

NRCS in Arizona

A Brief Assessment of Access to NRCS Programs Among Ranchers in Arizona



Swette Center for Sustainable Food Systems, Arizona State University

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Executive Summary

Born from the devastation of the Dust Bowl, the USDA Natural Resources Conservation Service (NRCS) – formerly the Soil Conservation Service – was built to address pressing conservation issues. Environmental challenges are dynamic and longitudinal in nature, manifesting in a multitude of ways across diverse landscapes and in response to unique anthropogenic forces. In that context, more than 85 years since its inception, NRCS continues to adapt and re-configure to meet the mission of “helping people help the land”. The 2018 Farm Bill provided several key updates to two key conservation programs available to Arizona ranchers, EQIP and CSP, including the creation of the EQIP Incentive Contracts Program, the inclusion of public lands in CSP eligibility, and the provision of Alternative Funding Arrangements (AFAs) for Tribes for both EQIP and CSP. The NRCS Access in Arizona capstone project, conducted by Elizabeth Broussard, Sarah Lemon, Kelly McClelland, Karli Moore, and Kathleen Yetman on behalf of the Arizona Association of Conservation Districts assessed the barriers faced by ranching clients and potential clients of NRCS in Arizona and highlights opportunities for mitigating those challenges in the future especially through the implementation of the three key 2018 farm bill changes.

“The healthier your range is, the healthier your cattle are, the healthier the wildlife is, the more pounds you get across the scale, and the happier you have your hunters....”

-Rancher in Mojave County

Introduction

Background

Born from the devastation of the Dust Bowl, the USDA Natural Resources Conservation Service (NRCS) – formerly the Soil Conservation Service¹ – was built to address pressing conservation issues. Environmental challenges are dynamic and longitudinal in nature, manifesting in a multitude of ways across diverse landscapes and in response to unique anthropogenic forces. In that context, more than 85 years since its inception, NRCS continues to adapt and re-configure to meet the mission of “helping people help the land”.

NRCS offers a variety of programs and technical assistance to help people reduce soil erosion, improve water quality, increase wildlife habitat, and address other conservation priorities and issues. Among its programs, NRCS offers financial assistance to eligible producers through several programs, including the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP). These programs receive mandatory annual funding through the farm bill and were most recently renewed and updated in the 2018 Farm Bill – The Agriculture Improvement Act of 2018.

EQIP provides financial and technical assistance to agricultural producers to implement certain approved conservation practices.² The program is available to producers through a competitive application process during which applications are ranked based on criteria developed by both the NRCS national headquarters and NRCS State Conservationists. Approximately half of total EQIP funding nationwide is set aside for livestock operations to improve grazing management practices and for infrastructure projects such as fence and well development. Another 10 percent is set aside for wildlife habitat and five percent for socially disadvantaged farmers – including minority and Tribal producers.³ CSP is a complementary program that supports more advanced conservation activities and offers farmers the opportunity to earn payments for actively managing, maintaining, and expanding conservation activities.

While certain criteria and priorities are set for EQIP and CSP through the Farm Bill at a federal level, there is some discretion at the state level to inform how NRCS implements these programs. For instance, NRCS develops state-level technical, outreach, and program materials, with the advice of the state technical committee and local working

¹ NRCS, *Honoring 85 Years of NRCS - A Brief History*

² NRCS, *Environmental Quality Incentives Program*

³ National Sustainable Agriculture Coalition, *Environmental Quality Incentives Program*

groups. States can also set their own state-specific conservation priorities, which can inform the implementation of these and other conservation programs. Additionally, any state can petition to add a new practice or propose an interim practice to be considered for adoption at the national level.⁴

In Arizona, one of the key organizations that works closely with the NRCS and the local natural resource conservation districts (NRCD) is the Arizona Association of Conservation Districts (AACD). The AACD is a 501(c) nonprofit organization, created by the NRCDs, that supports and promotes Arizona's 42 NRCDs to coordinate and fund conservation efforts across the state. NRCDs are comprised of farmers, ranchers and other landowners who volunteer their time to conserve agriculture and natural resources. NRCDs are local experts, the local hubs of conservation. They work closely with federal, state, tribal and local agencies and other entities to get conservation funds. NRCDs then work with private landowners in their district to get conservation work on the ground. Another feature of NRCDs are their education centers where they educate children and adults on the importance of agriculture and conservation. The NRCDs recognize the evolving needs of their constituent ranchers and commits itself to pushing for more inclusive and effective conservation practices to be covered under NRCS program guidelines. Within that framework, the AACD opted to participate as a client on this capstone project to comment on NRCS access and implementation among the Arizona ranching community.

As mentioned above, the 2018 Farm Bill provided several key updates to the EQIP and CSP programs including the creation of the EQIP Incentive Contracts Program⁵, the inclusion of public lands in CSP eligibility⁶, and the provision of Alternative Funding Arrangements (AFAs) for Tribes for both EQIP and CSP.⁷ To date, there has been some progress towards the implementation of these changes, but there is still work to be done and this report comes at an opportune time for influencing the on-going implementation of these programs in Arizona.

⁴ NRCS, *General Manual*, Title 450, Part 401.17 "Interim Practice Standards (ICPS)

⁵ NSAC, "A Closer Look at the 2018 Farm Bill: Working Lands Conservation Programs," 14 Jan. 2019

⁶ "Conservation Stewardship Program," *Title 7 Code of Federal Regulations, Pt. 1470.6*.

⁷ Native Farm Bill Coalition, Indigenous Food and Agriculture Coalition, University of Arkansas. *Tribal Provisions in the 2018 Farm Bill*

Current Conservation Practices in Arizona

Arizona is an agricultural state with more than 19,000 agricultural operations on 26,125,819 acres of agricultural land.⁸ Arizona has 42 Conservation Districts (Figure 1) served by 24 NRCS Field Offices. Thirty-two (32) of the NRCDs are political subdivisions of the state under oversight by the Arizona State Land Department. The other ten NRCDs are managed by Tribes. Conservation Districts work closely with NRCS to voice the conservation needs of local agricultural producers. NRCS in Arizona offers a variety of technical assistance and conservation programs, including the Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP).⁹ In 2017, Arizona NRCS received 413 applications for conservation programs and obligated 191 contracts.¹⁰



Figure 1. Map of Arizona Natural Resource Conservation Districts¹¹

⁸United States Department of Agriculture National Agricultural Statistics Service, "Table 8. Farms, Land in Farms, Value of Land and Buildings, and Land Use: 2017 and 2012"

⁹ NRCS Arizona, *Financial Assistance*

¹⁰ United States Department of Agriculture Natural Resources Conservation Service. *Arizona State Technical Advisory Committee Presentation, 2017*

¹¹ Arizona Association of Conservation Districts, *Arizona's Conservation Districts*

The majority of contracts in Arizona have historically been EQIP contracts for livestock operations, with 72 percent of contracts in 2017 being issued for livestock EQIP projects.¹² Arizona's NRCS currently prioritizes the following conservation areas: Insufficient Water, Soil Erosion, Water Quality Degradation, Degraded Plant Condition, Air Quality Impacts. Additional Arizona NRCS priorities are: Livestock Production Limitation Soil Quality Degradation, Inadequate Habitat for Fish and Wildlife and Inefficient Energy Use.¹³

A trend analysis of Arizona's EQIP participation in comparison to the other Four Corners states over the last 10 years (Colorado, New Mexico, and Utah) shows Arizona lagging behind in total obligations and contracts, but competitive in total acres covered.¹⁴ (Figures 2, 3, 4) Similarly, a trend analysis of Arizona's CSP participation in comparison to the other Four Corners states over the same time period shows Arizona lagging behind in total obligations, contracts, and acres covered.¹⁵ (Figures 5, 6, 7) While the total amount of EQIP monies contracted in Arizona has increased in recent years, total program participation in both EQIP and CSP has remained relatively constant. Together, the comparison with other regional states and intrastate trends suggest that there is a significant opportunity for increasing involvement in both programs in Arizona.

Before 2018, public lands were considered ineligible for the Conservation Stewardship Program (CSP). This was a significant barrier for Arizona producers to utilize the program, since many lands used for livestock production in Arizona are state and federally owned. As noted, the 2018 farm bill modified "eligible land" to include public land when the land is a working component of the participant's agricultural or forestry operation.¹⁶ This change has already resulted in a dramatic increase in applications for CSP by ranchers who graze cattle on State and Federal land.¹⁷ Figures 6 and 7 show the beginning of this trend with increases in both numbers of contracts and numbers of contracted acres for three out of the four states (AZ, NM, and UT).

¹² United States Department of Agriculture Natural Resources Conservation Service. *Arizona State Technical Advisory Committee Presentation*, 2017

¹³ NRCS Arizona, *Environmental Quality Incentives Program*

¹⁴ NRCS Conservation Programs EQIP Report fb08_cp_eqip

¹⁵ NRCS Conservation Programs CSP Report fb08_cp_cstp

¹⁶ "Conservation Stewardship Program," Title 7 *Code of Federal Regulations*, Pt. 1470.6

¹⁷ Marques Munis, Phone Interview, July 22, 2020.

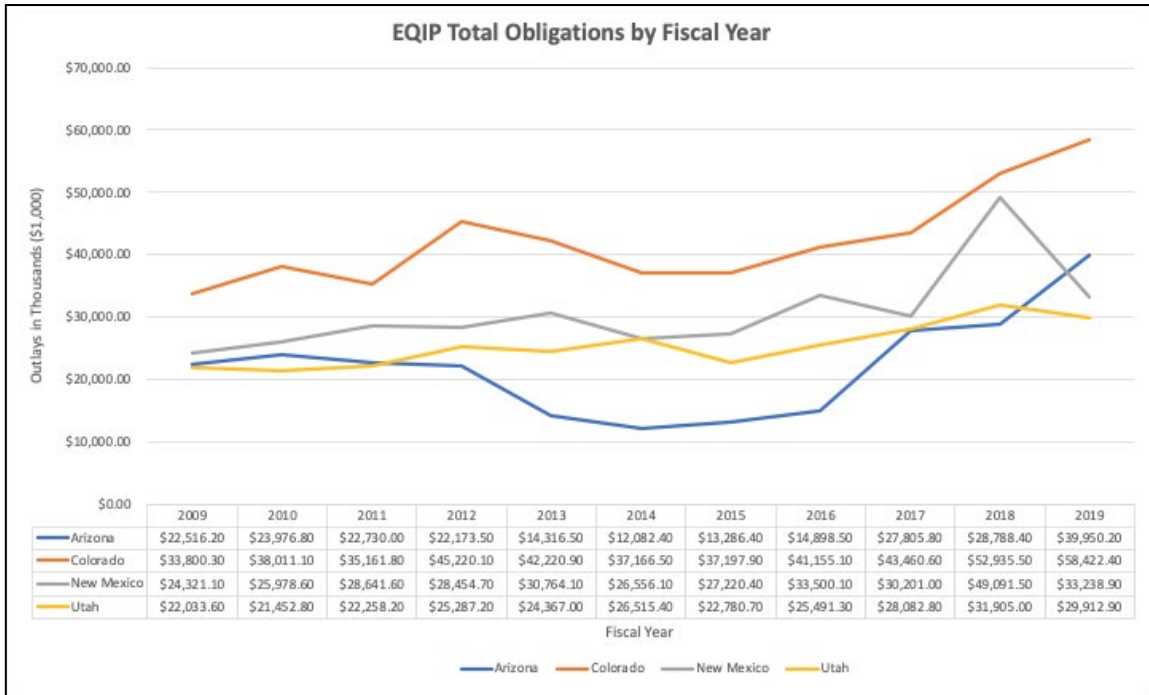


Figure 2. EQIP Obligations by Fiscal Year

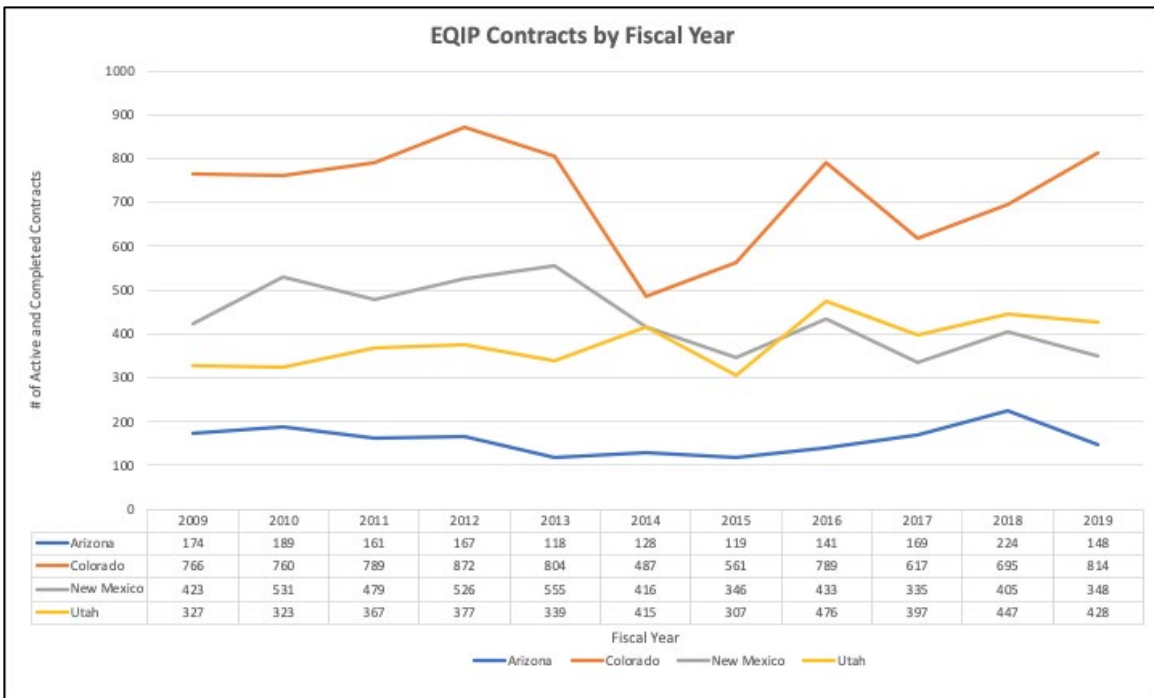


Figure 3. EQIP Contracts by Fiscal Year

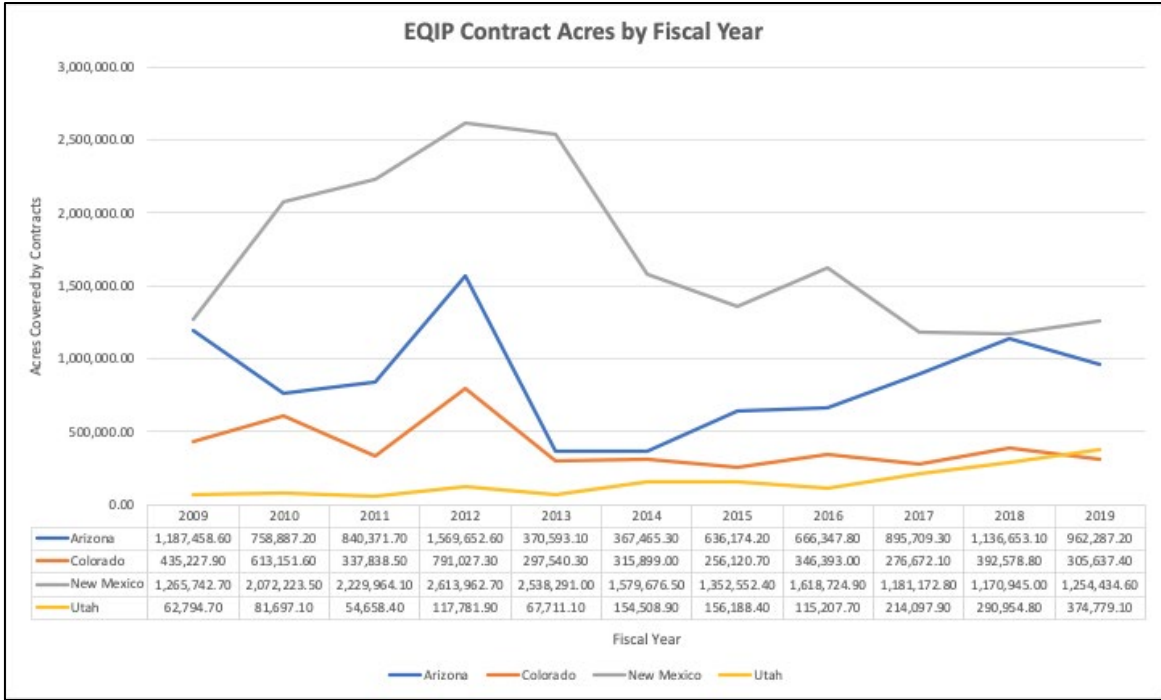


Figure 4. EQIP Contract Acres by Fiscal Year

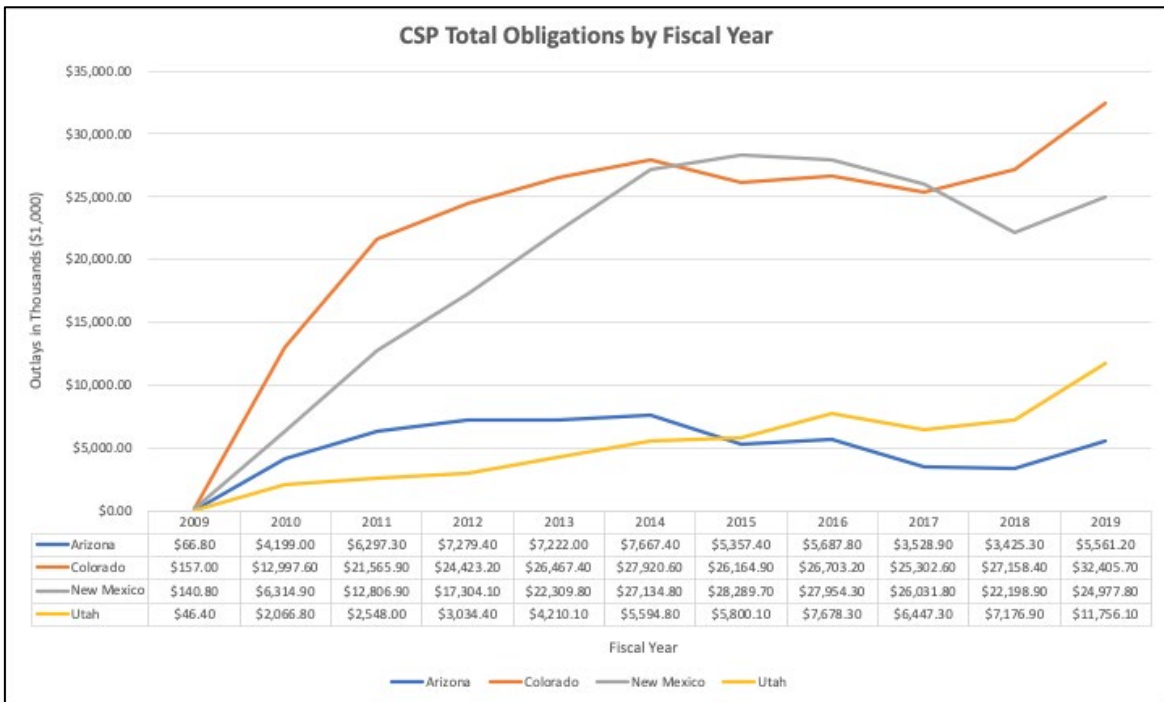


Figure 5. CSP Obligations by Fiscal Year

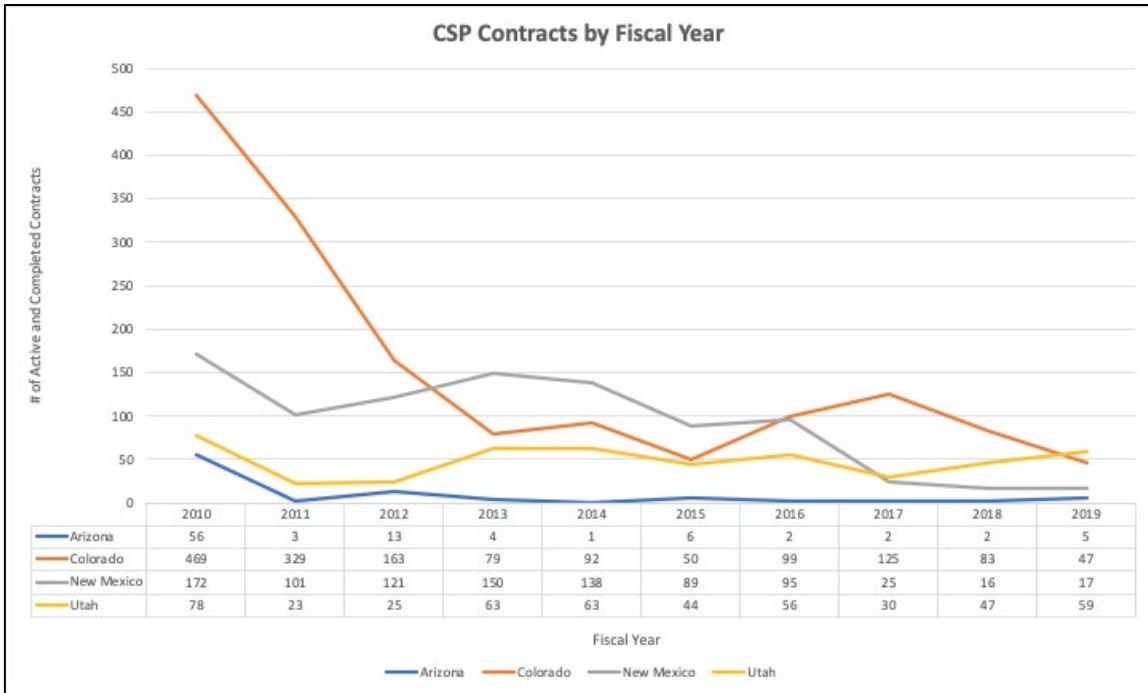


Figure 6. CSP Contracts by Fiscal Year

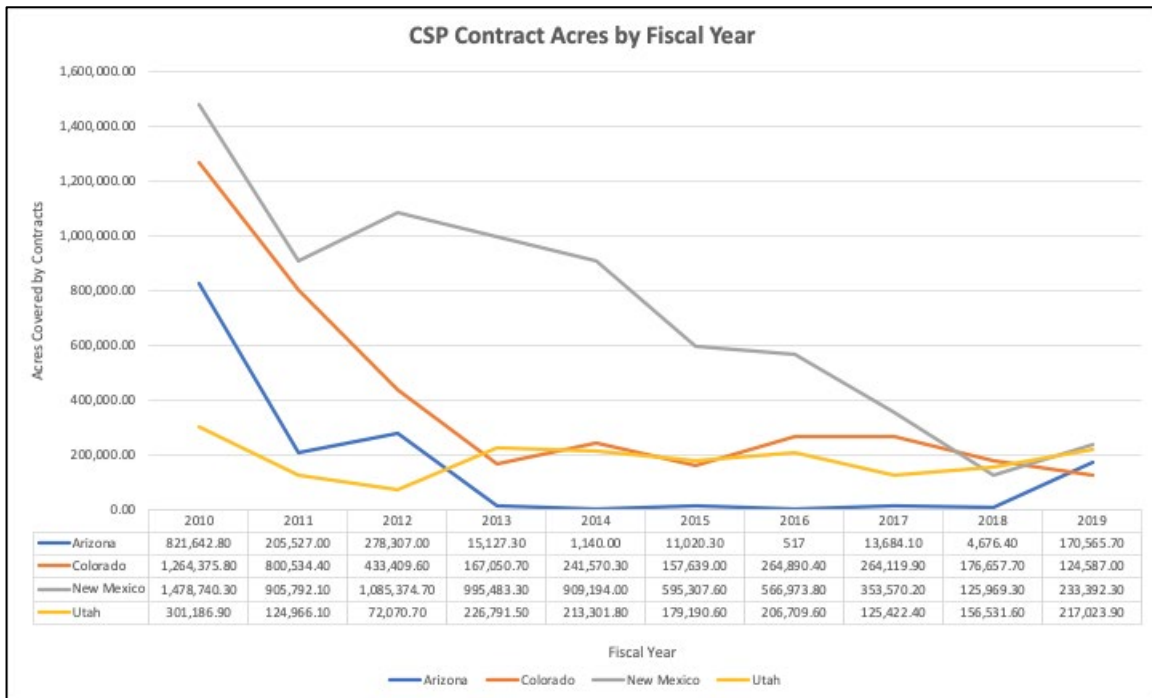


Figure 7. CSP Contract Acres by Fiscal Year

While our research focused on NRCS programs, we learned of other conservation programs available in Arizona. Many of the ranchers we interviewed had benefited from the Livestock & Crop Conservation Grant Program (LCCGP) offered by the Arizona Department of Agriculture (AZDA). This program was the result of the voter-supported Grow Smarter Arizona program, which resulted in the establishment of the LCCGP fund by the Arizona Legislature in 2003. The grant program supported private landowners and lessees of State and/or Federal lands to implement conservation management practices with the goal of conserving open space.¹⁸ The development of the program was informed by key stakeholders in conservation in Arizona: US Forest Service, US Bureau of Land Management, NRCS, Arizona State Land Department, Arizona Game and Fish Department, Arizona Cattle Growers Association and The Nature Conservancy.¹⁹

AZDA completed six LCCGP funding cycles between 2004 and 2015, awarding 256 grants in every county except for La Paz County. In total, \$16,576,121 were awarded and the fund was exhausted after fiscal year 2016 (Figures 8, 9). Seventy-eight percent of awarded projects were for water development (including solar), while 43 percent supported fencing, 25 percent grassland restoration and 8 percent for erosion control.²⁰ The LCCGP was a highly successful and effective program that allowed agricultural producers to leverage grant funds to access additional conservation incentive programs, increasing conservation practices across the state and boosting ranching businesses specifically.

¹⁸ Arizona Department of Agriculture, *Livestock & Crop Conservation Grant Program*

¹⁹ Arizona Department of Agriculture, *LCCGP General Overview*

²⁰ *ibid.*

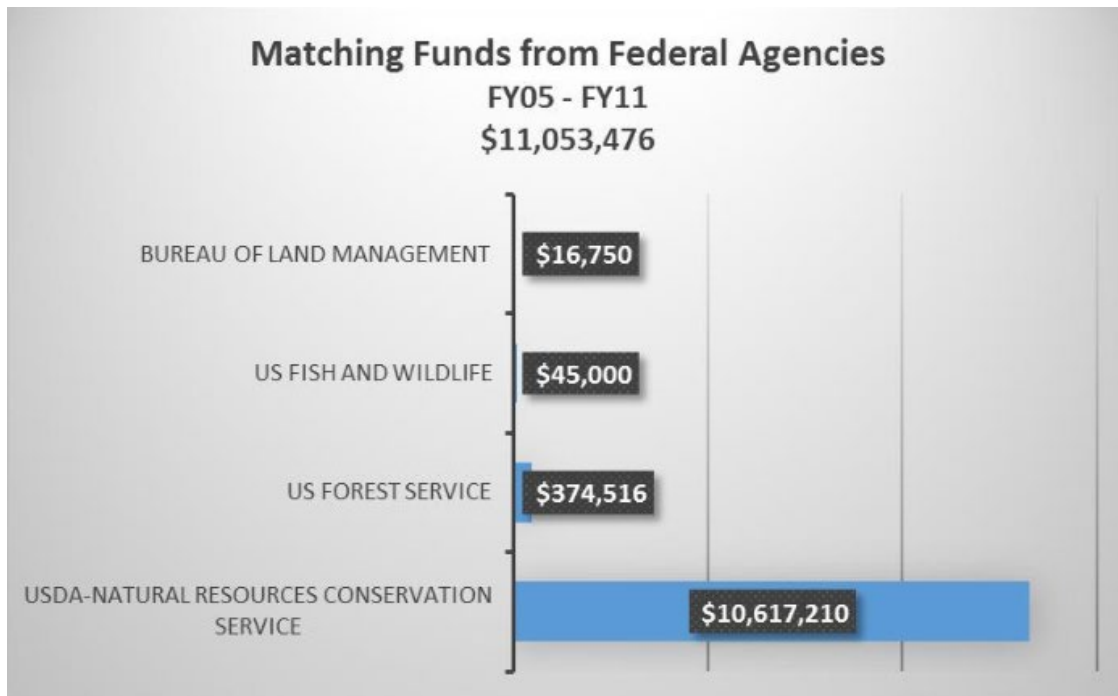


Figure 8. LCCGP Matching Funds from Federal Agencies²¹

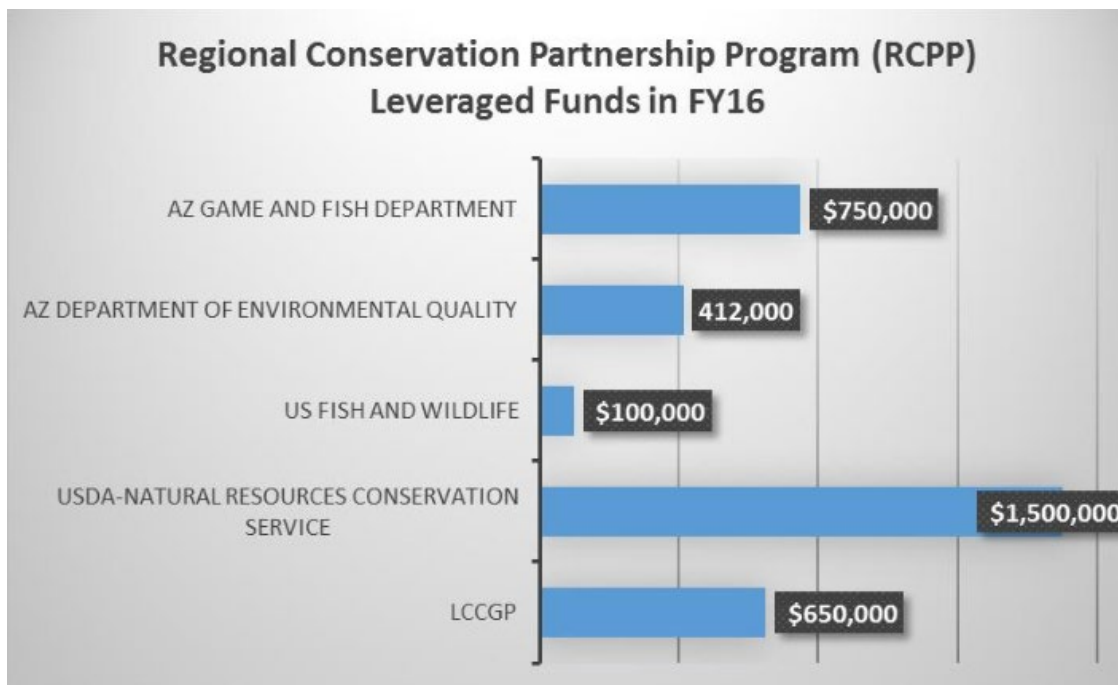


Figure 9. LCCGP RCCP Leveraged Funds in Fiscal Year 2016²²

²¹ Arizona Department of Agriculture. *LCCGP General Overview*

²² *ibid.*

Study Aims

In light of Arizona's on-going efforts towards conservation this report, prepared by our study team – graduate students in the Arizona State University Food Policy and Sustainability Leadership program, seeks to provide recommendations for improving conservation in Arizona through increased access to and involvement in NRCS programs for Arizona ranchers. The initial concept for this project arose during a visit of the ASU Food Policy and Sustainability Leadership students and faculty to the C-Bar Ranch outside of Wilcox, Arizona. During the visit in December 2019, the cohort toured the Thompson family ranch and learned about some of the issues and opportunities facing their operation including their use of some NRCS programs to support their conservation goals. During the visit, the topic of moveable fences came up along with discussions of other potentially useful practices that could be available for financial support through the NRCS EQIP or CSP programs. Based on these conversations, the initial goal of the project was to understand current practices available to Arizona ranchers through NRCS programs and to develop a list of desired practices that could be added to the current offerings, as well as a strategy for their adoption. However, after preliminary discussions with Sharma Torrens, the AACD Conservation Education Director, a couple of Arizona ranchers, and Dr. Michael Kotutwa Johnson who studies Tribal access to NRCS programs, it became clear that moveable fences may not be the most important thing to study. While there may still be some practices that could be added to the current Arizona guides, it became clear - due to pressing conservation issues and low participation in these incentive programs in Arizona - that the more important issue to investigate was access to and knowledge of the CSP and EQIP programs more generally.

This project now aims to identify and describe barriers faced by clients and potential clients of NRCS in Arizona and highlight opportunities for mitigating those challenges in the future. As lifelong students dedicated to building sustainable food systems, we view this work as beneficial to both the land and the people who steward it. We hope that our recommendations will help the NRCDs, AACD, NRCS, and other conservation advocates find ways to reduce any hassle and make NRCS programs more accessible to all Arizona ranchers.

Methodology

The research team met with many individuals closely tied to ranching in Arizona and conservation programs in order to learn more about current systems, programs, and barriers to participation. First, the team met with the AACD's Conservation Education Director, Sharma Torrens, to gather information about AACD's goals related to conservation incentive programs. The team also explored the work of Dr. Michael

Kotutwa Johnson on issues of access to and suitability of NRCS programs for Tribal farmers and ranchers. To supplement the team's consultation of his dissertation work, Dr. Johnson provided a presentation of his research via Zoom including an opportunity for questions and dialogue. To get a national perspective on NRCS programs and their evolution over time, the team met with Ferd Hoefner, Senior Strategic Advisor for National Sustainable Agriculture Coalition, who has worked extensively on conservation policy over his tenure with NSAC. Team members also contacted NRCS staff at the Arizona State office and field offices to gain insight on the implementation of NRCS programs in Arizona and contacted NRCS staff from other states to compare local implementation.

In addition to expert consultations, the research team felt it was necessary to consult with the end-users themselves, Arizona ranchers, to gain a complete picture. In order to gather more information and insight from producers about barriers to participation in NRCS conservation programs, our research team invited 25 Arizona ranchers to participate in one-hour interviews. Participants were contacted via email to schedule interviews that took place over the phone. Of these 25, eight ranchers were successfully interviewed over the phone, two ranchers agreed to participate but were ultimately unable to be interviewed, one rancher declined to participate, and the remaining 14 did not respond. Outreach and interviews took place in June and July 2020 - during the height of the Coronavirus pandemic and the summer grazing season - therefore the response rate was likely lower than it would have been under normal conditions or at a different time of year. The ranchers interviewed represented six (Cochise, Coconino, Maricopa, Mohave, Pinal, and Yavapai) of Arizona's 15 counties. Interviews covered topics including farm size and operation details, current conservation practices and incentive programs used, knowledge and past involvement with NRCS conservation programs, barriers to utilizing NRCS programs, and suggestions for increased participation in NRCS conservation programs. Interviews were semi-structured to allow participants to direct the conversation towards their highest priority issues and not all participants were asked every question. The full list of interview questions is provided in Appendix A. Interview responses were analyzed by research team members and common themes are outlined in this report.

Interview Themes

From our interviews it was clear that ranching operations in Arizona are as different as the ranchers themselves and thus critical issues vary significantly across the state. While each producer provided a unique perspective, several themes emerged in common across Arizona producers and are described below.

Relationships & Knowledge of NRCS and/or Other Agencies

One of the themes that we observed throughout our interviews was that all participants were aware of the NRCS and had a basic understanding of its programs. In some cases, producers highlighted the importance of knowing someone who had entered an NRCS contract before. They also highlighted the importance of building and maintaining a relationship with NRCS field offices and being connected with an NRCS agent who could walk them through the process. Several producers expressed how helpful and patient NRCS staff were throughout the process.

However, even those with good relationships noted concerns over the process of applying for EQIP and CSP and some of the bureaucratic hurdles to using the programs. Participants had varied experiences with the processes of applying for NRCS programs, including EQIP and CSP. Only half of the producers we interviewed had prior experience participating in EQIP or CSP contracts.

A few participants identified several other organizations or agencies, outside of NRCS, with whom they have partnered in order to implement conservation practices on their farm. Those mentioned by name in the interviews include Arizona Natural Resource Conservation Districts, Arizona Cattle Growers, Arizona Game and Fish Department (AZGFD), Farm Bureau, The University of Arizona Cooperative Extension, USDA Farm Service Agency, AZ Department of Agriculture (e.g. Livestock and Crop Conservation Grant), and AZ Department of Commerce (e.g. grant to replace generator wells with solar).

Additionally, several producers brought up issues or concerns about the coordination (or lack thereof) around working with multiple government and state agencies such as the Forest Service, AZGFD, the Bureau of Land Management, etc., towards common conservation goals. Several ranchers brought up the desire for better alignment and communication between the land management agencies and the NRCS. One rancher from Pinal county said, "I would participate [in EQIP] if I could get the 'okay' from the Forest Service." In this case, bureaucratic hurdles within the Forest Service, which this rancher said have been unresolved for about ten years, are a barrier to this producer receiving additional support from NRCS to implement conservation practices. This same rancher spoke of a disconnect between NRCS management plans and Forest Service management plans - when consulted for the same land, the two agencies came to very different conclusions.

A District Conservationist who works at both a field office and the State office confirmed that communication between agencies continues to be challenging. He noted the success of the Joint Chiefs Landscape Restoration Partnership as an example of inter-

agency collaboration.²³ A producer from Cochise county credited her conservation success to convening an annual meeting with all of the relevant agencies including NRCS, Forest Service, Game and Fish, etc. to ensure that everyone was on the same page. While other agencies and interagency alignment issues are generally beyond the scope of this report, it is important to include this information as NRCDs and AACD may have the potential to act as a liaison on some of these issues.

Bureaucracy & Process of Applying

Many ranchers interviewed mentioned that the cumbersome process of applying and the complex and specific rules and regulations that govern the programs made it difficult to participate in NRCS programs. A rancher in Yavapai County who had successfully participated in the EQIP program described their EQIP file as being “4 inches thick” and emphasized that the abundant and often redundant paperwork “takes times...which was hours that [they] couldn’t be out doing stuff on the ranch.” Furthermore, the rancher stressed that the required documentation and redocumentation throughout the application process was a drawback to participating in the program.

A rancher in Mohave County shared that there is little room for error on the paperwork and in the implementation of EQIP projects. This rancher told a story of a friend who installed the wrong size pole on a solar panel project, and NRCS refused to pay for the project. This rancher highlighted the need for close review of the approved project specifications before the project is implemented to ensure that the entire project is eligible for reimbursement. This close review can be time-intensive and require specific knowledge of project specifications, which some ranchers might not have.

Many ranchers interviewed mentioned that a barrier to participation in the EQIP program is that the program requires a cost share (does not cover 100% of costs associated with a project) and that it is a reimbursement program. Ranchers shared that the low cash flow associated with ranching makes it difficult to have the funds to pay the upfront costs for an EQIP project. Past and current supplemental programs through the AZ Department of Agriculture and the AZ Game and Fish Department, including the LCCGP program, have helped cover remaining costs associated with EQIP conservation projects. Ranchers communicated that they would not be able to participate in EQIP without this supplemental funding.

²³ Marques Munis Interview

Perception of Government Aid and Involvement

Another interesting issue that emerged in several interviews was the impact that personal or family perception of government programs could have on a rancher's decision to access these programs. Several producers expressed a reluctance to accept federal aid and a distrust of increased government involvement in their ranching operations. One rancher explained that they were first resistant to applying for federal funding because of a perception that it meant taking a handout from the government; they described it as "ranching welfare," which went against their independent spirit and was stigmatized in their community. However, after their NRCS agent explained that the money they would receive was funded through their tax contributions, they were willing to apply for EQIP funds. While that rancher maintained that they would prefer to pay less in taxes than have access to these programs, the understanding that they contributed to the funds they would receive was sufficient to justify applying for the money.

Another rancher noted that they had used and supported using the EQIP program for infrastructure improvements, but disapproved of the CSP program because it paid producers for "what they should be doing anyway." A subsequent rancher was reluctant to apply for the programs because of increased government oversight on their lands to meet the environmental and archeological study components of the application and the results evaluation processes. That rancher felt that the potential risk of additional government scrutiny outweighed the benefits of government funding. On the other hand, another rancher noted that the need for financial assistance for conservation outweighed their reservations against working with a government agency. Additionally, the latter noted a greater distrust of the government in older generations suggesting that as ranches continue to transition to younger generations there may be an increased appetite for using these programs.

Other Issues Identified

An original goal of this project was to identify and explore practices, specifically moveable fencing, not currently prioritized by NRCS incentive programs that would support regenerative and sustainable ranching practices. While most producers were not specifically interested in moveable fences, this provided an excellent catalyst for broader conversations around the appropriateness of available practices and standard project engineering specifications. The standard specifications for certain infrastructure projects, e.g. pipe sizes or height of water tank supports, are not always applicable to the conditions facing Arizona ranchers. In some cases the engineers are willing to work with applicants to adjust specifications to meet their needs, but the burden falls on the

rancher to have the expertise required to understand the specifications and the knowledge of alternative options.

Recommendations

Based on the NRCDs and AACD's unique role as a supporter of conservation across the state of Arizona and the relationships the NRCDs and AACD has with many state and federal agencies, the following are recommended actions the NRCDs and AACD can take to increase participation in NRCS conservation programs by Arizona ranchers.

Streamline the Application Process

Many ranchers identified process-related barriers that make accessing NRCS program funds difficult. While a complete overhaul of the application process is unlikely, cooperation between the NRCDs, AACD and NRCS to move toward a simpler application process will likely result in greater ease of participation in conservation incentive programs by Arizona ranchers. In addition, the need for coordination between state and federal agencies was apparent in interviews. The AACD could expand its support of Arizona conservation programs by facilitating meetings between these state and federal agencies, perhaps through planning sessions at the annual AACD conference. In addition, NRCDs and AACD could assist in educating producers about these processes and/or reassessing existing procedures so that NRCS programs operate more in tandem with other agency programs

In an effort to streamline the application process and increase participation, the Prescott Valley field office is drafting contracts for multiple programs simultaneously when meeting with farmers and ranchers. This integrated application process involves an interview and review of all of land and operations, followed by coordination between NRCS programs to ensure that the producer has contracts for everything that is eligible. First they consider CSP, then EQIP, then others if applicable and then conduct field assessments and begin conservation planning.²⁴ Since this is the first year of this pilot process, we recommend that NRCDs and AACD connect with the Prescott Valley Field Office in the next year to evaluate the effectiveness of this strategy. If it proves effective, we recommend that NRCDs and AACD advocate for this holistic application approach to be used in all NRCS field offices across Arizona so that farmers and ranchers are able to enroll in multiple programs and receive incentives for all eligible conservation practices in a timely manner.

²⁴ Marques Munis, Phone Interview, August 5, 2020

Advocate for Policies that Increase Access and Participation to NRCS Programs

As mentioned previously, the LCCGP allowed ranchers to implement conservation practices that they would otherwise not have been able to fund. Many of the ranchers we interviewed leveraged the LCCGP funds to pay the cost share for NRCS conservation programs. When researching the history of the LCCGP, an AZDA staff member shared that there is still a small amount of money remaining in the LCCGP fund. While it's not known what will happen with this money, she estimated that AZDA would act to use the funds within the next two years.²⁵ We recommend that AACD collaborate with AZDA and advocate for a continuation of the LCCGP or a similar program to sustain conservation practices across the State. AACD should encourage legislators to appropriate funds for the next five to ten years at a minimum to support agricultural producers in adapting to the challenges of climate change. In particular, the grant program should earmark a large percentage of available funding for Tribal and other socially disadvantaged agricultural producers.

While the interviewed producers differed on many issues, there was general agreement that conservation was a critical piece of maintaining their operations and central to their ranching values. All of the ranchers we spoke with are already using some kind of rotational grazing system and were interested in learning more about the connections between grazing practices and rangeland health. While there was an overarching desire to improve grazing practices (and some ranchers were already very well versed in the land benefits of grazing), there is room for the NRCS and AACD in partnership with the NRCS to make these land health and grazing connections more explicit. A key recommendation for achieving this goal would be to directly address the connections between conservation goals and grazing practices at the NRCS State Technical Committee (STC) meetings this fall.

The fall STC 2020 meetings are especially important because the NRCS will likely decide on the intrastate regional high-priority areas and the state priority resource concerns for each region under the new EQIP Incentive Contracts Program.²⁶ The EQIP Incentive Contracts program, as approved in the 2018 Farm Bill, is intended to provide payments for practice implementation as well as annual payments for operations and maintenance costs and lost income due to the practice implementation.²⁷ The program is being touted as a potential bridge between EQIP and CSP and given the current

²⁵ Lisa James. Phone Interview. August 4, 2020.

²⁶ "Environmental Quality Incentives Program," Title 7 *Code of Federal Regulations*, Pt. 1466

²⁷ NRCS, *Environmental Quality Incentives Program*

disparity between Arizona EQIP users and Arizona CSP users this could be a crucial program for building up the use of CSP in Arizona.

In anticipation of competing priorities between the major agricultural sectors in Arizona, we recommend the following three priorities that are directly impacted by grazing management, but are also relevant to other sectors:

- Soil health
- Water conservation
- Fire management

We also recommend the development of an information package of ranching related practices and infrastructure improvements²⁸ as available currently through EQIP or CSP, (e.g. CPS 614 - watering facility, CPS 576 livestock shelter structure, CPS 533 prescribed grazing) that could be bundled together in an idealized picture of program usage. The goal of the package would be to understand how and when EQIP, CSP, and the new EQIP Incentive Contracts programs could be used synergistically to achieve a long term, ranch-wide conservation plan. Our hope is that such a plan would be able to maximize the conservation benefits across the different programs while minimizing work duplication or re-engineering over time. This information could be developed from and used in conjunction with the consolidated planning process being piloted by the Prescott Valley Field Office to better prepare ranchers for those meetings.

Increase Outreach to Socially Disadvantaged Producers

Ranchers mentioned the need for increased outreach for NRCS programs. Outreach is needed not only to increase awareness of the programs, but also to support producers when applying for and implementing EQIP and CSP projects. We heard from NRCS staff that AACD's current CSP outreach is crucial to informing agricultural producers across the state.²⁹ Given the AACD's ongoing work to support the local NRCDs in connecting landowners with NRCS programs, it is unclear where the breakdown in communication typically occurs. Also, given that we were only able to interview 8 producers it is likely that the disconnect is dependent on the specific constellation of NRCS staff, NRCD leadership and resources, and other agency resources available to any given rancher. It may be more effective to survey producers in each NRCD specifically to understand the unique situations facing producers on a local scale. One rancher from Coconino county said it best,

“Conservation districts are one of the best resources that we have,
and we don't utilize them enough.”

²⁸ United States Department of Agriculture Natural Resources Conservation Service. *Arizona Field Office Technical Guide*

²⁹ Rebecca de la Torre. Phone Interview, August 4, 2020.

We recommend using the results of this brief study as a starting point for a conversation among the AACD board members about where outreach programs can be improved and what resources may be necessary to achieve those goals. Additionally, this could be a topic for a listening/discussion session at the next AACD annual conference or could be addressed by some other passive survey mechanism (e.g. a poll that enters you into a drawing to win a prize).

More immediately, the AACD could have a significant impact on access through efforts to normalize the use of these programs. As noted in the section on interview themes, exposure to other producers, family, or friends who had previously used EQIP or CSP was correlated with greater interest in learning more about the programs. One potential idea would be for the AACD to create a series of short video testimonials from Arizona ranchers that have successfully used the EQIP and/or CSP programs. Ideally, these videos would highlight a range of completed (or in-progress) projects available to Arizona ranchers in a way that is both interesting and engaging. By featuring real AZ ranchers, we anticipate that the viewers would be able to easily relate to the situations and stories of the other ranchers and see themselves as potential future success stories.

Future Research

Additional Ranching Perspectives

Because this study focused on ranchers who are very connected within the AACD network, we recognize that these individuals may prioritize and seek out conservation opportunities more often than the average producer in Arizona. Future research with producers outside of the AACD network could explore whether or not these individuals experience the same barriers to accessing NRCS programs identified by our interviewees.

Experience of Tribal Ranchers

In addition to the recommendations above, further research should also be conducted to identify barriers that prevent Tribal farmers and ranchers in Arizona from participating in NRCS programs. Arizona is home to 22 federally recognized Tribes located throughout the state (Figure 10).

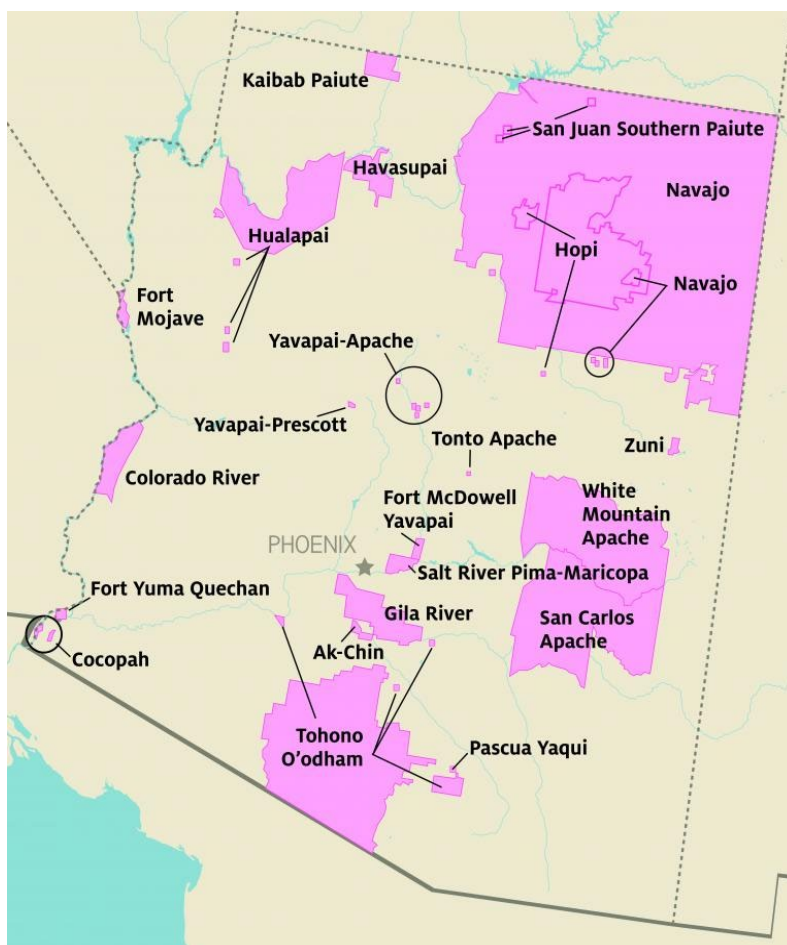


Figure 10. Map of federally recognized Tribes in Arizona.³⁰

According to the 2017 USDA Agricultural Census, 11,729 of Arizona's 19,086 agricultural producers (61 percent) were American Indian or Alaska Native.³¹ In that same year the nine Arizona field offices that serve predominantly Tribal producers obligated a total of 28 contracts, with the greatest number being 10 in the San Carlos field office and the least being zero in both the Keams Canyon and Shiprock field offices³² (Figure 11). By comparison, the remaining 15 field offices not located on or near Indian Reservations obligated 163 contracts.³³ These numbers show the massive potential to increase contracts in Tribal communities.

³⁰ Arizona State Museum, *Federally Recognized Tribes in Arizona*

³¹ United States Department of Agriculture National Agricultural Statistics Service. "Table 61. Selected Farm Characteristics by Race: 2017"

³² Land ownership varies depending on each Tribe. In some cases one contract will have more than one producer, meaning that these statistics do account for the number of producers who receive contracts.

³³ United States Department of Agriculture Natural Resources Conservation Service. *Arizona State Technical Advisory Committee Presentation*

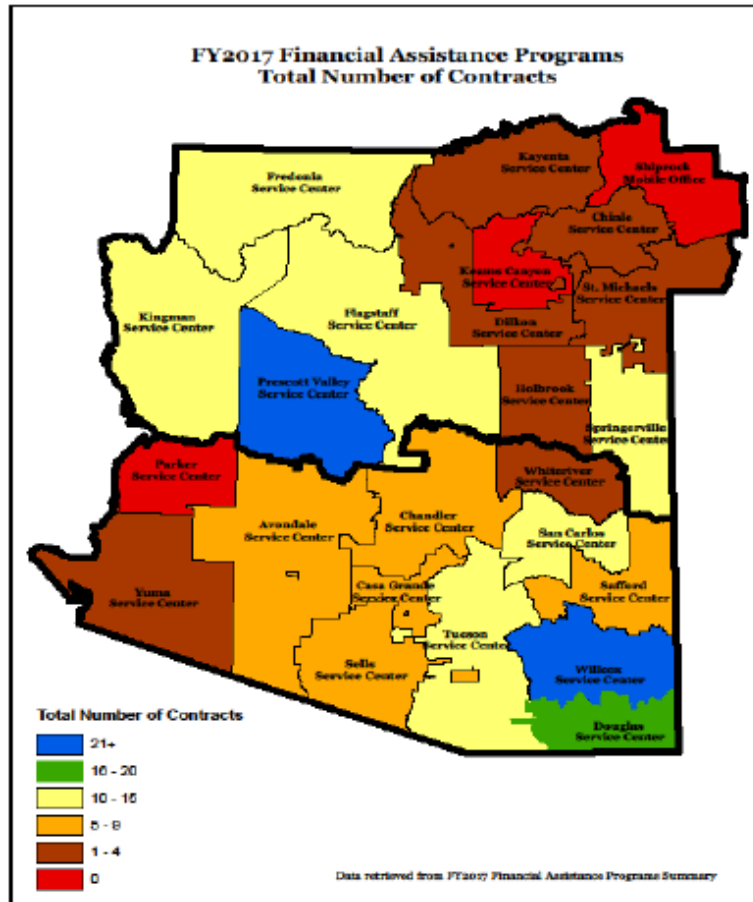


Figure 11. Map of NRCS Financial Assistance Contracts in 2017. ³⁴

Through our research, our team identified a great need for changes in practices and policies that keep many Tribal producers from participating. Due to the time constraints of our project and the timeline for Internal Review Board approval, we were unable to conduct interviews of Tribal producers in Arizona. However, we spoke with one representative from the Arizona Association of Tribal Conservation Districts, who works in Northeast Arizona. He identified a number of barriers that prevent Tribal producers in his area from accessing NRCS programs, including the application process, location of NRCS offices, capacity and staffing of Tribal conservation districts, additional costs associated with remoteness of locations, and lack of alignment with traditional Indigenous agriculture knowledge and practices.

While these barriers represent the perspective of one individual and are not representative of Arizona's diverse Tribal communities, there is overlap with the findings of Dr. Michael Kotutwa Johnson's dissertation work on NRCS access among the Hopi

³⁴ *ibid.*

people.³⁵ Dr. Johnson's work also noted lack of alignment with Tribal practices and issues with the application process, although he highlighted the impact that different arrangements of Tribal land tenure can have on using NRCS programs. While these issues may not be experienced by all Arizona Tribal communities and may not be an exhaustive list of potential barriers, we believe they represent a good starting point for future assessments of Tribal access.

NRCS has some existing efforts in place to ensure Tribal farmers and ranchers can utilize conservation programs³⁶ including resources to acknowledge and include Traditional Ecological Knowledge in conservation programs. Specifically, the Indigenous Stewardship Methods (ISM) guidebook is a valuable resource developed by Native Elders/Advisors and NRCS employees intended to help NRCS employees gain an understanding of the indigenous perspective of natural resources conservation, ISMs, and intellectual property rights.³⁷ Additionally, the 2018 Farm Bill included Tribal-specific provisions, including requirements for alternative funding arrangements to support Tribal access to NRCS conservation programs.³⁸

One Tribe in Arizona has received funds through the Alternative Funding Arrangement (AFA) to conduct two different programs. The AFA provides a unique opportunity for Tribes to use conservation practices that are scientifically proven but may or may not be approved for regular NRCS programs. This is especially important for Tribal communities; as sovereign nations with the wisdom and familiarity of the lands on which they live, they have Indigenous agricultural practices that are effective and essential conservation practices. The Tribal AFA provides an opportunity for Tribal leaders to convene a working group and request funding from NRCS to implement these practices. The Tribe then receives funding and manages the program utilizing local resources, which in turn creates jobs and supports the local economy. We urge AACD to learn more about these programs and participate as a partner where appropriate.

For future research, we recommend looking into the impact of the 2018 Farm Bill provisions, as well as focusing on specific applications of the ISM guidebook for Arizona, opportunities for improving alignment of NRCS Conservation Assistance with Indigenous Stewardship Methods, and other opportunities for improving access to NRCS programs for Native producers in Arizona.

³⁵ Johnson, Michael K. "Indigenous Agricultural Knowledge: Barriers, Integration, Policy, and Outreach"

³⁶ NRCS, *Tribal Assistance*

³⁷ United States Department of Agriculture Natural Resources Conservation Service. *Indigenous Stewardship Methods and NRCS Conservation Practices*

³⁸ Native Farm Bill Coalition, Indigenous Food and Agriculture Coalition, University of Arkansas. *Tribal Provisions in the 2018 Farm Bill*

A Note on the Tribal IRB Process

As referenced above, this capstone team strongly recommends further research into barriers faced by Tribal ranchers on Tribal lands. The team had a strong desire to pursue this work in concert with the findings presented above, but predetermined research schedules and rigid procedural timeframes prevented that outcome. While we cannot provide a researched recommendation on this topic, we do wish to share words of wisdom to future teams.

Many educational institutions – Arizona State University included – take special precautions to govern research activity involving Tribal people, Tribal lands or Tribal governments. A history of exploitative and extractive relationships between outside researchers and Tribal communities is a grim reminder of the necessity of such safeguards at both the research institution and the Tribal government level. This may manifest as special approval processes which require more training, more reviewers and more preparatory time.

This process should not lead to less interest in Native research topics but should primarily serve as a mechanism for transforming well-intentioned research goals into a strategic partnership that benefits all parties. We encourage meaningful and sustained partnerships among researchers and Tribal Nations so that quality improvement projects such as the one presented here can adequately capture the experiences of Tribal people in summary recommendations.

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Appendix

Appendix A: Rancher Interview Questions

1. What county are you located in?
2. Please describe your farm or ranch operation. (include size, scale, challenges, public land, terrain, etc.)
3. How long have you been ranching?
4. Describe your current permanent ranch infrastructure. (include fencing, watering, roads, etc.)
5. Do you use any temporary or portable infrastructure? (include fences, waterers, shade structures, solar, generators, etc.)
6. How do you move through your lands?
7. What's your familiarity with NRCS? (include agent, office, visits, etc.)
8. What's your familiarity with your local conservation district? (include active member or other groups)
9. Are you familiar with EQIP?
10. Have you ever or do you currently participate in EQIP?
11. If yes, describe your experience. (include projects, positives, drawbacks, etc.)
12. If not, why?
13. What incentivizes you (or would incentivize you) to use EQIP?
14. Are there any practices that are not currently covered that you would like to see on the EQIP list?
15. Are there any bureaucratic barriers to participating in EQIP? (e.g. signatures, taxable income increases)
16. Are you familiar with CSP?
17. Have you ever or do you currently participate in CSP?
18. Why or why not?
19. What incentivizes you (or would incentivize you) to use CSP?
20. Are there any practices that are not currently covered that you would like to see on the CSP list?
21. Are there any bureaucratic barriers to participating in CSP? (e.g. signatures, taxable income increases)
22. Do you use any non-NRCS conservation incentives? (include why and which ones)
23. What does conservation mean to you? How do you implement that principle in your operation?

24. Do you use any Traditional Ecological Knowledge practices or other cultural conservation practices?
25. Do you currently use a specific type of grazing system?
26. Are you familiar with using grazing systems to improve soil health?
27. Have you heard of grazing systems such as Management Intensive Grazing, Rotational Grazing, Adaptive Multi-Paddock Grazing? Or programs like Holistic Management?
28. If yes, please describe. (include interest, experience, barriers, strategy, etc.)
29. If no, please describe. (include incentive, more info?)
30. Do you have any experience with portable fences, or do you know anyone who has experience with portable fences? (include biggest benefits, obstacles, support, etc.)
31. Is there anything else we have not discussed that you would like us to know?
32. Would you like us to provide you with more information about anything we have discussed?

Would you like to receive a summary of our findings and recommendations?

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