for K-12 teachers, a summer set of practicum sessions and assisted in-class deployment of AI modules;
* The development of an initial network of committed educators and researchers focused on AI pedagogy; the network of the Computer Science Alliance will offer a preliminary backbone and will be supported by three convenings throughout the year to develop the vision and mission of the Alliance.
* The development of new K-12 curricula for AI education in K-12 classrooms, leveraging existing state-wide efforts on culturally-responsive computing pedagogy and collaborations with national initiatives on K-12 education (e.g., the Everyday AI curriculum developed by collaborator Irene Lee).

The budget includes

* support for K-12 teachers participating in the professional development initiatives
* support for K-12 students participating in summer practicums – in particular, a number of summer practicums will be implemented as women-only programs, designed and deployed by teams of undergraduate women students, following the successful model piloted since 2006 at NMSU in the Young Women in Computing program.
* support for the three convenings on AI pedagogy
* support for the consultant Irene Lee, providing national expertise in K-12 AI pedagogy
* support for the participation of collaborating investigators Dr. Lee, the Computer Science Alliance and the Computer Science Teachers Association in expanding the K-12 network of teachers and administrators
* support for NMSU personnel coordinating the day-to-day activities of the AI Alliance

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

"Expanding Artificial Intelligence Education - one student, one teacher, one school, one partner at a time."
The mission of the New Mexico Artificial Intelligence Alliance is to create access and opportunities for all students across New Mexico to quality education and training in foundations, applications, and ethical uses of Artificial Intelligence.
The vision of the New Mexico Artificial Intelligence Alliance is to achieve, by 2030, presence of Artificial Intelligence educational opportunities in the majority of middle and high schools in the state.
The AI Alliance will serve the broad population of K-12 teachers and students across New Mexico; the ubiquity of AI prompts the inclusion of teachers from any disciplines (not just the traditional computing and STEM teachers), with the intent of exposing to AI concepts students in a diversity of contexts and thus promoting a broad participation of students – in particular, trying to serve students who would not typically consider AI and technology as areas of interest.

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

The primary objectives of the New Mexico AI Alliance are:
1. Professional Development: the New Mexico AI Alliance will serve as a vehicle to deliver cutting-edge professional development to K-12 New Mexico teachers on how to effectively integrate AI in their curricula and expose students to fundamentals of AI;
2. Curricula and Content Development: the New Mexico AI Alliance will assist in the creation and dissemination of culturally-responsive AI curricula for New Mexico K-12 schools, through coordination of networks of experts and by serving a bridge to New Mexico for national curricular development efforts;
3. Innovation: exploration and improved understanding of effective and culturally-responsive pedagogy to expose K-12 students to AI concepts and tools and their ethical use to promote society's good.
4. Advocacy: the New Mexico AI Alliance will serve as a vehicle to advocate for the ethical and effective integration of AI in K-12 education to the benefit of all students across New Mexico.
5. Access: through the implementation of summer programming and the creation of informal learning opportunities, the AI Alliance will deploy models and initiatives to create access and training opportunities for K-12 women students in the area of AI.

The New Mexico AI Alliance will address the following goals related to promoting K-12 education in AI:

1. Empowering K-12 Teachers: By establishing the AI Alliance, we will provide K-12 teachers with the knowledge, tools, and confidence to deliver to their students the necessary tools, resources, and guidance to understand and harness the power of AI from an early age, preparing them to be competent participants in the digital era. This will be achieved through a variety of training and professional development programs.

2. Closing the Skills Gap: AI is rapidly transforming industries, and by focusing on K-12 education, we can bridge the skills gap and ensure that students are equipped with the knowledge and skills required to thrive in an AI-driven world. This will be achieved through a diversity of module and curricula development efforts.

3. Fostering Innovation: Encouraging AI education at an early stage can unlock the creative potential of students, enabling them to explore novel applications of AI and contribute to technological advancements and innovative solutions.

4. Ethical AI Development: With an alliance dedicated to K-12 AI education, we can instill a strong emphasis on ethics, ensuring that students understand the ethical implications and responsibilities associated with AI, leading to the development of responsible AI systems.

5. Enhancing Diversity and Inclusion: By promoting AI education in all K-12 schools across the state of New Mexico, we can create opportunities for students from diverse backgrounds to engage with AI, promoting inclusivity and diversity within the field and mitigating potential biases in AI systems. This will also contribute to the diversification of an AI workforce which is currently heavily gender and ethnically skewed. The team will promote innovation in the area of culturally-responsive pedagogy, customized to the specific needs of New Mexico students, and support the adoption of bi-lingual materials. In addition, dedicated outreach and informal learning opportunities will concentrate on promoting participation of women to AI educational activities – addressing a profound gender underrepresentation in the field.

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

6. Future-Proofing Education: The AI Alliance can help New Mexico K-12 educational institutions stay ahead of the curve by integrating AI into their entire curriculum, preparing students for the evolving job market and fostering a lifelong learning mindset.

7. Global Collaboration: By forming a state-wide AI Alliance, educators, policymakers, researchers, and industry leaders can collaborate and share best practices, resources, and expertise, fostering a state-wide network dedicated to advancing AI education and ensuring its widespread adoption.

The specific activities proposed for this funding period includes:

- Three state-wide convenings of stakeholders from education, research, industry and local government, to establish priorities in AI K-12 education and create a long-term strategy to pursue such priorities
- Professional development program across New Mexico, with both virtual and in-person activities
- Summer experiences for teachers and students to refine AI learning and practice on real-world problems
- Informal learning academic year activities focused on AI for K-12 women students
- Dissemination of AI pedagogy models within the state and on a national scale

In summary, establishing the AI Alliance to support K-12 education in AI is a proactive step towards equipping students with the necessary skills, fostering innovation, promoting ethics, and preparing them to succeed in an AI-powered future.

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?

- Teachers: The professional development of K-12 teachers in artificial intelligence (AI) offers significant benefits to both educators and students. By enhancing their understanding of AI concepts, tools, and applications, teachers can effectively integrate AI into the curriculum, creating dynamic and engaging learning environments. Professional development in AI enables teachers to foster critical thinking, problem-solving, and creativity among students, equipping them with essential skills for the digital age. Moreover, AI training empowers teachers to guide students in exploring ethical considerations and responsible AI practices, cultivating a sense of digital citizenship. By investing in the professional development of K-12 teachers in AI, we empower them to harness the potential of AI in education, ensuring students are prepared for the opportunities and challenges of the AI-driven future.
- Students: K-12 students' education in artificial intelligence (AI) brings valuable benefits by fostering critical thinking, problem-solving, and digital literacy skills. By gaining an understanding of AI concepts and applications, students can navigate the evolving technological landscape and harness AI tools to enhance their learning experiences. AI education empowers students to think innovatively, encouraging creative approaches to problem-solving and promoting future-ready skills. Additionally, AI education equips students with the knowledge to navigate ethical considerations, fostering responsible AI use and ensuring they become informed participants in an AI-driven world. AI skills are expected to be foundational for virtually any career choice the students intend to pursue.
- State: early AI education contributes to the following priorities of the New Mexico Economic Development Department "Empower and Collaborate" plan: (Priority 3.2) The Alliance will provide a fundamental building block towards reforming the workforce development ecosystem and better align students' skills to the present industry needs; (Priority 3.3) Early exposure to AI will provide students with cutting-edge problem solving skills and tools to improve success, motivate pursuit of higher education and serve as future leaders in the New Mexico economy; (Priority 4.3) Following the successful model implemented by the New Mexico Computer Science Alliance, the New Mexico AI Alliance will emphasize diversity and inclusion, through the adoption of culturally-responsive AI pedagogy and by emphasizing engagement of

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

teachers from rural communities in professional development programs; (Priority 6.1) Aerospace industry fundamentally relies on the use of AI-based optimization methods in the design of aircrafts and on the use of machine learning techniques in driving simulations and in customizing aircraft behavior to different scenarios; (Priority 6.2) modern biosciences, especially in the area of precision medicine and drug design, are heavily data-driven, integrating heterogeneous data sets (e.g., -omics) to understand structure and behavior of proteins, signaling networks, and overall system functioning of biological systems; (Priority 6.3) Modern cybersecurity is moving away from the traditionally-used reactive model (e.g., developing filters based on known threats) towards the use of machine learning to realize predictive threat responses, capable of acting in presence on unseen threats; furthermore, knowledge-based agents are now used to model malicious actors and automatically develop response plans; (Priority 6.4) Digital film making is crucially relying on the use of AI-generated content, e.g., artificial characters, special effects, animations, pushing the envelope in generative AI; (Priority 6.6) Precision agriculture requires the ability to integrate diverse data sets (e.g., weather, sensors, images, markets) to plan interventions (e.g., water delivery), identify potential risks (e.g., cattle illnesses from changes in animal behavior), and develop long term predictive modeling (e.g., cattle guidance to avoid overgrazing); autonomous systems are seen as the future of precision agriculture, especially in vast arid lands like New Mexico; (Priority 6.7) Intelligent manufacturing relies on a broad spectrum of AI techniques, from optimization methods for supply-chain management, to automated planning for reconfiguration of equipment and floor operation, to robotics for enhanced automation; (Priority 6.8) Global trade relies on automated decision making, fueled by sophisticated data-driven modeling, automated negotiation assistants, and powerful AI-driven optimization algorithms; (Priority 6.9) Sustainable and green energy requires innovation the overall electric infrastructure, to effectively integrate renewable sources and promote intelligent management of energy production, distribution and consumption (e.g., using smartgrids); AI technologies are the foundation for such intelligent infrastructures, through machine learning models for decision making, multi-agent systems for the management of microgrids, and data analytics solutions to enhance optimal behavior and resiliency.

- RPSP Priorities: The project is aligned with the following priorities established for the RPSP program for 2024: (Education and Teacher Preparation): The leading purpose of the New Mexico AI Alliance is to establish an effective state-wide network of teachers, researchers, practictioners, and administrators to promote K-12 teachers preparation and K-12 curricula development in Artificial Intelligence and its ethical use. (Centers of Excellence): the New Mexico AI Alliance will operate as a virtual and distributed state-wide center of excellence, with the goal of coordinating and supporting research and development efforts in the area of AI education.

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

The need for and the conceptual design of the New Mexico AI Alliance has arisen from two federally funded efforts:
* A grant from the Department of Education to New Mexico State University supporting the initial formation of an educational network focused on K-12 AI education; the grant is led by Dr. Pontelli and includes the Computer Science Alliance as co-lead; The funding will expire at the end of 2023.
* A grant from the National Science Foundation to the Computer Science Alliance (with New Mexico State University as a co-lead) focused on exploring professional development of K-12 teachers in the adoption of culturally-responsibe pedagogy in the teaching of computer science.

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.

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	New Mexico Artificial Intelligence Alliance

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☒	**Public Service ☒**	**Teaching ☒**

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The proposed New Mexico Artificial Intelligence Alliance will serve as an interdisciplinary state-wide network for K-12 teachers, students, administrators, AI and educational researchers, and industry. The initial goal of the AI Alliance is to promote early exposure and training in AI.

The project is, first of all, aligned with the land-grant mission of NMSU, providing a growth opportunity for the diverse population of the state, through a state-wide educational initiative capable of transforming lives; the project represents an integration of teaching, research and public service.

The AI Alliance is responsive to several of the goals specified in the LEADS 2025 Strategic Plan.

LEADS Goal 1: the AI Alliance will enhance the learning experience for K-12 students through professional development of teachers, development of cutting-edge modules exposing AI concepts across curricula of a diversity of disciplines, and promoting the use of AI tools and concepts as instruments for critical thinking and problem solving. The exposure of AI as an instrument to solve real-world problems will promote engagement of diverse groups of students. The establishment of professional development programs for teachers will ensure advancement of knowledge and sustainability.

LEADS Goal 2: the AI Alliance will ground the efforts in existing and ongoing social science research on effective mechanisms to teach AI content to K-12 students and advance the knowledge and confidence of both students and teachers. The AI Alliance will engage AI researchers, educational researchers, social scientists and AI practitioners to collaboratively investigate effective curricula and culturally-responsive pedagogy to introduce K-12 students to AI concepts. The AI Alliance will take the lead in the development of research proposals (e.g., to the National Science Foundation) and facilitate the creation of research working groups.

LEADS Goal 3: the AI Alliance will nurture and develop partnerships with K-12 schools and districts across the state, as well as with institutions of higher education, industries, and national labs. Collectively, the network established by the AI Alliance will collaborate to build capacity and engagement in AI learning and teaching across the entire state. In particular, our approach to developing AI skills will rely on involvement of local educational and social communities, emphasizing the impact of AI on local communities and fostering community-based engagement. The teaching of AI will be grounded in the ethical use of technology and developed through co-curricular activities and project-based learning. Sustainability will include development of online microcredentials and smooth pathways into higher education opportunities.

LEADS Goal 4: Particular emphasis will be placed on the use of culturally-responsive pedagogies specifically designed for the teaching of computing and AI, to promote inclusion and participation of all students and all teachers. The AI Alliance will rely on the existing teachers network established by the Computer Science Alliance to reach rural communities and communities which are underserved in the state.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.

This abstract outlines the establishment of an alliance aimed at promoting K-12 artificial intelligence (AI) education in New Mexico. Recognizing the significance of AI in shaping the future, the alliance seeks to empower students with the knowledge, skills, and ethical understanding necessary to navigate the evolving digital landscape. By bridging the AI skills gap and fostering innovation, the alliance aims to prepare New Mexico's students to thrive in an AI-driven world and contribute to technological advancements. The alliance places a strong emphasis on ethics, ensuring that students develop a responsible approach to AI development and deployment. By promoting diversity and inclusion, the alliance aims to create equal opportunities for all students to engage with AI education. Through collaboration among educators, policymakers, and industry leaders, the alliance seeks to establish a network that shares best practices, resources, and expertise in K-12 AI education. The establishment of this alliance in New Mexico signifies a proactive step towards future-proofing education, enabling students to become proficient in AI, and positioning the state at the forefront of AI education and innovation. The New Mexico AI Alliance integrates with and expands the existing New Mexico Computer Science Alliance, which has been instrumental in providing state-wide professional development for K-12 teachers in computer science and computational thinking and promoting state-level and national-level advocacy for the integration of computer science in K-12 schools.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	Click or	Click or	Click or	Click or	Click or
Federal G&C Expenditures	Click or	Click or	Click or	Click or	Click or
Private G&C Awards	Click or	Click or	Click or	Click or	Click or
Private G&C Expenditures	Click or	Click or	Click or	Click or	Click or

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS	OBJECTIVES
☒ **GOAL 1** Enhance Student Success and Social Mobility	☒ **1.** Diversify, optimize, and Increase system-wide enrollment
	☒ **2.** Increase student learning, retention, and degree attainment
	☐ **3.** Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences
	☒ **4.** Strengthen career pathways through service-learning, experiential learning and research engagement
	☐ **5.** Elevate graduate education
	☐ **6.** Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒ **GOAL 2** Elevate Research and Creativity	☒ **1.** Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education
	☐ **2.** Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity
	☒ **3.** Amplify impact of research findings by addressing local needs that align with global challenges
	☐ **4.** Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒ **GOAL 3** Amplify Extension and Outreach	☐ **1.** Be a leader in place-based innovation and in economic and community development
	☒ **2.** Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility
	☒ **3.** Improve PK-20 Science, Technology, Engineering and Math (STEM) education
	☐ **4.** Strengthen and elevate public-private engagement
	☐ **5.** Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☐ **GOAL 4** Build a Robust University System	☒ **1.** Advance equity, inclusion and diversity and effectively support students, faculty and staff
	☐ **2.** Cultivate faculty and staff excellence, enhance productivity and improve the work climate
	☐ **3.** Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

		FY25 Request
RPSP Title:	New Mexico Artificial Intelligence Alliance	
Contact Name:	Enrico Pontelli	**$406,642**
Contact Email:	epontell@nmsu.edu	

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

RPSP Goal: Develop AI skills among K-12 Teachers

RPSP Objective 1: Provide Teachers Professsional Development in AI		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of K-12 teachers participating in book clubs	N/A	30	Pilot project on semester-long AI training for teachers using virtual platforms
2	Number of K-12 teachers participating in practicums	N/A	20	Summer practicums enable teachers to develop and test modules
3	Number of K-12 teachers implementing AI modules	N/A	20	Implementation of AI modules in K-12 classrooms

RPSP Objective 2: Provide AI exposure and training to K-12 students		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of K-12 students attending summer programs	N/A	200	Small groups of middle and high school students participating in summer tests of AI modules
2	Number of K-12 students exposed to AI modules	N/A	400	In-class deployment of AI modules
3	Number of K-12 teachers implementing AI modules	N/A	20	In-class deployment of AI modules
4	Number of K-12 students (women) in informal learning programming	N/A	60	Out-of-class activities specifically for women

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

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

		FY25 Request
RPSP Title:	New Mexico Artificial Intelligence Alliance	
Contact Name:	Enrico Pontelli	**$406,642**
Contact Email:	epontell@nmsu.edu	

RPSP Goal: Form an Alliance of educators, researchers and practitioners engaged in development of AI curricula

RPSP Objective 1: Create network of stakeholders in AI K-12 education		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of participants in AI convenings	N/A	120	Three convenings across the year to establish and solidify a network of committted teachers, administrators, researchers, government representatives and practitioners to prioritize New Mexico strategies for K-12 AI education
2	Number of working groups created	N/A	3	Creation of small working groups within the Alliance to pursue specific strategies, e.g., cultural responsive pedagogy, curricular frameworks, bi-lingual AI education

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: New Mexico Artificial Intelligence Alliance
Contact Name: Enrico Pontelli
Contact Email: epontell@nmsu.edu

FY25 Request

$406,642

RPSP Objective 2: Research curricula and pedagogy for AI K-12 education		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of classroom modules investigated	N/A	15	
2	Number of microcredentials developed	N/A	2	Online microcredentials will provide sustainability of professional development programs
3	Number of research proposals submitted	N/A	2	Working groups within the Alliance will pursue private and federal funding to expand the activities
4	Number of publications and presentations submitted	N/A	2	National dissemination of lessons learned

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

RPSP Goal: Engage K-12 schools in AI education

RPSP Objective 1: Outreach to K-12 teachers and students		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of K-12 students attending summer programs	N/A	200	
2	Number of K-12 teachers attending PD programs	N/A	40	Along with the semester-long bookclub, we plan to introduce AI training components in the summer professional development program implemented by the Computer Science Alliance

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: New Mexico Artificial Intelligence Alliance
Contact Name: Enrico Pontelli
Contact Email: epontell@nmsu.edu

FY25 Request

$406,642

3	Number of K-12 students participating in informal learning AI programming	N/A	60	

RPSP Objective 2: Expose K-12 Schools to AI opportunities		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of presentations to school administrators	N/A	10	The team will engage in visits to different school districts in the state to increase participation and identify potential school leads in the introduction of AI modules

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

RPSP Goal: Promote cultural responsive AI pedagogies

RPSP Objective 1: explore cultural responsiveness in AI pedagogy		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of training components on cultural responsiveness	N/A	2	Expand ongoing efforts in the exploration of cultural responsive pedagogy, e.g., through microcredentials for New Mexico teachers

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: New Mexico Artificial Intelligence Alliance

Total: $ 406,642.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance		$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund		$ 606,642.00	$ 606,642.00	
Local		$ -		
Total Appropriations	$ -	$ 606,642.00	$ 606,642.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ 606,642.00	$ 606,642.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries			0.00	$ -			
Professional Salaries			1.50	$ 82,000.00	1.50		Program manager
Other Staff Salaries			0.50	$ 27,500.00	0.50		Faculty support
Student Salaries (GA/TA)			1.00	$ 24,000.00	1.00		
Other Salaries			2.50	$ 59,800.00	2.50		student salaries
Total All Salaries	0.00	$ -	5.50	$ 193,300.00	5.50	$ 193,300.00	
Fringe Benefits				$ 32,842.00		$ 32,842.00	
Travel				$ 25,000.00		$ 25,000.00	
Utilities				$ -			
Institutional Support Charges				$ -			
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses				$ 28,000.00		$ 28,000.00	
Equipment				$ 7,500.00		$ 7,500.00	
Other Expenditures				$ 320,000.00		$ 320,000.00	
Total Expenditures	0.00	$ -	5.50	$ 606,642.00	5.50	$ 606,642.00	
Ending Fund Balance		$ -		$ -		$ -	

Center of Excellence for Space Commercialization and Workforce Development

2024

Title: Commercial Space New Mexico
FY24 Actual: $50,000
FY25 Request: 650,000
$ Change: $600,000

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. ***Center of Excellence for Space Commercialization and Workforce Development*** 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.

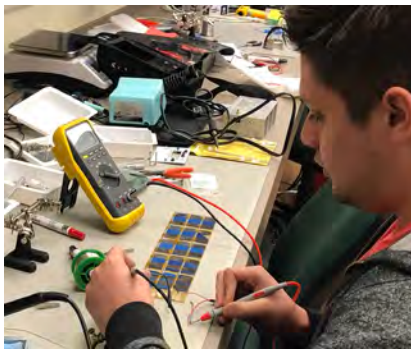
Goals and Objectives

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 crucial 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

The Center has secured federal awards and converted them to SBIR STTR opportunities.

The Center leverages Arrowhead Center, the Physical Science Laboratory and the Aggies Innovation Space.

Two STTRs submitted with Astrobotic Technology

Three STTRs submitted with SPiN Tech.

NSF I-Corps selection

Model of Success

Last year's Fast Facts:

- AFRL –Program
- MSTAR Proposal
- 5 STTRs
- 28 Undergraduates
- 5 Masters
- 2 PhD
- 12 students graduated
- 100% of graduates are working in the space industry

Impact

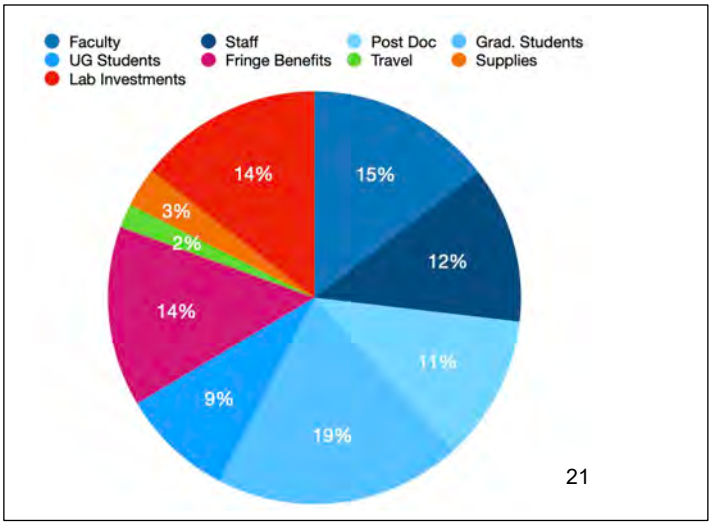
The transition of New Mexico into a hub for commercial space will require a supply of innovative ideas generated by the State's human capital and a workforce that can support the industry's growth. Center of Excellence for Space Commercialization and Workforce Development will support New Mexico State 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.

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 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	

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

FY25 Funding Request ($XXX,XXX):	$650,00

If Previously Funded, Amount that was awarded in FY24 ($XXX,XXX):	

Type of Project (X for Type)

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

Please explain if other is marked:

1. Number of years the project has received General Fund support (*Disregard if new program):*	1

2. Project Description / Executive Summary:

The Center of Excellence for Space Commercialization and Workforce Development 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's footprint in the State. The Center of Excellence for Space Commercialization and Workforce Development 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 State's Space Valley initiative by fostering collaboration with the space industry and growing an experienced engineering workforce. The Center of Excellence will work closely with the Arrowhead Center, the College of Engineering's Arrowhead Center, and the NMSU Physical Science Laboratory.

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

Eighty percent of the budget is an investment in human capital, including $95K for faculty summer salaries, $74K for a postdoc, $79.5K$ for two professional staff members, $126K to support five graduate students, and $58K to support eight undergraduates. Approximately $92K goes toward fringe benefits. We request $20K for supplies to support the student

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

engagement projects and $94K for laboratory upgrades to provide state-of-the-art training for students. We will seek matching funds from the space industry for student projects and 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 had been 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 attracted several companies. Central New Mexico Community College is addressing the training of technicians for the space industry. Center of Excellence for Space Commercialization and Workforce Development 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. Center of Excellence for Space Commercialization and Workforce Development will directly support at least 20 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, the Air Force Research 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. Use-inspired research is essential to derive economic development.
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.

Better than expected collaborative efforts on STTRs

Participation by PSL

NSF I-Corps selection

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.
Faculty are enthusiastic about the program

7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?
The Center of Excellence for Space Commercialization and Workforce Development 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?
The program earned three federal awards. (STTR, Research and Workforce development)

9. Accomplishment/ Highlights (bullet form)
NASA MUREP Advancing Regolith-related Technologies & Education (MARTE) ($400K) STTR Proposal with Astrobotic-Lunar Landing Site Compaction NASA NSPIRES Proposal - Lunar Landing Site Preparation M-STTR with SPiN Tech - MA61C integration with Flight Software System NASA STTR with SPiN Tech - MA61C ($89K) DoD STTR with SPiN Tech - Optical Navigation in the Cislunar environment DoD STTR with SPiN Tech - Electromagnetic Docking System AFRL-UNP Mission Concepts -1 proposal - Electromagnetic Docking ($70k) NSF I Corps Section - Electromagnetic Docking NSF Engines Type 2 Proposal - Space Valley - in the final round of 32. NASA MSTAR proposal with NMT – Autonomous Rendezvous and Docking STTR with Astrobotic - Antenna Design for Lunar mission (PSL) 35 Students participated in the project. 12 Graduated, and all work in the aerospace industry, five in New Mexico. Five faculty members participated in the proposals or projects.

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

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	Center of Excellence for Space Commercialization and Workforce

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☒	**Public Service** ☐	**Teaching** ☐

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

Goal 1: Enhance Student Success
Objective 1.2 Retention and Degrees
Student participation in research programs increases both retention and graduate rates.
Objective 1.4 Career Pathways
Projects with industry partners promote STEM career awareness. The program is specifically designed to address the development of STEM self-efficacy, mindset, and career awareness.
Objective 1.5 Integrated academics and research
Course in MAE, CS, and ECE directly support the research goals of this program.

Goal 2: Elevate Research
Objective 2.1 Research to address challenges and integrate with education
Capstone projects address this objective.
Objective 2.3 Amplify research by addressing global challenges.
This project supports the challenges outlined in NASA's mission statement.
Objective 2.4 Amplify research by accelerating technology transfer.
The objective is supported through partnerships with the space industry and the Arrowhead Center.

Goal 3: Amplify Extension and Outreach
*Objective 3.1 L*eader in innovation and economic development
The goal of Center of Excellence for Space Commercialization and Workforce is to promote innovation in commercial space and promote economic growth.
Objective 3.5 Increase support for business
The partnerships with the space industry support this objective.

R1: Funding for Post Doc
Funding for a Post Doc is included.

VPR - Emerging Areas of Research Opportunities: Space Commercialization
Commercial Space New Mexico Directly supports this growth area.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.

The Center of Excellence for Space Commercialization and Workforce 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.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	0	$365,000	$466,000	$831,000	$466,000
Federal G&C Expenditures	0	$365,000	$466,000	$831,00	$831,000
Private G&C Awards	0	$55,000	$55,000	$110,000	$110,000
Private G&C Expenditures	0	$55,000	$55,000	$110,000	$110,000

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS		OBJECTIVES	
☒	GOAL 1 Enhance Student Success and Social Mobility	☐	1. Diversify, optimize, and Increase system-wide enrollment
		☒	2. Increase student learning, retention, and degree attainment
		☐	3. Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences
		☒	4. Strengthen career pathways through service-learning, experiential learning and research engagement
		☒	5. Elevate graduate education
		☒	6. Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒	GOAL 2 Elevate Research and Creativity	☒	1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education
		☐	2. Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity
		☒	3. Amplify impact of research findings by addressing local needs that align with global challenges
		☐	4. Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒	GOAL 3 Amplify Extension and Outreach	☒	1. Be a leader in place-based innovation and in economic and community development
		☐	2. Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility
		☐	3. Improve PK-20 Science, Technology, Engineering and Math (STEM) education
		☐	4. Strengthen and elevate public-private engagement
		☐	5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☐	GOAL 4 Build a Robust University System	☐	1. Advance equity, inclusion and diversity and effectively support students, faculty and staff
		☐	2. Cultivate faculty and staff excellence, enhance productivity and improve the work climate
		☐	3. Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Center of Excellence for Space Commercialization and Workforce Development

Contact Name: Steve Stochaj

Contact Email: sstochaj@nmsu.edu

FY25 Request

$650,000

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.		**Measure Results**		**Measure Targets**			**Comments *(Briefly state your case)***
	RPSP Measures:	**FY21 Estimate**	**FY23 Estimate**	**FY23**	**FY24**	**FY25**	
1	Number of students trained	N/A	35	32	32	55	Funding starts 1 July 2022
2	Number of graduates	N/A	12	8	9	30	Funding starts 1 July 2022
3	Number employed in the space industry	N/A	12	8	8	30	Funding starts 1 July 2022
4	Number employed in NM	N/A	6	5	5	10	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.		**Measure Results**		**Measure Targets**			**Comments *(Briefly state your case)***
	RPSP Measures:	**FY21 Estimate**	**FY24 Estimate**	**FY23**	**FY24**	**FY25**	
1	Number of reserachers	N/A	5	5	5	10	Funding starts 1 July 2022
2	Number of proposal submitted	N/A	7	5	5	15	Funding starts 1 July 2022
3	External funding generated	N/A	$570k	$250k	$250k	$500k	

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Center of Excellence for Space Commercialization and Workforce Development

Contact Name: Steve Stochaj

Contact Email: sstochaj@nmsu.edu

FY25 Request

$650,000

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.		Measure Results		Measure Targets			Comments *(Briefly state your case)*
RPSP Measures:		**FY21 Estimate**	**FY24 Estimate**	**FY23**	**FY24**	**FY25**	
1	Number of joint projects	N/A	7	4	4	12	Funding starts 1 July 2022
2	Number of industry contacts	N/A	15	12	12	25	Funding starts 1 July 2022
3	Number of patent discloures	N/A	0	1	1	2	Funding starts 1 July 2022
4	Number of Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) Seed Funds	N/A	5	2	2	10	Funding starts 1 July 2022

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: Space Commercialization

Total: $ 650,000.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance	$ -	$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund		$ 650,000.00	$ 650,000.00	
Local		$ -		
Total Appropriations	$ -	$ 650,000.00	$ 650,000.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ 650,000.00	$ 650,000.00	
Transfers (to) from				
Instruction and General	$ 50,000.00	$ 600,000.00	$ 650,000.00	Main I&G State Appropriated. HB2 includes $50k for Eng Space Commercialization.
Student Social and Cultural		$ -		
Research		$ -		
Public Service		$ -		
Internal Service		$ -		
Student Aid		$ -		
Auxiliary Enterprises		$ -		
Athletics		$ -		
Independent Operations		$ -		
Capital Outlay		$ -		
Renewal and Replacement		$ -		
Total Transfers	$ 50,000.00	$ 600,000.00	$ 650,000.00	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries			1.00	$ 95,000.00	1.00	$ 95,000.00	
Professional Salaries			1.50	$ 79,500.00	1.50	$ 79,500.00	
Other Staff Salaries			1.00	$ 74,000.00	1.00	$ 74,000.00	
Student Salaries (GA/TA)	1.31	$ 43,467.00	3.69	$ 82,278.00	5.00	$ 125,745.00	
Other Salaries			4.00	$ 57,600.00	4.00	$ 57,600.00	
Total All Salaries	1.31	$ 43,467.00	11.19	$ 388,378.00	12.50	$ 431,845.00	
Fringe Benefits		$ 217.00		$ 91,666.00		$ 91,883.00	
Travel		$ 855.00		$ 11,345.00		$ 12,200.00	
Utilities				$ -			
Institutional Support Charges				$ -			
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses		$ 5,461.00		$ 14,611.00		$ 20,072.00	
Equipment				$ 94,000.00		$ 94,000.00	
Other Expenditures				$ -			
Total Expenditures	1.31	$ 50,000.00	11.19	$ 600,000.00	12.50	$ 650,000.00	
Ending Fund Balance		$ -		$ 650,000.00		$ 650,000.00	

Center for Alternative Water Research, Treatment and Reuse

2024

Center for Alternative Water Research, Treatment and Reuse

FY24 Actual: $130,000
FY25 Request: $1,200,000
$ Change: $1,070,000

A sustainable water supply from all available water resources is essential to economic development, ecological health, and human wellness. Traditional freshwater supplies in New Mexico are unsustainable due to overdrafts, chronic droughts, and climate change. Our goal is to establish a water desalination and reuse program with a focus on the convergence of sustainable water-energy-environment-agriculture nexus. The Center aims to address the water challenges by developing cost-effective, environmentally sustainable brackish water desalination and water reuse technologies. The program is built upon the existing project supporting the New Mexico Produced Water Research Consortium (NMPWRC) and expand its research focus to brackish water desalination and water reuse.

Objectives of the Program

- Establish a robust research and development program to address the challenges of developing alternative water sources.
- Grow the workforce of the future to address the water challenges of the 21st century.
- Conduct cutting-edge research on innovative water treatment and desalination technologies to boost water supplies in New Mexico.
- Provide a research and development accelerator for water technology transfer and commercialization.
- Catalyze broader collaborations for the expanded community, state, national, and industry public-private partnerships.
- Promote concerted efforts for major federal grants with leveraging resources and cost share.
- Conduct laboratory and pilot-scale testing to demonstrate technical performance and cost-effectiveness of treatment technologies.

We are conducting laboratory and pilot testing of innovative desalination technologies at NMSU, Brackish Groundwater National Desalination Research Facility (BGNDRF) in Alamogordo, and the Kay Bailey Hutchinson Desalination Plant in El Paso.

Fig. 1. Student demonstrating a high recovery reverse osmosis pilot unit

Fig. 2. Produced water storage tanks in BGNDRF for pilot projects

Benefits to New Mexico

Public and Environmental Health

- State-of-the-science risk and toxicology assessment
- Provide high quality, safe water for fit-for-purpose uses

Fresh Water Sustainability

- Provide new water resources
- Create drought-proof water supplies to support resiliency
- Meet water demand

Economic Development

- Water for new and growing industries that create jobs
- Create a high-tech water sector
- Support regional development

Energy Security

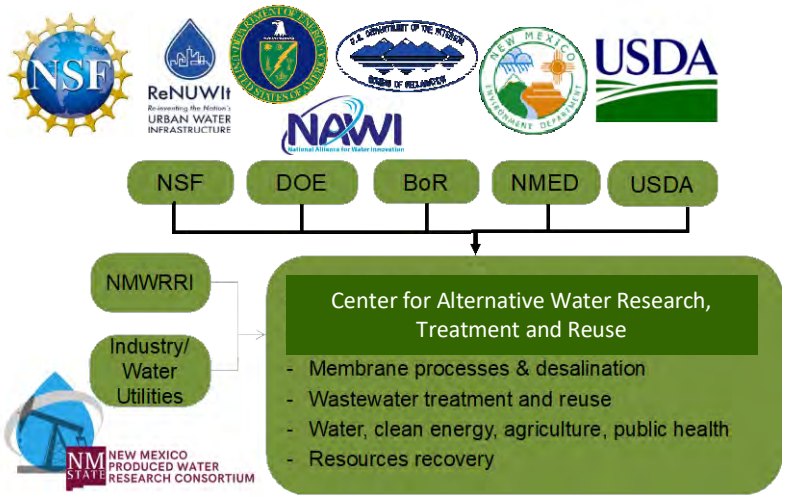
- Reduce environmental impacts of energy industry
- Support clean energy production with alternative water supplies
- Reduce energy production costs

The **$1,070,000 expansion** request will support:

- Developing cutting-edge brackish water desalination and water reuse technologies, and serving as models for communities in New Mexico;
- Providing valuable educational opportunities for our students, preparing them to tackle future water challenges, and expanding the critical water engineering pipeline;
- Fostering knowledge transfer and encouraging the adoption of sustainable water management practices statewide.

Advance science and technology for brackish water desalination and water reuse to improve water sustainability

A public-private partnership for water desalination and reuse program

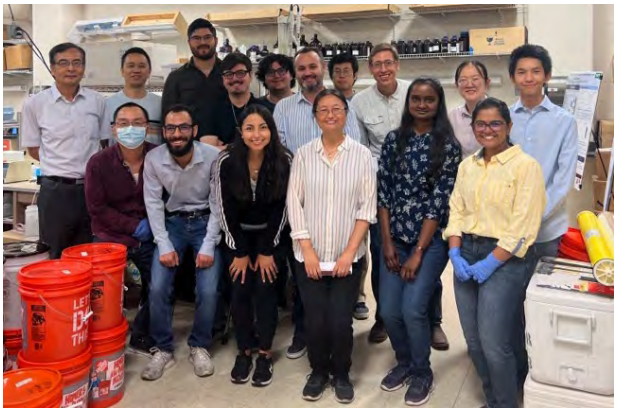


NM state funds will support

- Infrastructure and capacity for conducting innovative brackish water desalination and water reuse technologies in New Mexico.
- Information and data to assist in New Mexico Environment Department (NMED) and Office of the State Engineers (OSE) to make science based decision in regulations and policy of utilizing alternative water supplies.
- Improved characterization of physical, chemical, microbiological, and environmental toxicity analysis of treated alternative water.
- Demonstration of integrated treatment systems including pretreatment, treatment/desalination, post treatment, and resource recovery for fit for purpose applications
- Improved evaluation of economic, social, and environmental risks/benefits of brackish water desalination and water reuse
- 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.

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 brackish water desalination and water reuse, and proceeding with several additional pilot demonstrations.
- Supported NMED on 5 state-wide public meetings and hosted 4 public outreach workshops across New Mexico.
- Expanding public outreach programming to ensure all stakeholders are informed of the science and technology research and development efforts, including a web portal and updates for access to public meetings, workshops, technical information and public education efforts, a series of podcasts on water reuse and desalination.
- 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 7 postdocs, 22 graduate students, 8 undergraduate and 3 high school students.



Leveraged

- Since 2019, the water desalination and reuse program has participated in research projects with $130.6M funded by federal, state, and industry, of which $8,428,932 funding has been used to support the water research and education activities at NMSU.

NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Projects (RPSP)
FY 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	

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

FY25 Funding Request ($XXX,XXX):	$1,200,000

If Previously Funded, Amount that was awarded in FY24 ($XXX,XXX):	

Type of Project (X for Type)

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

Please explain if other is marked:

1. Number of years the project has received General Fund support (*Disregard if new program):*	2

2. Project Description / Executive Summary:

A sustainable water supply from all available water resources is essential to economic development, ecological health, and human wellness. Traditional freshwater supplies in New Mexico are unsustainable due to overdrafts, chronic droughts, and climate change. Brackish water is a widely available but largely untapped resource in New Mexico. The Center for Alternative Water Research, Treatment and Reuse aims to promote economic development in New Mexico by conducting critical research to develop cost-effective, environmentally sustainable brackish water desalination and water reuse technologies that can be applicable to large municipalities, industries, as well as small, rural communities with adaptable, modular, and autonomous systems.

Expansion Justification:

The focus on alternative water research, treatment and reuse leverages over five years of aligned research conducted under the New Mexico Produced Water Research Consortium (NMPWRC). Alternative waters are defined as non-freshwater resources (e.g. brackish, municipal, produced, etc.). The requested funding will expand the research beyond produced water to include brackish water desalination and municipal wastewater treatment and reuse for fit-for-purpose application in New Mexico. Our goal is to establish a world-class alternative water research,

2. Project Description / Executive Summary:

treatment and reuse center with a focus on the convergence of water-energy-environment-agriculture nexus, which is central to the sustainable development of human society. The inextricable linkages between these critical domains require a suitably integrated approach to ensuring water security for human health, industry needs, sustainable agriculture, and environmental protection. The program will mirror the land-grant model to improve social equity and economic justice which are pressing issues affecting states and communities.

An overarching objective of the program is to build water infrastructure and capacities for New Mexico to address the water crisis, interdependencies of at the nexus of water-energy-environment-agriculture nexus, shared vulnerabilities, and shared opportunities to foster sustainable, healthy communities. Specifically, the Center aims to (1) grow the water workforce of the future to address the water challenges of the 21st century; (2) conduct cutting-edge research on innovative water treatment and desalination technologies to boost water supplies in New Mexico; (3) provide a research and development accelerator for water technology transfer and commercialization; (4) catalyze broader collaborations for the expanded community, state, national, and industry public-private partnerships; (5) promote concerted efforts for major federal grants with leveraging resources and cost share.

The program will be directed by Dr. Pei Xu and the environmental engineering faculty at NMSU including Drs. Huiyao Wang, Yanyan Zhang, Runwei Li, and Zachary Stoll, and supported by the extensive expertise across the NMSU system (Engineering; Arts and Sciences; Agricultural, Consumer and Environmental Sciences; Business; Health, Education and Social Transformation; and community colleges). The Center is leveraged by external research partnerships with the New Mexico Produced Water Research Consortium (NMPWRC), U.S. Bureau of Reclamation (BoR), National Alliance for Water Innovation (NAWI), eight national laboratories, National Institutes of Health (NIH), U.S. Department of Agriculture (USDA), U.S. Department of Energy (DoE), National Science Foundation (NSF), United States Environmental Protection Agency (USEPA), New Mexico Environment Department (NMED), Office of the State Engineer (OSE), industry, and water utilities.

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

The Center is requesting recurring funding of $1,200,000, which includes a $1,070,000 expansion request to support faculty, postdoctoral researchers, staff, graduate research assistants, and undergraduates salary and fringe; develop infrastructure and capacity for conducting cutting-edge alternative water desalination and reuse technologies; serve as a research and development accelerator to foster technology transfer and adoption of sustainable water management practices in New Mexico; provide data and information to regulatory agencies on developing policies and regultions of utilizing alternative waters (desalination of brackish water and wastewater); perform water quality analysis using advanced analytical methods to ensure the treated water is safe for use; and fund faculty and student water research with required water treatment instruments, chemicals, materials, and supplies. The $1,070,000 expansion request will support technology development and demonstration; characterize physical, chemical, and biological water quality parameters; conduct whole effluent toxicity tests and risks assessment of using alternative water for fit-for-purpose applications; coordinate data acquisition to obtain, process, synthesize, and publish high-quality research papers. The goal of the expanded research is to develop brackish water and municipal wastewater as technically viable, economically affordable, and environmentally sustainable water sources to address water challenges in New Mexico.

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

New Mexico faces an unprecedented water crisis due to chronic droughts. Current drought monitoring shows that extreme drought conditions are occurring more quickly, and droughts are intensified by heat waves, resulting in increased drying. This trend is expected to continue throughout the 21st century due to climate change. The

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

increasing frequency of droughts and hot extremes will significantly impact water resources, increase wildfire activities, and exacerbate crop loss. Under extreme drought conditions, water resources such as groundwater, surface water, and soil moisture are greatly reduced, leading to water shortages. New Mexico has recognized that traditional, freshwater resources have become scarcer due to climate change. This has incentivized municipalities and industries to evaluate the use of alternative waters, as ways to augment existing supplies, strengthen resiliency, and support existing and growing economies. The urgency to develop alternative water supplies has prompted new State and federal efforts, which have culminated in the instantiation of new funding opportunities and the passing of regulations and guidelines to support alternative water supply development. The main alternative waters in focus include brackish water and municipal wastewater. Each of these alternative waters requires treatment by desalination processes to separate salts, pathogens, and other constituents to meet the water quality standards for fit-for-purpose applications. Reverse osmosis (RO) is a primary treatment process for brackish water desalination and water reuse. However, the broad applications of desalination technologies have been hindered by concentrate management and membrane fouling and scaling, which challenges RO desalination facilities and will require new technologies and novel approaches to overcome. Therefore, despite the increased desire and demand for the treatment and reuse of alternative waters, there is an incomplete understanding of what existing and emerging technologies will enable cost-effective treatment. The Water Desalination and Reuse program, currently funded by federal programs like the DOE's National Alliance for Water Innovation (NAWI), the Bureau of Reclamation, the National Science Foundation, and the U.S. Department of Agriculture, has been instrumental in accelerating innovative technologies and attempting to provide a wider array of cost-effective treatment technologies to develop alternative water supplies. In addition, the program has been focused on resource recovery from waste streams, such as desalination concentrate and municipal wastewater, by converting them into bioenergy, chemicals, and fertilizers. Through the extensive expertise of the researchers at NMSU as well as the well-established external partnerships, the program is well positioned to address the water challenges in New Mexico. The program will benefit the entire state by boosting water supplies that are important drivers of New Mexico's economy. More importantly, the 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 traditional freshwater; promoting economic development by creating additional water for new and growing industries that create jobs.

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

Research: The funding will support the experimental research on developing low-cost, highly energy-efficient water treatment and desalination technologies and the characterization of treated alternative water quality for fit-for-purpose uses. The program will conduct critical research on developing and demonstrating water desalination technologies, and providing water quality information for effective rule-making by the NMED, Water Quality Control Commission (WQCC), and the Office of the State Engineers (OSE).

Teaching and advising: The workforce development and education is a core mission of the Water Desalination and Reuse program. The program 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 the skills and knowledge needed to complete their degrees and move into New Mexico's job sector.

Public outreach and service: Science-driven, environmental and public health-based education and outreach is the foundation of discussing fit-for-purpose treatment and reuse of alternative water. Realizing the need to inform and educate the public on the benefits and impacts of brackish water desalination and water reuse, the program has established a comprehensive Communication, Outreach, and Education Plan to engage stakeholders in the state-of-the-science of water reuse and desalination. The program will continue to prepare public education materials (e.g., brochures, factsheets, podcasts), develop the website for the public for easy access to information

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

on our efforts and activities, present at conferences and conduct several public education workshops in New Mexico, and publish scientific papers and technical reports in top journals.

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 for Altnerative Water Research, Treatment and Reuse will leverage over five years of aligned research under the New Mexico Produced Water Research Consortium (NMPWRC). The major focus of the Center is expanded from produced water research to brackish water desalination and municipal wastewater reuse. Below describe the major accomplishments in FY23 through NMPWRC:

• Established and developed sampling and analysis methods for constituents of concern in treated produced water;

• Established advanced analytical methods including targeted, non-targeted, and whole effluent toxicity tests to measure the physical, chemical, and biological constituents in produced water and treated produced water;

• Characterized 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;

• Developed integrated treatment trains including pre-treatment, treatment/desalination, and post-treatment to meet the water quality requirements for different beneficial use applications;

• Assess the health and safety effects of the use of treated produced water including risks and toxicity to public health, aquatic organisms, 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 NMPWRC has made extensive progress in establishing the formal operational protocols and has begun initial research, the funding has been limited and affected the progress of research activities. 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. The NMSU research team has worked diligently to pursue federal funds from the Department of Energy and Bureau of Reclamation. Currently there are six DOE proposals pending on produced water treatment and resource recovery. Investment of state funds could diversify revenue sources that will help maintain momentum and contribute to the overall program on water reuse and desalination.

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

The Center aims to develop alternative water supplies 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 water challenges. Research to fill the science and technology gaps associated with the safe and protective use of treated alternative water is an essential step to securing new potential water sources for New Mexicans and relieving demand for traditional freshwater resources. Furthermore, the research will advance opportunities for using renewable energy for water treatment and desalination; and providing water for hydrogen production in NM which requires desalinated water for electrolysis and steam reforming processes. The program has established extensive public-private partnerships with industry, federal and state agencies, national laboratories, technology developers, and academia. The research program is very productive in education, research, and workforce development. The following summarizes the postdoc and student advising: 7 postdocs conducting water desalination research in the Center; 9 PhD students graduated since 2021; 7 PhD students in progress; 8 MS students graduated since 2021; 10 MS students in progress. The Center has developed an internship program and sponsored the research of 8 undergraduate students and 3 high school students. The students have published 18

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

peer-reviewed journal papers in 2022-23, and multiple students received international, national, and regional awards at conference presentations.

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

The Center has received support from several industry sponsors and has acquired funding from the National Science Foundation, Department of Energy, Department of Agriculture, and the Bureau of Reclamation to develop innovative water treatment and desalination technologies. Since 2019, the Center has participated in research projects with $130.6M funded by federal, state, and industry, of which $8,428,932 funding (including cost share) has been used to support the program's research and education activities at NMSU. We will continue to seek federal and industrial funding to support water desalination research and pilot testing.

9. Accomplishment/ Highlights (bullet form)

Accomplishments to date for the existing project - NMPWRC on produced water research include:

- The NMPWRC 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 NMPWRC 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 NMPWRC 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. Brochures, factsheets, and podcasts for public education and outreach have been prepared and posted at the NMPWRC website.
- To date, the NMPWRC has completed or has underway several research projects and several large pilots that are moving to mobilization and start-up phases.

Aligned research on brackish water desalination and municipal water reuse that will be expanded on and leveraged includes:

- Successfully developed collaboration with industry partners to use alternative water supplies for hydrogen production and reduce the reliance of the energy industry on freshwater supplies;
- Completed a pilot demonstration project sponsored by the Bureau of Reclamation treating municipal wastewater and septic effluent for reuse.
- Since 2019, the Center has participated in research projects with $130.6M funded by federal, state, and industry, of which $8,428,932 funding (including cost share) has been used to support the Center's water research and education activities at NMSU.
- Since 2019, published 45 peer-reviewed papers in top scientific journals.

Medical Projects	
10. How many graduates stay in practice in New Mexico	NA

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	Center for Alternative Water Research, Treatment and Reuse

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☒	**Public Service ☒**	**Teaching ☒**

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The goal of the Center for Alternative Water Research, Treatment and Reuse is to build water infrastructure and capacities for New Mexico to address the water crisis with brackish water desalination and reuse to foster sustainable, healthy communities. Specifically, the Center aims to (1) grow the water workforce of the future to address the water challenges of the 21st century; (2) conduct cutting-edge research on innovative water treatment and desalination technologies to boost water supplies in New Mexico; (3) provide a research and development accelerator for water technology transfer and adoption of sustainable water management practices statewide. The program aligns with the NMSU mission and achieves the following LEADS 2025 Goals:

Enhance student success and social mobility: The Center provides mentoring and training opportunities to address energy, water, and environmental challenges. The research projects provide hands-on experiences in both laboratory and field to better prepare students with the skills and knowledge needed to complete their degrees and move into New Mexico's job sector. The Center will strengthen students' career pathways through working with industry and stakeholders, service-learning, experiential learning, and research engagement. The water desalination program at NMSU has supported the research of 8 postdocs, 16 PhD students, 30 MS students, 40 undergraduate, and 9 high school students.

Elevate research and activity: The Center supports the experimental research on developing low-cost, highly energy-efficient brackish water desalination and water reuse technologies and characterization of treated water for fit-for-purpose use. The program has been identified by the USEPA to lead the national produced water reuse research together with Ground Water Protection Council. The Center will facilitate the convergence of cutting-edge research on the energy-water-environment nexus with undergraduate and graduate education to address local and global water challenges. This will include supporting students' research projects and integrating new knowledge and information developed from the Center's research activities into undergraduate and graduate curricula. In addition, the program provides opportunities for NMSU students to work with international researchers in Australia, Israel, and Europe, which amplifies the impact of their research on global economy and promote international collaborations.

Amplify extension and outreach: Realizing the need to inform and educate the public on the benefits and impacts of brackish water desalination and water reuse, the program has established a comprehensive Communication, Outreach, and Education Plan to engage stakeholders in the state-of-the-science of water desalination and reuse. The program has attracted the engagement of over 160 participants from academia, industry, NGOs, and federal, state and local government agencies.

Build a robust university system: The Center has engaged the participation of minority and underrepresented students in research projects, and has developed collaborations with faculty, staff, and students across the campus and with national labs and other institutions. The program will continue to advance equity, inclusion, and diversity, and effectively cultivate faculty and staff excellence, enhance productivity, and improve the work climate at NMSU.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.

A sustainable water supply from all available water resources is essential to economic development, ecological health, and human wellness. Traditional freshwater supplies in New Mexico are unsustainable due to overdrafts, chronic droughts, and climate change. Our Water Desalination and Reuse program aims to conduct critical research to develop cost-effective, environmentally sustainable brackish water desalination and water reuse technologies. The program aims to (1) grow the workforce of the future to address the water challenges of the 21st century; (2) conduct cutting-edge research on innovative water treatment and desalination technologies to boost water supplies in New Mexico; (3) provide a research and development accelerator for water technology transfer and adoption; (4) catalyze broader collaborations for the expanded community, state, national, and industry public-private partnerships; and (5) promote concerted efforts for major federal grants with leveraging resources and cost share. The Center will benefit the entire state because water security is an important driver of New Mexico's economy and communities. More specifically, the research and education 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.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	Click or	Click or	Click or	Click or	Click or
Federal G&C Expenditures	Click or	Click or	Click or	Click or	Click or
Private G&C Awards	Click or	Click or	Click or	Click or	Click or
Private G&C Expenditures	Click or	Click or	Click or	Click or	Click or

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS		OBJECTIVES	
☒	GOAL 1 Enhance Student Success and Social Mobility	☐	1. Diversify, optimize, and Increase system-wide enrollment
		☐	2. Increase student learning, retention, and degree attainment
		☐	3. Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences
		☒	4. Strengthen career pathways through service-learning, experiential learning and research engagement
		☒	5. Elevate graduate education
		☒	6. Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒	GOAL 2 Elevate Research and Creativity	☒	1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education
		☐	2. Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity
		☒	3. Amplify impact of research findings by addressing local needs that align with global challenges
		☒	4. Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒	GOAL 3 Amplify Extension and Outreach	☒	1. Be a leader in place-based innovation and in economic and community development
		☐	2. Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility
		☐	3. Improve PK-20 Science, Technology, Engineering and Math (STEM) education
		☒	4. Strengthen and elevate public-private engagement
		☒	5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☒	GOAL 4 Build a Robust University System	☒	1. Advance equity, inclusion and diversity and effectively support students, faculty and staff
		☒	2. Cultivate faculty and staff excellence, enhance productivity and improve the work climate
		☐	3. Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Center for Alternative Water Research, Treatment and Reuse
Contact Name: Pei Xu
Contact Email: pxu@nmsu.edu

FY25 Request

$1,200,000

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 Results**				**Measure Targets**						**Comments *(Briefly state your case)***
	RPSP Measures:	**FY20 Estimate**	**FY20 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of students involved in NMPWRC research	N/A	N/A			NA	NA	NA	4	7	10	
2	Number of postdoc researchers supported by NMPWRC	N/A	N/A			NA	NA	NA	2	3	3	
3	Number of students funded in NMPWRC research	N/A	N/A			NA	NA	NA	2	3	4	
4	Number of undergraduate courses integrated with energy-water research	N/A	N/A			NA	NA	NA	2	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	4	ENVE 452/552 - Unit Operation of Wastewater Treatment; ENVE 556 - Advanced Water Treatment and Reuse; ENVE 598 - Special Research Topic; Graduate Seminar

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

RPSP Goal: Integrate research with student education and accelerate technology and knowledge transfer

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		**Measure Results**				**Measure Targets**						**Comments *(Briefly state your case)***
	RPSP Measures:	**FY20 Estimate**	**FY20 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	The number of projects funded by Federal agencies or industrial partners	N/A	N/A			NA	N/A	N/A	3	3	5	
	The number of projects recognized by federal agencies or industrial partners								3	3	5	
2	The number of new technologies developed by the consortium	N/A	N/A			NA	N/A	N/A	2	3	4	Water characterization methods using toxicity tests and chemical analysis, new desalination technologies
3	Number of research projects with international collaborations	N/A	N/A			NA	N/A	N/A	0	1	2	with CSIRO (Australia), Ariel University (Israel)
4	Number of journal publications authored/co-authored by students and postdocs	N/A	N/A			NA	N/A	N/A	5	5	10	
5	Number of conference presentations for technology transfer and promoting economic development	N/A	N/A			NA	N/A	N/A	5	5	15	

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Center for Alternative Water Research, Treatment and Reuse
Contact Name: Pei Xu
Contact Email: pxu@nmsu.edu

FY25 Request

$1,200,000

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 Results**				**Measure Targets**						**Comments *(Briefly state your case)***
RPSP Measures:		**FY20 Estimate**	**FY20 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Update NMPWRC website with news, reports, publications, presentations, and maps	N/A	N/A			NA	N/A	N/A	Provide monthly updates on information	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	N/A	N/A			NA	N/A	N/A	72 meetings a year	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	N/A	N/A			NA	NA	NA	2 public meetings	2 public meetings	2 public meetings	

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

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 Results**				**Measure Targets**						**Comments *(Briefly state your case)***
RPSP Measures:		**FY20 Estimate**	**FY20 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of minority and underrepresented students and postdocs engaged in research projects	N/A	N/A			NA	NA	NA	2	3	3	

RPSP Objective 2: Cultivate faculty and staff excellence, enhance productivity and improve work climate		**Measure Results**				**Measure Targets**						**Comments *(Briefly state your case)***
RPSP Measures:		**FY20 Estimate**	**FY20 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of joint publications with NMSU faculty and industry partners	NA	NA			NA	NA	NA	3	3	6	
2	Number of joint proposals submitted with NMSU faculty	NA	NA			NA	NA	NA	3	3	7	

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: Produced Water Consortium

Total: $ 1,200,000.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance		$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund	$ 130,000.00	$ 1,070,000.00	$ 1,200,000.00	
Local		$ -		
Total Appropriations	$ 130,000.00	$ 1,070,000.00	$ 1,200,000.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ 130,000.00	$ 1,070,000.00	$ 1,200,000.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

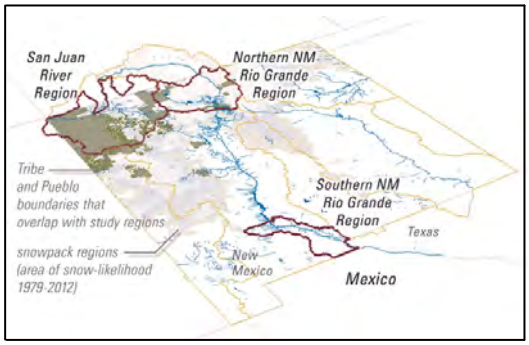
Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries	0.27	$ 23,166.00	0.50	$ 64,095.00	0.77	$ 87,261.00	three faculty each with 2 month summer month support 0.22 FTE x3 = 0.66; and one faculty with 1 month summer support at 0.11 FTE, in total 0.77 FTE
Professional Salaries			2.00	$ 180,000.00	2.00	$ 180,000.00	Program manager at 1 FTE, one postdoc at 1 FTE
Other Staff Salaries	0.26	$ 10,000.00	0.24	$ 15,000.00	0.50	$ 25,000.00	1 project coordination 0.5 FTE,
Student Salaries (GA/TA)	0.65	$ 26,860.00	1.35	$ 80,580.00	2.00	$ 107,440.00	4 full-time students, each as 0.5 FTE
Other Salaries			0.38	$ 10,080.00	0.38	$ 10,080.00	three undergraduate students each at 0.125 FTE
Total All Salaries	1.18	$ 60,026.00	4.47	$ 349,755.00	5.65	$ 409,781.00	
Fringe Benefits		$ 9,119.00		$ 82,282.00		$ 91,401.00	
Travel		$ 6,376.00		$ 13,900.00		$ 20,276.00	travel for conferences, sample collection and travel from NMSU to pilot testing site
Utilities				$ -			
Institutional Support Charges				$ 150,000.00		$ 150,000.00	NMPWRC director Mike Hightower and Deborah Dixon
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses		$ 26,979.00		$ 68,021.00		$ 95,000.00	chemicals and supplies
Equipment		$ 27,500.00		$ 322,500.00		$ 350,000.00	instruments for chemical analysis and treatment
Other Expenditures				$ 83,542.00		$ 83,542.00	Maintenance services, sample shipment, publications, student tuitions and fees
Total Expenditures	1.18	$ 130,000.00	4.47	$ 1,070,000.00	5.65	$ 1,200,000.00	
Ending Fund Balance		$ -		$ -		$ -	

New Mexico Water Resources Research Institute (NM WRRI)

FY24 Actual: $1,183,800

FY25 Request: $1,658, 800



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)

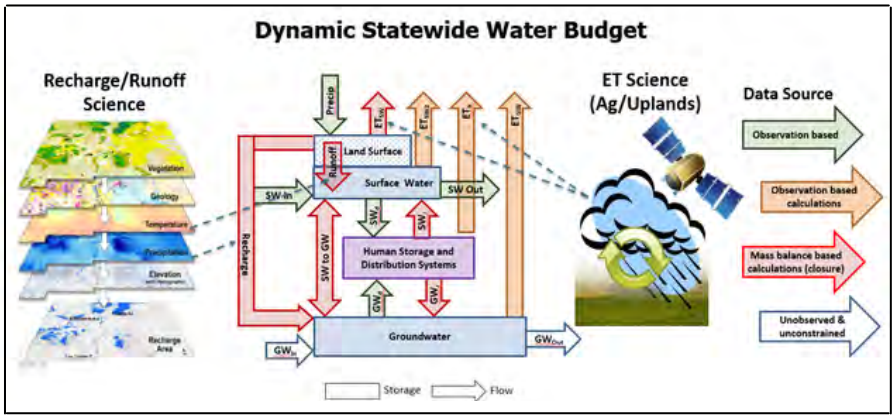
- The DSWB provides an integrative view of water resources and user-defined future scenarios; and supports local, regional, and statewide water planning.
- The model includes future scenarios for population growth, agricultural, municipal and industrial water-use efficiency, and management decisions 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.

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

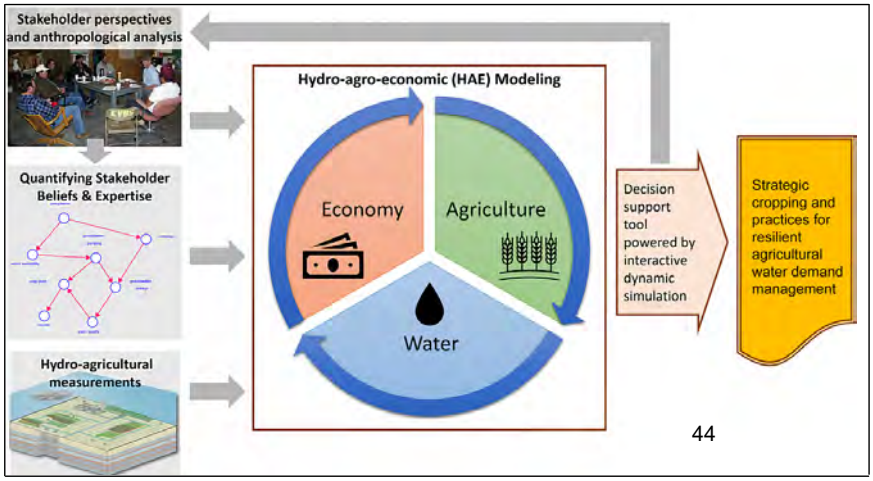
Strategic Community Water Management Program and Community Hydrology

- 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 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. 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.

Stakeholder-Driven Decision Support Model for Groundwater Conservation

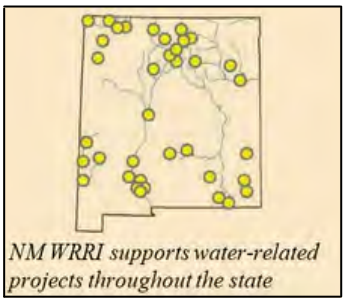


New Mexico Universities Alternative Water Supplies and Produced Water Synthesis Project

- 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.



NM WRRI supports water-related projects throughout the state

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 FY22, NM WRRI leveraged funding from external sources in the amount of $3.1M.
- 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.
- FY22 and FY23 provided a total of 24 student water research awards across the state supporting at least 42 students.
- Faculty seed grants help pave the way for additional research and funding.

Some Recent Efforts by Students:

- Assessment of Water Footprints of New Mexico Major Crops
- Effects of catastrophic wildfire on stream macroinvertebrate communities in Northern New Mexico
- Effects of Turbidity on fish behavior and community structure in New Mexico Rivers
- Environmental Water Leasing in the Middle Rio Grande: A Case Study of the First Three Years
- Hydrothermal Liquefaction of Wastewater Sludges for Energy Resource Recovery
- Influence of seasonality on the relative importance of abiotic and biotic factors in determining fish survival in isolated pools in New Mexico rivers
- Informing River Corridor Transport Modeling by Harnessing Community Data and Machine Learning
- Low-Level Radionuclide Removal and Concentration from Water Using Waste-Derived Biochars and Adsorbent Combustion
- The Co-Transport of PFAS and Anionic Salts

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 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	

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

FY25 Funding Request ($XXX,XXX):	$1,658,800

If Previously Funded, Amount that was awarded in FY24 ($XXX,XXX):	

Type of Project (X for Type)

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

Please explain if other is marked:

1. Number of years the project has received General Fund support (*Disregard if new program):*	54

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 54 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.

Through continuing funding, including additional FY23 appropriations awarded by the NM Legislature, NM WRRI has been able to expand its statewide support of research to serve communities, water users, and water managers and to develop watershed restoration and monitoring projects to mitigate flooding and improve aquifer recharge and watershed health. The **Strategic Community Water Management Program** will install sensors, make easy to access local websites, provide on-call technical assistance, and deliver water information requested by

2. Project Description / Executive Summary:

community stakeholders who need up-to-the-minute research information for their water management needs. The Strategic Community Water Management program is a new effort to serve the state that builds on the technical understanding developed by the **Community Hydrology Program**.

The **Community Hydrology Program** funds field water budget equipment, faculty, and graduate student research on New Mexico surface water-groundwater interactions in communities of northwest New Mexico, the Upper Rio Grande, Central New Mexico, the Lower Rio Grande, Rincon Arroyo, and multiple additional critical sites. The **Community Hydrology Program** supports research on watershed restoration to recharge groundwater and supports community agriculture. NM WRRI researcher and stakeholder collaborations create opportunities for new technology and irrigation alternatives to mitigate drought. The **Community Hydrology Program** provides: 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 Doña 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 can access a real-time rangeland soil moisture monitoring system installed at NMSU Corona Range and Livestock Research Center.

NM WRRI is providing integrated community-resilient monitoring and research that leverage other state-funded weather projects. State appropriations funding the expansion of weather stations throughout New Mexico are valuable to help NM WRRI provide data for our modeling to build onto the NM WRRI developed **New Mexico Dynamic Statewide Water Budget**. NM WRRI's partnership and collaboration with State Climatologist David DuBois provides data needed to expand and build offshoot models for decision-makers and drought resiliency. These community research efforts will be improved with access to the new weather monitoring equipment recently funded by the state legislature.

NM WRRI 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 performs updates to the **New Mexico Dynamic Statewide Water Budget (NMDSWB)** model to include input data for the historical period by the addition of the Water Use by Categories report released by the NM Office of the State Engineer. 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, 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, NM WRRI has continued to expand its statewide water planning and management efforts for water resiliency.

In FY23 NM WRRI initiated a new project, the **Groundwater Conservation Project**. This project works with farmers, water managers, and other stakeholders to identify strategic cropping and

2. Project Description / Executive Summary:

practices for water demand management. This project assesses the impacts of groundwater conservation on water budget and agricultural economies. The project creates water sustainability by conserving groundwater through reduced pumping; improving environmental quality and reducing dust storms; supporting farmer livelihoods by informing sustainable groundwater management; and connecting river valley water to NMDSWB and the 50-Year Water Plan for resilience.

NM WRRI is finalizing work on 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** 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 currently 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's needs. 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 WRRI.

The General Fund supports the **Faculty and Student Water Research Grant Programs.** The programs support water-related research conducted by faculty and students statewide. The programs provide faculty "seed money" to pursue critical areas of water resources research while providing training opportunities for their students. The grants help faculty to explore and develop research ideas that can attract more substantial external funding. Student Water Research grants help students initiate research projects in water resources research under the guidance of a faculty advisor. These awards support the training of New Mexico's future water experts.

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

NM WRRI is requesting recurring funding of $1,658,800. The RPSP funding request provides support for water budget equipment and salary for researchers, staff, graduate research assistants, and undergraduates; the budget supports faculty and student water research grants statewide; our funding request provides support to resolve important water issues; coordinates data acquisition to obtain, process, synthesize, and deliver data; improve water management; will continue ongoing research and updates on the NMDSWB, New Mexico surface water-groundwater interactions, and strategic community water management to communities of the Upper Rio Grande, the Estancia Basin, the Lower Rio Grande, and other critical sites, such as northern New Mexico, Doña Ana and Sierra counties, Rincon Arroyo, central NM, and NMSU Corona Range and Livestock Research Center; sustains the New Mexico Universities Produced Water Synthesis Project. Funding will provide continued support for the Groundwater

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

Conservation Project, as well as the ongoing support of the Faculty and Student Water Research Grant Projects. State appropriations will also provide cash-match and leverage needed to meet the objectives and deliverables of recently externally funded projects on 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 WRRI's recurring funding of $1,658,800 supports actionable science useful for stakeholders. Funding for field water budget equipment and graduate student staff to conduct the studies provides 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. Data provides additional inputs which improve the accuracy of the NM Dynamic Statewide Water Budget (DSWB) Regional Water and Community (RegWac) models, which are developed to estimate the comparative long-term effect of alternative management strategies. Each element of the water budget is measured at each site, including 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 WRRI 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 WRRI 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 WRRI. 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 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 WRRI helps New Mexico 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 WRRI has administered over 522 research projects; funded over 352 state faculty; provided training for over 2,682 university students; and produced over 437 technical and miscellaneous reports. FY25 funding will support the ongoing research on surface water and groundwater as

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

communities continue to face issues related to water scarcity and drought, as well as improve New Mexico'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 New Mexico'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 WRRI 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 WRRI 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 WRRI's funding request helps graduate degree programs primarily at NMSU, NM Tech, UNM, ENMU, and NMHU. The NM WRRI 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 New Mexico require the highest quality research to solve its water-related problems. For decades, the NM WRRI has been a leader in water research. Ultimately, the citizens of New Mexico are the primary beneficiaries of the services provided by NM WRRI.

Teaching: Training undergraduate and graduate students at New Mexico's universities is a core mission of the NM WRRI 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 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.

The **Strategic Community Water Management Program** will install sensors, analyze data, provide on call technical assistance, and make water information available to community stakeholders who need up-to-the-minute research information for their water management needs. Funding support for this program was recently appropriated through the New Mexico General Appropriation (Junior Bill) and supports research initiatives in Canjilon, Placitas, and La Union as well as the development of the statewide program. The **Strategic Community Water Management Program** builds on the **Community Hydrology Program**. The **Community Hydrology Program** offers a program tightly integrated with efforts related to research, service, and outreach in specific communities throughout New Mexico. The program supports research on

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.

surface water and groundwater in northwest New Mexico, the Upper Rio Grande, Central New Mexico, the Lower Rio Grande, Rincon Arroyo, and other critical sites where communities continue to face issues related to water scarcity and drought. The program elevates graduate education and provides experience with outreach by maintaining constant communication which connects university and local individuals and groups. This program continues to build a platform of trust with local communities relevant to implementing projects to address research questions. The **Community Hydrology Program** supports research on watershed restoration to recharge groundwater and support community agriculture. NM WRRI researcher and stakeholder collaborations create opportunities for new technology and irrigation alternatives to mitigate drought. Through the available data, crop pattern scenario testing has addressed the importance of agricultural water productivity in water conservation and the relation between water conservation and resilience. Support of this program has expanded into the watersheds at La Union and Rincon Arroyo. Other accomplishments include the creation of a qualitative data set of 27 in-depth interviews with agricultural stakeholders related to fallowing, agricultural water use, and water conservation. Through the connections with communities and developing collaborative partnerships, NM WRRI will leverage General Fund appropriations with an award funded by the New Mexico Environment Department's River Stewardship Program. The awarded project will perform watershed restoration in three regions of New Mexico. Other accomplishments this fiscal year include our most recent partnership with Taos Soil & Water Conservation District to provide a water quality assessment of the Rio Hondo River system. Lastly, a new initiative and construction is underway to establish a Strategic Community Water Center at Stucky Hall where stakeholders and communities throughout the state can access real-time water data.

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.

NM WRRI's goal is to continue building partnerships and collaborative opportunities to conceptualize ways to contribute to the ISC's 50-Year Water Plan to help sustain the Governor's initiative long-term.

Nine years ago, water planning stakeholders requested better information on New Mexico's water budget to reduce the detrimental effects of drought. NM WRRI responded and built the **New Mexico 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 New Mexico. The DSWB helps counties, water planning regions, and the state access data that 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 on the comparison of operational precipitation and evapotranspiration products and synthesizing water supply and demand information from across the state into a single, easily accessible location. The goal is to synthesize the information in such a way that users can view information

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.

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.

The NMDSWB project amplifies 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 in updating the NMDSWB
- Developing a new drought index specific to climatic and physical conditions in New Mexico
- Providing online access to the model and associated data to a large audience

Research and creative activity to address local and global challenges are facilitated with the NMDSWB project. The tool has been used as a data source in a number of peer-reviewed scientific publications and doctoral dissertations investigating water management in arid and semi-arid environments, demonstrating and reflecting its significance and importance in academic-scientific research studies. The previous fiscal years have involved doctoral students working on updates and maintaining the NMDSWB with the latest data from OSE and USGS including water use and hydroclimate data and evaluating the Drought Monitor Index using NMDSWB. This fiscal year, we are excited to report one of WRRI's doctoral students working on this project successfully defended his academic dissertation and received his PhD degree.

Other accomplishments for this program during the fiscal year include completing an effort captured in a report for the ISC's 50-year water plan that gathered community perspectives in several diverse regions of New Mexico; and leveraging General Fund appropriations with funding awarded by the US Bureau of Reclamation Drought Resiliency Program and the USDA Organic Transitions Program, to identify pathways for resiliency aided by building customized models of socio-hydrologic dynamics for two regions of New Mexico that utilize inputs from the DSWB. The DSWB provides collaboration with the US Geological Survey to validate groundwater modeling for the Lower Rio Grande region in the transboundary aquifer community model.

The **Groundwater Conservation** project has continued 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

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.

farmers in realizing water demand reductions and support policy-makers in understanding policy effects. The outcomes and impacts resulting from this collaborative research projected are expected to: reduced water usage; improve environmental quality, e.g. reduced dust storms; support agricultural communities to thrive and adapt; further develop the ability to assess regional water management; address underlying water scarcity issues which are currently leading to conflicts. The **Groundwater Conservation** project also connects river valley water to the NM DSWB and the 50-Year Water Plan for Resilience.

During this fiscal year NM WRRI researchers have conducted groundwater fallowing scenario modeling to see the impact of upstream groundwater fallowing on downstream runoff. The scenario testing helps decision-makers design policy options for enhancing robust community resiliency by integrating them into water conservation practices. NM WRRI researchers designed and delivered a new free online course accessible to all, nationally and internationally. The course introduces system modeling for the analysis of groundwater sustainability aiming to understand behaviors in transboundary groundwater systems, obtain skills in dealing with dynamic problems in terms of transboundary groundwater resiliency, understand how system modeling is relevant to policymaking and research, and how system modeling can advance transboundary groundwater resilience.

Other accomplishments during the fiscal year include completing a stakeholder-led Hatch and Mesilla Valley Watershed Restoration Plan that includes goals and projects to refill the shallow aquifers of the region. Graduate students presented their research findings on dual irrigation systems for pecans at the Western Pecan Growers Association and drip-irrigated pistachios at the 67th Annual New Mexico Water Conference and the VIII International Symposium on Almonds and Pistachios. Work is ongoing in Southern New Mexico study areas to make data available in real-time to pecan and pistachio growers. More accomplishments include externally funded projects such as the Foundation for Food & Agriculture Research project which utilizes General Fund appropriations to meet its cost-share requirement has made significant progress on the examination of fallowing strategies in the Lower Rio Grande.

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 WRRI), New Mexico State University (NMSU), New Mexico Tech (NMT), and the University of New Mexico (UNM). The researchers involved in this project are 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 newly produced water data and a more thorough analysis of source and disposal formations, further assessment of 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 FY23, two peer-reviewed publications were published and one technical

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.

completion report is in prep. NM WRRI maintained an active role in the Government Advisory Board and New Mexico Produced Water Research Consortium working groups. NM WRRI staff presented at the New Mexico Produced Water Research Consortium annual meeting for an audience of 60 industry and policy stakeholders. Both the industry and the PWRC have expressed a desire to continue collaborating with NM WRRI and the **NMUPWSP** because of NM WRRI's strength 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.

The **Clean Drinking Water Technology Project** is developing and characterizing a clay pellet technology to purify contaminated household water. The clay pellets treat and remove uranium and heavy metals from water to produce potable water. This project is serving communities where the ability to obtain clean water persists, such as in the northwest corner of New Mexico. In the past year utility of the pellets, aspects of fabrication, safety, and characterization were investigated. The parameters and protocols for the fabrication of the clay technology have now been established in the laboratory. Now that the clay pellet sorbents are fully characterized and the uranium sorption proof-of-concept, the next and final phase is to investigate the uranium sorption process fully. Capacities, kinetics, and thermodynamic measurements will cement the process and allow investigators to establish a sorption model that can be used in homes and potentially on a larger scale.

Faculty and Student Water Research and Education Grant Programs provide support for water-related research through the Institute's federal base grant and through state appropriations. Student Water Research awards support the training of New Mexico's future water experts through grants to university students throughout the state for their water-related research projects. FY22-23 Provided 24 student water research awards across the state supporting at least 42 students. In FY23, eight students supported by funding from the WRRI completed their graduate degree programs.

Faculty Water Research Grant funds are made available through the Institute's federal base grant (Section 104B of the Water Resources Research Act – [Public Law 109-471]) and through state appropriations. These "seed money" projects allow New Mexico university faculty to pursue critical areas of water resources research while providing training opportunities for their students. The grants and "seed monies" help faculty explore and develop research ideas that can attract more substantial outside funding. FY23 funding supported two faculty and one staff researcher and 17 students.

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

The **Community Hydrology Program** creates opportunities for collaboration between NM WRRI researchers and stakeholders for new technology and irrigation alternatives to mitigate drought.

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

The program gathers, processes, analyzes, and delivers real-time water data to New Mexico communities for better water management based on their own community-provided needs.

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 involving non-scientist individuals in the project introduces the diversity of local knowledge, supports adaptive management, builds resilience, and addresses water resource risk management.

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.

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 New Mexico Universities research expertise is complemented by private sector on-the-ground input to provide cutting-edge research for effective new approaches to produced water.

The **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.

Faculty and Student Water Research and Education Grant Programs prepare students to become New Mexico's future water resources scientists, technicians, managers, and policymakers and are central to the mission of the NM WRRI. Under the guidance of accomplished and knowledgeable faculty researchers, student water research 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 New Mexico's job sector. 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 the private water-related industry. FY22-23 Provided 24 student water research awards across the state supporting at least 42 students. In FY23, eight students supported by funding from the NM WRRI completed their graduate degree programs.

Faculty Water Research Grant funds are made available through the Institute's federal base grant (Section 104B of the Water Resources Research Act – [Public Law 109-471]) and through state appropriations. These "seed money" projects allow New Mexico university faculty to pursue critical areas of water resources research while providing training opportunities for their students. The grants and "seed monies" help faculty explore and develop research ideas that can attract more substantial outside funding. FY23 funding supported two faculty and one staff researcher and 17 students.

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

Funding awarded through these programs 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.

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 supports 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, 2022, through June 30, 2023, NM WRRI managed 22 externally funded awards. The institute administered 37 sub-awards as a result of the 22 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, U.S. Geological Survey, New Mexico Environment Department, 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 States 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, twelve proposals were developed which sought funding from the Bureau of Reclamation, National Science Foundation, United States Geological Survey, the New Mexico Environment Department, the State of New Mexico Office of Natural Resources Trustee, and Taos Soil & Water Conservation District.

9. Accomplishment/ Highlights (bullet form)

The **Strategic Community Water Management Program:**

- received funding in May 2023 and has already made meaningful advances in a short time;
- purchased equipment for projects in Canjilon, Placitas, and La Union as well as the support center at Stucky Hall;

9. Accomplishment/ Highlights (bullet form)

- works with community members to define needs;
- gained approval from NMSU to remodel part of Stucky Hall for the interactive technical support center.

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;
- 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;
- collaborates with community planners to obtain federal funding for watershed restoration to recharge groundwater and support community agriculture;
- meetings and workshops to deliver data to stakeholder groups for water management and planning needs;
- delivers real-time data for water users across;
- addresses on-the-ground community member needs in Northwestern New Mexico, North Central New Mexico, Southern New Mexico, and Southeastern New Mexico.

The **New Mexico Dynamic Statewide Water Budget and Statewide Water Assessment:**

- responds to stakeholders by providing quantitative information and data available for water planning across the state;
- A collaborative understanding of regional water dynamics through visualizations from the NM DSWB. Community conversations synthesize local knowledge of the vision, goals, vulnerabilities, and future needs related to water resilience included in the NM ISC's 50-Year Water Plan;
- improved understanding of water availability for users in-state;
- pathways for resiliency aided by building customized models of socio-hydrologic dynamics for two regions of New Mexico
- 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 New Mexico;
- 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;

9. Accomplishment/ Highlights (bullet form)

- 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;
- NM WRRI 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 **Groundwater Conservation Project:**

- provides strategies for groundwater conservation by developing strategic cropping and agricultural land use strategies on water budgets and agricultural economies for a long-term water supply;
- examines fallowing strategies in the Lower Rio Grande
- connects river valley water to the NMDSWB and the 50-Year Water Plan for resilience;
- engages with local communities throughout the state to identify new risks and opportunities for water resilience and sustainability.
- partners with state water agencies such as the New Mexico Environment Department and Office of the State Engineer to restore the health of river ecosystems alongside farming and rangeland communities of the Rio Grande Basin in New Mexico;
- conducts and provides research results to policymakers, stakeholders, and local communities for better water planning and management

The **New Mexico Universities Produced Water Synthesis Project**:

- provides NM WRRI an active role in the Government Advisory Board and NMPWRC working groups;
- collaborates and supports the Produced Water Research Consortium Project, an NMSU and NMED partnership;
- conducts and supports ongoing research at NMT, UNM, NMSU, and NM WRRI;
- completed three technical completion reports, and one technical completion is in prep;
- published two peer-reviewed publications;
- coordinates and collaborates on brackish and produced water research.

The **Clean Drinking Water Technology Project**:

- developed and characterized a clay pellet technology to purify contaminated household water;

9. Accomplishment/ Highlights (bullet form)

- serves communities where the ability to obtain clean water persists, such as in the northwest corner of New Mexico;
- created protocols for the fabrication of the clay technology in the laboratory;
- establishing a sorption model that can be used in homes and potentially on a larger scale;

Faculty and Student Water Research and Education Grant Programs:

- funded 11 students through the Student Water Research Program in FY22 and 13 students in FY23;
- eight water-resources-trained students funded by NM WRRI projects graduated in FY23;
- supported 59 students across the state through student and faculty water-related research grants awarded
- transfers information related to staff and faculty water-related research or research findings at the NM WRRI Annual New Mexico Water Conferences.

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

- published two peer-reviewed technical completion reports in FY23, as part of NM WRRI's mission to disseminate water research results;
- hosted an informative two-day annual water conference where the program provides an outlet for researchers to share their ideas, and receive peer reviews on important water topics they are researching;
- three hundred twenty-one registrants attended the NM WRRI 67th Annual NM Water Conference, which was held in a hybrid format in FY23;
- NM WRRI hosted seven specialty conferences in FY23 related to transboundary groundwater resilience, exploring adaptive water strategies for managing drought, the Gold King Mine spill, as well as a non-point source workshop in collaboration with NMED. The total number in attendance at these conferences and workshops were 743.

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

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	Water Resources Research Institute

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☒	**Public Service ☒**	**Teaching ☒**

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

Research (NMSU Leads 2025 Goal: Elevate Research and Creativity) NM WRRI funding supports faculty and student water-related research at NMSU as well as New Mexico's other four–year public universities thereby benefiting faculty and students statewide. It supports research in both water quality and water quantity and water planning and coordination. At NMSU, funding helps faculty who conduct and support the Water Science Management graduate degree program and water-related graduate programs at NM Tech and UNM. The NM WRRI will continue to administer water-related research and participate in collaborative research efforts, complementing water research statewide and leveraging funds to attract federal and private funding.

Public Service (NMSU Leads 2025 Goal: Amplify Extension and Outreach): Limited water resources in New Mexico requires the highest quality research to solve its water-related problems. For decades, the NM WRRI has been a leader in water research. NM WRRI hosts statewide conferences, workshops, and meetings to address drought, water conservation, and water efficiency, and gathers data on stakeholder needs to deliver the needed quantitative data. Ultimately, the citizens of New Mexico are the primary beneficiaries of the services provided by NM WRRI.

Teaching (NMSU Leads 2025 Goal: Enhance Student Success and Social Mobility): Training undergraduate and graduate students at New Mexico's universities is a core mission of the NM WRRI and is instrumental in preparing students to become our future water resources scientists, technicians, and managers. Grants provide students with opportunities to work with faculty advisors for hands-on experience in the lab and the field and provide students with the skill sets needed to successfully complete degree programs and move into New Mexico's job sector.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department, or the Governor's Office.

The NM WRRI 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 WRRI 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 New Mexico Senator Clinton P. Anderson and was modeled on the NM WRRI. Located at the state's land-grant university, NM WRRI 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 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. Every sector of New Mexico's economy, including jobs, education, culture, and health relies on available and good-quality water.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	259,001.00	778,777.36	3,176,378.00	7,203,848.36	12,093,642.36
Federal G&C Expenditures	933,511.53	664,476.96	992,665.17	4,572,009.90	8,365,372.99
Private G&C Awards	Click or	50,000.00	Click or	50,000.00	50,000.00
Private G&C Expenditures	Click or	15,771.30	4,573.63	20,344.93	20,344.93

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS		OBJECTIVES	
☒	GOAL 1 Enhance Student Success and Social Mobility	☐	1. Diversify, optimize, and Increase system-wide enrollment
		☒	2. Increase student learning, retention, and degree attainment
		☐	3. Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences
		☒	4. Strengthen career pathways through service-learning, experiential learning and research engagement
		☒	5. Elevate graduate education
		☐	6. Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒	GOAL 2 Elevate Research and Creativity	☒	1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education
		☒	2. Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity
		☒	3. Amplify impact of research findings by addressing local needs that align with global challenges
		☒	4. Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒	GOAL 3 Amplify Extension and Outreach	☒	1. Be a leader in place-based innovation and in economic and community development
		☒	2. Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility
		☐	3. Improve PK-20 Science, Technology, Engineering and Math (STEM) education
		☒	4. Strengthen and elevate public-private engagement
		☒	5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☒	GOAL 4 Build a Robust University System	☒	1. Advance equity, inclusion and diversity and effectively support students, faculty and staff
		☒	2. Cultivate faculty and staff excellence, enhance productivity and improve the work climate
		☐	3. Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Water Resources Research Institute
Contact Name: Sam Fernald
Contact Email: afernald@nmsu.edu

FY25 Request
$1,658,800

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)***
	RPSP Measures:	**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of student WRRI Student Water Research Grants awarded	16	15	11	12	12	16	16	16	16	NM WRRI saw a small decrease in number of students responding to call for proposals
2	Total number of students supported by the WRRI Student Water Research Grants	36	41	42	42	12	16	16	42	42	
3	Number of students participating on Faculty Directed Graduate Student Research Program	7	11	17	17	3	3	8	10	10	

RPSP Objective 2: Report and presentation of student research projects		**Measure Results**				**Measure Targets**					**Comments** ***(Briefly state your case)***
	RPSP Measures	**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of completed reports submitted by WRRI Student Research Grant recipients	14.00	14.00	11.00	12	12	16	16	16	16	
2	Number of students who present results at WRRI Annual Water Conference	45.00	52.00	33.00	37	30	16	30	30	30	Target for FY24 remains the same; we will release two RFPs during FY24 to increase grant recipients

RPSP Objective 3: Water Resources Trained Graduates		**Measure Results**				**Measure Targets**					**Comments** ***(Briefly state your case)***
	RPSP Measures:	**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Cumulative number of students who graduate who receive funding from WRRI	12	13	10	8	6	8	11	11	11	Again, due to the decrease in student grant applicants the number of recipients decreased slightly in our FY23 estimate

RPSP Title: Water Resources Research Institute
Contact Name: Sam Fernald
Contact Email: afernald@nmsu.edu

FY25 Request
$1,658,800

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)***
RPSP Measures:		**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of project awards made	4	5	4	5	5	2	2	5	5	
2	Number of faculty and researchers funded on SWA projects	10	10	11	10	4	4	10	10	10	
3	Number of products (maps, reports, databases, models) produced	2 reports 2 presentations	8 maps 6 reports	13 maps, 3 reports, 4	10 maps, 1 reports,	1+ reports 1 db	1+ reports 1 db	5 reports 2 db	NA	NA	Will be phased out in FY24 and going forward. The same measures are included individually below
4	Number of maps produced	9	8	13	10	4	4	10	10	10	
5	Number of reports produced	NA	6	3	4	NA	1	5	5	5	FY23 estimate lower than target due to report in draft
6	Number of draft reports	NA	1	1	2	NA	NA	NA	2	2	
7	Number of databases produced or revised	NA	2	0	0	NA	1	2	0	0	
8	Number of presentations	NA	2	3	5	NA	1	5	5	5	
9	Number of models produced or revised	NA	1	4	3	NA	1	2	2	2	
10	Number of project-oriented meetings held throughout state associated with SWA	10	1	13	15	12+	18	18	15	15	

RPSP Objective 2: Deliver data to stakeholder groups for water management and planning needs **New objective for FY20**		**Measure Results**				**Measure Targets**					**Comments** ***(Briefly state your case)***
RPSP Measures		**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Meetings/workshops to gather stakeholder needs for quantitative data	40	40	66	40	10+	10+	35	40	40	
2	Information delivered for user needs across the state (presentations, documents, etc.)	17	23	32	20	3	3	110	10	10	The FY23 target should've been 10 and not 110

RPSP Title: Water Resources Research Institute
Contact Name: Sam Fernald
Contact Email: afernald@nmsu.edu

FY25 Request
$1,658,800

RPSP Objective 3: Coordinate and collaborate on brackish and produced water research		Measure Results				Measure Targets					Comments *(Briefly state your case)*
RPSP Measures		**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of meetings/conference calls held throughout state related to brackish and produced water resources	10	47	21	15	4	4	20	15	15	
2	Number of awards made for brackish and produced water research	3	5	4	2	2	2	3	2	2	FY24 target measures decreased due to prior year's trend
3	Number of databases and models produced or revised	2 final draft reports including maps 3 progress reports	1 database update	4 proposals, 5 final reports, 2 models, 1 database	2 proposals, 2 final reports, 2 models, 1 database	5	5	4	4	4	
4	Number of proposals	NA	5	4	2	NA	2	3	2	2	
5	Number of final reports	NA	1	5	5	NA	2	3	5	5	FY24 target measures decreased due to prior year's trend
6	Number of draft reports	NA	5	2	3	NA	2	3	3	3	
7	Number of maps produced	NA	12	6	5	NA	2	10	5	5	
8	Number of Progress reports	NA	2	1	2	NA	2	3	NA	NA	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

FY25 Request
$1,658,800

RPSP Objective 4: Publish reports to disseminate water research results		Measure Results				Measure Targets					Comments *(Briefly state your case)*
	RPSP Measures	**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of technical reports published by faculty	3	6	8	5	5	5	5	5	5	
2	Number of final reports by Student Grant recipients	13	14	11	12	12	12	15	15	15	FY23 estimate did not reach target due to decrease in student awards due to decline in applicants
3	Number of conference proceedings produced	2	2	2	2	2	3	3	3	3	1 proceeding in draft for FY23
4	Number of final reports associated with the Statewide Water Assessment posted on WRRI website	4	6	3	4	2	2	2	2	2	
5	Number of special reports, often associated with sponsored conference or workshop	9	11	0	2	3	4	10	1	1	FY23 target measures are combined with peer-reviewed publications which are now below
6	Peer-reviewed Journal publications that address NM water issues published by WRRI staff, postdoctoral researchers, and graduate research assistants	NA	NA	12	10	NA	NA	12	12	12	
7	Proposals submitted to leverage funding	NA	NA	6	12	NA	NA	8	8	8	submitted proposals I FY23 exceed targets because additional proposals were solicited by the sponsors

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)*
	RPSP Measures:	**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of meetings held with public and private entities to educate about the Statewide Water Assessment	6	22	13	15	6	6	25	25	15	
2	Number of "hits" to the WRRI website	719	2,084	21,003	14,000	1,600	1,750	1,200	14,000	14,000	IT utilized a new analytic tool resulting in a more accurate count that records user sessions; IT accounts the decrease from FY22 actuals to FY23 estimates due to the pandemic when all interactions were being conducted online
3	Number of "NM Water eNews" produced annually	12	12	12	12	12	12	12	12	12	

RPSP Title: Water Resources Research Institute
Contact Name: Sam Fernald
Contact Email: afernald@nmsu.edu

FY25 Request
$1,658,800

4	Average number per month of NM Water eNews distributed	1,550	1,931	1,961	2000	1650	1800	1800	2000	2000	

RPSP Title: Water Resources Research Institute
Contact Name: Sam Fernald
Contact Email: afernald@nmsu.edu

FY25 Request
$1,658,800

	RPSP Objective 2: Promote NM WRRI through conferences and workshops	**Measure Results**			**Measure Targets**						**Comments** ***(Briefly state your case)***
	RPSP Measures	**FY20 Actuals**	**FY21 Actual**	**FY22 Actual**	**FY23 Estimate**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**	
1	Number of annual Water Conference participants	270	540	388	350	250	250	310	350	350	
2	Number of specialty conferences/workshops offered	4	4	11	7	2	2	4	6	6	
3	Number of participants at specialty conferences/workshops	636	792	1134	743	100	100	600	700	700	

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: Water Resource Research Institute

Total: $ 1,658,800.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance	$ 1,098,457.00	$ (483,104.00)	$ 615,353.00	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund	$ 1,183,800.00	$ 475,000.00	$ 1,658,800.00	based on FY24
Local		$ -		Actual General Appropriations
Total Appropriations	$ 1,183,800.00	$ 475,000.00	$ 1,658,800.00	
Grants and Contracts				
Federal	$ 796,104.00	$ 67,447.00	$ 863,551.00	
State	$ 563,790.00	$ 16,914.00	$ 580,704.00	
Local	$ 39,840.00	$ (39,840.00)		
Total Grants and Contracts	$ 1,399,734.00	$ 44,521.00	$ 1,444,255.00	
Private Gifts, Grants and Contracts	$ 26,836.00	$ (20,836.00)	$ 6,000.00	FFAR & Thornburg sponsorship end
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services	$ 300.00	$ -	$ 300.00	water war books
Other Sources - Detail in Comments		$ -		
Total Revenues	$ 2,610,670.00	$ 498,685.00	$ 3,109,355.00	
Transfers (to) from				
Instruction and General	$ 62,000.00	$ 5,000.00	$ 67,000.00	Overhead Recovery
Student Social and Cultural		$ -		
Research	$ (47,800.00)	$ -	$ (47,800.00)	Clean Drinking Water Program
Public Service		$ -		
Internal Service		$ -		
Student Aid		$ -		
Auxiliary Enterprises		$ -		
Athletics		$ -		
Independent Operations		$ -		
Capital Outlay		$ -		
Renewal and Replacement		$ -		
Total Transfers	$ 14,200.00	$ 5,000.00	$ 19,200.00	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries	0.60	$ 56,050.00	0.09	$ 3,363.00	0.69	$ 59,413.00	
Professional Salaries	9.68	$ 661,773.00	6.11	$ 319,706.00	15.79	$ 981,479.00	Increase to add FT director and a postdoctoral researcher
Other Staff Salaries	3.38	$ 140,783.00	0.57	$ 8,447.00	3.95	$ 149,230.00	
Student Salaries (GA/TA)	8.89	$ 379,685.00	1.10	$ 22,781.00	9.99	$ 402,466.00	
Other Salaries	1.08	$ 45,000.00	0.11	$ -	1.19	$ 45,000.00	
Total All Salaries	23.63	$ 1,283,291.00	7.98	$ 354,297.00	31.61	$ 1,637,588.00	
Fringe Benefits		$ 310,997.00		$ 128,234.00		$ 439,231.00	using FY24 fringe rates
Travel		$ 98,810.00		$ 1,976.00		$ 100,786.00	includes extensive community fieldsite travel
Utilities				$ -			
Institutional Support Charges		$ 49,900.00		$ -		$ 49,900.00	
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses		$ 1,364,976.00		$ 35,024.00		$ 1,400,000.00	equipment & supplies & materials
Equipment				$ -			includes subcontracts and professional service contracts
Other Expenditures				$ -			for all programs
Total Expenditures	23.63	$ 3,107,974.00	7.98	$ 519,531.00	31.61	$ 3,627,505.00	
Ending Fund Balance		$ 615,353.00		$ (498,950.00)		$ 116,403.00	

New Mexico Artificial Intelligence Alliance

2024

New Mexico Artificial Intelligence Alliance
FY24 Actual: $0
FY25 Request: $406,642
$ Change: $406,642

The Need

- Over 400,000 technology jobs and 71,000 college graduates
- Over 2.3Million jobs in AI
- Critical gaps in K-14 AI education
  - o Convergence of K-12 CS curricula
  - o No agreement on K-12 AI curricula
- Gaps amplified by lack of diversity
  - o 15% of AI professionals are women
  - o 80% of AI faculty are men
  - o Less than 7% of UG AI degrees are Hispanic
- World Economic Forum – 1Billion jobs transformed by AI
- In May 2023, 5% of job losses caused by AI
- McKinsey & Co. role of primary education to transition jobs
  - o AI education broader than CS or STEM
  - o Early exposure, AI as problem solving, experiential learning

The Opportunity

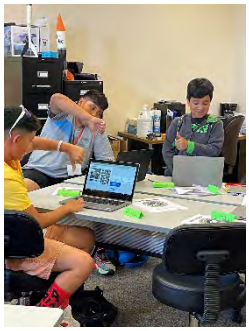
- Early exposure to AI as a tool for critical thinking, problem solving is crucial to shape career trajectories
- Knowledge of beneficial and ethical uses of AI will become an essential skill - driving how most disciplines operate
- *New Mexico Computer Science Alliance* provides a dynamic and established network for PD of teachers in computing and in development of CS culturally responsive pedagogy K-12 pedagogy
- New Mexico PED has promoted adoption of computing and technology in the classrooms through funding and legislation
- The NM landscape is fertile to achieve national lead in K-12 AI education
- NM is rich in AI research & educational expertise, linkage to national initiatives and focused on the success of New Mexico students
- The team leads state-wide pilot efforts in K-12 AI PD (EdAI)
- The team is part of national networks (e.g., CAHSI) to promote dissemination and achievement of national leadership in K-12 AI

AI Alliance Mission & Vision

"Expanding Artificial Intelligence Education - one student, one teacher, one school, one partner at a time."

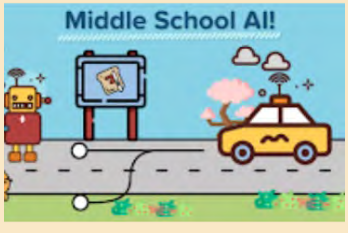
The **mission** of the *New Mexico AI Alliance* is to create access for all students across New Mexico to quality education in foundations, applications, and ethical uses of AI.

The **vision** of the *New Mexico AI Alliance* is to achieve, by 2030, presence of AI educational opportunities in the majority of middle and high schools in NM.



Benefit to New Mexico

- **K-12 Teachers –** create a sustainable network and programs to build K-12 teachers' skills in AI pedagogy, AI curricula and ownership of AI content
- **K-12 Students –** develop AI knowledge, curiosity, and confidence, ability to master AI as a critical and ethical problem solving tool
- **AI Knowledge –** lay the foundation for long-term AI knowledge creation, both foundational as well as applied
- **NM Economy –** early AI education contributes to Priorities 3.2, 3.3, 4.3 of EDD; AI underlies most industries named for Priority 6 (6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.8, 6.9)
- **Alignment with RPSP Priorities**
  - o Education & Teacher Preparation
  - o Centers of Excellence



New Mexico Artificial Intelligence Alliance

The NM AI Alliance is designed to promote K-12 artificial intelligence (AI) education in New Mexico. Recognizing the significance of AI in shaping the future, the alliance seeks to empower teachers and students with the knowledge, skills, tools, and ethical understanding necessary to navigate the evolving digital landscape. By bridging the AI skills gap and fostering innovation, the Alliance aims to prepare New Mexico's students to thrive in an AI-driven world and contribute to technological advancements. The Alliance places emphasis on integrating diverse expertise from public education, academia, industry and government to sustain the AI development of K-12 teachers. The Alliance places emphasis on ethics, ensuring that students develop a responsible approach to AI development and deployment. By promoting diversity and inclusion, the Alliance aims to create equal opportunities for all students to engage with AI education. Through collaboration among educators, policymakers, and industry leaders, the Alliance seeks to establish a network that shares best practices, resources, and expertise in K-12 AI education. The establishment of this Alliance in New Mexico signifies a proactive step towards future-proofing education, through teachers-focused professional development and curricula development, enabling students to become proficient in AI, and positioning the state at the forefront of AI education and innovation. The Alliance integrates with and expands the existing NM Computer Science Alliance, which has been instrumental in providing state-wide professional development for K-12 teachers in computer science and promoting state-level and national-level advocacy for the integration of computer science in K-12 schools.

Team

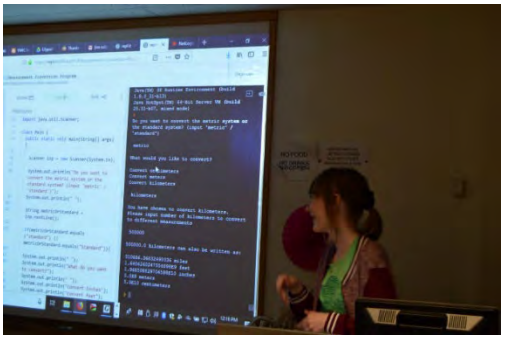
- **AI Leads:**
  - Huiping Cao, NMSU
  - Son Tran, NMSU
  - Enrico Pontelli, NMSU
- **Educational Experts**
  - Amanda Peel, NMSU
  - Irene Lee, MIT
  - Paige Prescott, NM Computer Science Alliance
  - Yolanda Lozano, NM Computer Science Teachers Association
- **Evaluation Team**
  - Sarah Hug, Colorado Research & Evaluation

AI Alliance Goals

- **Empower** New Mexico K 12 teachers from any discipline in mastering and teaching AI concepts and tools
- Develop a state wide **network** of educators, researchers, and practitioners to advance AI knowledge in K 12 audiences
- Develop, assess and disseminate culturally responsive **curricula** on AI and its ethical applications
- Establish New Mexico as a **National Leader** in K 12 inclusive AI education

First Year Activities

- **Launch Convening –** stakeholders engagement, initial network formation
- **AI K-12 Cohort Formation –** recruitment of 30 K-12 teachers across the state, virtual onboarding
- **AI Book Club –** bi-weekly meetings teachers meetings with facilitators
- **AI Practicum –** summer camps with K-12 teachers and students to develop and test AI modules
- **Summer Convening –** stakeholders network expansion, prepare for state-level advocacy
- **AI Classroom Deployment –** Fall semester deployment of AI modules, data collection
- **Spring Evaluation and National Dissemination –** evaluation and assessment, presentations at national meetings
- **Presentation to stakeholders –** final convening of stakeholders, development of sustainability plan, solidifying network structure



NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Projects (RPSP)
FY 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	New Mexico Artificial Intelligence (AI) Alliance

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

FY25 Funding Request ($XXX,XXX):	$406,642

If Previously Funded, Amount that was awarded in FY24 ($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.

1. Number of years the project has received General Fund support (*Disregard if new program):*	Click or tap here to enter text.

2. Project Description / Executive Summary:

The field of Artificial Intelligence (AI) has witnessed an explosive growth in recent years, fueled by the wide availability of diverse and large data sets, innovations in AI algorithms, and the development of affordable high-performance computing systems. AI has led to rapid delivery of innovations in a variety of domains, such as digital humanities, arts, public health, drug design, law enforcement, and digital agriculture. AI brings huge potential to transform modern society and it is already evident that AI is positioned to become an essential job skill in the immediate future, regardless of the desired field of study and career objectives.

This project will lead to the establishment of the New Mexico AI Alliance, as a network of educators, researchers and practitioners committed to promote K-12 AI education across the state of New Mexico. The AI Alliance is modeled after highly successful Computer Science Alliance and will initially build on its network. Nevertheless, it should be recognized that the scope, foundations, and implications of AI are well beyond the realm of computer science technology, and even beyond the scope of traditional STEM fields.

Recognizing the significance of AI in shaping the future, the AI Alliance seeks to advocate for AI training and education, and provide K-12 teachers from a diversity of disciplines with the tools to empower students with the knowledge, skills, and

2. Project Description / Executive Summary:

ethical understanding necessary to navigate the evolving AI landscape. By bridging the AI skills gap and fostering innovation, the AI Alliance aims to prepare New Mexico's students to thrive in an AI-driven world and contribute to technological advancements. The AI Alliance places a strong emphasis on ethics, ensuring that students develop a responsible approach to AI development and deployment. By promoting cultural-responsive AI pedagogy, the AI Alliance aims to create equal opportunities for all students to engage with AI education. Through collaboration among educators, policymakers, researchers, and industry leaders, the AI Alliance seeks to establish a network that shares best practices, resources, and expertise in K-12 AI education and provides professional development for teachers and administrators to advance the role of AI across New Mexico's K-12 schools. The establishment of this alliance in New Mexico signifies a proactive step towards future-proofing education, enabling students to become proficient in AI, and positioning the state at the forefront of AI education and innovation.

The New Mexico AI Alliance integrates with and expands the existing New Mexico Computer Science Alliance, which has been instrumental in providing state-wide professional development for K-12 teachers in computer science and computational thinking and promoting state-level and national-level advocacy for the integration of computer science in K-12 schools. The New Mexico AI Alliance avails of existing educational and outreach networks provided by the New Mexico Computer Science Alliance and by the New Mexico Chapter of the Computer Science Teachers Association (NM-CSTA).

The efforts of the AI Alliance will be designed to promote both continuous innovation – e.g., through the formation of working groups exploring novel curricula and pedagogies - as well as sustainability – e.g., through the development of online microcredentials that could be disseminated across the state.

While the initial and primary focus of the New Mexico AI Alliance is on serving the K-12 population of teachers and students in New Mexico, in the long term we view the AI Alliance expanding its effort into two-year college programs and eventually providing accelerated, sustainable and realistic pathways into AI-focused college degrees (e.g., the novel Bachelor of Science in Artificial Intelligence currently being developed).

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

The budget requested will support the initial development of the New Mexico AI Alliance and the launch of an initial set of initiatives. The requested funds will support

* The creation of an initial professional development program, composed of a semester-long virtual AI book-club for K-12 teachers, a summer set of practicum sessions and assisted in-class deployment of AI modules;
* The development of an initial network of committed educators and researchers focused on AI pedagogy; the network of the Computer Science Alliance will offer a preliminary backbone and will be supported by three convenings throughout the year to develop the vision and mission of the Alliance.
* The development of new K-12 curricula for AI education in K-12 classrooms, leveraging existing state-wide efforts on culturally-responsive computing pedagogy and collaborations with national initiatives on K-12 education (e.g., the Everyday AI curriculum developed by collaborator Irene Lee).

The budget includes

* support for K-12 teachers participating in the professional development initiatives
* support for K-12 students participating in summer practicums
* support for the three convenings on AI pedagogy
* support for the consultant Irene Lee, providing national expertise in K-12 AI pedagogy
* support for the participation of collaborating investigators Dr. Lee, the Computer Science Alliance and the Computer Science Teachers Association in expanding the K-12 network of teachers and administrators
* support for NMSU personnel coordinating the day-to-day activities of the AI Alliance

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

"Expanding Artificial Intelligence Education - one student, one teacher, one school, one partner at a time."

The mission of the New Mexico Artificial Intelligence Alliance is to create access and opportunities for all students across New Mexico to quality education and training in foundations, applications, and ethical uses of Artificial Intelligence.

The vision of the New Mexico Artificial Intelligence Alliance is to achieve, by 2030, presence of Artificial Intelligence educational opportunities in the majority of middle and high schools in the state.

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

The AI Alliance will serve the broad population of K-12 teachers and students across New Mexico; the ubiquity of AI prompts the inclusion of teachers from any disciplines (not just the traditional computing and STEM teachers), with the intent of exposing to AI concepts students in a diversity of contexts and thus promoting a broad participation of students – in particular, trying to serve students who would not typically consider AI and technology as areas of interest.

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

The primary objectives of the New Mexico AI Alliance are:
1. Professional Development: the New Mexico AI Alliance will serve as a vehicle to deliver cutting-edge professional development to K-12 New Mexico teachers on how to effectively integrate AI in their curricula and expose students to fundamentals of AI;
2. Curricula and Content Development: the New Mexico AI Alliance will assist in the creation and dissemination of culturally-responsive AI curricula for New Mexico K-12 schools, through coordination of networks of experts and by serving a bridge to New Mexico for national curricular development efforts;
3. Innovation: exploration and improved understanding of effective and culturally-responsive pedagogy to expose K-12 students to AI concepts and tools and their ethical use to promote society's good.
4. Advocacy: the New Mexico AI Alliance will serve as a vehicle to advocate for the ethical and effective integration of AI in K-12 education to the benefit of all students across New Mexico.

The New Mexico AI Alliance will address the following goals related to promoting K-12 education in AI:

1. Empowering K-12 Teachers: By establishing the AI Alliance, we will provide K-12 teachers with the knowledge, tools, and confidence to deliver to their students the necessary tools, resources, and guidance to understand and harness the power of AI from an early age, preparing them to be competent participants in the digital era. This will be achieved through a variety of training and professional development programs.

2. Closing the Skills Gap: AI is rapidly transforming industries, and by focusing on K-12 education, we can bridge the skills gap and ensure that students are equipped with the knowledge and skills required to thrive in an AI-driven world. This will be achieved through a diversity of module and curricula development efforts.

3. Fostering Innovation: Encouraging AI education at an early stage can unlock the creative potential of students, enabling them to explore novel applications of AI and contribute to technological advancements and innovative solutions.

4. Ethical AI Development: With an alliance dedicated to K-12 AI education, we can instill a strong emphasis on ethics, ensuring that students understand the ethical implications and responsibilities associated with AI, leading to the development of responsible AI systems.

5. Enhancing Diversity and Inclusion: By promoting AI education in all K-12 schools across the state of New Mexico, we can create opportunities for students from diverse backgrounds to engage with AI, promoting inclusivity and diversity within the field and mitigating potential biases in AI systems. This will also contribute to the diversification of an AI workforce which is currently heavily gender and ethnically skewed. The team will promote innovation in the area of culturally-responsive pedagogy, customized to the specific needs of New Mexico students, and support the adoption of bi-lingual materials.

6. Future-Proofing Education: The AI Alliance can help New Mexico K-12 educational institutions stay ahead of the curve by integrating AI into their entire curriculum, preparing students for the evolving job market and fostering a lifelong learning mindset.

7. Global Collaboration: By forming a state-wide AI Alliance, educators, policymakers, researchers, and industry leaders can collaborate and share best practices, resources, and expertise, fostering a state-wide network dedicated to advancing AI education and ensuring its widespread adoption.

The specific activities proposed for this funding period includes:

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

- Three state-wide convenings of stakeholders from education, research, industry and local government, to establish priorities in AI K-12 education and create a long-term strategy to pursue such priorities
- Professional development program across New Mexico, with both virtual and in-person activities
- Summer experiences for teachers and students to refine AI learning and practice on real-world problems
- Dissemination of AI pedagogy models within the state and on a national scale

In summary, establishing the AI Alliance to support K-12 education in AI is a proactive step towards equipping students with the necessary skills, fostering innovation, promoting ethics, and preparing them to succeed in an AI-powered future.

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?

- Teachers: The professional development of K-12 teachers in artificial intelligence (AI) offers significant benefits to both educators and students. By enhancing their understanding of AI concepts, tools, and applications, teachers can effectively integrate AI into the curriculum, creating dynamic and engaging learning environments. Professional development in AI enables teachers to foster critical thinking, problem-solving, and creativity among students, equipping them with essential skills for the digital age. Moreover, AI training empowers teachers to guide students in exploring ethical considerations and responsible AI practices, cultivating a sense of digital citizenship. By investing in the professional development of K-12 teachers in AI, we empower them to harness the potential of AI in education, ensuring students are prepared for the opportunities and challenges of the AI-driven future.
- Students: K-12 students' education in artificial intelligence (AI) brings valuable benefits by fostering critical thinking, problem-solving, and digital literacy skills. By gaining an understanding of AI concepts and applications, students can navigate the evolving technological landscape and harness AI tools to enhance their learning experiences. AI education empowers students to think innovatively, encouraging creative approaches to problem-solving and promoting future-ready skills. Additionally, AI education equips students with the knowledge to navigate ethical considerations, fostering responsible AI use and ensuring they become informed participants in an AI-driven world. AI skills are expected to be foundational for virtually any career choice the students intend to pursue.
- State: early AI education contributes to the following priorities of the New Mexico Economic Development Department "Empower and Collaborate" plan: (Priority 3.2) The Alliance will provide a fundamental building block towards reforming the workforce development ecosystem and better align students' skills to the present industry needs; (Priority 3.3) Early exposure to AI will provide students with cutting-edge problem solving skills and tools to improve success, motivate pursuit of higher education and serve as future leaders in the New Mexico economy; (Priority 4.3) Following the successful model implemented by the New Mexico Computer Science Alliance, the New Mexico AI Alliance will emphasize diversity and inclusion, through the adoption of culturally-responsive AI pedagogy and by emphasizing engagement of teachers from rural communities in professional development programs; (Priority 6.1) Aerospace industry fundamentally relies on the use of AI-based optimization methods in the design of aircrafts and on the use of machine learning techniques in driving simulations and in customizing aircraft behavior to different scenarios; (Priority 6.2) modern biosciences, especially in the area of precision medicine and drug design, are heavily data-driven, integrating heterogeneous data sets (e.g., -omics) to understand structure and behavior of proteins, signaling networks, and overall system functioning of biological systems; (Priority 6.3) Modern cybersecurity is moving away from the traditionally-used reactive model (e.g., developing filters based on known threats) towards the use of machine learning to realize predictive threat responses, capable of acting in presence on unseen threats; furthermore, knowledge-based agents are now used to model malicious actors and automatically develop response plans; (Priority 6.4) Digital film making is

7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?
crucially relying on the use of AI-generated content, e.g., artificial characters, special effects, animations, pushing the envelope in generative AI; (Priority 6.6) Precision agriculture requires the ability to integrate diverse data sets (e.g., weather, sensors, images, markets) to plan interventions (e.g., water delivery), identify potential risks (e.g., cattle illnesses from changes in animal behavior), and develop long term predictive modeling (e.g., cattle guidance to avoid overgrazing); autonomous systems are seen as the future of precision agriculture, especially in vast arid lands like New Mexico; (Priority 6.7) Intelligent manufacturing relies on a broad spectrum of AI techniques, from optimization methods for supply-chain management, to automated planning for reconfiguration of equipment and floor operation, to robotics for enhanced automation; (Priority 6.8) Global trade relies on automated decision making, fueled by sophisticated data-driven modeling, automated negotiation assistants, and powerful AI-driven optimization algorithms; (Priority 6.9) Sustainable and green energy requires innovation the overall electric infrastructure, to effectively integrate renewable sources and promote intelligent management of energy production, distribution and consumption (e.g., using smartgrids); AI technologies are the foundation for such intelligent infrastructures, through machine learning models for decision making, multi-agent systems for the management of microgrids, and data analytics solutions to enhance optimal behavior and resiliency. • RPSP Priorities: The project is aligned with the following priorities established for the RPSP program for 2024: (Education and Teacher Preparation): The leading purpose of the New Mexico AI Alliance is to establish an effective state-wide network of teachers, researchers, practictioners, and administrators to promote K-12 teachers preparation and K-12 curricula development in Artificial Intelligence and its ethical use. (Centers of Excellence): the New Mexico AI Alliance will operate as a virtual and distributed state-wide center of excellence, with the goal of coordinating and supporting research and development efforts in the area of AI education.

8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?
The need for and the conceptual design of the New Mexico AI Alliance has arisen from two federally funded efforts: * A grant from the Department of Education to New Mexico State University supporting the initial formation of an educational network focused on K-12 AI education; the grant is led by Dr. Pontelli and includes the Computer Science Alliance as co-lead; The funding will expire at the end of 2023. * A grant from the National Science Foundation to the Computer Science Alliance (with New Mexico State University as a co-lead) focused on exploring professional development of K-12 teachers in the adoption of culturally-responsibe pedagogy in the teaching of computer science.

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.

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	New Mexico Artificial Intelligence Alliance

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☒	**Public Service ☒**	**Teaching ☒**

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The proposed New Mexico Artificial Intelligence Alliance will serve as an interdisciplinary state-wide network for K-12 teachers, students, administrators, AI and educational researchers, and industry. The initial goal of the AI Alliance is to promote early exposure and training in AI.

The project is, first of all, aligned with the land-grant mission of NMSU, providing a growth opportunity for the diverse population of the state, through a state-wide educational initiative capable of transforming lives; the project represents an integration of teaching, research and public service.

The AI Alliance is responsive to several of the goals specified in the LEADS 2025 Strategic Plan.

LEADS Goal 1: the AI Alliance will enhance the learning experience for K-12 students through professional development of teachers, development of cutting-edge modules exposing AI concepts across curricula of a diversity of disciplines, and promoting the use of AI tools and concepts as instruments for critical thinking and problem solving. The exposure of AI as an instrument to solve real-world problems will promote engagement of diverse groups of students. The establishment of professional development programs for teachers will ensure advancement of knowledge and sustainability.

LEADS Goal 2: the AI Alliance will ground the efforts in existing and ongoing social science research on effective mechanisms to teach AI content to K-12 students and advance the knowledge and confidence of both students and teachers. The AI Alliance will engage AI researchers, educational researchers, social scientists and AI practitioners to collaboratively investigate effective curricula and culturally-responsive pedagogy to introduce K-12 students to AI concepts. The AI Alliance will take the lead in the development of research proposals (e.g., to the National Science Foundation) and facilitate the creation of research working groups.

LEADS Goal 3: the AI Alliance will nurture and develop partnerships with K-12 schools and districts across the state, as well as with institutions of higher education, industries, and national labs. Collectively, the network established by the AI Alliance will collaborate to build capacity and engagement in AI learning and teaching across the entire state. In particular, our approach to developing AI skills will rely on involvement of local educational and social communities, emphasizing the impact of AI on local communities and fostering community-based engagement. The teaching of AI will be grounded in the ethical use of technology and developed through co-curricular activities and project-based learning. Sustainability will include development of online microcredentials and smooth pathways into higher education opportunities.

LEADS Goal 4: Particular emphasis will be placed on the use of culturally-responsive pedagogies specifically designed for the teaching of computing and AI, to promote inclusion and participation of all students and all teachers. The AI Alliance will rely on the existing teachers network established by the Computer Science Alliance to reach rural communities and communities which are underserved in the state.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.

This abstract outlines the establishment of an alliance aimed at promoting K-12 artificial intelligence (AI) education in New Mexico. Recognizing the significance of AI in shaping the future, the alliance seeks to empower students with the knowledge, skills, and ethical understanding necessary to navigate the evolving digital landscape. By bridging the AI skills gap and fostering innovation, the alliance aims to prepare New Mexico's students to thrive in an AI-driven world and contribute to technological advancements. The alliance places a strong emphasis on ethics, ensuring that students develop a responsible approach to AI development and deployment. By promoting diversity and inclusion, the alliance aims to create equal opportunities for all students to engage with AI education. Through collaboration among educators, policymakers, and industry leaders, the alliance seeks to establish a network that shares best practices, resources, and expertise in K-12 AI education. The establishment of this alliance in New Mexico signifies a proactive step towards future-proofing education, enabling students to become proficient in AI, and positioning the state at the forefront of AI education and innovation. The New Mexico AI Alliance integrates with and expands the existing New Mexico Computer Science Alliance, which has been instrumental in providing state-wide professional development for K-12 teachers in computer science and computational thinking and promoting state-level and national-level advocacy for the integration of computer science in K-12 schools.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	Click or	Click or	Click or	Click or	Click or
Federal G&C Expenditures	Click or	Click or	Click or	Click or	Click or
Private G&C Awards	Click or	Click or	Click or	Click or	Click or
Private G&C Expenditures	Click or	Click or	Click or	Click or	Click or

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS	OBJECTIVES
☒ **GOAL 1** Enhance Student Success and Social Mobility	☒ **1.** Diversify, optimize, and Increase system-wide enrollment
	☒ **2.** Increase student learning, retention, and degree attainment
	☐ **3.** Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences
	☒ **4.** Strengthen career pathways through service-learning, experiential learning and research engagement
	☐ **5.** Elevate graduate education
	☐ **6.** Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒ **GOAL 2** Elevate Research and Creativity	☒ **1.** Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education
	☐ **2.** Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity
	☒ **3.** Amplify impact of research findings by addressing local needs that align with global challenges
	☐ **4.** Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒ **GOAL 3** Amplify Extension and Outreach	☐ **1.** Be a leader in place-based innovation and in economic and community development
	☒ **2.** Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility
	☒ **3.** Improve PK-20 Science, Technology, Engineering and Math (STEM) education
	☐ **4.** Strengthen and elevate public-private engagement
	☐ **5.** Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☒ **GOAL 4** Build a Robust University System	☒ **1.** Advance equity, inclusion and diversity and effectively support students, faculty and staff
	☐ **2.** Cultivate faculty and staff excellence, enhance productivity and improve the work climate
	☐ **3.** Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

		FY25 Request
RPSP Title:	New Mexico Artificial Intelligence Alliance	
Contact Name:	Enrico Pontelli	**$406,642**
Contact Email:	epontell@nmsu.edu	

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

RPSP Goal: Develop AI skills among K-12 Teachers

RPSP Objective 1: Provide Teachers Professsional Development in AI		**Measure Targets**		**Comments *(Briefly state your case)***
	RPSP Measures:	**FY24**	**FY25**	
1	Number of K-12 teachers participating in book clubs	N/A	30	Pilot project on semester-long AI training for teachers using virtual platforms
2	Number of K-12 teachers participating in practicums	N/A	20	Summer practicums enable teachers to develop and test modules
3	Number of K-12 teachers implementing AI modules	N/A	20	Implementation of AI modules in K-12 classrooms

RPSP Objective 2: Provide AI exposure and training to K-12 students		**Measure Targets**		**Comments *(Briefly state your case)***
	RPSP Measures:	**FY24**	**FY25**	
1	Number of K-12 students attending summer programs	N/A	200	Small groups of middle and high school students participating in summer tests of AI modules
2	Number of K-12 students exposed to AI modules	N/A	400	In-class deployment of AI modules
3	Number of K-12 teachers implementing AI modules	N/A	20	In-class deployment of AI modules

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

		FY25 Request
RPSP Title:	New Mexico Artificial Intelligence Alliance	
Contact Name:	Enrico Pontelli	**$406,642**
Contact Email:	epontell@nmsu.edu	

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

RPSP Goal: Form an Alliance of educators, researchers and practitioners engaged in development of AI curricula

RPSP Objective 1: Create network of stakeholders in AI K-12 education		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of participants in AI convenings	N/A	120	Three convenings across the year to establish and solidify a network of committted teachers, administrators, researchers, government representatives and practitioners to prioritize New Mexico strategies for K-12 AI education
2	Number of working groups created	N/A	3	Creation of small working groups within the Alliance to pursue specific strategies, e.g., cultural responsive pedagogy, curricular frameworks, bi-lingual AI education

RPSP Objective 2: Research curricula and pedagogy for AI K-12 education		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of classroom modules investigated	N/A	15	
2	Number of microcredentials developed	N/A	2	Online microcredentials will provide sustainability of professional development programs
3	Number of research proposals submitted	N/A	2	Working groups within the Alliance will pursue private and federal funding to expand the activities
4	Number of publications and presentations submitted	N/A	2	National dissemination of lessons learned

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

		FY25 Request
RPSP Title:	New Mexico Artificial Intelligence Alliance	
Contact Name:	Enrico Pontelli	**$406,642**
Contact Email:	epontell@nmsu.edu	

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

RPSP Goal: Engage K-12 schools in AI education

RPSP Objective 1: Outreach to K-12 teachers and students		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of K-12 students attending summer programs	N/A	200	
2	Number of K-12 teachers attending PD programs	N/A	40	Along with the semester-long bookclub, we plan to introduce AI training components in the summer professional development program implemented by the Computer Science Alliance

RPSP Objective 2: Expose K-12 Schools to AI opportunities		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Number of presentations to school administrators	N/A	10	The team will engage in visits to different school districts in the state to increase participation and identify potential school leads in the introduction of AI modules

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

		FY25 Request
RPSP Title:	New Mexico Artificial Intelligence Alliance	
Contact Name:	Enrico Pontelli	**$406,642**
Contact Email:	epontell@nmsu.edu	

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

RPSP Goal: Promote cultural responsive AI pedagogies

RPSP Objective 1: explore cultural responsiveness in AI pedagogy		**Measure Targets**		**Comments *(Briefly state your case)***
	RPSP Measures:	**FY24**	**FY25**	
1	Number of training components on cultural responsiveness	N/A	2	Expand ongoing efforts in the exploration of cultural responsive pedagogy, e.g., through microcredentials for New Mexico teachers

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: New Mexico Artificial Intelligence Alliance

Total: $ 406,642.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance		$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund		$ 406,642.00	$ 406,642.00	
Local		$ -		
Total Appropriations	$ -	$ 406,642.00	$ 406,642.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ 406,642.00	$ 406,642.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries			0.00	$ -			
Professional Salaries			1.00	$ 60,000.00	1.00		
Other Staff Salaries			0.00	$ -			
Student Salaries (GA/TA)			1.00	$ 24,000.00	1.00		
Other Salaries			0.00	$ -			
Total All Salaries	0.00	$ -	2.00	$ 84,000.00	2.00	$ 84,000.00	
Fringe Benefits				$ 22,642.00		$ 22,642.00	
Travel				$ 5,000.00		$ 5,000.00	
Utilities				$ -			
Institutional Support Charges				$ -			
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses				$ 5,000.00		$ 5,000.00	
Equipment				$ -			
Other Expenditures				$ 290,000.00		$ 290,000.00	This amount includes stipends, practicum costs, supplies and miscellaneous
Total Expenditures	0.00	$ -	2.00	$ 406,642.00	2.00	$ 406,642.00	
Ending Fund Balance		$ -		$ -		$ -	

Young Women in Artificial Intelligence (YWiAI)

2024

Young Women in Artificial Intelligence

FY24 Actual: $0
FY25 Request: $170,650
$ Change: $170,650

Young Women in Computing (YWiC) was established in 2006 to boost the number of women studying computer science at NMSU. YWiC, part of the National Science Foundation's Broadening Participation in Computing, has directly impacted more than 15,000 students in the state. YWiAI is an outgrowth of the YWiC tradition in response to the enormous skills gap in artificial intelligence (AI) and machine learning (ML) for the future workforce. Jobs requiring knowledge of AI and ML are expected to increase 71% over the next five years. It is crucial for the state's K-12 students to learn AI and ML now because it already plays an active role in our lives across nearly all sectors: health, law enforcement, elections, publishing, and more. Phone assistants like Siri, ChatGPT, spam blockers, smart homes, self-driving cars, and robots are just a few tools utilizing AI-powered technology. However, AI-technology learning opportunities are limited in the state, especially in rural communities and underrepresented groups.

Engaging students from under-represented minorities in technology, i.e., Native Americans, Hispanics, and females in AI education can help ensure that the design, development, and utilization of AI technologies are inclusive, accessible, and equitable. This project aims to increase K-12 knowledge, awareness, and perceptions of AI. To develop a diverse AI workforce of the future, it is important to expose students to the wide range of applicability of AI and its career options. AI literacy will prepare a workforce that is knowledgeable and capable of working in AI, STEM, and computer science fields while increasing social mobility of New Mexico's future generations. YWiAI will promote understandings of AI concepts and processes and broaden students' perspectives on ethics and AI and AI's impact on society. Scientists are working to develop AI to think and act like humans to solve more complex issues and how it can assist in solving the world's pressing issues, from poverty to inequalities.

YWiAI Mission

The mission of NMSU's Young Women in AI (YWiAI) program is to recruit and retain rural and underrepresented K-12 students through outreach programs that are designed to increase access to and interest and confidence in AI technologies to meet workforce needs using a near-peer model.

AI: Next-Generation STEM

As Artificial Intelligence (AI) technologies begin to reshape modern society, educating younger students about AI has become a national priority for both the United States and its competitors.

Outreach Activities

In Fall 2023, the YWiAI program will contact 10 STEM teachers to assist in recruiting participants from school districts with low population density and a high number of students that meet federal metrics for Free or Reduced Lunch program.

Identified students will be offered opportunities to learn AI-related concepts and activities taught by current NMSU computer science students representing YWiC.

Virtual and in-person out-of-school activities, including summer camps, focused on computer science and AI concepts will be offered throughout the 2023-24 school year and 2024 summer.

Participation goal will be 125 students.

AI Outreach

YWiAI will present project based activities on AI and the various fields it is being used including space and other industries employing robots, utilizing data science to recognize patterns, and automation based on machine learning.

Participants will learn AI core concepts including ethics and how to spot deep fakes; create chatbots (virtual assistants); collect and analyze real work data, i.e., weather patterns utilizing data science and AI algorithms; and teach computers image recognition and to respond with autonomous actions.

Leveraged Funds

YWiAI will leverage funds from private foundations for program delivery.

The program will also utilize funding from the National Science Foundation iCREDITS-2 project as part of research to increase female and under-represented minorities in computer science and technology related fields.

NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Projects (RPSP)
FY 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	

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

FY25 Funding Request ($XXX,XXX):	170,650

If Previously Funded, Amount that was awarded in FY24 ($XXX,XXX):	NA

Type of Project (X for Type)

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

Please explain if other is marked:

NA

1. Number of years the project has received General Fund support (*Disregard if new program):*	Click or tap here to enter text.

2. Project Description / Executive Summary:

This project is designed to increase K-12 students' knowledge, confidence, and perceptions of artificial intelligence. Additionally, the project aims to provide AI-related activities across New Mexico particularly to underrepresented minorities and females to develop a pipeline of graduates prepared to enter a workforce capable of working in AI, computer science, and STEM fields.

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

The budget establishes the YWiAI program, pays participants stipends, college student wages, travel to rural areas, and supplies for AI-related outreach out-of-school activities.

4. Program Mission (include population served, other demographic info):
The mission of YWiAI is to help migitage skills gap of rural and underrepresented minority K-12 students in AI and help meet the needs of a knowledgable workforce.

5. Key Project Objectives (Overview only – relates to separate performance measure form)
Increase AI literacy in rural areas of the state lacking access to outreach activities; increase mastery skills and confidence of females and underrepresented minorities in AI and machine learning through informal learning; and provide pathways to to sustain AI technology and STEM interest in college.

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.
N/A

7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?
YWiAI is aligned with state priorities: the New Mexico Legislative Council's Science, Technology and Telecommunications Committee issue of interest includes the development of STEM programs including the recruitment and retention of STEM students into programs designed to meet job market needs. The Committee will focus on the challenges and impacts of artificial intelligence on society. The state is committed to giving students 21st Century Skills through adoption of programs that expand opportunities in rural and underserved schools that prepare students for post-secondary education.

8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?
YWiAI will apply for federal and private foundation grants throughout the project period.

9. Accomplishment/ Highlights (bullet form)
N/A

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

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	Young Women in Artificial Intelligence (YWiAI)

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☐	**Public Service** ☒	**Teaching** ☐

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The mission of Young Women in Artificial Intelligence (YWiAI) is to increase K-12 students' knowledge, confidence, and perceptions of artificial intelligence. Additionally, the project aims to provide AI-related activities across New Mexico particularly to underrepresented minorities and females to develop a pipeline of graduates prepared to enter college and a workforce capable of working in AI, computer science, and STEM fields. The program aligns with the land grant mission of NMSU to provide outreach and public service that fosters learning, diversity, inclusion, and social mobility to our communities. YWiAI plays a role in the university's LEADS 2025 strategic plan to develop and implement innovative and culturally responsive outreach that supports social mobility as well as improving STEM education.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.

The mission of NMSU's Young Women in Artificial Intelligence (YWiAI) program is to recruit and retain rural and underrepresented K-12 students through outreach programs that are designed to increase access to and interest and confidence in AI technologies to meet workforce needs using a near-peer model. The program will help mitigate the enormous skills gap in AI among the state's K-12 students. The AI-technology learning opportunities are limited in the state. By engaging students from under-represented minorities in technology we can help ensure that the design, development, and utilization of AI technologies are inclusive, accessible, and equitable. AI literacy will prepare a workforce that is knowledgeable and capable of attending college and working in AI, STEM, and computer science fields while increasing social mobility of New Mexico's future generations. YWiAI will promote understandings of AI concepts and processes and broaden students' perspectives on ethics and AI and AI's impact on society. Scientists are working to develop AI to think and act like humans to solve more complex issues and how it can assist in solving pressing issues, from poverty to inequalities.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	0	0	0	0	0
Federal G&C Expenditures	0	0	0	0	0
Private G&C Awards	0	0	0	0	0
Private G&C Expenditures	0	0	0	0	0

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS	OBJECTIVES
☐ **GOAL 1** Enhance Student Success and Social Mobility	☐ **1.** Diversify, optimize, and Increase system-wide enrollment ☐ **2.** Increase student learning, retention, and degree attainment ☐ **3.** Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences ☐ **4.** Strengthen career pathways through service-learning, experiential learning and research engagement ☐ **5.** Elevate graduate education ☐ **6.** Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☐ **GOAL 2** Elevate Research and Creativity	☐ **1.** Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education ☐ **2.** Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity ☐ **3.** Amplify impact of research findings by addressing local needs that align with global challenges ☐ **4.** Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒ **GOAL 3** Amplify Extension and Outreach	☐ **1.** Be a leader in place-based innovation and in economic and community development ☒ **2.** Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility ☒ **3.** Improve PK-20 Science, Technology, Engineering and Math (STEM) education ☐ **4.** Strengthen and elevate public-private engagement ☐ **5.** Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☐ **GOAL 4** Build a Robust University System	☐ **1.** Advance equity, inclusion and diversity and effectively support students, faculty and staff ☐ **2.** Cultivate faculty and staff excellence, enhance productivity and improve the work climate ☐ **3.** Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title:	Young Women in Artificial Intelligence (YWiAI)	**FY25 Request**
Contact Name:	Mari Langford	**$170,650**
Contact Email:	mlangfor@nmsu.edu	

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

RPSP Goal:

RPSP Objective: Increase access to and interest and confidence in AI and related technologies through K-12 outreach		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Total number of teachers contacted in rural school districts	10	15	YWiAI will utilize school teachers to assist in recruiting participants
2	Total number of participants in outreach activities	125	125	
3	Out-of-school informal learning activities	6	6	Three in the fall and three in the spring
4	Summer camp	2	2	
5	Percentage of program participants who are females and	58%	63%	

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: Young Women in Artificial Intelligence (YWiAI)

Total: $ 170,650.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance		$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund		$ 170,650.00	$ 170,650.00	
Local		$ -		
Total Appropriations	$ -	$ 170,650.00	$ 170,650.00	
Grants and Contracts				
Federal		$ 37,400.00	$ 37,400.00	NSF iCREDITS Center funding
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ 37,400.00	$ 37,400.00	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ 208,050.00	$ 208,050.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries			0.00	$ -			
Professional Salaries			0.00	$ 15,000.00		$ 15,000.00	10 $500 K-12 Teacher stipends; program evaluator
Other Staff Salaries			0.50	$ 27,500.00	0.50	$ 27,500.00	YWiAI Program Manager
Student Salaries (GA/TA)			0.00	$ -			
Other Salaries			2.50	$ 59,800.00	2.50	$ 59,800.00	Student employees wages
Total All Salaries	0.00	$ -	3.00	$ 102,300.00	3.00	$ 102,300.00	
Fringe Benefits				$ 10,200.00		$ 10,200.00	Staff and student fringes
Travel				$ 35,000.00		$ 35,000.00	Educational outreach to rural areas; per diem and travel for participants to NMSU
Utilities				$ -			
Institutional Support Charges				$ -			
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses				$ 23,000.00		$ 23,000.00	Educational equipment, project supplies, summer camp meals
Equipment				$ 6,300.00		$ 6,300.00	5 laptops for student employees
Other Expenditures				$ 31,250.00		$ 31,250.00	125 $250 stipends for K-12 participants
Total Expenditures	0.00	$ -	3.00	$ 208,050.00	3.00	$ 208,050.00	
Ending Fund Balance		$ -		$ -		$ -	

Counseling & Educational Psychology (CEP) Clinic

2024

CEP Clinic: Specialty Clinic Development
FY24 Actual: $0 (new)
FY25 Request: $452,455

CEP Clinic Mission

The mission of the CEP Clinic is to contribute to the workforce development of competent and social-justice oriented mental health providers to address the mental health needs of the local and larger New Mexico community while decreasing the mental health disparities in our region.

Who We Are

The CEP Clinic is the training and research clinic for the New Mexico University's Department of Counseling & Educational Psychology (CEP). The CEP Clinic currently provides individual and group counseling services to NMSU students. Trainees from the department's Counseling Psychology program (PhD), Clinical Mental Health Counseling program (MA), the School Psychology programs (EdS and PhD) and Counseling and Community Psychology undergraduate major (BS) provide services as part of internships, practica, field experiences and assessment courses while receiving supervision from CEP faculty and advanced doctoral students.

The CEP Clinic is located in O'Donnell Hall, Room 047. The clinic space, which is equipped for live or recorded session observation, allows for intensive supervision, further bolstering trainee skill in providing evidence-based and culturally relevant mental health care. The CEP Clinic is also well equipped to gather outcomes data relevant to the treatment progress of clients and trainee development.

The Need

The New Mexico Department of Health identified New Mexico as the state with the fourth highest rate of suicide (2020), with two out of five high school students reporting feeling sad or hopeless (2019) and 18% of adults having a history of depression (2020).[1] The CEP Clinic plays an integral role in the training of competent mental health providers, thus, contributing to the workforce development of persons uniquely qualified to serve the mental health needs of New Mexico and beyond. State funding support will allow for an increase in training opportunities for students across the CEP department. This in turn will significantly increase the potential of clinical service hours provided to the Las Cruces and neighboring communities. Thus, our impact it twofold, as we address the national shortage of mental health providers and increase the option of affordable and accessible care to Southern New Mexicans.

Our Current Impact

Since fall of 2020, the CEP Clinic has provided individual and group therapy services **to over 500 NMSU students**, totaling over **3000 clinical service hours**.

In the 2023-2024 academic year, the CEP Clinic has provided the placement for the training of:

- 11 Counseling Psychology PhD Students
- 13 Clinical Mental Health Counseling MA students
- 11 School Psychology EdS students
- 7 Undergraduate Interns
- 4 Graduate Assistants

Together, these trainees assisted in providing **1053 hours of individual therapy** and **100 hours of group therapy** to the NMSU student body.

[1] https://www.nmhealth.org/data/view/report/2650/

CEP Clinic Goals: Specialty Clinic Development

The CEP Clinic seeks to (1) **increase health equity** by providing quality and affordable mental health services to the Las Cruces community and beyond by (2) **expanding the state-of-the-art training experiences** for mental health provider trainees.

To address the mental health needs of the NMSU, Las Cruces, and larger community, the CEP Clinic has a goal of (1) **establishing specialty clinics** open to the community to target specific mental health need areas and (2) **increase research activities** and productivity.

Specialty clinics will include:

- Child and adolescent mental health clinic
- Community adult mental health clinic
- Educational assessments

These specialty clinics will provide services in Spanish and English.

Research activities will focus on:

- Client mental health outcomes monitoring
- Trainee counseling skills and competencies development

Goal Impact

Specialty Clinics will allow the CEP Clinic to *double* the number of clinical service hours provided to the Las Cruces and neighboring communities.

Additionally, the number of telehealth mental health service hours is expected to *triple*, thus reducing barriers to treatment for clients.

Funding support will allow for additional graduate assistantships to be created, thus *increasing* the training opportunities and financial assistance to mental health trainees.

Counseling & Educational Psychology (CEP) Clinic

CEP Clinic: Specialty Clinic Development
FY24 Actual: $0 (new)
FY25 Request: $452,455

CEP Clinic Mission

The mission of the CEP Clinic is to contribute to the workforce development of competent and social-justice oriented mental health providers to address the mental health needs of the local and larger New Mexico community while decreasing the mental health disparities in our region.

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To address the mental health needs of the NMSU, Las Cruces, and larger community, the CEP Clinic has a goal of (1) **establishing specialty clinics** open to the community to target specific mental health need areas and (2) **increase research activities** and productivity.

Specialty clinics will include:

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These specialty clinics will provide services in Spanish and English.

Research activities will focus on:

- Client mental health outcomes monitoring
- Trainee counseling skills and competencies development

Goal Impact

NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Projects (RPSP)
FY 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	Counseling & Educational Psychology (CEP) Clinic – Specialty Clinic Development

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

FY25 Funding Request ($XXX,XXX):	$452,455.00

If Previously Funded, Amount that was awarded in FY24 ($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.

1. Number of years the project has received General Fund support (*Disregard if new program):*	0

2. Project Description / Executive Summary:

The NMSU CEP Clinic is the training and research mental health clinic for the Department of Counseling & Educational Psychology (CEP). Currently, trainees from the department's Counseling Psychology (PhD), Clinical Mental Health Counseling (MA), and School Psychology (EdS and PhD) programs provide supervised individual and group therapy services to NMSU students. Client presenting concerns include, but are not limited to, depression, anxiety, adjustment difficulties, identity exploration, and academic stress. The CEP Clinic also serves as in internship site for Counseling and Community Psychology undergraduate (BS) students. The specialized training opportunities provided by the CEP Clinic not only contribute to the workforce development of competent mental health professionals, but also serves as an important mental health resource for the NMSU student body.

State funding will help the CEP Clinic expand its current scope of practice to address Southern New Mexico and the Borderland's need for affordable and quality mental health care. Specifically, the CEP Clinic aims to concretize staff infrastructure to create and sustain specialty clinics open to the southern New Mexico community for (1) child and adolescent individual and group therapy, (2) adult individual and group therapy, and (3) educational assessments.

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

Funds are necessary to establish a strong infrastructure in order to expand services to the Southern New Mexico and Borderlands community and to meet program goals. Two College Associate Faculty, who are licensed psychologists or mental health providers, are needed to coordinate the services for the populations served. One College Associate Faculty will oversee the coordination of services, outreach, and supervision for the P-12 population and the other for the adult populations served. Ideally, one of these individuals will be a bilingual psychologist/mental health provider. This will be necessary in order to meet the needs of children, adolescents, families, and adults in our local and Souther NM/Borderlands community. The Post-Doctoral Clinician/Researcher is needed in order to provide additional supervision and clinical training as well as oversee the research repository and data collection processes. This Post-Doc will also be responsible for seeking external funding opportuites to support the CEP Clinic functions. This will be a critical function in order for the CEP Clinic to work towards continuing funding streams. A program coordinator will be responsible for all administrative tasks related to the day to day function of the clinic (i.e., including the technology for training and storage) and oversight over the undergraduate interns. Lastly, we seek to increase the number of graduate assistants in the CEP Clinic who will work closely with the College Associate Faculty in training and supervisory responsibilities. Lastly, with the expansion of services to a P-12 population, funding will be needed to create spaces to serve these clients (i.e., child/adolescent therapy room and additional educational and assessment materials aimed at this population) and additional equipment will be needed with the increase in faculty, staff, and students.

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

The mission of the CEP Clinic is to contribute to the workforce development of competent and social-justice oriented mental health providers to address the mental health needs of the local and larger New Mexico community while decreasing the mental health disparities in our region.

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

The key project objective is to provide training opportunities focused on counseling and assessment with clients across the lifespan. This will require the CEP Clinic to expand the current focus from college students to community adult, children, and adolescents through the creation of speciality clinics. Each specialty clinic will focus on a specific population. Additionally, we would expand services to add assessment services to both adults and the P-12 population.

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?

The New Mexico Department of Health identified New Mexico as the state with the fourth highest rate of suicide (2020), with two out of five high school students reporting feeling sad or hopeless (2019) and 18% of adults having a history of depression (2020). The CEP Clinic plays an integral role in the training of competent mental health providers, thus, contributing to the workforce development of persons uniquely qualified to serve the mental health needs of New Mexico and beyond. CEP students currently receive training in state-of-the-art facilities that allow for intensive supervision, further bolstering their skill in providing evidence-based and culturally relevant mental health care to the NMSU student body. The CEP Clinic is also well equipped to gather outcomes data relevant to the treatment progress of clients. As such, state funding support will allow for an increase in training opportunities for students across the CEP department. This in turn will significantly increase the potential of clinical service hours provided to the Las Cruces and neighboring communities. Thus, our impact is twofold, as we address the national shortage of mental health providers and increasing the options for affordable and accessible care to Southern New Mexicans. Students who train in the CEP Clinic have successfully become licensed psychologists, counselors, school psychologists, and educational specialists in New Mexico and beyond. They have secured employment in mental and behavioral health clinics, school districts, federally qualified health centers,

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

counseling centers, academic institutions, and veteran affairs agencies, both locally and globally. Source: https://www.nmhealth.org/data/view/report/2650/

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

The program does not, at present, receive any awards. Funding from private donors have been sought in the past, which has led to some small renovations and upgrades of furtniture and technology in the CEP Clinic.

9. Accomplishment/ Highlights (bullet form)

- Since fall of 2020, trainees at the CEP Clinic have provided individual and group therapy mental health services to over 500 NMSU students, totaling over 3000 hours of clinical services.
- During the 2022-2023 academic year, despite being open only during the fall and spring semesters, 4 days a week, the CEP Clinic saw 169 new clients and 19 returning clients. This totaled 1053 individual therapy hours and 100 group therapy hours. With funding support, the CEP Clinic will be able to increase hours available to the community (weekends, evening, and summer appointments). Thus, through the creation of specialty clinic, it is projected that clinical service hours will double in the span of 1 year (averaging 2000 hours of clinical services provided per year).
- During the 2022-2023 academic year, trainees in the CEP Clinic received specialized training in and provided 33.5 hours of telehealth clinical services. With additional funding, it is expected that this number will triple, with over 100 hours of telehealth services being provided per year. Thus, barriers for rural community members in accessing mental health services will be reduced.
- During the 2022-2023 academic year, the CEP Clinic provided training to 11 counseling psychology doctoral students, 13 clinical mental health counseling masters students, 11 school psychology education specialist students, and 4 doctoral graduate assistants. With funding support, additional graduate assistantships will be created, thus increasing the training opportunities and financial assistance to mental health trainees.
- During the 2022-2023 academic year, 7 undergraduate interns were placed in the CEP Clinic. Over 50% of these interns will continue in mental health related fields or begin graduate level studies related to mental health within a year. With funding support, more undergraduate interns can be placed in the CEP Clinic (anticipated 10 per year). This early exposure to the mental health services field will contribute to the pipeline of bilingual and bicultural students pursuing mental health professions.
- Since 2021, the CEP Clinic has been gathering client outcomes and trainee development measures focused on client symptomology and distress monitoring, the therapeautic working alliance, and clinician openness to discussing cultural identities in the context of treatment. The CEP Clinic is well-equipped to continue this data gathering. A postdoctoral fellow will assist in publishing this data in peer reviewed high-impact journals
- The CEP Clinic successfully employs Advanced Doctoral Students through Graduate Assistantships, which supports a model where the trainee becomes the trainer via a supervision learning experience.
- At the onset of the COVID-19 pandemic, the CEP Clinic successfully pivoted to being able to offer tele-health services in addition to face to face services.
- The CEP Clinic has upgraded technology to be in line with best practices regarding training and storage of protected information.
- The CEP Clinic serves as a hub for faculty and graduate students to engage in outcomes research through data collected with clientele.

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

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	CEP Clinic Specialty Clinic Development

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☐	**Public Service** ☒	**Teaching** ☐

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The CEP Clinic is the training and research mental health clinic for the Department of Counseling & Educational Psychology (CEP). The mission of the CEP Clinic is to contribute to the workforce development of competent and social-justice minded mental health providers to address the mental health needs of the local and larger New Mexico community while decreasing mental health disparities in our region. The CEP Clinic has five treatment/assessment rooms, three observation rooms (live and recorded), a file room and a workspace for providers and trainers. The opportunity for live or recorded observation of sessions is integral to the training of mental health professionals and a resource not all training programs have. Currently, trainees from the department's graduate programs in Counseling Psychology (PhD), Clinical Mental Health Counseling (MA), and School Psychology (EdS and PhD) provide supervised individual and group therapy services to NMSU students. These trainees provide services as part of internships, practica, field experiences and assessment courses while receiving supervision from faculty (including licensed psychologists, prescribing psychologists and licensed counselors) and advanced doctoral students. All services comply with relevant professional ethical codes and state & federal healthcare laws. The student clientele may be enrolled in classes offering extra credit for volunteer activities or are referrals from various university programs (e.g., Aggie Health and Wellness Center, Housing and Residential Life). Additionally, the CEP Clinic serves as an internship site for the department's undergraduate program in Counseling & Community Psychology, thus meeting the capstone project requirement for students in our undergraduate degree program. The CEP Clinic not only contributes to the workforce development of competent mental health providers, but also provides a much-needed public service to the NMSU student body and with additional resources can expand these services to the local, Southern New Mexico and Borderlands community. Additionally, the CEP Clinic engages in outcomes research, thus supporting the research endeavor of the university through facilitation of faculty, undergraduate, and graduate students' qualifying projects, dissertations, theses, classroom projects, presentations, and publications. Overall, the focus of the CEP Clinic on learning, inquiry, diversity and inclusion, as well as service directly aligns with NMSU's Mission. The CEP Clinic is exceptionally situated to serve the mental health needs of NMSU and the larger community. During the 2022-2023 academic year alone, the CEP Clinic has provided the placement for the training of 11 Counseling Psychology PhD Students, 13 Clinical Mental Health Counseling MA students, 11 School Psychology EdS students, 7 Undergraduate Interns, and 4 Graduate Assistants. Together, these trainees assisted in providing 1053 hours of individual therapy services to the NMSU student body. Through the development of specialty clinics, the impact of the CEP Clinic is expected to double.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.

The CEP Clinic is the training and research mental health clinic for the Department of Counseling & Educational Psychology (CEP). The mission of the CEP Clinic is to contribute to the workforce development of competent and social-justice minded mental health providers to address the mental health needs of the local and larger New Mexico community while decreasing mental health disparities in our region. The CEP Clinic currently provides individual and group counseling services to NMSU students. Trainees from the department's Counseling Psychology program (PhD), Clinical Mental Health Counseling program (MA), the School Psychology programs (EdS and PhD) and Counseling and Community Psychology undergraduate major (BS) provide services as part of internships, practica, field experiences and assessment courses, while receiving supervision from faculty (including licensed psychologists, prescribing psychologists and licensed counselors) and advanced doctoral students. The training experiences fulfills NMSU's land-grant mission and LEADS 2025 goals of strengthening careers pathways through experiential learning and research engagement/amplification, elevating graduate education, outreach, and advancing equity, inclusion, and diversity. The CEP Clinic centers around the following performance goals: 1) provide high quality training in counseling and assessment; 2) train culturally competent mental health providers; 3) address the mental health and education needs of the NMSU community; 4) engage in outcomes research. The attainment of these goals leads to our graduate students and alumni working across New Mexico and the borderland area to address mental health disparities, while increasing the workforce in critical shortage areas.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	0	0	0	0	0
Federal G&C Expenditures	0	0	0	0	0
Private G&C Awards	0	0	0	0	0
Private G&C Expenditures	0	0	0	0	0

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS		OBJECTIVES	
☒	GOAL 1 Enhance Student Success and Social Mobility	☐	1. Diversify, optimize, and Increase system-wide enrollment
		☐	2. Increase student learning, retention, and degree attainment
		☐	3. Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences
		☒	4. Strengthen career pathways through service-learning, experiential learning and research engagement
		☒	5. Elevate graduate education
		☐	6. Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒	GOAL 2 Elevate Research and Creativity	☐	1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education
		☐	2. Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity
		☒	3. Amplify impact of research findings by addressing local needs that align with global challenges
		☐	4. Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒	GOAL 3 Amplify Extension and Outreach	☒	1. Be a leader in place-based innovation and in economic and community development
		☒	2. Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility
		☐	3. Improve PK-20 Science, Technology, Engineering and Math (STEM) education
		☐	4. Strengthen and elevate public-private engagement
		☐	5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☒	GOAL 4 Build a Robust University System	☒	1. Advance equity, inclusion and diversity and effectively support students, faculty and staff
		☐	2. Cultivate faculty and staff excellence, enhance productivity and improve the work climate
		☐	3. Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Counseling & Educational Psychology Clinic - Specialty Clinic Development
Contact Name: Elsa Arroyos & Sarah Ramos
Contact Email: earroyos@nmsu.edu; sramos90@nms

FY25 Request

$452,455

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

RPSP Goal: Provide training opportunities in culturally competent counseling and assessment

RPSP Objective 1: Increase the number of trainees in the CEP Clinic		**Measure Targets**			**Comments *(Briefly state your case)***
RPSP Measures:		**FY22**	**FY24**	**FY25**	
1	Increase number of graduate students receiving training in counseling and assessment	NA	35	45	With the additional staff and supervisory support, additional students will be able to be trained in the CEP Clinic
2	Increase number of undergraduate students completing their internships in the CEP Clinic	NA	7	10	With the additional staff and supervisory support additional students will be able to be trained in the CEP Clinic
RPSP Objective 2: Increase the number of individual and group counseling hours		**Measure Targets**			**Comments *(Briefly state your case)***
RPSP Measures:		**FY22**	**FY24**	**FY25**	
1	Recruit additional clients for training purposes	NA	1000 hours	2000 hours	With the additional staff and supervisory support additional students will be able to be trained in the CEP Clinic and, therefore, more clients will need to be recruited
2	Recruit clients for educational assessments	NA	0	10	Assessments will be a new service that will be implemented; however, there is a need both within NMSU and beyond for educational assessments focused on learning disabilities.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Counseling & Educational Psychology Clinic - Specialty Clinic Development
Contact Name: Elsa Arroyos & Sarah Ramos
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FY25 Request

$452,455

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

RPSP Goal: Engage in outcome resarch

RPSP Objective 1: Understand the impact of counseling on diverse groups and individuals		**Measure Targets**			**Comments *(Briefly state your case)***
RPSP Measures:		**FY22**	**FY24**	**FY25**	
1	Collect data on the impact of various factors on counseling outcomes	N/A		1	We currently have a repository of data related to counseling research and with a Post Doctorate in place then the scope of the research can be expanded

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

RPSP Goal: Create assessment specialty clinics

RPSP Objective 1: Provide educational assessment, individual, and group counseling services to children and adolescents		**Measure Targets**			**Comments *(Briefly state your case)***
RPSP Measures:		**FY22**	**FY24**	**FY25**	
1	Create a protocol for assessments with children and adolescents	N/A		1	With the collaboration of new staff and clinic director, a protocol and process can be estbablished to provide this service.
2	Establish referral sources for clients who are children and adolescents	N/A		3	In order to be able to offer services to this population we need to secure referral sources and market our services to this population.
RPSP Objective 2: Provide educational assessments to adults		**Measure Targets**			**Comments *(Briefly state your case)***
RPSP Measures:		**FY22**	**FY24**	**FY25**	
1	Create a protocol for assements with adults	N/A		1	With the collaboration of new staff and clinic director, a protocol and process can be established to provide this service.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Counseling & Educational Psychology Clinic - Specialty Clinic Development
Contact Name: Elsa Arroyos & Sarah Ramos
Contact Email: earroyos@nmsu.edu; sramos90@nms

FY25 Request

$452,455

2	Establish referral sources for adult clients	N/A		3	In order to be able to offer services to this population we need to secure referral sources and market our services to this population.

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: Counseling & Educational Psychology (CEP) Clinic - Specialty Clinic Dev

Total: $ 452,455.00

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance	$ -	$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund			$ 452,455.00	
Local		$ -		
Total Appropriations	$ -	$ -	$ 452,455.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ -	$ 452,455.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries					2.00	$ 158,682.00	12 mos. College Assc. Faculty (salary/fringe)
Professional Salaries					1.00	$ 60,000.00	Post-Doc Clinician/Reseacher (salary/fringe)
Other Staff Salaries					1.00	$ 36,722.00	Program Coordinator
Student Salaries (GA/TA)					1.00	$ 55,096.00	2 Annual GAs, salary plus tuition waiver
Other Salaries				$ -			
Total All Salaries		$ -		$ -		$ 310,500.00	
Fringe Benefits						$ 91,945.00	Fringe on all salaries except GAs
Travel				$ -			
Utilities				$ -			
Institutional Support Charges				$ -			
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses						$ 30,000.00	assessments & child/adol therapy room
Equipment						$ 20,000.00	equipment
Other Expenditures				$ -			
Total Expenditures	0.00	$ -	0.00	$ -	0.00	$ 452,445.00	
Ending Fund Balance		$ -		$ -			

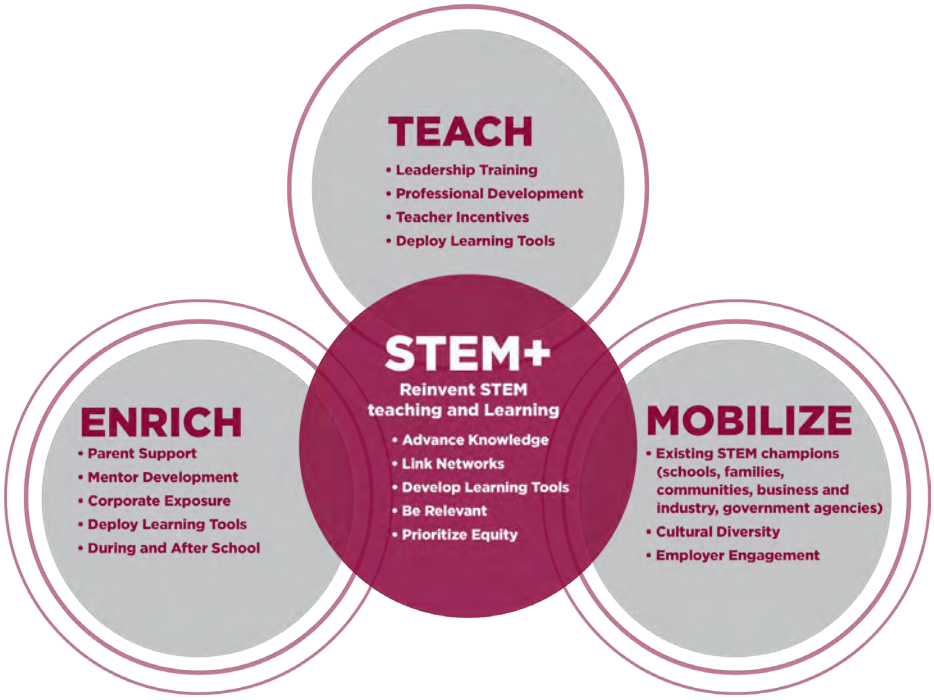
STEM+ Center of Excellence in Teaching and Learning

FY25

STEM+ Center of Excellence in Teaching and Learning
FY24 Actual: $0
FY25 Request: $500,000
$ Change: $500,000

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 **STEM+ Center of Excellence in Teaching and Learning** 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. STEM+ 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 STEM+ is the creation of an inclusive ecosystem to advance evidence-based teaching and learning practices. STEM+ 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. Outcomes of the STEM+ Center of Excellence will be Case Studies that guide replication and scale of best practices for statewide K-20 STEM education.



MISSION

Serving the educational needs of New Mexico's population through culturally, geographically and demographically responsive research in STEM teaching and learning. STEM+ 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

- o **Number of undergraduate students participating in STEM-based experiential learning activities.**
- o **Number of students participating in experiential learning that align with NM target industry sectors.**
- o **Increase in STEM identity – confidence and interest in STEM career fields.**
- o **Increase demographic diversity.**

Foster Best Practice in STEM teaching and learning that can be scaled and replicated

- o **Number of graduate students participating in STEM teaching and learning research.**
- o **Number of faculty actively participating**
- o **Number of STEM teaching and learning proposals submitted.**

Elevate engagement across all stakeholders in STEM teaching and learning

- o **Number of participating schools.**
- o **Number of K-12 students. participating in STEM outreach programming.**
- o **Increase demographic diversity.**
- o **Number of teachers participating in STEM teaching and learning professional development.**
- o **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 C*ommunity 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.

STEM+ 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) **STEM+** will enhance the learning experience for K-16 students through participation in cross-curricular, problem-solving activities that augment classroom learning.

(2) **STEM+** 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) **STEM+** 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) **STEM+** 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) **STEM+** will cultivate and nurture partnerships and collaborations with K-16 educational institutions to collectively build capacity and engagement in STEM teaching and learning.

(6) **STEM+** will develop STEM-based professional development modules, delivered via NMSU On-Demand, for teachers in STEM fields and/or CTE.

(7) **STEM+** will broaden statewide participation and alignment of STEM outreach programming, curricular and co-curricular, in partnership with schools, employers, and community networks.

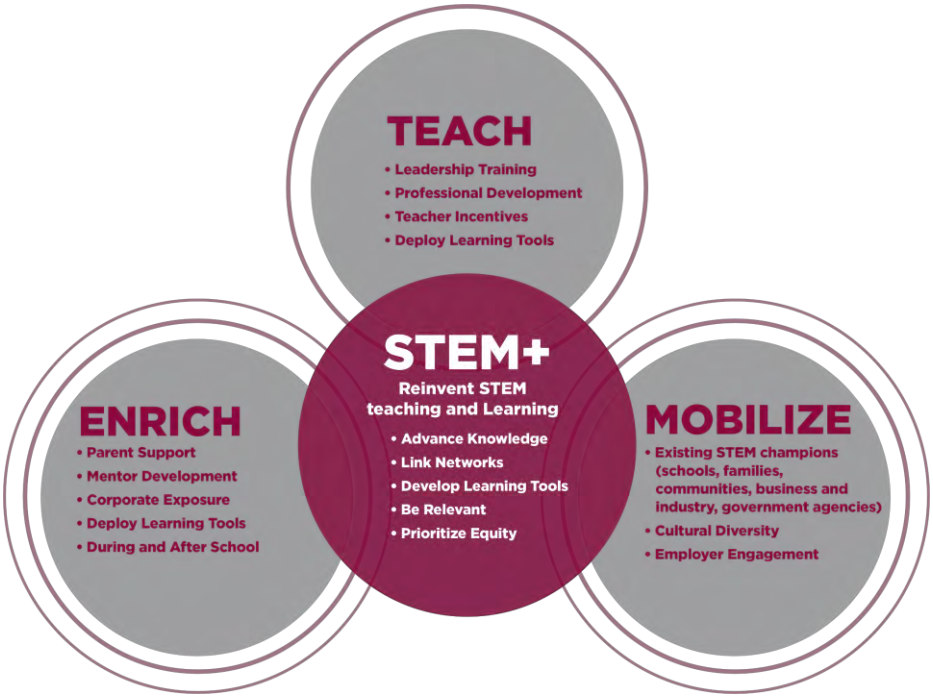
STEM+ Center of Excellence in Teaching and Learning

2024

STEM+ Center of Excellence in Teaching and Learning
FY24 Actual: $0
FY25 Request: $500,000
$ Change: $500,000

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 **STEM+ Center of Excellence in Teaching and Learning** 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. STEM+ 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 STEM+ is the creation of an inclusive ecosystem to advance evidence-based teaching and learning practices. STEM+ 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. Outcomes of the STEM+ Center of Excellence will be Case Studies that guide replication and scale of best practices for statewide K-20 STEM education.



MISSION

Serving the educational needs of New Mexico's population through culturally, geographically and demographically responsive research in STEM teaching and learning. STEM+ 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

- o **Number of undergraduate students participating in STEM-based experiential learning activities.**
- o **Number of students participating in experiential learning that align with NM target industry sectors.**
- o **Increase in STEM identity – confidence and interest in STEM career fields.**
- o **Increase demographic diversity.**

Foster Best Practice in STEM teaching and learning that can be scaled and replicated

- o **Number of graduate students participating in STEM teaching and learning research.**
- o **Number of faculty actively participating**
- o **Number of STEM teaching and learning proposals submitted.**

Elevate engagement across all stakeholders in STEM teaching and learning

- o **Number of participating schools.**
- o **Number of K-12 students. participating in STEM outreach programming.**
- o **Increase demographic diversity.**
- o **Number of teachers participating in STEM teaching and learning professional development.**
- o **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 C*ommunity 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.

STEM+ 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) **STEM+** will enhance the learning experience for K-16 students through participation in cross-curricular, problem-solving activities that augment classroom learning.

(2) **STEM+** 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) **STEM+** 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) **STEM+** 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) **STEM+** will cultivate and nurture partnerships and collaborations with K-16 educational institutions to collectively build capacity and engagement in STEM teaching and learning.

(6) **STEM+** will develop STEM-based professional development modules, delivered via NMSU On-Demand, for teachers in STEM fields and/or CTE.

(7) **STEM+** 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 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	

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

FY25 Funding Request ($XXX,XXX):	500,000

If Previously Funded, Amount that was awarded in FY24 ($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:

1. Number of years the project has received General Fund support (*Disregard if new program):*	N/A

2. Project Description / Executive Summary:

The proposed STEM+ Center of Excellence in Teaching and Learning will serve as a multi-institutional, cross-disciplinary resource for faculty, staff and other organizations across New Mexico to advance common interests in STEM teaching and learning through research, teaching and public service. A key objective of the Center of Excellence is the creation of a statewide inter-connected community of practice commited to advancing scholarly teaching and learning to effectively broaden participation in STEM. The proposed Center will create an inclusive, connected, and networked K-16 educational ecosystem, and will enhance the learning experience for K-16 students through engagement in cross-curricular, problem-solving activities that augment classroom learning. The STEM+ Center of Excellence will focuse 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. The Center will serve as a statewide 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, the Center will advance scholarly proposals, publications, and activities that elevate STEM education as *inclusive* as opposed to *elusive,* fostering opportunities to create targeted support

2. Project Description / Executive Summary:

pathways for academic growth to ensure all students thrive. Further, the Center will cultivate and 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 C*ommunity-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 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, the Center 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 the Center 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 STEM -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 Center personnel.

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

- Other expenditures: Subcontract funding for NMSU SOAR Lab for program evaluation and assessment.

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

The STEM+ Center of Excellence in Teaching and Learning 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 unifyies "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 unifyies "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?

The STEM+ Center directly addresses challenges outlined in the multi-year NM Ecomic 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. 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.

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	STEM+ Center of Excellence in Teaching and Learning

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☒	**Public Service ☒**	**Teaching ☒**

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The proposed STEM+ Center of Excellence will serve as an multi-institutional, interdisciplinary resource for faculty, staff in New Mexico to advance common interests in STEM teaching and learning through research, teaching and public service. A key objective of the Center 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.

LEADS 2025 Goal 1: STEM+ will enhance the learning experience for K-16 students through engagement in cross-curricular, problem-solving activities that augment classroom learning. Students will be engaged in problem-solving experiences that foster critical thinking and solution-seeking skills that can be used in school and throughout their lives. Examples of these experiences include undergraduate research experiences, summer STEM camps/experiences, a variety of student competitions, and near-peer mentoring across STEM disciplines, and the ability to leverage and network institutional resources (facilities, equipment, personnel) to support teacher development and school STEM engagement. While New Mexico higher education institutions offer STEM programs in various forms, the STEM+ Center of Excellence will engage faculty and staff to influence STEM student learning and engagement by "unpacking" the curriculum and data through a Case Study model to collectively, identify opportunities to scale best practice.

LEADS 2025 Goal 2: STEM+ is focused 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. The proposed Center of Excellence will serve as a statewide 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, STEM+ 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.

LEADS 2025 Goal 3: STEM+ will cultivate and 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 C*ommunity-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.

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 STEM+ Center of Excellence 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 unifyies "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, the STEM+ Center 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.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2019	2020	2021	5 Yr 2017-21	10 Yr 2012-21
Federal G&C Awards	Click or	Click or	Click or	Click or	Click or
Federal G&C Expenditures	Click or	Click or	Click or	Click or	Click or
Private G&C Awards	Click or	Click or	Click or	Click or	Click or
Private G&C Expenditures	Click or	Click or	Click or	Click or	Click or

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS	OBJECTIVES
☒ GOAL 1 Enhance Student Success and Social Mobility	☒ 1. Diversify, optimize, and Increase system-wide enrollment ☒ 2. Increase student learning, retention, and degree attainment ☒ 3. Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences ☒ 4. Strengthen career pathways through service-learning, experiential learning and research engagement ☒ 5. Elevate graduate education ☒ 6. Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒ GOAL 2 Elevate Research and Creativity	☒ 1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education ☐ 2. Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity ☒ 3. Amplify impact of research findings by addressing local needs that align with global challenges ☒ 4. Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒ GOAL 3 Amplify Extension and Outreach	☒ 1. Be a leader in place-based innovation and in economic and community development ☒ 2. Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility ☒ 3. Improve PK-20 Science, Technology, Engineering and Math (STEM) education ☒ 4. Strengthen and elevate public-private engagement ☒ 5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☒ GOAL 4 Build a Robust University System	☒ 1. Advance equity, inclusion and diversity and effectively support students, faculty and staff ☒ 2. Cultivate faculty and staff excellence, enhance productivity and improve the work climate ☐ 3. Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: STEM+ Center of Excellence in Teaching and Learning
Contact Name: Patricia Sullivan
Contact Email: patsulli@nmsu.edu

FY25 Request
$500,000

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)***
	RPSP Measures:	**FY21**	**FY22**	**FY24**	**FY25**	
1	Number of undergraduate students participating in STEM-based experiential learning activites at NMSU	NA	NA	N/A	100	
2	Number of students participating in experiential learning that align with NM target industry sectors	NA	NA	N/A	100	
3	Increase in STEM identity	NA	NA	N/A	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)***
	RPSP Measures:	**FY21**	**FY22**	**FY24**	**FY25**	
1	Number of faculty actively engaged in STEM+ Center of Excellence in Teaching and Learning	N/A	N/A	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	N/A	N/A	4	
3	Number of graduate students engaged in STEM teaching and learning research	N/A	N/A	N/A	10	

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: STEM+ Center of Excellence in Teaching and Learning
Contact Name: Patricia Sullivan
Contact Email: patsulli@nmsu.edu

FY25 Request
$500,000

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)***
	RPSP Measures:	**FY21**	**FY22**	**FY24**	**FY25**	
1	Number of public schools engaged	N/A	N/A	N/A	15	
2	Number of students participating in STEM outreach programming	N/A	N/A	N/A	2000	
3	Number of employers engaged	NA	NA	N/A	10	
4	Number of teachers participating in STEM teaching and learning professional development	NA	NA	N/A	100	

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: STEM+ Center of Excellence in Teaching and Learning

Total: $ 500,000.00

Budget verses Actual Revenue and Transfers	Budget FY 23	Change	Request FY 24	Comments
Beginning Fund Balance		$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund		$ -	$ 500,000.00	
Local		$ -		
Total Appropriations	$ -	$ -	$ 500,000.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ -	$ 500,000.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses

	FY23 FTE		Change FTE	$ -	FY24 FTE		
Faculty Salaries			0.25	$ 50,000.00	0.50	$ 50,000.00	Summer support
Professional Salaries			1.00	$ 125,000.00	1.25	$ 125,000.00	Program Director and Management
Other Staff Salaries			0.50	$ 53,000.00	1.00	$ 53,000.00	Program Specialist
Student Salaries (GA/TA)			1.00	$ 20,000.00		$ 20,000.00	1 Graduate Student
Other Salaries			0.50	$ 15,000.00	0.25	$ 15,000.00	Media and Communications
Total All Salaries	0.00	$ -	3.25	$ 263,000.00	3.00	$ 263,000.00	
Fringe Benefits				$ 88,995.00		$ 88,995.00	
Travel				$ 15,000.00		$ 15,000.00	In-state and conference travel
Utilities				$ -			
Institutional Support Charges				$ 20,000.00		$ 20,000.00	4% Institutional Support Fee
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses				$ 7,500.00		$ 7,500.00	General supplies and Materials
Equipment				$ 5,505.00		$ 5,505.00	Computers/laptops/other technology
Other Expenditures				$ 100,000.00		$ 100,000.00	other university partners for aligned research
Total Expenditures	0.00	$ -	3.25	$ 500,000.00	3.00	$ 500,000.00	
Ending Fund Balance		$ -		$ (500,000.00)		$ -	

Aggie Women & Gender Advocacy Center

2024

Aggie Women & Gender Advocacy Center
FY24 Actual: N/A
FY25 Request: $284,400
$ Change: $284,400

The **Aggie Women & Gender Advocacy Center's** (AWGAC) mission would be to "improve the campus environment for all individuals by developing educational programming to address women's issues and gender-related concerns and providing advocacy for all", a mission which complements the those of the University and Division of Student Success.

The **Aggie Women & Gender Advocacy Center** will address a significant gap in NMSU's service to our diverse study body. While NMSU provides programs and services for Black, LGBTQ+, American Indian, Asian and Pacific Islander, and Chicano students, the absence of targeted all gender and women's programming and advocacy services will be addressed by the creation of the Center. While the intersectionality of women and gender identities with other diversity programs on campus is acknowledged, there are common issues specifically related to gender and interpersonal violence that the AWGAC would actively address. Additionally, the AWGAC will provide advocacy and support for students who are or will soon be parents, survivors of sexual violence and/or sexual harassment, and victims of stalking while also coordinating outreach programs around topics such as career attainment, leadership development, and social advocacy and service.

The Aggie Women & Gender Advocacy Center will assist in evaluating the campus climate for women at NMSU and partner with offices aligned with the goal of supporting the Center's mission of improving the overall academic and employment environment on campus for women at NMSU. AWGAC will form natural partnerships with numerous campus entities including but not limited to: Aggie Health and Wellness Center (women's healthcare clinicians, psychologists, counselors, and Health Promotions), Student Assistance Services, Disability Access Services, the Gender and Sexuality Studies faculty, Office of Institutional Equity (Title IX Director), the NMSU Alumni Association, the NMSU Foundation, Housing and Residential Life, Student Involvement and Leadership Programs, Sorority Life, Campus Police, and each of the diversity programs (Black, American Indian, LGBTQ+, Asian & Pacific Island, Chicano). To accomplish the primary mission, the AWGAC will form an advisory group with membership from campus partners to provide guidance and expertise so as to ensure that all programming, resources, and advocacy services

Citlalli Benitez, 2023-24
Student Body President - ASNMSU

Fact: There have been fewer than 10 female SBPs since the male and female student governments combined in the mid-20th century.

Solution: The AWGAC could offer trainings to assist women in running successful campaigns for campus elections and beyond.

Mission

The Aggie Women & Gender Advocacy Center will serve as an inclusive, on-campus student advocacy center that strives to improve the campus environment for all individuals by developing educational programming addressing women's issues and gender-related concerns and providing advocacy for all.

Predicted Impact of the AWGAC

The impact of this program would address a significant resource and advocacy gap that currently exists in providing gender specific resource-support with an educational focus for students at NMSU. In alignment with the Governor's healthcare initiatives focused on the **preservation and expansion of reproductive healthcare education and access**, the AWGAC would be a key collaborator with the Aggie Health and Wellness Center and the Office of Institutional Equity, as well as various community agencies throughout Las Cruces. This would involve offering **intentional support, advocacy services, resources**, and recommendations in alignment with the interests and needs of the students who visit the center.

The Center would also assist NMSU in **meeting the 2022 federal Nursing Mothers Act (PUMP Act)** by providing a viable location for nursing mothers to achieve privacy when nursing or pumping aside from a restroom; **help student parents who cannot arrange childcare to have a space to study that is welcoming of children**; and provide programs and space for intentional conversations around **developing skills that often differ based on gender (leadership, conflict management, career**

PROPOSED SERVICES

Educational programming to include but is not limited to:

- mental and physical health,
- sexual and reproductive health,
- personal and inter-personal safety,
- career preparation,
- leadership development & education,
- political advocacy, and
- parenting support,

Advocacy services and resources to include campus and community partnerships for survivor's advocacy;

Research briefings in support of political advocacy and preparation for women in leadership roles;

Joint networking events with NMSU alumni and regional/national leaders to highlight the importance of mentoring and the empowerment of women.

Family/child friendly study spaces, access to private lactation spaces, and access to personal hygiene items.

NEW MEXICO HIGHER EDUCATION DEPARTMENT
Research & Public Service Projects (RPSP)
FY 2025

Institution:	NEW MEXICO STATE UNIVERSITY
Name/Title of Project	

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

FY25 Funding Request ($XXX,XXX):	$284,400

If Previously Funded, Amount that was awarded in FY24 ($XXX,XXX):	

Type of Project (X for Type)

Research ☐ **Public Service** ☒ **Academic** ☐ **Athletics** ☐

Clinical ☐ **Economic Development** ☐ **Other (Explain Below)** ☐

Please explain if other is marked:

1. Number of years the project has received General Fund support (*Disregard if new program):*	N/A

2. Project Description / Executive Summary:

The Aggie Women & Gender Advocacy Center (AWGAC) works to improve the campus environment for all students by developing educational programming addressing women's and gender-related issues and providing advocacy for all genders. AWGAC educational programming will focus on issues that impact individuals of different genders differently such as mental and physical health, sexual and reproductive health, safety, career preparation, leadership, political advocacy, and parenting support. AWGAC advocacy will include campus and community partnerships for survivor's advocacy, research brief in support of political advocacy, and preparation for women in leadership roles. AWGAC services will include, but are not limited to, family/child friendly study spaces for students, access to private lactation spaces, mentoring, empowerment and networking events, and access to personal hygiene items.

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

The budget provides for staffing necessary to provide programming, collaborate with other units at NMSU, and form partnerships with community agencies and groups. Further, the budget provides travel, supplies, and expense support to develop, coordinate, and implement educational programming, advocacy services, and outreach.

4. Program Mission (include population served, other demographic info):
The Aggie Women & Gender Advocacy Center will serve as an inclusive, on-campus student advocacy center that strives to improve the campus environment for all individuals by offering advocacy services, support resources, and educational programming that addresses women's issues and gender-related concerns. Targeted students would include those with questions specific to child-care; pregnancy accomodations; interpersonal violence concerns and/or advocacy support needs; academic and career referrals; and other such requests.

5. Key Project Objectives (Overview only – relates to separate performance measure form)
Key project objectives include hiring staff to run the center, identifying and equipping an accessible space to welcome and accommodate students who want to utilize it (including but not limited to a child-friendly space for student parents to study and a private lactation space), and developing a schedule of collaborative and original programs and events with other NMSU offices to initiate educational outreach.

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 challenges will be identifying and developing an appropriate physical space for the advocacy center to be housed/located. The top objective would be to effectively collaborate with numerous academic and student success departments to arrange a rollout of quality events and services that honor the work that others are already offering while also increasing and improving the attention focused on the issues faced by women.

7. Describe the project impact (Statewide impact, does it address the Governor's initiatives, and/or what are the student outcomes?
The impact of this program would be to address a significant advocacy gap that currently exists in resource-support and educational focus for students at NMSU. In alignment with the Governor's healthcare initiatives focused on the preservation and expansion of reproductive healthcare education and access, the AWGAC would collaborate with the Aggie Health and Wellness Center, as well as various community agencies throughout Las Cruces, to offer support, advocacy services, resources, and recommendations in alignment with the interests and needs of the students who visit the center. The Center would assist NMSU in meeting the 2022 federal Nursing Mothers Act (PUMP Act) by providing a viable location for nursing mothers to achieve privacy when nursing or pumping aside from a restroom; help student parents who cannot arrange childcare to have a space to study that is welcoming of children; and provide programs and space for intentional conversations around developing skills that often differ based on gender (leadership, conflict management, career advancement strategies, etc). The AWGAC would provide all of these things and many more for the students at NMSU.

8. Does the project receive awards, private donations or Federal grants? Have you sought out funding from other sources?
No and although conversations have been had with other funding sources, none have yet been successful.

9. Accomplishment/ Highlights (bullet form)
None to report as of yet.

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

FISCAL YEAR 2025 RPSP PROGRAM REVIEW
New Mexico State University Supplemental Form

Name/Title of Project:	Aggie Women & Gender Advocacy Center

1. Does the RPSP align with the NMSU Mission? (Check all that apply)		
Research ☐	**Public Service** ☒	**Teaching** ☐

2. Explain below how the program aligns with the mission. Answer is limited to the box below.

The mission of the New Mexico State University system is to serve the diverse needs of the state through comprehensive programs of education, research, extension and outreach, and public service. As the state's land-grant and space-grant university, and as a Hispanic-Serving Institution, NMSU fosters learning, inquiry, diversity and inclusion, social mobility, and service to the broader community.

In support of the university mission, the mission of the Division of Student Success is to, "empower students by engaging them in all aspects of the student experience and by guiding their development of self-advocacy skills". Reporting through the Division of Student Success, the newly formed Aggie Women & Gender Advocacy Center's (AWGAC) mission would be to "improve the campus environment for all individuals by developing educational programming to address women's issues and gender-related concerns and providing advocacy for all", a mission which complements the those of the University and Division.

The Aggie Women & Gender Advocacy Center will address a significant gap in NMSU's service to our diverse study body. While NMSU provides programs and services for Black, LGBTQ+, American Indian, Asian and Pacific Islander, and Chicano students, the absence of targeted all gender and women's programming and advocacy services will be addressed by the creation of the Center. While the intersectionality of women and gender identities with other diversity programs on campus is acknowledged, there are common issues specifically related to gender and interpersonal violence that the AWGAC will address. Additionally, the AWGAC will provide advocacy and support for students who are or will soon be parents, survivors of sexual violence and/or sexual harassment, and victims of stalking while also coordinating outreach programs around topics such as career attainment, leadership development, and social advocacy and service.

The Aggie Women & Gender Advocacy Center will assist in evaluating the climate for women at NMSU and partner with offices aligned with the goal of supporting the Center's mission of improving the overall academic and employment climate on campus for women at NMSU. AWGAC will form natural partnerships with numerous campus entities including but not limited to: Aggie Health and Wellness Center (women's healthcare clinicians, psychologists, counselors, and Health Promotions), Student Assistance Services, Disability Access Services, the Gender and Sexuality Studies faculty, Office of Institutional Equity (Title IX Director), the NMSU Alumni Association, the NMSU Foundation, Housing and Residential Life, Student Involvement and Leadership Programs, Sorority Life, Campus Police, and each of the diversity programs (Black, American Indian, LGBTQ+, Asian & Pacific Island, Chicano). The AWGAC will form an advisory group with membership from campus partners who will provide guidance and expertise to ensure that all programming, resources, and advocacy services remain relevant to ensure the mission. The AWGAC will also collaborate with various Las Cruces and Doña Ana County community organizations to co-sponsor events in support of improving women's quality of life, survivor support, career attainment, and health.

3. Short Program Summary: Provide a short description of what the program does, i.e. Mission, scope, how the program benefits the state, or what challenge/need it addresses. The program summary is limited to the box below. It will be used as a description in submissions to the board of Regents, NMSU administration, the Higher Education Department or the Governor's Office.
The Aggie Women & Gender Advocacy Center (AWGAC) works to improve the campus environment for all students by developing educational programming addressing women's and gender-related issues and providing advocacy for all genders. AWGAC educational programming will focus on issues that impact individuals of different genders differently such as mental and physical health, sexual and reproductive health, safety, career preparation, leadership, political advocacy, and parenting support. AWGAC advocacy will include campus and community partnerships for survivor's advocacy, research brief in support of political advocacy, and preparation for women in leadership roles. AWGAC services will include, but are not limited to, child friendly study spaces for students, access to private lactation spaces, mentoring, empowerment and networking events, and access to personal hygiene items.

4. Total Federal and Private Grants and Contracts (G&C) Leveraged from State Funds (###,##0).

Type of G&C	2020	2021	2022	5 Yr 2018-22	10 Yr 2013-22
Federal G&C Awards	Click or	Click or	Click or	Click or	Click or
Federal G&C Expenditures	Click or	Click or	Click or	Click or	Click or
Private G&C Awards	Click or	Click or	Click or	Click or	Click or
Private G&C Expenditures	Click or	Click or	Click or	Click or	Click or

5. The RPSP must achieve at least one Leads 2025 Goal and Objective.

GOALS	OBJECTIVES
☒ GOAL 1 Enhance Student Success and Social Mobility	☒ 1. Diversify, optimize, and Increase system-wide enrollment ☒ 2. Increase student learning, retention, and degree attainment ☐ 3. Develop a culture of 'Aggie Life' reflected by high student engagement through participation and learning in co-curricular experiences ☒ 4. Strengthen career pathways through service-learning, experiential learning and research engagement ☐ 5. Elevate graduate education ☐ 6. Offer a portfolio of engaging, relevant, and accessible academic programs that are tightly integrated with efforts related to research, service and outreach
☒ GOAL 2 Elevate Research and Creativity	☐ 1. Facilitate the convergence of research and creative activity to address local and global challenges, integrated with undergraduate and graduate student education ☐ 2. Intentionally grow humanities, social sciences and creative arts to achieve comprehensive excellence in research and creative activity ☒ 3. Amplify impact of research findings by addressing local needs that align with global challenges ☐ 4. Amplify impact of research on society and the economy and promote international collaboration by accelerating technology and knowledge transfer
☒ GOAL 3 Amplify Extension and Outreach	☐ 1. Be a leader in place-based innovation and in economic and community development ☐ 2. Develop and implement innovative and culturally responsive PK-20 outreach, professional development, and continuing education programs that support social mobility ☐ 3. Improve PK-20 Science, Technology, Engineering and Math (STEM) education ☒ 4. Strengthen and elevate public-private engagement ☐ 5. Amplify Cooperative Extension and outreach programs and services to increase support for businesses, individuals, and communities
☒ GOAL 4 Build a Robust University System	☒ 1. Advance equity, inclusion and diversity and effectively support students, faculty and staff ☒ 2. Cultivate faculty and staff excellence, enhance productivity and improve the work climate ☒ 3. Nimbly respond to a dynamic higher ed environment, optimizing systems, processes and space utilization

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title:	Aggie Women & Gender Resource Center	**FY25 Request**
Contact Name:	Ann Goodman	**$284,400**
Contact Email:	anng@nmsu.edu	

NMSU LEADS 2025 Goal:	**1 - Enhance Student Success and Social Mobility**
RPSP Goal:	To increase the retention of students who experience gender-based discrimination and/or interpersonal violence by increasing resources and advocacy specific to college students and their complex academic and personal circumstances.

	RPSP Objective 1: Increase the number of students who are provided campus-based advocacy services and local community services.	**Measure Targets**		**Comments *(Briefly state your case)***
	RPSP Measures:	**FY24**	**FY25**	
1	Develop formal referral advocacy protocols for students who have identified as a complainant and/or respondent of sexual assault/harassment, stalking or gender-based discrimination.	1	2	Currently the only resources available to students at NMSU a part-time victims advocate with University Police, Student Counseling Services, and the La Pinon Sexual Assault Recovery Services off campus. This service can be more specific to "student" needs, case management, and overall support needs. Target protocols would be for students, athletes, student-employees.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title:	Aggie Women & Gender Resource Center	**FY25 Request**
Contact Name:	Ann Goodman	**$284,400**
Contact Email:	anng@nmsu.edu	

2	Employ full-time and part-time trained staff to triage and meet with student walk-ins or referrals that have a concern or complaint and wants to talk about various types of support options, legal/civil processes, and university processes related to acts of real and/or perceived gender-based discrimination.	1	3	Currently the Office of Institutional Equity and Dean of Students staff are the primary contacts for students seeking to file reports about issues in and out of the classroom, etc. Both entities are involved in the investigation and adjudication processes associated with TIX and/or Student Conduct and students are hesitant to engage or talk with these offices due to multiple fears and concerns.
3	Create method/protocol and collect aggregate data specific to student intakes, referrals, and CARE cases to measure retention and graduation rates.	create baseline	report data each semester	Current data is available in various pockets at the University - there is not an easy method to measure retention and/or graduation among students involved in cases that involve a gender-based discrimination incident or complaint.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title:	Aggie Women & Gender Resource Center	**FY25 Request**
Contact Name:	Ann Goodman	**$284,400**
Contact Email:	anng@nmsu.edu	

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

RPSP Goal: Through the advisory committee, research will be supported that focuses on student success and gender-based issues such as mental and physical health, sexual and reproductive health, safety, career preparation, leadership political advocacy and parent support that impacts retention.

RPSP Objective 1: Develop a better understanding of the complex needs of students specific to gender-based barriers found on the NMSU campus that keep them from being academically successful.		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Survey students for real or perceived unrealized support needs associated with gender-based programs, outreach, and/or support.	1	1	Recent climate surveys have indicated a lack of support for gender specific incidents and/or concerns at NMSU.
2	Respond to results of research based resports AND local community advocacy surveys associated with victims assistance with solution oriented - future focused ideas and protocols for NMSU.	collect baseline information	1	Recent concerns have been brought to light that indicates students are not finding resources to help them advocate for themselves when going through difficult situations involving incidents of sexual violence. This is NOT due to NMSU processes but rather due to federal regulations and expectation of neutral fact-finding processes and lack of resources outside of those office/areas.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title: Aggie Women & Gender Resource Center

Contact Name: Ann Goodman

Contact Email: annG@nmsu.edu

FY25 Request

$284,400

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

RPSP Goal: Implement a strategic communications strategy to educate and connect faculty, staff, students and the local community with the Aggie Women & Gender Advocacy Center and resources offered NMSU students.

RPSP Objective 4: Establish collaborative work relationships with campus partners and local agencies who can spread information about the resources and services offered by the AWGAC and benefits it has on the state, nation, and global community.		**Measure Targets**		**Comments *(Briefly state your case)***
RPSP Measures:		**FY24**	**FY25**	
1	Partner with NMSU Foundation and local community organizations to host a women's leadership and networking conferences or events for students (undergraduate and graduate) in the Las Cruces area.	1	3	The Center will co-host an conference and networking event with the NMSU Foundation, to introduce identified alumni and local leaders with an interest in women's leadership, networking, and mentoring.
2	Coordinate and formalize referral mechanisms with local advocacy services such as La Pinon and La Clinica to assist students experiencing trauma related to TIX incidents.	1	enhance as identified by advisory board	NMSU currently has informal agreements with La Pinion through faculty volunteers in the College of HEST and University Police victims advocate. This would formalize campus resources and advocacy options provided to students working through traumatic circumstances that may be formally or informally known to campus authorities.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title:	Aggie Women & Gender Resource Center	**FY25 Request**
Contact Name:	Ann Goodman	**$284,400**
Contact Email:	anng@nmsu.edu	

3	Coordinate and host a campus and community resource fair that highlights women & gender- specific health needs (physical and mental health), family services, and network opportunities. Partnerships with Aggie Health & Wellness, the College of ACES Family and Consumer Sciences faculty, and LGBT+ staff would be sought out to make this a valuable opportunity for all students.	1	1	There is currently nothing coordinated for students on campus that highlights services or resources for student parents, women's health or reproductive services, child care resources or opportunities for family support. Partners with Aggie Health & Wellness

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
2023-24 Report

RPSP Title:	Aggie Women & Gender Resource Center	**FY25 Request**
Contact Name:	Ann Goodman	**$284,400**
Contact Email:	anng@nmsu.edu	

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

RPSP Goal: Enhance the current NMSU academic and service infrastructure to respond to new federal regulations associated with Title IX, Title VII, and Nursing Mothers Act by providing while improving and advancing the understanding of gender equity specific to higher education and the workplace.

RPSP Objective 1, 2, and 3: Formalize working processes with campus partners and local agencies regarding referral processes, support mechanisms, resources and services offered by the AWGAC that will assist in keeping students on the path to student success and the completion of their degree.		**Measure Targets**		**Comments *(Briefly state your case)***
	RPSP Measures:	**FY24**	**FY25**	
1	Develop policies and procedures that are student centered and address the importance of information sharing, collaborative support processes, and proactive health and safety measures for individuals impacted by gender-based discrimination or regulations that address gender equality.	1	as identified through advisory board	Currently, offices that deal with a number of student concerns and situations are operating in isolation. More dialogue, formal processes, and interdisciplinary training among campus entities such as Student Conduct, Athletics, Human Resources (ELR), Office of Institutional Equity, Housing & Residential Life, Student Assistance Services, and Aggie Health & Wellness are just some of the entities that could benefit from this initiative.

Research and Public Service Projects (RPSP)
Performance Measures Longitudinal Report
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RPSP Title:	Aggie Women & Gender Resource Center	**FY25 Request**
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2	Work with Human Resources and the Provost Office to enhance or develop new training components associated with faculty, staff, and student onboarding specific to women and gender resources and services offered by the AWGAC.	1	2	while there are current online modules for employees to take related to reporting requirements, etc. There need to be more intentional dialogue and small group in-serve workshops and/or training for all employees. This needs to be a coordinated effort that involves Student Success, HR, Office of the Provost and Faculty Senate.

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: Aggie Women and All Gender Advocacy Center

Total: $284,400

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance	$ -		$ 284,400.00	New Program
Appropriations				
Federal				
State plus Tobacco Settlement Fund			$ 284,400.00	
Local				
Total Appropriations	$ -		$ 284,400.00	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ -	$ 284,400.00	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries			0.00	$ -			
Professional Salaries			1.00		1.00	$ 70,000.00	Unit Administrator
Other Staff Salaries			2.00		2.00	$ 100,000.00	Social Work, Program Coordinator
Student Salaries (GA/TA)			0.50		0.50	$ 25,000.00	GA in Gender & Sexuality Studies
Other Salaries			0.00			$ 1,000.00	Tuition for GA
Total All Salaries	0.00	$ -	3.50		3.50	$ 196,000.00	
Fringe Benefits						$ 72,400.00	
Travel						$ 5,000.00	
Utilities							
Institutional Support Charges							
Plant Operation and Maintenance Charges							
Supplies and Expenses						$ 11,000.00	
Equipment				$ -			
Other Expenditures				$ -			
Total Expenditures	0.00	$ -	3.50	$ -	3.50	$ 284,400.00	
Ending Fund Balance		$ -		$ -		$ 284,400.00	

NEW MEXICO HIGHER EDUCATION DEPARTMENT (NMHED)

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

FY 2025

Print, sign, and submit cover sheet and individual submissions to NMHED by September 15, 2023

Institution: **New Mexico State University**

Primary Contact

Name and Title: Clayton Abbey, Assistant Vice President of Government and Community Relations

Phone: 505-239-8821

Email: cabbey@nmsu.edu

Governing Board Signature: Date:

Institutional Rank (priority)	Program/Project Title	Request in FY25	New Program (X)
	Agricultural Entities		
1	Agricultural Experiment Station	20,788.9	
1	Cooperative Extension Service	17,330.4	
1	Department of Agriculture	23,865.9	
	Other Non- Instruction and General Entities		
1	Athletics	9,675.0	
1	Educational Television and Public Media	1,442.8	
1	New Mexico Tribal Education Initiatives	300.0	
1	New Mexico Teacher Pipeline Initiatives	300.0	
	Research and Public Service Main		
1	Space Commercialization	650.0	
2	Produced Water Consortium	1,200.0	
3	College Assistance Migrant Program	302.1	
4	Sunspot Solar Observatory	389.5	
5	Water Resources Research Institute	1,658.0	
6	New Mexico Artificial Intelligence Alliance	606.6	x
7	Manufacturing Sector Development Program	672.7	
8	Autism Diagnostic Center	1,115.3	
9	Nurse Anesthesiology	500.0	
10	Nurse Expansion	2,081.2	
11	Arrowhead Center for Business Development	378.4	
12	Center of Excellence in Sustainable Food and Ag Systems	507.9	
13	Mental Health Nurse Practitioner	1,315.0	
14	Indian Resources Development	277.9	
15	STEM Alliance for Minority Participation	357.9	
16	Alliance for Teaching and Learning Advancement	217.8	
17	Counseling & Educational Psychology	452.4	x
18	STEM+ Center of Excellence in Teaching and Learning	500.0	x
19	STEM K-12 Career Pipeline	100.0	

20	Aggie Women and Gender Advocacy Center	284.4	x
21	Anna Age Eight Institute	2,106.8	
	Research and Public Branch		
	Dona Ana		
1	Dona Ana- Nurse Expansion	928.9	
1	Dona Ana- Dental Hygiene	557.5	
	Grants		
1	Grants- Veteran's Center	45.6	
1	Grants- Tribal Initiatives	100.0	
	Total Funding Request	**$ 91,008.90**	**4**
Please insert additional as needed.			

NEW MEXICO HIGHER EDUCATION DEPARTMENT (NMHED)

Research & Public Service Project (RPSP)

FY 2025

Fill and submit packet to NMHED per instructions by September 15, 2023

Institution:	
Name/Title of Project:	
RPSP Type	**Choose One**
FY24 Funding Request	
If previously funded, amount that was awarded in FY24	$ -
(Choose up to two - one from each dropdown)	
Type of Project	**Choose One** **Choose One**

1	**Number of years the project has received General Fund support: (Disregard if new program)**	0
2	**Project Description/Executive Summary:**	
3	**Budget Narrative (Overview only - Budget Detail follows on next worksheet):**	
4	**Program Mission (Include population served, other demographic information):**	
5	**Key Project Objectives (Overview only - Details and Measures on following worksheet):**	
6	**For existing projects, describe major accomplishments in a single paragraph, and if applicable, any obstacles encountered the previous fiscal year. For new projects, identify the top objectives and challenges for the current fiscal year:**	
7	**Describe the Project Impact (Statewide impact, Governor's initiatives, and/or specific student outcomes):**	
8	**Describe Student Population Served (in-state vs out-of-state students):**	

9	**Does the project receive awards, private donations or federal grants? Have you sought out funding from other sources?**	
10	**Medical Projects Only - How many graduates stay and practice in New Mexico?**	

RPSP-Budget 1

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

Institution: New Mexico State University

RPSP Project: | **Total:** $ -

Budget verses Actual Revenue and Transfers	Budget FY 24	Change	Request FY 25	Comments
Beginning Fund Balance		$ -	$ -	
Appropriations				
Federal		$ -		
State plus Tobacco Settlement Fund		$ -		
Local		$ -		
Total Appropriations	$ -	$ -	$ -	
Grants and Contracts				
Federal		$ -		
State		$ -		
Local		$ -		
Total Grants and Contracts	$ -	$ -	$ -	
Private Gifts, Grants and Contracts		$ -		
Land & Permanent Fund or Local Property Taxes		$ -		
Tuition and Fees		$ -		
Endowment		$ -		
Sales and Services		$ -		
Other Sources - Detail in Comments		$ -		
Total Revenues	$ -	$ -	$ -	
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		$ -		
Total Transfers	$ -	$ -	$ -	

Expenses - If multiple revenue sources, provide a breakdown of each revenue source per expense category

	FY24 FTE		Change FTE	$ -	FY25 FTE		
Faculty Salaries			0.0	$ -			
Professional Salaries			0.0	$ -			
Other Staff Salaries			0.0	$ -			
Student Salaries (GA/TA)			0.0	$ -			
Other Salaries			0.0	$ -			
Total All Salaries	0.0	$ -	0.0	$ -	0.0	$ -	
Fringe Benefits				$ -			
Travel				$ -			
Utilities				$ -			
Institutional Support Charges				$ -			
Plant Operation and Maintenance Charges				$ -			
Supplies and Expenses				$ -			
Equipment				$ -			
Other Expenditures				$ -			
Total Expenditures	0.0	$ -	0.0	$ -	0.0	$ -	
Ending Fund Balance		$ -		$ -		$ -	

RPSP-Objectives 1

NEW MEXICO HIGHER EDUCATION DEPARTMENT (NMHED)
Research & Public Service Project (RPSP)
Project Objectives Sheet

Institution:

New Mexico State University

RPSP Project:

	Total
	$ -

	Demonstrable goal based on benefit to students (especially at-risk), generation of degrees (especially STEM-H) and the people of New Mexico	Actuals for FY23	Target for FY24	Target for FY25	Comments - Demonstrate consistent improvement as a result of the awarded RPSP, trends, etc.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Add Additional lines as needed

Name of the Request:	***State employee group health insurance shortfall***
Brief Description of the request:	*Requesting reimbursement for state employee group health insurance shortfall which was invoiced and paid by NMSU.*
Language Requested for inclusion in the General Appropriations Act:	*To reimburse NMSU for shortfall in state employee health insurance which was invoiced and paid by NMSU per the Laws of 2023, Chapter 210, Section 6, Item 15 and Item 16.*
Justification:	*NMSU received an invoice totaling $7,660,548.44 from the New Mexico General Services Department for a portion of the past and future projected shortfall in the employee group health benefits fund. This was unexpected prior to the Laws of 2023 and represents a hardship for the NMSU system.*
Request Type:	*Deficiency (FY22)*
Rank:	*# (1 through 10, 1 being the highest)*
Agency Contact	*Clayton Abbey, Government Relations Officer*
Contact Phone Number:	575-646-5909
Related to Recurring Expense	No
Related to Capital Expense	No
Related to proposed legislation:	No

Law says "local governments and higher education insitutions"

This was accrued in FY23. There was not an option for FY23 deficiency. FY23 has ended. I would think the current options would be: FY23 deficiency or FY24 Supplement

MEMORANDUM

July 20, 2023

TO: Higher Education Presidents, Chancellors, and Colleagues
FROM: Stephanie M. Rodriguez, Cabinet Secretary, New Mexico Higher Education Department
CC: Mario Suazo, Chief of Staff and Chief Financial Officer, New Mexico Higher Education Department
Gerald Hoehne, Capital Projects and Interim Institutional Finance Director, New Mexico Higher Education Department
Debbie Garcia, Budget Analyst, New Mexico Higher Education Department
RE: Research and Public Service (RPSP) Guidance and Forms

On July 1, 2023, the New Mexico Higher Education Department (NMHED) issued guidance on the preparation of Request for Public Service Projects (RPSP) to all higher education institutions. This guidance was provided to assist colleges and universities with the planning of RPSP submissions to the agency later this year. The guidance included the following:

1. RPSPs specifically supporting Instruction and General (I&G) purposes should not be submitted as a RPSP request, but instead should be included in the higher education institution's I&G base.
2. Any RPSP that falls below $200,000, regardless of function, must be rolled into I&G.
3. The agency will only accept up to five new RPSP submissions from research universities, and up to three new RPSP submissions from comprehensive universities, branch community colleges, and independent community colleges.

The guidance also provided that the following RPSP programs which support non-I&G purposes remain eligible for consideration, regardless of dollar amount, and can be submitted to support both new and existing requests. Submission limits as noted in item three (3) above apply to these as well.

- Health Care
- Mental and Behavioral Health and Social Work
- Education and Teacher Preparation
- Student Support Services
- Centers of Excellence
- Agricultural Programs associated with New Mexico State University
- Quasi-Governmental Agencies

The agency will also be considering up to three (3) expansion requests for all higher education sectors if they meet the criteria as outlined in the three guidance points above.

The deadline to submit RPSP requests is **September 15, 2023**. New forms have been published on the NMHED website and are available for your use. Please make sure to download and populate the new forms as changes have been made to the information the agency is collecting.

Please upload the signed certification form along with completed applications to the following Dropbox link.

If you have any questions regarding this correspondence, please contact Gerald Hoehne, Interim Director of Institutional Finance, at Gerald.Hoehne@hed.nm.gov.

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New Mexico State University