



The New Mexico Water Resources Research Institute (NM WRRI) is located at New Mexico State University in Las Cruces, New Mexico. The New Mexico Legislature established NM WRRI in 1963, and it was approved under the 1964 federal Water Resources Research Act. NM WRRI's mission is to develop and disseminate knowledge that will assist the state and nation in solving water problems. NM WRRI funds research and demonstration projects conducted by researchers, faculty, and students from universities across the state to address water issues critical to New Mexico and the region.

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Download Attachments from <u>NM WRRI AgWRP website</u> *Attachment I.* Application Template *Attachment II.* Budget Template *Attachment III.* Monitoring and Water Impact Assessment Agreement

# SECTION 1. PROGRAM DESCRIPTION

**1.1. Program Purpose**: The NM WRRI Agricultural Water Resilience Program (AgWRP) implements in part Action A2, <u>New Mexico 50-Year Water Action Plan</u> to incentivize agricultural water conservation. The goal is to maintain the resilience of New Mexico agriculture and provide food security in a future with less available water, as stated in HB2.5 315, the enabling legislation for AgWRP. To achieve this goal, NM WRRI will implement projects that improve farmers' and ranchers' ability to manage, conserve, and efficiently apply limited water resources for agricultural production.

This funding opportunity is posted on the New Mexico Water Resources Research Institute website at <a href="https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html">https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html</a>. The website includes three documents, the Application template, the Budget template, and the Monitoring and Water Impact Assessment Agreement, that can be downloaded to complete each document. Any updates to the Request for Applications (RFA), questions, answers, and addenda will also be included on the website.

**1.2. Funding:** Funding for selected projects is provided through New Mexico State Fiscal Year 2026 Special Appropriations. The total funding amount is \$4.5 million and the maximum award is \$250,000. Awarded projects will be selected through a competitive grant process for eligible New Mexico entities. Eligible applicants are not required to contribute to the project

costs; however, a 25 percent non-state or non-federal match, as a cash or in-kind match, is desirable.

**1.3. Project Duration:** Projects will have two phases. The first expenditure phase requires that all project funds be expended from September 15, 2025, through June 30, 2026. The second completion and assessment phase will extend until June 30, 2027, to complete projects and monitoring and water impact assessments as described below in Section 3.

**1.4. Eligible Applicants:** Eligible applicants, partnered with ranchers and farmers, are New Mexico recognized public entities including:

- Soil and water conservation districts
- Irrigation and conservancy districts
- Watershed districts
- Acequia and community ditch associations
- Tribal governments
- Local governments

New Mexico ranchers and farmers must coordinate with an eligible applicant to develop grant proposals that involve and/or support their land, livestock, and associated operations.

**1.5. Funded Activities Scope:** Project applications should include new approaches, technological tools, or infrastructural improvements related to agricultural water conservation. Activities should improve infrastructure reliability, operational flexibility, use-efficiency, conservation, or resilience of water resources without increasing depletions. Eligible applicants are encouraged to propose innovative projects that fit the purpose of the program and address regional agricultural needs related to water. For more detailed examples and additional information, refer to Appendix A: Activities Suitable for Funding.

Projects must support New Mexico food security and the long-term continuation of New Mexico agricultural production. Projects must address one or more of the following regionally appropriate water resilience objectives:

- Increase water efficiency to optimize the use of diminished water supplies
- Improve reliability of water supply or infrastructure
- Conserve water to decrease basin depletions and support long-term water sustainability
- Improve groundwater sustainability
- Implement new approaches and technologies to improve irrigation and stockwater timing and management
- Support voluntary adoption of drought-tolerant, lower water-use crops
- Create operational flexibilities to adapt to changing climate and drought

## **1.6.** Application Evaluation Criteria:

	Evaluation Factors	Points Available
1.	Includes partnership between rancher or farmer and public entity eligible	10
	applicant for funding distribution, project coordination, and reporting	
2.	Alignment with program goals and Action A2 of the New Mexico 50-Year	10
	Water Action Plan; supports agricultural water conservation and resilience,	
	and food security	
3.	Clearly stated goals and objectives with specific descriptions of the project	10
	activities; clearly outlined methods and defined technical approach to	
	produce deliverables that fulfill the project's objectives; specific equipment	
	requirements; and clearly stated expected results	
4.	Innovation and novelty; uses funds to implement new or novel approaches	10
5.	Demonstrates capacity, including subcontractors if needed, to design,	10
	specify, install, and operate the project, including specialized technical or	
	engineering expertise if required	
6.	Project fits within timeframe of budgeted appropriation (all project funds	10
	must be expended by June 30, 2026, and monitoring and assessment are	
	completed in collaboration with NM WRRI by June 30, 2027)	
7.	Water savings and/or water resilience impact clearly stated with an estimate	10
	of anticipated benefits (that is quantified if possible)	
8.	Details a reasonable budget that is aligned with the project scope and	10
	reflects good use of public resources	
9.	Involves research through collaboration with one or more researchers,	10
	showing innovation and applied research; may include projects that	
	demonstrate how water resilience practices can be transferred, adapted, and	
	scaled for efficiency, ease, and effectiveness of broader adoption and	
	application	
10	. Agrees to interact with the NM WRRI water impact analysis and scientific	10
	assessment coordination efforts; includes signed Monitoring and Water	
	Impact Assessment Agreement between the eligible applicant, the partner,	
	and NM WRRI (Attachment III).	
То	tal Points Available	100

**1.7. Review Panel:** The NM WRRI AgWRP Review Panel is comprised of highly qualified water experts, topic area experts, and members of the NM WRRI Program Development and Review Board (PDRB) that includes representation of major universities and water-involved agencies in NM. The AgWRP Review Panel will review proposals and make funding recommendations to the NM WRRI Director. Proposals should be written for those with general knowledge of agriculture and water.

## **1.8. Application Timeline:**

- Monday, June 16, 2025 The application portal opens for 42 days to receive applications.
- Tuesday, July 1, 2025 Informational Webinar with Q&A.
- Monday, July 28, 2025 Applications must be submitted online at <u>https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html</u> by 5:00 pm MDT.
- Friday, August 29, 2025 Recipients of projects selected for funding will be notified.
- Monday, September 15, 2025 Projects begin.

**1.9. Reporting:** Eligible applicants are accountable for carrying out the activities described in the funded project and are required to document the outputs of those activities. Accepted projects are required to complete quarterly reports and a final report. To streamline reporting, templates for these reports including all required components, and details will be provided by NM WRRI. Quarterly reports will include a brief status update for each task that is a straightforward description of project activities. The quarterly reports will also provide the opportunity to discuss any changes to schedule, personnel, proposed tasks, or budgets. The final report will include a final status report for each task, summaries of monitoring data and results, project photos including before/after photo pairs, a discussion of lessons learned, and any recommendations to NM WRRI for future projects.

**1.10. Application Questions:** NM WRRI will hold an informational webinar with Q&A on Tuesday, July 1, 2025, to describe the RFA and field questions.

Eligible applicants who have additional questions regarding this RFA may email questions to NM WRRI (nmwrri@nmsu.edu), subject line: "FY26 Agricultural Water Resilience Application Questions." For broader access through inclusion in the frequently asked questions posted on the project website, question submittals are requested by 5:00 pm MDT on July 8, 2025.

Answers to frequently asked questions will be posted on the NM WRRI AgWRP website at <u>https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html</u> by 5:00 PM MDT on July 10, 2025. It is the responsibility of all eligible applicants to check the website for the most recent updates, including addenda.

## **SECTION 2. APPLICATION**

**2.1. Application Requirements:** See *Attachment I:* Application Template. Note: All applications must be typed. Handwritten applications will not be accepted.

2.1.1. <u>Eligible Applicant Information</u>: Include name, entity, mailing address, email, and phone number.

2.1.2. <u>Rancher or Farmer Partner Information</u>: Include name, mailing address, email, and phone number.

# 2.1.3. Project Information:

2.1.3.1. <u>Project Location</u> (maximum 100 words): Include the address (include the county) and coordinates of the project site location as well as a map of the target region.

2.1.3.2. <u>Goals and Objectives</u> (maximum 300 words): The project's goals must align with Action A2 – incentivizing agricultural water conservation – of the <u>New Mexico 50-Year Water Action</u> <u>Plan</u>, to maintain the resilience of New Mexico agriculture and provide food security in a future with less available water. Indicate the overall background and need for the project. Include a clear statement of the long-term goal(s) of the proposed project. If possible, specify goals associated with the volume of water conserved, increased yield per amount of water, etc..

2.1.3.3. <u>Methods</u> (maximum 400 words): Describe the technical approach for the project. Include details of your operation such as acreage, crop type, water source, basin/watershed, etc. Include the tasks necessary to achieve project results, deliverables for each task, a description of how the task will be accomplished, and the person responsible for implementing each task. Demonstrate capacity to design, install, and operate the project, including subcontractors, researchers, or specialized technical or engineering expertise if required.

2.1.3.4. <u>Capital Equipment</u> (maximum 100 words): Detail the equipment greater than \$5,000 needed for the project to be implemented.

2.1.3.5. <u>Calendar</u> (maximum 100 words): Detail the planned start and completion dates for each task in the project.

2.1.3.6. <u>Expected Results</u> (maximum 250 words): Describe the expected results of the project including water savings and water resilience impacts.

2.1.4. <u>Budget</u>: Complete the budget table provided in the application template (*Attachment II:* Budget Template). The budget must be submitted with the application as an attachment. Use the Excel table found in the application at <u>https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html</u>. Refer to *Attachment II:* Budget Template for examples of types of costs and the amount of detailed justification to be included in your budget. Ensure that your budget totals correctly and all budgeted costs are justified.

Costs must be solely related to the project proposed, justified, and allowable as described in "Eligible Reimbursement Items" below. Awarded recipients will be reimbursed for costs incurred upon submittal of detailed invoices, proof of payment, and other supporting documentation (e.g., subcontractor invoices, timesheets, receipts, etc.). Payments will be made to the awarded recipient after NM WRRI receives a complete invoice package and reviews the completed work. Payment may be withheld for failure to complete timely quarterly reports or other project deliverables stated in the Awarded Grant document. Final project invoice payments will be withheld until the project's Final Report is accepted by NM WRRI. 2.1.4.1. <u>Eligible Reimbursement Items:</u> Items eligible for reimbursement under the NM WRRI AgWRP include but are not limited to:

- Itemized hourly wages for work on the project, supplies that are permanently affixed to the project or expended in their entirety during the project term, equipment rental, travel, and subcontractor services as approved in the project work plan.
- Implementation of on-the-ground measures to improve New Mexico agriculture and provide food security in a future with less available water as approved in the project work plan, including but not limited to installing efficient irrigation systems, drip irrigation systems, farm water tanks, weather Apps for soil management, fencing, etc.
- Hourly staff time for partner coordination exclusively within the context of the project, as approved in the project work plan.
- Contractor and subcontractor rates must be disclosed and reflect current fair market rates.
- Gross receipts tax.

2.1.4.2. <u>Ineligible Reimbursement Items</u>: The following items are not eligible for reimbursement under an awarded NM WRRI AgWRP grant:

- Ongoing maintenance and monitoring beyond the contract period.
- Funding for projects required under administrative and/or judicial order.
- Costs, including personnel costs, of securing additional sources of project funds.
- Indirect costs (e.g. penalty fees or damages other than pay for work performed, attorney fees, and administrative fees, 2.61.6.8 NMAC).
- Lobbying.

2.1.5. <u>Letters of Support</u>: Include letters of support from key project participants and supporters such as contractors, landowners, public lands managers, watershed groups, user groups, and other agency partners as attachments to your application. Letters of support must state the role or contribution in the project for that specific partner or individual, where applicable, and must be unique (i.e., no form letters).

2.1.6. <u>Monitoring and Impact Assessment Agreement</u>: Optional. Include a signed Monitoring and Impact Assessment Agreement (*Attachment III*). Grant recipients are encouraged to participate in an impacts monitoring and assessment project with NM WRRI.

2.1.7. <u>Cited References</u>: All works cited must be referenced in this section.

**2.2. Application Submission:** All applications must be submitted through the NM WRRI AgWRP website at <a href="https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html">https://nmwrri.nmsu.edu/nmwrri-agwrp/nmwrri-agwrp.html</a> by 5:00 pm MDT on Monday, July 28, 2025.

For questions about this RFA, please contact NM WRRI at <a href="mailto:nmwrri@nmsu.edu">nmwrri@nmsu.edu</a>

## SECTION 3. NM WRRI MONITORING AND WATER IMPACT ASSESSMENT

**3.1. Project Coordination:** Awarded applicants will work with the NM WRRI AgWRP water impact and scientific assessment coordinator to determine the appropriate equipment for measuring the impact of the project on water savings and water resilience. NM WRRI staff may require a site visit prior to measurement equipment installation. Further details will be provided to selected projects.

**3.2. Measurement Equipment Installation:** NM WRRI will purchase, assist with installation, and maintain the equipment for the duration of the project. Eligible applicants are responsible for providing site access and any project-generated data. NM WRRI will lead the effort to monitor project impacts and fulfill state reporting requirements. This includes supplying technical support during implementation phases for selecting and installing monitoring equipment. NM WRRI staff will conduct the data collection and analysis necessary to evaluate and quantify water conservation, water efficiency, water resilience, and food security outcomes. Measurements may include, but are not limited to, flow rates, soil moisture, crop type, crop acreage, and crop yield, as outlined in relevant program documentation. Examples of devices and instruments that could be used to evaluate project performance and measure impact can be found in Appendix B: Table of Monitoring Equipment, which shows examples of the types of equipment the proposer may need to install to participate in the NM WRRI Monitoring and Water Impact Assessment Program.

**3.3. Monitoring and Assessment:** Once measurement equipment is installed, data will be collected by NM WRRI staff either through telemetry or through site visits. The data will be used for determining the effectiveness of the project for water impact reporting. The data may also be used in scientific reports or publications. More details will be provided to awarded applicants.

### Appendix A: Activities Suitable for Funding

**Eligible funding examples for ranchers and farmers:** Below is a list of potential ideas, approaches, systems, methods, techniques and technologies for ranchers and farmers to consider; other ideas may also be eligible for consideration and support. Categories and examples of funded activities include:

#### Improving Stockwater Management

- Upgrading and installing modern drinking water systems such as covered, insulated, or shaded water tanks to reduce evaporation.
- Using shade balls in livestock drinking ponds.
- Sediment removal systems and filtration systems.
- Installing or upgrading windmills and solar-powered pumps for livestock drinking water.

#### **Improving Ranch Management**

- Installing automated stock tank systems for efficient livestock water management.
- Using smart irrigation systems in ranches to improve pasture productivity.
- Supporting the cultivation of drought-resistant and low-water consumption forage crops.
- Installing barriers to protect riparian areas from overgrazing and prevent uncontrolled livestock access.
- Reducing invasive vegetation (such as salt cedar, Russian olive, and Siberian elm) to reduce water consumption and increase availability for other uses.

## Improving Ranch Quality

- Enhancing ranch soil quality using organic and natural fertilizers/amendments to enhance forage growth, soil health, improve water retention, and increase water use efficiency.
- Improving ranches and pastures with drought-tolerant and nutrient-rich forage for healthier livestock.

## Monitoring and Surveillance Technology

- Using drones to monitor ranches and livestock and, detect potential issues.
- Installing smart sensors to track animal movement and analyze behavior to help identify overused water sources, detect early signs of water stress, and improve water and grazing management.

#### Integrating Agriculture and Livestock

- Establishing and installing manure collection systems for conversion to fertilizer, compost, and biogas production to mitigate water quality impacts.
- Installing and using processing units to convert agricultural crop waste into low wateruse livestock feed.

#### Livestock Infrastructure

• Establishing, installing and upgrading shade structures to protect livestock from harsh weather and reduce their water consumption.

#### Improving Water Use Efficiency in Irrigation

- Converting or upgrading irrigation systems to smart drip, subsurface, or sprinkler irrigation technologies.
- Lining channels, rehabilitating, and upgrading open channels and canals, and installing modern pipes and connectors to improve water conveyance efficiency and prevent leakage.
- Installing covers or shade balls over open irrigation channels or water tanks to reduce evaporation.
- Using suction pumps to remove sediment and modernizing filtration systems for irrigation water.
- Adopting soil moisture conservation farming techniques, such as plastic mulching or organic mulching.

### Agricultural Water Management Improvement

- Installing sensors, well meters, water gauges, and soil moisture probes.
- Installing automated irrigation gates and upgrading pipes in open irrigation channels and canals to improve water distribution efficiency.

#### **Reducing Dependence on Irrigated Water Supplies**

- Adopting and cultivating drought-resistant and low water use crop varieties.
- Providing support and incentives for crop conversion, encouraging farmers to replace high water consumption crops with low water consumption alternatives.

#### **Extending Local Water Supplies and Water Quality Improvement Systems**

- Infrastructure for rainwater harvesting, capturing, and diversion, including tanks or artificial lakes and ponds for collecting and storing rainwater.
- Using non-conventional water sources such as brackish groundwater.
- Using cost-effective low-quality water treatment and desalination systems such as reverse osmosis (RO) and de-ionization systems.
- Using magnetic treatment systems to improve water and nutrient absorption by crops.
- Using solar-powered water treatment systems and desalination for protected agriculture (e.g., greenhouses).
- Infrastructure for agricultural drainage water collection, including drainage channels, water basins, drain pipes, trenches, and artificial lakes.
- Reducing invasive vegetation (such as salt cedar, russian olive, and siberian elm) to reduce water consumption and increase availability for other uses.

### Improving Soil Health and Water Retention

- Using fertigation systems (i.e., smart fertilizer injection and mixing with irrigation) to improve the efficiency of water and fertilizer use.
- Improving soil health using organic fertilizers/amendments and green manure to increase water retention capacity.
- Applying bio-stimulants to enhance soil health, promote microbial activity, stimulate nutrient absorption, and enhance water-holding capacity.

### Protected Agriculture Technologies and Upgrades

- Upgrading cooling and ventilation systems in greenhouses to improve water and energy efficiency.
- Installing smart drip irrigation systems in greenhouses to reduce water loss and waste.
- Using renewable energy systems (solar energy) for water pumping, cooling, and lighting in greenhouses.
- Supporting soilless farming systems such as aquaponics and aeroponics to reduce water consumption.
- Using and installing nanofiltration (NF) and ultrafiltration (UF) systems for water filtration.
- Solar-powered water treatment systems and desalination for protected agriculture systems.

### Modern Technologies to Support Farming and Irrigation

- Installing agricultural weather stations to track local climate and improve irrigation scheduling.
- Installing thermal cameras to detect leaks, blockages, and other irrigation problems.
- Using smart irrigation controllers for optimized water use.
- Using multi-depth moisture sensors for more effective irrigation scheduling.
- Using drones for irrigation process monitoring, pest and disease monitoring, crop spraying, and fertilization.

#### Additional Technologies to Support Food and Agricultural Production

• Upgrading pumps, plows, harvesters, and tractors to the latest, more efficient models and versions.

The following table outlines some selected agricultural systems and technologies along with their general components, representing potential items suitable for funding.

Case/System	General Components Description
Shade Balls (Evaporation Control)	Black hollow plastic balls to cover open water
Livestock Drinking Water Tanks	Stock tanks, concrete base
Drip Irrigation	Main lines, PE laterals, drippers (emitters), non-return
	valve (NRV), screen and sand filters, fittings

Sprinkler Irrigation	Sprinklers, PVC pipes, NRV, filters, pressure regulators, risers, fittings
Surface Irrigation rehabilitation	Laser leveling, field adjustment, ditch lining, water gates/structures
Surface Pump	Pump, controller, installation, fittings
Submersible/Well pump	Submersible pump, controller, installation, fittings
Automatic Fertigation System	Fertigation tank, injectors, control valves, automation unit
Upgrade Greenhouse Drip Irrigation	Pipes, pressure system, drippers, control unit
Automatic Greenhouse Fertigation System	Tank, injectors, control valves, automation unit
Greenhouse Cooling and Ventilation System	Fans, evaporative cooling pads, thermostats, roof vent system, controller
Solar Pump System	Solar panels, batteries, controller, solar pump

# Appendix B: Table of Monitoring Equipment

The following table presents some devices and instruments that will be used to evaluate project performance and measure impact.

Device/Instrument	Purpose
Flow Meters	Measurement of water flow in irrigation pipes
Ultrasonic Flow Meters	Measurement of flow inside pipes
Pressure Transducers	Measure water depth/level in wells
Current Velocity Meters	Measure water velocity and depth in open channels
Rain Gauge (Tipping Bucket)	Measure rainfall
Weather Station	Measure humidity, wind speed, and solar radiation
Time Domain Reflectometer (TDR)	Measure soil volumetric water content
Sensors	
Data Loggers	Record and store data from sensors
Stock Tank Level Sensors	Monitor water levels in livestock tanks
Livestock Water Flow Meters	Measure water consumed by livestock
Rugged Laptops	Computers to use onsite
IoT Systems and Gateway	Send data to cloud for remote analysis
Cloud Platforms	Store and analyze field data
Power Supply (Battery and Solar	Provide power to sensors and devices in field locations
Panels)	