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Technical Assistance Programs for Agricultural Irrigation Improvements in Arizona

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Introduction

A number of organizations offer technical assistance programs for improvements to agricultural irrigation systems. Irrigation improvements can lead to more efficient and precise application of water. As a result, growers have more flexibility to respond to temperature extremes, water scarcity, or market fluctuations.

This guide provides an overview of the different types of technical assistance programs available to growers in Arizona to improve irrigation efficiency or water conservation on the farm. Definitions of the various funding types (for example: cost share, cooperative agreement, grants) are also provided. This guide describes the different types of technical assistance programs, the available funding, and the eligibility requirements (who can apply) for those programs to assist producers in identifying the best fit for their individual operation. See Table 1 for this information.

Some of the technical assistance program funds and assistance listed in Table 1 are competitive. Therefore, even if a grower meets the eligibility requirements, this does not guarantee the grower will be awarded the funds or assistance.

Useful definitions

Contract

An agreement with specific terms between two or more persons or entities in which there is a promise to do something in return for a valuable benefit known as consideration. A contract can be used to acquire property or services.

Cooperative or Partnership Agreement

An eligible entity applies for financial assistance on behalf of an agricultural producer. An eligible entity includes a Federally-recognized Tribe, State, unit of local government, agricultural or silvicultural association, or other such groups of agricultural producers. This type of funding is distinguished from a grant in that it provides for substantial involvement between the federal agency (e.g. Natural Resources Conservation Service) and the recipient in carrying out the activity contemplated by the award.

Cost Share Agreement

In this type of agreement, a portion of the project or program cost is borne by the funding agency (e.g. Natural Resources

Conservation Service) and a portion of the project or program cost is borne by the funding recipient in order to help defray the cost of a particular improvement practice.

Grant

This is a direct award of financial assistance, the principal purpose of which is to transfer a thing of value from a federal agency to a recipient to carry out a public purpose of support or stimulation authorized by a law of the United States. Grants typically require reporting and may also include cost share or matching funds. Oftentimes a federal grant is not awarded to individuals, therefore a cooperative or partnership agreement with an agency or other organization may be necessary in order for the money to be conveyed to an individual.

In-Kind Contribution

As part of a grant or cost share agreement, a recipient is often required to provide a non-cash value contribution. In-kind contributions may be in the form of real property, equipment, supplies and other expendable property. The value of goods and services directly benefits a specifically identifiable project or program.

Loan

Federal loan programs (e.g. Farm Service Agency) are designed to help family farmers obtain loans and conduct business planning. The goal of federal farm loan programs is to graduate its borrowers to commercial credit. Once a farmer is able to obtain credit from the commercial lending sector, the Agency's mission of providing temporary, supervised credit is complete.

Loan Guarantees

Guaranteed loans provide lenders with a guarantee of percent of the loss of principal and interest on a loan. Farmers and ranchers apply to an agricultural lender, which then arranges for the guarantee. Loan guarantees permit lenders to make agricultural credit available to farmers who do not meet the lender's normal underwriting criteria.

Matching funds

Matching funds are sometimes required for grant applications. Fulfilling matching fund requirements can be in the form of real money or in-kind contributions, such as a person's time.

Subaward

This is an award of financial assistance in the form of money, or property in lieu of money, made under an award by a recipient to an eligible subrecipient. For example, a state or local entity may receive funds to distribute to qualifying individuals.

Tax Credit

This is a non-refundable credit, which is deducted from an individual's tax liability (what one owes in state taxes). The credit is put towards your state tax payments for up to five years.

Technical Assistance

Federal agencies such as Natural Resources Conservation Service provide technical assistance, supported by science-based technology, for enhancing conservation on agricultural and nonindustrial private forest land. This assistance is available at no cost to the recipient.

Not all of the aforementioned funding types appear in the following table; however they are commonly used in federal and state technical assistance programs and were therefore defined.

Further information and contacts

- *Determining the Amount of Irrigation Water Applied to a Field*, a University of Arizona, College of Agriculture and Life Sciences, Cooperative Extension publication: **http://ag.arizona.edu/pubs/water/az1157.pdf**
- For a directory of additional University of Arizona, College of Agriculture and Life Sciences, Cooperative Extension publications related to irrigation (listed by publication number), visit: **http://extension.arizona.edu/sites/extension.arizona.edu/files/resourcefile/resource/hepaul/CALSirrigationpubs.pdf**
- Find your local Natural Resources Conservation Service, Farm Services Agency, or Rural Development field office: **http://offices.sc.egov.usda.gov/locator/app**
- Find your local University of Arizona, College of Agriculture and Life Sciences Cooperative Extension office: **http://extension.arizona.edu/**

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Table 1. Technical Assistance Programs Available in Arizona for Agricultural Irrigation Improvements

Organization	Program	Funding type	Funding amount	Eligibility	More information
Arizona Department of Revenue (ADOR)	Agricultural Water Conservation Credit	**Tax credit**	The credit is equal to 75% of the qualifying expenses incurred in the purchase or installation of an agricultural water conservation system.	A partnership or an individual that incurs expenses during the taxable year for the purchase and installation of an agricultural water conservation system and has a conservation plan on file with NRCS. For details, visit: **http://www.azdor.gov/Portals/0/Brochure/562.pdf**	**www.azdor.gov/LinkClick.aspx?fileticket=bt7mtX38LQc%3D&tabid=66 pages 389-392** (ADOR tax form number 312)
Arizona Department of Water Resources (ADWR)	Water Management Assistance Program funds Irrigation Management Services	**Contract**	Irrigation consultation provided to assist producers with water management decisions.	Serves all Pinal Active Management Area agricultural producers.	(520) 836-1960 x123 irrigationmanagementservice@yahoo.com
United States Department of the Interior (DOI)–Bureau of Reclamation (BOR)	WaterSMART Grant	**Cost Share Agreement**	BOR provides 50/50 cost share funding. Group I: Up to $300,000 provided for smaller on-the-ground projects. Group II: Up to $1,500,000 for larger, phased on-the-ground projects. No more than $750,000 in a given fiscal year.	Irrigation and water districts, Tribes, States and other entities with water delivery authority.	**http://on.doi.gov/Jk3mGn**
United States Department of Agriculture (USDA)–Farm Services Agency (FSA)	Farm Ownership and Operating Loan Programs	**Loan**	Maximum indebtedness $300,000	Family-size farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender.	**http://1.usa.gov/HIfyN8**
USDA–FSA	Farm Ownership and Operating Loan Programs	**Loan guarantee**	Maximum indebtedness of $1,214,000	A percentage of Guaranteed Loan funds are targeted to beginning farmers and ranchers and minority applicants.	**http://1.usa.gov/HIfyN8**
USDA–FSA	Conservation Loan (CL) Program	**Loan guarantee**	Maximum indebtedness of $1,214,000	For information on eligibility, contact your local FSA office (**http://1.usa.gov/IhgNoD**) or visit the FSA website at **www.fsa.usda.gov.**	**http://1.usa.gov/I4ad5a**
USDA–Natural Resources Conservation Service (NRCS)	Environmental Quality Incentives Program (EQIP)	**Cost Share Agreement**	Up to 75 or 90% of costs not to exceed $300,000 per individual.	Persons engaged in livestock, agricultural, or forest production. Can own or lease land. If leasing, must have landowner permission.	**http://bit.ly/JrRUEL**
Western Sustainable Agriculture Research and Education (SARE)	Farmer/Rancher Grant	**Grant**	Individual farmers or ranchers may apply for up to $15,000, and a group of three or more producers may apply for up to $25,000.	Eligible to apply if primary occupation is farming or ranching, possess a farm/ranch tax number, OR you are a part-time producer with at least $1,000 documented annual income from the operation.	**http://bit.ly/IrSoMc** **http://bit.ly/HOxBUh**

There are many ways to irrigate crops in Arizona. One of the most common methods is the flood and furrow irrigation system (Figure 1). Figures 2, 3, and 4 demonstrate alternative practices that can improve irrigation efficiency on the farm. To compare the efficiency ranges of different types of irrigation systems, see the publication *Determining the Amount of Irrigation Water Applied to a Field,* which is listed under the Further Information and Contacts section of this publication.

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Figure 1. Romaine lettuce in Yuma, AZ irrigated by flood irrigation.

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Figure 2. Cotton in double crop operation in Goodyear, AZ. This method of planting increases soil infiltration. Additionally, stubble from previous crops acts as a mulch, reducing soil evaporation as well as suppressing weeds.

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Figure 3. Alternative row irrigation at the Maricopa Agricultural Center in Maricopa, AZ. By irrigating only every other row, crops still receive needed moisture and water is conserved. Additionally, alternate row irrigation is used as a means for controlling salt and moving it away from the seed line.

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Figure 4. Lateral move pivots irrigate a crop in Maricopa, AZ. By applying water with overhead sprinklers, the irrigation water and other inputs such as fertilizers can be delivered more precisely than with flood irrigation.

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cals.arizona.edu/pubs/farm/az1583.pdf

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