



United States Department of Agriculture



# NEW MEXICO 2019 ANNUAL



J. XAVIER MONTOYA, STATE CONSERVATIONIST  
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# HELPING PEOPLE HELP THE LAND

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# NEW MEXICO 2019 ANNUAL REPORT



***The USDA Natural Resources Conservation Service provides programs and operations designed to address the natural resource concerns that impact New Mexico's agriculture***



**J. Xavier Montoya**  
State Conservationist

In New Mexico, the National Resources Conservation Service's (NRCS) legacy of serving the people and the land endures. This is because our practices are locally-led and rooted in sound science. The decisions made, the practices implemented, and the conservation technical assistance offered are based on research, technological advances, and empirical study. NRCS New Mexico helps producers address their immediate needs, achieve their long-term goals, and foster a healthy and sustainable environment.

2019 saw many successes that were particularly important to New Mexico. Acequias and land grant-mercedes are communities profoundly important to the culture and history of New Mexico. These traditional communities can trace their origin back centuries. New Mexico's acequias—communal irrigation canals—still function as a tool to preserve and share scarce desert water. Acequias are only found in two states, Colorado and New Mexico. In 2018, a provision in the Farm Bill was passed to make acequias and land grant-mercedes eligible entities for grants and technical assistance. Funding acequia projects had been a challenge in the past. This remarkable new development has allowed NRCS to begin the process of providing technical assistance and infrastructure investments to land grants and acequias which will help improve the irrigation efficiency of small underserved communities in New Mexico. We hope this will affect significant change for acequias, small farming communities, and minority landowners, and help farmers keep farming.

We were also thrilled in August of 2019 to host NRCS Chief Matt Lohr who came to visit our beautiful state, meet our New Mexico team and our partners, and see first-hand all of the great work being done in the Land of Enchantment.

We are honored to serve the agricultural producers of New Mexico and are privileged to have earned their trust and confidence as we continue helping people help the land.

Thank you to the NRCS New Mexico team and all of our partners who continuously work to create a better New Mexico.

Sincerely,

*J. Xavier Montoya*

J. Xavier Montoya,  
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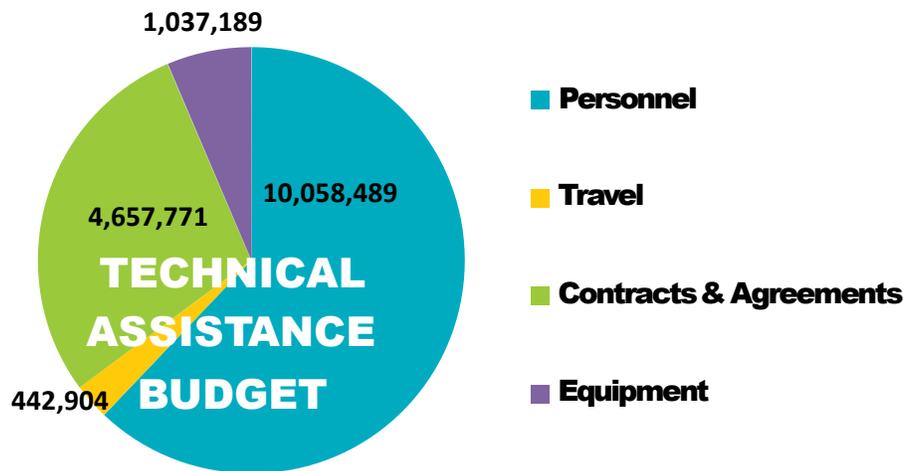
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## Rosabeth Garcia-Sais Assistant State Conservationist for Management & Strategy

The Management & Strategy Team contributed to the overall success of NRCS New Mexico by providing much of the behind the scenes support for the field as well as oversight and quality assurance in our processes. We helped get conservation on the ground by effectively developing and managing a technical assistance budget of over \$16.2 million used to support our workforce as follows:



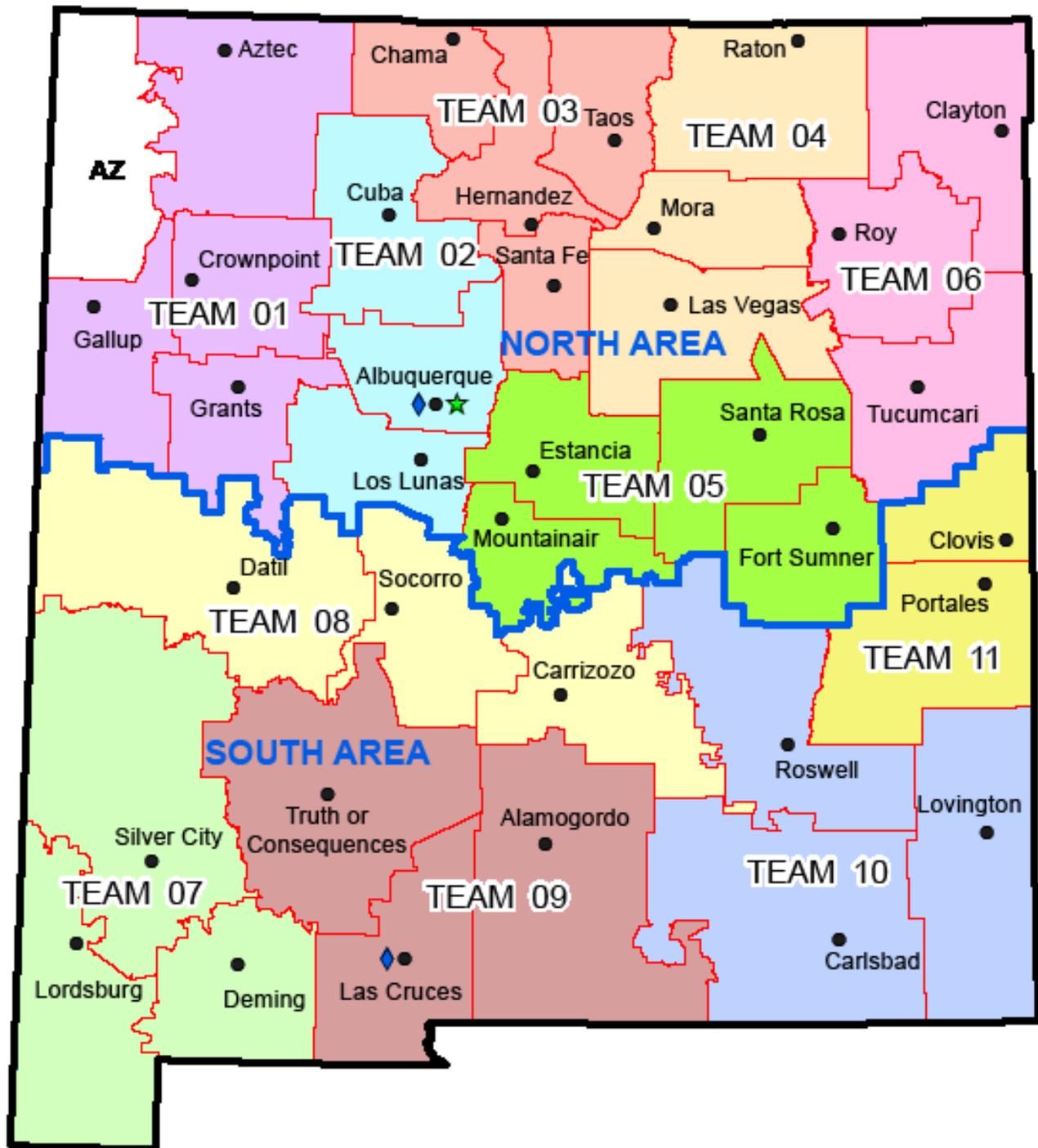
The investment and financial support for employees go far beyond the paycheck. Although salaries and benefits are a large part of the technical assistance funding, the Management & Strategy (M&S) Team also ensures that employees have safe and professional offices, equipment, vehicles, and updated computers to provide top-notch customer service to our customers.

The overall staffing level remained below our approved cap of 141, but it wasn't for lack of trying. The M&S Team coordinated the posting of 44 job opportunities on USAJobs which resulted in 21 positions filled. There were still 11 announcements pending closure at the end of the fiscal year. In addition to federal hiring efforts, grants and agreements played a major role in our conservation efforts. We continued to utilize our partnerships with the New Mexico Department of Agriculture and the National Older Worker Career Center to provide additional staffing in the field. We also awarded 12 new agreements and amended 16 existing agreements.

There were no retirements in the fiscal year 2019, but we are not likely to be so fortunate in future years. Therefore, it was important for us to provide employees, all employees, with comprehensive retirement training. To that end, two 2-day pre-retirement workshops were conducted in the first quarter.

The Management & Strategy Team, like many of the teams in the field, experienced turnover. Although we were sad to see them go, we were happy that two of our four employees were promoted with other federal agencies. However, thanks to the great teamwork and cooperation from our NRCS family and the FPAC Business Center, the fiscal year 2019 was another successful year for the Management & Strategy Team!

## NRCS - New Mexico Administrative Areas and Service Centers



Resource Inventories and Assessments  
KRM, 10/5/2017  
E:\Map\_Templates\MDK\NM\_admin\_18.mxd



- ★ State Office - Albuquerque
- ◆ North Area Office - Albuquerque
- ◆ South Area Office - Las Cruces

## Kristin Graham Chavez Assistant State Conservationist for Programs

Environmental Quality Incentives Program (EQIP) was a continued success with over \$24 million in obligated funding to assist agricultural producers to plan and implement conservation practices that improve soil, water, plant, animal, air, and related natural resources on agricultural land and non-industrial private forestland. This was achieved through local, state, and national initiatives.

- **Local initiatives include:** Grazed Rangeland, Irrigated Cropland, Forestland, Watersheds, Beginning Farmer or Rancher, Conservation Activity Plans, and Animal Feeding Operations.
- **State initiatives include:** Energy, Organic, Seasonal High Tunnel, Acequias, and Tribal Lands.
- **National initiatives include:** National Water Quality, Strike Force, Working Land for Wildlife Lesser Prairie Chicken, Joint Chiefs, and Water SMART.

### ENVIRONMENTAL QUALITY INCENTIVES PROGRAM

New Contracts.....	348
Acres .....	1,254,435
Dollars.....	\$24,535,158
Contracts with Beginning Farmers/Ranchers.....	77
Contracts with Limited Resource Farmers/Ranchers.....	9
Contracts with Socially Disadvantaged Farmers/Ranchers.....	156

### Top Eight EQIP Practices Installed on the Ground in FY2019

PRACTICE	EXTENT	PROJECTS	FINANCIAL ASSISTANCE
BRUSH MANAGEMENT	61,745 ACRES	238	\$3,324,556
SPRINKLER SYSTEM	3,660 ACRES	66	\$3,093,869
IRRIGATION PIPELINE	133,390 FEET	135	\$2,436,349
WATERING FACILITY	413 NO.	413	\$1,773,524
FENCE	1,073,235 FEET	189	\$1,930,316
LIVESTOCK PIPELINE	983,167 FEET	213	\$1,404,275
FORAGE AND BIOMASS PLANTING	3,110 ACRES	81	\$738,949
FOREST STAND IMPROVEMENT	2,184 ACRES	143	\$2,228,749

## **REGIONAL CONSERVATIONIST PARTNERSHIP PROGRAMS (RCPP)**

**Canadian River Watershed Restoration Project:** The Canadian River Watershed Restoration Project encourages ranchers and landowners operating within the Prairie Grasslands Region of New Mexico to utilize the Environmental Quality Incentives Program. Each participating rancher, in collaboration with federal and state land managing agencies, will develop a resource management plan. The leveraged EQIP funds facilitate restoration efforts outlined in the plan, like treating invasive plant species. Partners within the CRWRP have been addressing resource concerns on ranches with mixed ownership lands for 11 years. This project was initiated when eight Soil and Water Conservation Districts encompassing the entire Canadian River Watershed began collaborating through a Joint Powers Agreement to restore the watershed of the Canadian River and its tributaries.

**New Mexico Range and Forest Soil Health Initiative:** The New Mexico Range and Forest Soil Health Initiative is designed to bring Environmental Quality Incentives Program and partner funds together for New Mexico's ranchers whose operations include federal lands. Each rancher, state and federal agency with lands included in the ranch operation will develop a coordinated resource management plan or CRMP. The CRMP will include range and forest soil health restoration strategies, such as forest thinning, to combat the increase in wildland fires. New Mexico experienced over 1.5 million acres in wildfires from 2009 to 2014. Restoration efforts through this initiative are critical to funding treatments on over 20 million acres of brush-invaded rangeland and 10 million acres of overstocked forest lands.

**Building Resiliency in the San Juan-Rio Chama Region:** Participating States: New Mexico (lead state) and Colorado— Completed by the Bureau of Reclamation in 1976, the San Juan-Rio Chama Diversion is a series of diversion structures and tunnels that together carry runoff 26 miles across the Continental Divide from the Colorado River watershed to the Rio Chama, in the Rio Grande watershed. This diversion, along with the Rio Chama, provides approximately one-third of New Mexico's water supply for irrigators, agriculture, industry, communities, and fish and wildlife. The Building Resiliency in the San Juan-Rio Chama Region Project, managed by East Rio Arriba Soil and Water Conservation District and twenty partners, complements recent diversion structures with additional forest health and watershed treatments to increase the resiliency of the landscape to withstand stressors such as drought, wildfire, and climate change in southern Colorado and northern New Mexico. Between 2017 and 2021, partners in the San Juan–Rio Chama region of southern Colorado & northern New Mexico will complete 1,000 – 1,500 acres of watershed resiliency treatments per year utilizing \$6.4 million of Environmental Quality Incentives Program funds, Conservation Stewardship Program funds, and the Agricultural Easement Program funds.



## REGIONAL CONSERVATIONIST PARTNERSHIP PROGRAMS (continued)

**North Central NM Watershed Restoration Project:** This is a regional watershed project aimed at reducing wildfire risk while at the same time improving soils, hydrology, vegetation, and enhancing social/economic needs. The watershed approach provides a framework for coordinating project needs among private landowners, state and federal agencies, tribes, communities, and other interested stakeholders. The project extends from Taos (North) to Bernardo (South) and Gallup (West) to Santa Rosa (East), including all major tributaries and sub-watersheds of the Rio Grande and Pecos River in that region. This project will expand on previous work with established partners to improve the natural resources of this critically important region. Forest restoration practices have been shown to reduce high-severity wildfire and to improve watershed health, water quality, and water quantity. Poor historic management of forest watersheds and riparian zones along with current and forecast climate change are creating a dire situation for the condition and availability of New Mexico’s forest, rangeland, and water resources.

**New Mexico Acequia Revitalization on Historic Lands:** New Mexico has a rich history of community acequias supporting agriculture. Approximately 800 acequias and community ditch associations serve many farmers or “parciantes” who make all, or part of their livelihood from farming and ranching. Farms served by acequias range in size from less than one acre to over 500 acres. The majority of farmers depending on acequias are minorities in underserved communities. Acequias are located in 12 of the most impoverished counties in New Mexico. In New Mexico we say “agua es la vida” (water is life). This project will help sustain this critical social and spiritual connection as a matter of social and environmental justice. The objective of this initiative is to facilitate and promote surface water conservation, increase irrigation system efficiencies/ effectiveness, and improve water quality on agricultural lands and for downstream purposes.



**Pecos Partnership:** Participating States: New Mexico (Lead State) and Texas— The Pecos River Watershed in New Mexico and Texas is home to the Permian Basin, one of the largest and most important oil and gas reserves in the country. The National Fish and Wildlife Foundation (NFWF) and its partners will collaborate with at least four major oil and gas producers on the Pecos River Watershed Initiative to promote the conservation of the region’s important rangeland and riparian features. NFWF will use Environmental Quality Incentives Program and Conservation Stewardship Program programs to support the riparian restoration, grazing system improvements, water development and irrigation improvements, the establishment of native riparian and rangeland species and removal of invasive species.

## CONSERVATION STEWARDSHIP PROGRAMS (CSP)

Conservation Stewardship Program (CSP) provides significant financial assistance to manage private land in New Mexico with a total of \$15,539,798 in payments for fiscal year (FY) 2019 allocated to 539 active CSP contracts. Contract renewals were not offered in FY 2019, so contracts that expired at the end of the calendar year 2018 were given the opportunity to either extend the contract for a 6th year or apply for a new contract. In 2019 NRCS began rolling out changes to improve conservation planning. The changes will allow NRCS to better communicate the conservation benefits of CSP activities. In 2019 NRCS also created new CSP activities that will provide more options for producers considering CSP.

<b>New Contracts in 2019</b> .....	<b>17</b>	<b>Total Active Contracts</b> .....	<b>463</b>
<b>New Acres in 2019</b> .....	<b>233,392</b>	<b>Total Acres</b> .....	<b>5,202,322</b>
<b>2019 Contracts with Beginning Farmer/Rancher</b> .....	<b>5</b>	<b>Total</b> .....	<b>50</b>
<b>2019 Contracts with Socially Disadvantaged Farmer/Rancher</b> .....	<b>8</b>	<b>Total</b> .....	<b>153</b>
<b>2019 Dollars Obligated (for all 5 years of the contract)</b> .....	<b>\$2,291,904.28</b>		
<b>Total payments for all contracts</b> .....	<b>\$14,498,520</b>		

Since 2017 a total of 76 contracts have enrolled in regular CSP covering more than 900,000 acres.		
The activities below are those that have been contracted more than 10 times in the 76 contracts. * may be multiple times in one contract		
<i>Name</i>	<i>Number</i>	<i>Extent</i>
Grazing management- Animal health (Nutbal)	41	300,180 acres
Wildlife friendly fencing- retrofitting	16	26,000 feet
Grazing management- monitoring range health	15	133,681 acres
Brush management	12*	565 acres

### Targeted resource concerns for 2019

**Agland** (grazed range, cropland and pasture)

Soil erosion, Soil quality degradation, Degraded plant condition, Inadequate habitat for fish and wildlife, Livestock production limitation

**Agland Irrigated** (grazed range, cropland and pasture) with focus on conserving irrigation water

Soil erosion, Soil quality degradation, Degraded plant condition, Inadequate habitat for fish and wildlife, Insufficient water

**Nonindustrial private forestland**

Soil erosion, Water quality degradation, Degraded plant condition, Inadequate habitat for fish and wildlife, Livestock production limitation

**AGRICULTURAL CONSERVATION EASEMENT PROGRAM (ACEP)** is growing in New Mexico. There is a continual need for protecting wetlands, farmland, and grasslands from development and fragmentation. The growing success of this program is largely due to the ability of local easement entities to enroll and manage these easements.

New Easements .....	1
Acres.....	5,239
Easement total (ALE, WRP, GRP, FRPP) .....	29
Entities holding NRCS funded easements.....	4

## CONGRESSIONAL DISTRICT PROGRAMS TALLY

### Environmental Quality Incentives Program (EQIP)

Congressional District	Contracts Obligated	Contracted Acres	Obligation Amount
1	13	40,589	\$695,795
2	167	907,279	\$13,457,117
3	168	306,566	\$10,382,246

### Conservation Stewardship Program (CSP)

Congressional District	Contracts	Contracted Acres	Obligation Amount
1	4	18,852.90	\$131,602.08
2	23	248,959.82	\$1,895,248.90
3	7	53,366.30	\$265,053.60

### Regional Conservation Partnership Program (RCPP)

Congressional District	Contracts	Contracted Acres	Obligation Amount
1	21	178,305	\$1,752,989
2	3	74,543	\$402,929
3	5	24,756	\$576,513
<b>Total</b>	<b>29</b>	<b>277,604</b>	<b>\$2,732,431</b>



## Alicia Rodriguez, Assistant State Conservationist for Partnerships

Conservation is cooperative and collaborative. It takes a team to make conservation happen. NRCS New Mexico's sustained achievements in delivering conservation services and programs are largely attributed to our strong working relationships with many key partners, such as the New Mexico Association of Conservation Districts, New Mexico Coalition of Conservation Districts, Soil and Water Conservation Districts, New Mexico Department of Agriculture, local, state and federal government, acequia associations, elected and appointed officials, and of course our farmers, ranchers, tribes and pueblos, and others who manage privately owned lands.

In 2019, NRCS New Mexico worked diligently in planning, coordinating, and participating in numerous successful stakeholder events to enact NRCS's motto, Helping People Help the Land. NRCS New Mexico continues to highlight the importance of productive working lands and healthy water while sustaining and enhancing the future for agriculture producers.

Through these efforts, the NRCS New Mexico brand continues to grow stronger, further strengthening our stakeholder relationships. NRCS New Mexico has a long history of building and maintaining partnerships. This has a direct correlation to our success in implementing millions of dollars annually through our Farm Bill programs, which continues to enhance and expand the depth of our conservation reach throughout the state.



**NRCS Chief Matthew Lohr's visits with NRCS New Mexico and New Mexico Partners**

The importance of our relationships with individual farmers, ranchers, landowners, local conservation districts, state, and federal agencies, tribes, Earth Team volunteers, and many other conservation-minded individuals cannot be overstated. Sharing our technical expertise and leveraging our respective resources allow us to better serve our ever-growing constituency. Collectively, we continue to improve and leave our conservation imprint on America's natural resources. The successes of our partnerships continue to thrive as we strive to achieve the NRCS mission to protect, restore, and enhance the lands and waters upon which we all depend.



**NMACD Farm Bill Specialist**



**Jim Berlier, NMACD President with Xavier Montoya, NM STC**

## FARM BILL OUTREACH, EDUCATION AND PROMOTION

Providing assistance to targeted groups cannot be done without partnerships involving federal, state, county, municipal, special interest and non-profit groups to band together to maintain or improve the quality of life for New Mexico’s agricultural producers. In 2019, NRCS selected and approved four grants (\$93,007 total) to assist our partners in reaching people who NRCS may not normally reach.

**San Juan SWCD, Backyard Conservation (\$27,304 project for 3 years) – Covers team 1.** San Juan SWCD will lead 12 Backyard Conservation workshops for the local agricultural community, private landowners, and general citizens.

**Flower Hill Institute, Healing Native Soil in Jemez Pueblo – (\$15,006 project for 1 year) – Covers team 2.** Flower Hill Institute will teach 6 classes on various topics such as soil, water, and air, adding organic matter and nutrients, cover crops, crop rotation, erosion compaction, and contamination, and nutrient cycles and flows.

**NM Association of Resource Conservation and Development, Farm Bill and Urban Conservation Outreach Programs – (\$11,400 project for 1 year) – Covers team 7, 8, 9.** The project is to promote parts of the Farm Bill that targets agricultural and urban dwellers in the use of natural resources and the promotion of native habitat and improvement of habitat for pollinators.

**Playa Lakes Joint Venture, Promoting Farm Bill Programs for Playa Conservation via Website and Videos – (\$39,297 project for 1 year). Covers team 4, 6, 10, and 11.** This project aims to develop and maintain a *Playas Work for NM* website that provides information about the benefits of playas.



Xavier Montoya, NM STC addresses NRCS employees at a Farm Bill Training in Las Cruces



NRCS employees at a Farm Bill Training in Las Cruces

## Earth Team Volunteers

NRCS is proud of the dedicated Earth Team volunteers and staff who have committed their time and talents to conserving and protecting our natural resources.

### Earth Team Award Recipients Recognized in FY19

New Mexico was recognized for the following awards:

- National Group Volunteer Award and West Regional Group Award Winners—Friends of Whitfield, Belen
- West Regional Earth Team Individual Volunteer Award—William “Bill” Humphries, Tucumcari

### New Mexico ended the FY with:

- 9,783.50 Hours! (The most ever!)
- 959 Volunteers (Highest ever!)
- 100% Office Utilization (3rd year with reaching 100%)
- This FY19 we have upped the goal to 10,000 hours.



Group Volunteer Award Winners: National and Regional West Award Winners: The Friends of the Whitfield Wildlife Conservation Area in Belen, New Mexico, volunteered 1,800 hours over the past year, holding many conservation events that they organized and conducted at the Whitfield Conservation Area.



Bill Humphries (far right) with NRCS employees, allowed NRCS field staff and state staff to conduct a Prescribed Grazing Training on his ranch, allowing numerous NRCS field staff, local ranchers, and Technical Service Providers to learn the process of writing a Grazing Management Plan and conduct the different transects that go along with the plan in order to comply with the new and improved CStwP. Additionally, he is inspiring neighboring ranchers, local college students, and younger future ranchers and farmers to embrace conservation.

## James Hewitt, State Conservation Engineer

During FY19, NRCS New Mexico engineering staff supported USDA Strategic Goals by ensuring USDA programs were delivered efficiently, effectively, and with integrity and a focus on customer service. These results-focused measures align with other USDA Strategic Goals by strengthening the stewardship of private lands through technology and research and by maintaining a high-performing workforce through employee engagement and empowerment, enhancing conservation planning with science-based tools and information, promoting productive working lands, and enhancing productive agricultural landscapes.

The NRCS New Mexico, State Office Engineering Section reviewed and checked field office designs; provided design and policy guidance to field offices; completed numerous on-farm designs, design checks, and certifications; and completed site visits, surveys, and designs for numerous Acequia projects. The NRCS New Mexico, State Office Engineering Section provided irrigation design training for NRCS area and field office staff that included: hoop house, micro/drip irrigation, center pivot irrigation, pump design, irrigation water management (IWM), variable frequency controller basics and safety issues, NM 533E Construction Specification requirements, and use of irrigation design software: WinSRFR and SURFACE.



The NRCS New Mexico Regional Geologist completed over 140 well reports for water well contracts in New Mexico and Arizona. The Regional Geologist also reviewed two mineral assessments for Arizona farms and provided geotechnical review for all phases of the following Arizona dam rehabilitation projects: Buckeye, Graveyard, Graham County Dams, Florence, Vineyard Road, Freeman Wash, Powerline Channel, Coyote Wash Buena School Watershed Recharge Project, and Fredonia.

NRCS New Mexico engineering staff helped watershed dam owners (i.e., Irrigation Districts, Soil and Water Conservation Districts, and Watershed Districts) conduct numerous annual O&M inspections of NRCS-assisted dams to assess general conditions at dam embankments, principal and emergency spillways, sediment pools, principal spillway outlets, and perimeter fences and gates; document field observations; document actions taken, and any actions needed to be taken, by the dam owners; and account for general maintenance and repairs to address damages resulting from localized storm events.

The NRCS New Mexico State Office Assistant SCE completed the Santa Cruz River Watershed Site #1 Floodwater Retarding Structure Rehabilitation Plan.

NRCS New Mexico, State Office Engineering Section gave numerous presentations to NRCS NM employees, non-federal partners, and outside contractors on the DamWatch (internet-based) tool, for use on NRCS-assisted watershed projects, and the Watershed Operations and Flood Prevention Program.

## Steve Kadas, State Resource Conservationist

The New Mexico Resource Technology Services department (RTS) oversees the NRCS Ecological Sciences department (i.e., Agronomy, Range, Wildlife Biology, Forestry, Archeology, and Business Tools). We provide technical leadership to NRCS Field and State Office staff as well as our partners. We ensure that our employees are prepared to provide the best technical assistance to our clients, so those clients can, in turn, be successful land stewards, while being highly productive and profitable. The RTS Team ensures that NRCS New Mexico has access to the latest scientific tools, technology, and training. Below are examples of our accomplishments for FY2019.



***“If we are bold in our thinking, courageous in accepting new ideas, and willing to work with instead of against our land, we shall find in conservation farming an avenue to the greatest food production the world has ever known.”***

## ARCHEOLOGY

FY19 was a busy year for the RTS Cultural Resources (CR) staff. The first full year operating under the Prototype Programmatic Agreement with the New Mexico State Historic Preservation Officer (SHPO) was highly successful and allowed for streamlined efficiency in consultation and cultural resource management. RTS CR staff completed 282 field investigations that accounted for 20,582 acres surveyed. These field investigations resulted in the documentation of 514 total cultural resources and implemented protective treatment measures for approximately 313 cultural resources determined eligible for nomination to the National Register of Historic Places (NRHP). RTS CR staff provided two statewide, week-long trainings for field office staff. After successful completion of this in-depth training program, field office staff are able to take an active role in cultural resource management for resources located within the project areas of their planned practices. The continued partnership with NMACD for two contract archeologists was instrumental in supporting the cultural resource management efforts of the RTS CR staff.



Cultural Resources Training class on a field trip to view the petroglyphs at Pony Hills outside Deming, NM, February 2019. RTS CR staff continued the application of geophysical technology to evaluate sites during the course of inventory. As a result, they were able to make more accurate determinations of the sub-surface potential of NRHP eligible sites and recommend protective measures in consultation with SHPO and the Navajo Nation THPO. The RTS CR staff geophysical efforts have also been used in partnership with the Pueblo of Isleta to evaluate an important ancestral pueblo site at Pottery Mound currently threatened by active erosion along the Rio Puerco.

## RANGE MANAGEMENT AND GRAZING LAND CONSERVATION

72% of all lands in New Mexico are classified as rangeland with grazing as the primary use on these acres. Cattle numbers average around half a million head in the state (NM Ag Statistics) and generate the second highest income in New Mexico's top five agricultural products (37%), right behind dairy products (39%) respectively (net state-nm economy.com). New Mexico NRCS understands the importance of the cattle industry to the state and offers technical and financial assistance through multiple programs to livestock producers. Prescribed grazing is a conservation practice available to producers to assist in managing the harvest of vegetation with grazing and browsing animals. Developing and implementing a grazing management plan is the strength of the practice and helps producers with operation goals and management decisions while maintaining healthy productive rangeland. In 2019, NM NRCS held a week-long capstone Advanced Grazing Management Class at New Mexico State University with 26 attendees to ensure technical adequacy in delivering assistance and developing grazing management plans in coordination with New Mexico's livestock producers. For more information on developing a grazing management plan, please call your local NRCS office.



## CONSERVATION PLANNING AND WATER QUALITY CONSERVATION

In 2019, three important trainings—Soil Health for Sustainability, High Tunnel Systems, and Conservation Planning Modules 6-8—were held at different locations around the State. The trainings were attended by both NRCS New Mexico employees and partners. Soil Health for Sustainability is a requirement for Conservation Planners focusing on the principles of soil health and implementation strategies. Conservation Planning Modules 6-8 is the field portion of the Conservation basic course. Participants review principles and gain hands-on planning experience on rangeland and cropland. The High Tunnel Systems Training gave information specific to High Tunnels as well as two visits to innovative producers using high tunnel systems.



DeSmet's Dairy Farm near Los Lunas NM, July 2019



NRCS Staff at High Tunnel System Training in Taos

## OUTREACH AND EDUCATION ON SOIL HEALTH AND WATER CONSERVATION

Conservation education for conservation groups, schools, colleges, tribes, and organizations is a priority. The Rainfall Simulator--in addition to the soil slake, slump and stability test--continues to be used around New Mexico, demonstrating the properties and benefits of healthy soil. Cover crops are continuing to be used more in New Mexico as producers become aware of the benefits, especially for soil health.



NRCS Resource Conservationist demonstrating principles of soil health to students at the Albuquerque and Santa Fe schools STEM Challenge Workshop held at the Rio Mora NWR, near Watrous NM, September 2019.



NRCS State Rangeland Management Specialist and Resource Conservationist give a demonstration on soil and range health using the Rainfall Simulator at a meeting of the Cabezón Range Management field tour and workshop, August 2019.



NRCS State Rangeland Management Specialist giving a demonstration on soil and range health using the Rainfall Simulator.

## Rick Strait, State Soil Scientist

### Developing better “Grounds” and Weed Control

Working with local coffee roasters, New Mexico NRCS developed a low-cost method to clean up weed-infested fields on small and/or organic farms. The method consists of wrapping existing farm equipment in re-purposed burlap coffee bean bags to remove weed seed and related debris from farm fields.



Tractor before and after its morning coffee.



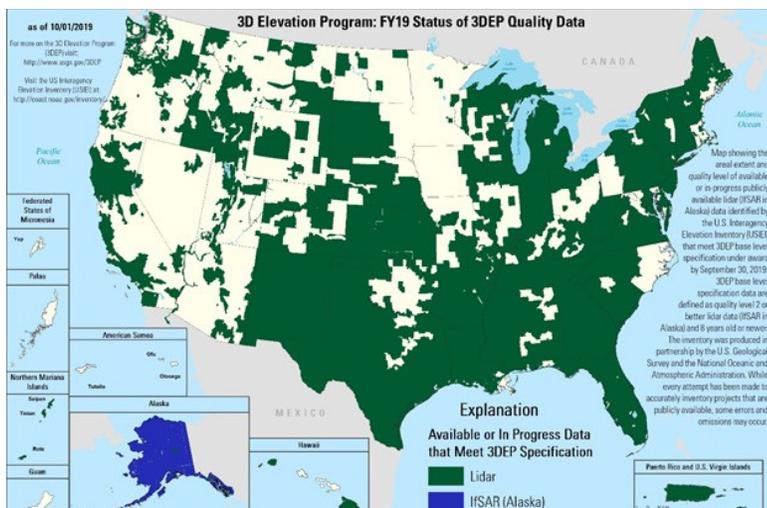
The method is particularly effective on weeds with ‘sticky’ seeds such as sandburs and goat heads. We look forward to establishing demonstration plots across the state using this technology in 2020-2021.

***“NRCS New Mexico strives to develop, enhance, and deliver quality data and tools to support conservation planning and program delivery.”***

### STATEWIDE HIGH RESOLUTION ELEVATION DATA – FIRST IN THE WEST!

In 2019, NM NRCS continued working with Federal and State partners to complete the acquisition of additional high-resolution elevation data (LiDAR). LiDAR delivers sub-meter elevation data accuracy for conservation planning activities.

Thanks to our ongoing partnerships, New Mexico is the first state in the west (and the largest state in the nation) to have 100% complete coverage of in-process LiDAR data.



(Map courtesy of 3D Elevation Program Partner, USGS)



**Thomas Marshall, North Area Conservationist**

NORTH AREA PROGRAM ACTIVITY		
	CONTRACTS	OBLIGATED AMOUNT
EQIP	219	\$12,857,880.88
CSI-GCI	42	\$638,695.00
RCPP	29	\$2,728,719.00
CSP	9	\$1,847,843.00

**Philmont Emergency Watershed Protection (EWP)**

Starting on May 31, 2018 the Ute Park Fire burned 36,740 acres of land. The fire forced mandatory evacuations and threatened the northern New Mexico communities of Cimarron and Ute Park until its containment on June 19, 2018.

Team 4 worked extensively with the New Mexico Natural Resource Conservation Service (NRCS) Emergency Watershed Protection (EWP) core team members to complete the work shown on the following page. The team worked with field office staff, area staff, Philmont personnel and Colfax County as project sponsor to accomplish rehabilitation work after the Ute Park Fire. Through these efforts, natural resources were restored and conserved to prevent future resource damage.



Photo credit: Morgan Timms, The Taos News

## WORK DONE ON PHILMONT EMERGENCY WATERSHED PROTECTION (EWP)

Practice	Planned	Units	Cost Per Unit	Total Cost	25% Match	75% NRCS
Mastication	575	ac.	\$700.00	\$402,500.00	\$100,625.00	\$301,875.00
Contour Tree Felling	35	ac.	\$700.00	\$24,500.00	\$6,125.00	\$18,375.00
Re-Seeding	742	ac.	\$150.00	\$111,300.00	\$27,825.00	\$83,475.00
Wattles	3650	In. ft.	\$2.00	\$7,300.00	\$1,825.00	\$5,475.00
Debris Removal (Burned Structures)	7	ea.	\$1,000.00	\$7,000.00	\$1,750.00	\$5,250.00
Debris Removal (Only Burned Trees Around Structures)	3	ac.	\$1,000.00	\$3,000.00	\$750.00	\$2,250.00
Grade Stabilization Structure	3	ea.	\$500.00	\$1,500.00	\$375.00	\$1,125.00
Sediments Basins	17022	cu. Yds.	\$7.00	\$119,154.00	\$29,788.50	\$89,365.50
Sediment Diversions	2896.2	cu. Yds.	\$10.00	\$28,962.00	\$7,240.50	\$21,721.50
Silt Fences	71	ea.	\$150.00	\$10,650.00	\$2,662.50	\$7,987.50

## UTE GULCH COMMISSARY STRUCTURE PROTECTION DIVERSION

DIVERSION AT THE END OF CONSTRUCTION

DIVERSION AFTER RAINFALL EVENT CATCHING SEDIMENT PROTECTING STRUCTURE



## Robin Dunn Ranch, Gran Quivira-Claunch, New Mexico

In 2015, Robin Dunn began an EQIP- RCPP contract with the intent of utilizing brush management to improve native plant health and to improve livestock grazing and wildlife habitat on her ranch. The brush management addresses the invasion of juniper and piñon trees on her rangeland. The increase of piñon and juniper trees have decreased native plants. There is a large population of pronghorn antelope in the area and Robin is interested in improving the native forage that would be available for both livestock and wildlife such as the antelope. She hopes the brush management will improve the pronghorn antelope's habitat as well.

The contract includes 800 acres of brush management. A contractor is conducting mastication on the brush. This is Robin's first EQIP contract with the Mountainair field office.



## Tolani Francisco, Bosque Farms, New Mexico

In 2017, Tolani Francisco, bought a new home on agricultural land in Bosque Farms, New Mexico. The property had been a field of Sudan grass and was poorly irrigated by an earthen ditch.

With EQIP, Tolani was able to replace the earthen ditch irrigation system that was originally there with a pipeline and multiple valves. Before, the earthen ditch wouldn't fully charge, and it took 8-10 hours to fully irrigate 3.5 acres. Now it only takes about 3 hours. Filling up the ditch and moving to a pipeline has saved a lot of time. Tolani doesn't have to continuously clean and clear the ditch of debris and roots and trash, or coordinate that maintenance and care with neighbors, which can be a challenge in and of itself. All this saved time means more available time to work on other activities.

NRCS also provided Tolani help finding contractors for cutting. And the soil health surveys they assisted in reassured Tolani that the horse manure she'd been composting for two years would be perfect for adding humic acid and phosphorous to her fields. Her alfalfa is in high demand for its good quality and fetches a good price, and Tolani is already beginning to plan the next steps for her field—cover crops and continued soil testing!



Tolani Francisco and NRCS Soil Conservationist



Tolani kicks dirt off a new irrigation valve.



## Adrian Tafoya, South Area Conservationist

SOUTH AREA PROGRAM ACTIVITY				
	CONTRACTS	ACRES	OBLIGATION AMOUNT	PAYMENT AMOUNT
EQIP	129	578,399	\$11,681,797.53	\$782,232.74
CStP	42	86,887	\$1,507,689.76	\$218,186.64

### Angel Grove LLC (EQIP), San Miguel, New Mexico

The installation of Micro-Jet Sprinklers to produce pecans in Dona Ana County has led Edgar Villalobos and Karon Stone with Angel Grove LLC to efficiently apply groundwater irrigations during times when there is limited surface water received from the Elephant Butte Irrigation District. Edgar is now able to apply irrigation water based on the local evapo-transpirations conditions and pecan tree requirements at various stages during the growing season. There is no excess water applied during the early and late times of the growing season. He is also able to apply the required amounts during the highest peak demand rates on multiple soil textures on his operation.

They have, in addition to improved uniform irrigation water distribution, applied less irrigation water due to reduced evaporation rates from the soil surface as a result of implementing annual cover crops and crop residues on the soil surface. The result of this has improved the Soil Health on his operation leading to improved soil infiltration rates and effective rainfall moisture when received. He is now able to cut down his irrigation time from 5 to 6 days for the entire farming operation to 48 hours to complete his irrigation cycle.

Angel Grove LLC has applied these conservation practices with multiple NRCS contracts awarded to them within the last 5 years and has made tremendous improvements to his soils from the previous bare soil conditions that were present during the tree transplant operations.

## Angel Grove LLC (EQIP), San Miguel, New Mexico (continued)

Edgar started with cool-season cover crops mix from an NMSU recommendation. Now he has incorporated no-till planting to include warm-season cover crops with legumes and grasses. His next step in his Soil Health Journey is to switch to permanent perennial cover crops with a mixture of native Buffalo grass mixed in with legumes, to assist with his recycling of nutrients.

Edgar attended soil health workshops and was immediately convinced that this was the way to produce his pecans.

The combination of these practices has led the 8-year-old pecan trees to rapid growth and increased yields with increased weight and quality of the pecan nuts. Edgar indicated that on average there are 48 nuts per pound with a yield of 60.63 and has improved the marketing of his crop.

Edgar initially started his pecan operation using granular fertilizer and is now using the sprinkler system to apply chelated fertilizers along with humic acids. He has reduced the amounts of fertilizer applied by 30% with the addition of the growing cover crops to his operation. This has lowered his fuel, pesticides and labor inputs considerably. He now only has two mowing operations per cover crop plantings.

Edgar indicated that there are “no issues” interfering with the harvest operations with the additions of the Cover Crops and crop residues left on the soil surface. They have in addition to the Micro-Jet sprinklers; implemented a Soil Health System to make further improvements on the soil’s water-holding capacities with the implementation of Cover Crops in the tree aisles, mulching with compost under the tree canopy and no-till farming practices. All of these practices were a result of working with NRCS.

Even though they have recently started their Soil Health Journey; the improvements have improved the soil’s aggregate stability and increased the soil’s microflora to recycle nutrients and eliminated the need to apply insecticides. The long term goal is to reduce production inputs while improving the soil health and quality of the environment.

The soil texture on portions of this field is identified as (Rw) Riverwash with high amounts of coarse sand. He can set nuts effectively during the early Spring months with his soil health management system in place.

Edgar will start his first tree pruning next Spring 2020 by topping the highest branches and will shred the tree pruning to add additional carbon to the soil.



## Picacho Acequia, Carrizozo, New Mexico

On December 3, 2012, the Picacho Acequia contacted the Carrizozo field office for assistance on some major ditch repairs. The Picacho ditch was established in the 1860s and currently serves nine irrigators with 132 acres of various crops. The Carrizozo Field Staff contacted the South Area Office and the State Office for engineering assistance. The Field Office and State Engineering staff completed a plan to repair all the ditch's concerns. Once the planning was complete NRCS staff met with the ditch group and they prioritized the ditch's needs. It was decided by the Acequia to repair the flume that was being undermined by the runoff from Hwy 70.



**Flume in need of repair**



**Culvert from Hwy 70 causing problem**

Field office staff worked with the Acequia on the engineering drawings and possible funding methods. After many months of work by the NRCS staff, the flume repair drawings were completed and the project was funded under the EQIP program, using State Acequia funds.



**RipRap protection for pipeline**



**Structure for water control and pipeline**

The project was contracted in 2018 and completed in 2019. The project not only repaired the Acequia flume, but also helped in protecting a retaining wall built in the 1930's by the CCC that was being undermined by the ditch.



**CCC enrollees in New Mexico, 1940's**  
photo courtesy of National Archives and Record Administration



## Patrick Garay, Arrey, New Mexico

Patrick Garay is an agricultural producer in Arrey, NM. He and his family have a vast agricultural operation in the area. One of Pat's most recent ventures was the purchase of a local pecan orchard. The orchard was well established, but not reaching its maximum yield potential because of the current irrigation system. The system utilized small wells with outdated bubblers that did not supply adequate water to the dripline of the trees; therefore, the growth and production of the pecan trees were minimal. Pat was funded through EQIP in 2018 out of the Truth or Consequences Field Office. Through EQIP, Pat installed a solid set sprinkler system that provides uniform irrigation water at the proper rate for the trees. He has already seen an improvement in production and hopes to continue to see a rise in plant health and production. One of the aspects of the system that Pat has been most excited about is the automation of the system. Pat was able to connect the system to his smartphone. So now, Pat can be at the family chile plant down the road or in another state and know exactly how the sprinkler system is operating.



Newly installed sprinklers

## Aerial Chemical Brush Management, Datil, New Mexico

Fiscal Year 2019 has yielded great success with our aerial chemical brush management practices. This year, we were able to successfully coordinate with the Bureau of Land Management (BLM) to treat over 2700 acres of Piñon-Juniper encroachment. Overall, between BLM and private land ownership, over 3700 acres were treated through this application process.

## Aerial Chemical Brush Management, Datil, New Mexico (continued)

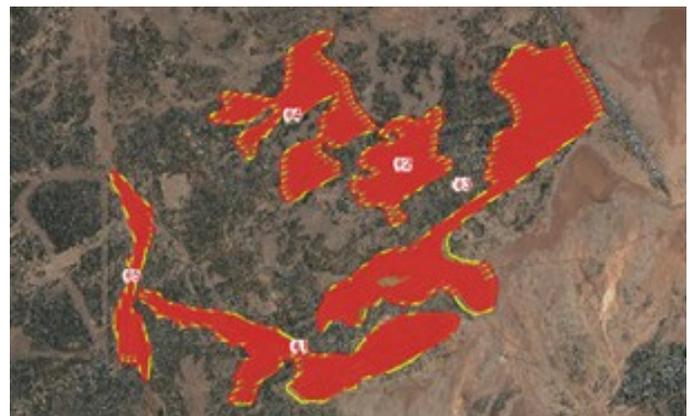
Success was attributed through the partnership with the BLM, who was essential in their role in helping to secure a contractor who was willing to take on the extra burden and responsibilities that come with applications at such high altitudes, multiple agencies, and multiple landowners as well. Success also is attributed to the landowners, who recognized the need for conservation in these remote areas. Their patience in the whole process was essential to the success of the whole operation.



BLM and Private Treatment: Over 2,700 acres



Aerial chemical brush treatment from similar type project



Private Treatment: Over 2,700 acres

## Don Hartman, Deming, New Mexico



Don Hartman is a Deming SWCD board member who has participated in TEAM 7 staff meetings (photos) to educate the staff on the benefits that he has experienced. Don has also taken time, during harvest activities, to educate new employees who don't have a strong farming background.

Don participated in CSP and selected Cover Crops among other enhancements. Since completing his CSP contract, he has seen the benefits of, and is now incorporating cover crops into his farming rotation on his own. Adoption!



### CSP enhancements applied:

- GPS targeted spray application (smart sprayer)
- Leave standing grain crops unharvested to benefit wildlife.
- Variable frequency drive motor
- Use of legume cover crops as nitrogen source
- Plant tissue test to improve nitrogen management
- Land application of treated manure
- Remote monitoring and notification of irrigation pumping plant operation





## CIVIL RIGHTS ADVISORY COMMITTEE

We are a diverse group of people serving a diverse group of people. New Mexico's culture and tradition make it one of the world's most diverse places. We take our responsibility of being fair, transparent, honest and accountable very seriously. One of the tools we use to ensure this is the Civil Rights Advisory Committee (CRAC). The CRAC's charter is designed to assure that we are following federal laws, civil rights policies and national and state objectives, and advises the State Conservationist on all Equal Opportunity Employment (EEO) and program delivery related matters. The CRAC promotes education, awareness, and outreach of all the Special Emphasis Programs.

Three diversity days were held across New Mexico in 2019.

- South Area included presentations about the El Paso Holocaust Museum and Veteran Services and VFW
- North Area included acequia education
- State Office included acequia education and flamenco cultural information and dance performances

### Chief's Workforce Diversity Award

In 2019, it was announced that a NRCS NM Soil Conservationist from the Crownpoint field office received the Chief's Workforce Diversity Award, recognizing her assistance with BIA Eastern Agency portion of the Navajo Nation as well as several Navajo Nation Department of Natural Resources Ranches, and for actively providing outreach to producers in the service areas and at program outreach presentation events. The Soil Conservationist conducted the outreach program presentations in both the Navajo and English languages and also provided conservation program announcements, on-air, with the local radio station that broadcasts in the Navajo language.





In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English. To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: [program.intake@usda.gov](mailto:program.intake@usda.gov).

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## NRCS Service Centers

NRCS Office	(Current as of 2019)
Alamogordo	(575) 437-3100
Albuquerque	(505) 761-5447
Aztec	(505) 334-3090
Carlsbad	(575) 887-3506
Carrizozo	(575) 648-2941
Chama	(575) 756-2581
Clayton	(575) 374-9461
Clovis	(575) 762-4769
Crownpoint	(505) 786-7094
Cuba	(575) 289-3278
Datil	(575) 772-5722
Deming	(575) 546-9692
Estancia	(505) 384-2272
Fort Sumner	(575) 355-2448
Gallup	(505) 722-4357
Grants	(505) 287-4045
Hernandez	(505) 753-3508
Las Cruces	(575) 522-8775
Las Vegas	(505) 425-3594
Lordsburg	(575) 542-9141
Los Lunas	(505) 865-4643
Lovington	(575) 396-5857
Mora	(575) 387-2424
Mountainair	(505) 847-2941
Portales	(575) 356-6629
Raton	(575) 445-9571
Roswell	(575) 622-8746
Roy	(575) 485-2294
Santa Fe	(505) 471-0410
Santa Rosa	(575) 472-5401
Silver City	(575) 388-1569
Socorro	(575) 835-1710
Taos	(575) 758-3863
T or C	(575) 894-2212
Tucumcari	(575) 461-3801
State Office	(505) 761-4400
	(800) 410-2067



# Conservation Planning



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