

Water Conservation Field Services Program 2000 Annual Report



Bureau of Reclamation
Upper Colorado Region
Albuquerque Area Office
Provo Area Office
Western Colorado Area Office

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WATER CONSERVATION FIELD SERVICES PROGRAM

Bureau of Reclamation - Upper Colorado Region

Annual Report - Fiscal Year 2000

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Upper Colorado Region Overview

The purpose of the **Water Conservation Field Services Program (WCFSP)** is to actively encourage water conservation, by assisting irrigation and other water districts with their responsibility to develop and implement water conservation plans. It is also intended to complement other state and local conservation efforts. The WCFSP, through each of Reclamation's Area Offices, is providing technical and financial assistance to the districts in developing and implementing water management and conservation plans, demonstrating unfamiliar and innovative water management technologies, and providing water conservation information and education.

This report is a summary of WCFSP activities in the Upper Colorado (UC) Region during fiscal year 2000. It has been prepared jointly by the Regional and Area Office Coordinators. Area Office Coordinators prepared the sections discussing their respective local programs. This document provides an overview of the WCFSP and discusses local WCFSP assistance activities and accomplishments.

The WCFSP has been implemented in the Albuquerque Area Office (AAO), headquartered in Albuquerque, New Mexico; the Provo Area Office (PRO), headquartered in Provo, Utah; and the Western Colorado Area Office (WCAO), headquartered in Grand Junction, Colorado. The Western Colorado Area Office is providing WCFSP assistance through its Grand Junction, Colorado and its Durango, Colorado offices. The Albuquerque Area Office is also providing WCFSP services through its El Paso Field Division Office located in El Paso, Texas.

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Introduction

In 1997, the U.S. Bureau of Reclamation initiated the Water Conservation Field Services Program (WCFSP) to encourage water conservation and efficient use of water supplies on Federal reclamation projects, as well as foster improved water management on a watershed basis throughout the Western states. The WCFSP was designed to implement the Preferred Alternative in Reclamation's March 1996 Final Environmental Impact Statement on implementation of the Reclamation Reform Act of 1982 (RRA). It is intended to fulfill Reclamation's legal responsibility under Section 210 (a) of the RRA to "encourage" water conservation, and to assist districts in meeting their obligation to develop water conservation plans under Section 210 (b). It is also intended to broaden our partnerships with others in fostering improved water management on a watershed basis in support of other Federal directives such as the Fish and Wildlife Coordination Act of 1958 and the Endangered Species Act of 1973. Its primary objective is to provide incentives through technical and financial assistance to water districts and water users to foster the efficient use and conservation of Western water supplies.

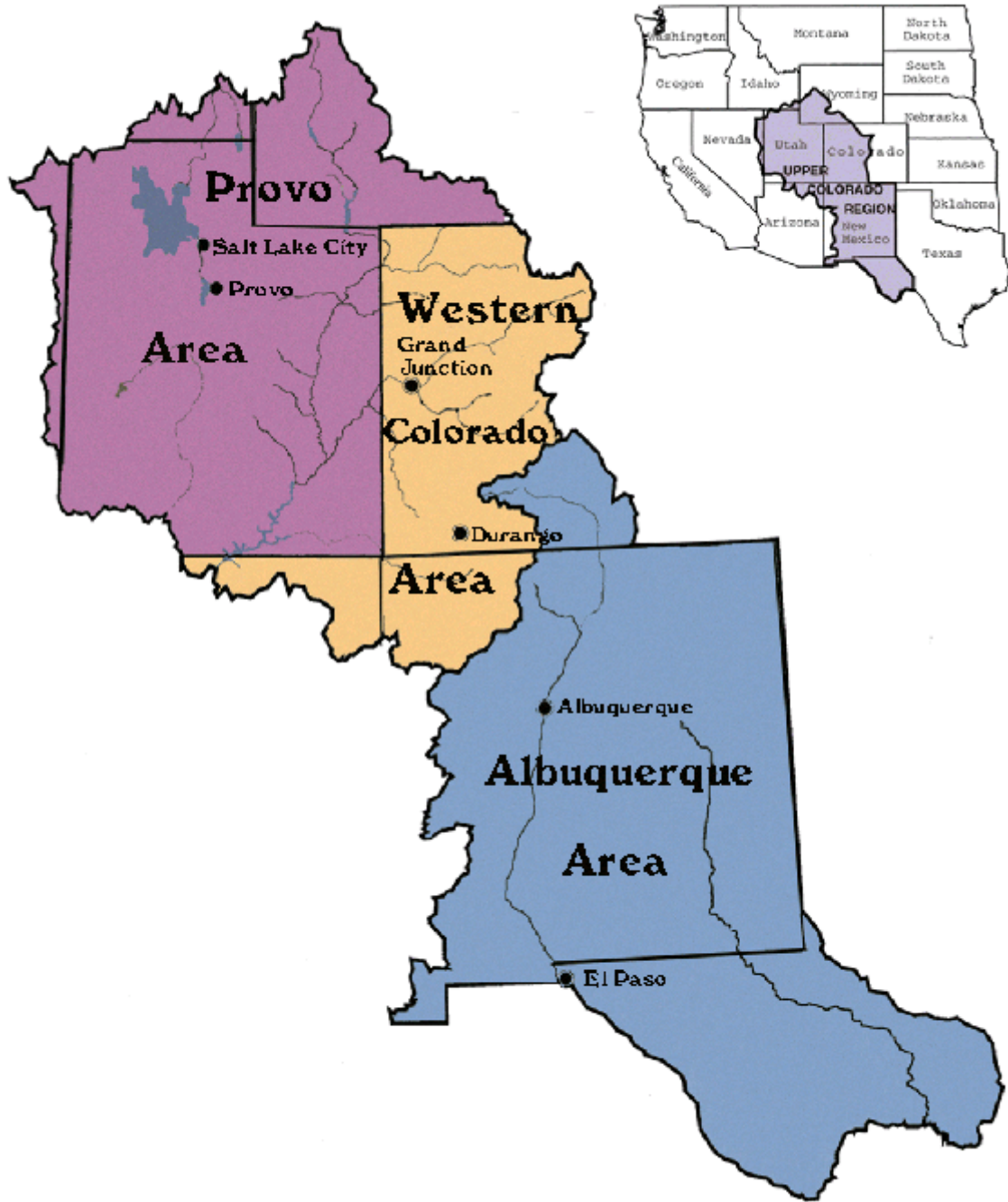
Purpose and Scope

The WCFSP has been established to actively encourage water conservation, assist water districts with their responsibility to develop water conservation plans, and complement and support State and other conservation programs, particularly where improved water management can be fostered on a watershed basis.

While the program emphasis under RRA is to work with Reclamation projects, the WCFSP is also designed to contribute to watershed partnerships outside of Reclamation projects to improve fish and wildlife habitat associated with water systems or water supplies affected by Reclamation projects.

For the purposes of the WCFSP, the term "conservation" means "efficient use," and not merely "saving water for other purposes." The WCFSP is about assisting districts, both urban and agricultural, in their efforts to manage water more effectively. It is about measuring water to know how much is being diverted and delivered. It is about accounting for deliveries of water to know where and how it's being used. And, it is about encouraging efficient water management practices to maximize the beneficial use of diversions from reservoirs, streams, and aquifers, while minimizing the environmental impacts to instream and other watershed resources.

The WCFSP is not intended as a replacement for other programs where Reclamation's overall goal is efficient water management—but rather, it is intended to complement and augment them in terms of providing a new field program strategy for conservation partnership and customer service.



Upper Colorado Region
Area Office Jurisdiction

Technical and Financial Assistance

The WCFSP provides a framework for an incentive-based program of technical and financial assistance at Reclamation's Area Office level. The WCFSP provides assistance to water districts; state, local, and Indian Tribal governments and sub-entities; colleges, universities, and public schools; nonprofit and profit organizations; and individuals. Additional technical support is available from Reclamation's Regional Offices and the Denver Technical Service Center.

Examples of technical assistance include such things as field visits, surveys, assessments or reviews by Reclamation staff to assist with planning, demonstration, or implementation; agreements to fund State or other technical staff or consultants to assist with, or develop plans; technical workshops, tours, or training provided by Reclamation or others; and other water conservation education outreach activities or sponsorship.

Examples of financial assistance include such things as grants or cooperative agreements for field demonstration of specific measures; cost-sharing on implementation of selected measures; stipends to districts to encourage joint planning; support for conservation research or technology transfer; and financial support for special incentives under existing State and other conservation programs.

Each Area Office has been challenged to develop a "base program" that will:

- Provide technical and financial assistance to districts and entities developing and implementing water conservation plans
- Establish collaborative efforts with district and other entities to encourage basinwide coordination in the planning, preparation, and implementation of water conservation plans by districts
- Develop and provide districts with planning guidance and other informational tools to assist in the development and implementation of water conservation plans
- Provide educational workshops and technical training opportunities for districts and other entities in water management and conservation planning and implementation
- Provide technical and financial assistance in demonstration and technology transfer of innovative or unfamiliar conservation technologies
- Provide cost-sharing opportunities to encourage the implementation of effective water conservation and efficiency improvement measures
- Ensure that Reclamation assistance programs support and complement existing State water conservation efforts

Each Reclamation Area Office has developed the specific mix of technical and financial assistance activities to be offered locally in each of four program emphasis areas, (1) develop water management and conservation plans, (2) promote conservation information and education, (3) demonstrate innovative or unfamiliar conservation technologies, and (4) implement effective water conservation measures.

Water Management Planning: Through the WCFSP, technical and financial assistance are made available to encourage the development of quality water management plans by districts. In many cases, this is one-on-one assistance provided by Reclamation staff. In others, it may be financial assistance through cost-sharing to support the district in development of its plan.

Typical activities include:

- Conduct field visits to assist with resource inventories and water conservation plans
- Assist with planning surveys and designs, water budgets and investigations, studies, and evaluations
- Facilitate planning among districts by encouraging and developing partnerships and agreements
- Coordinate technical assistance through partnerships and agreements among organizations

Conservation Information and Education: The WCFSP also promotes activities designed to create partnerships in conservation education, information dissemination, and training. Through a variety of means, local area offices are finding ways to develop information and education outreach programs through the WCFSP that support and emphasize conservation awareness.

Typical activities include:

- Conducting field tours
- Distributing information guides and materials
- Conducting workshops, including an annual water management seminar
- Providing on-the-ground educational services for general and specific activities
- Arranging partnerships with governmental, state, and local educational organizations
- Participating in water fairs and other children's education activities
- Establishing and supporting Water Conservation Information Centers

Demonstration of Innovative Conservation Technologies: Area programs are supporting local demonstration of projects such as improved water measurement, appropriate use of automation and telemetry control, new approaches to minimizing canal and ditch seepage, and innovative on-farm irrigation management methods.

Typical activities include:

- Assist with research, evaluation, and demonstration
- Sponsor specific conservation demonstration projects and activities
- Coordinate financial assistance for joint projects and partnerships with other agencies

Implementation of Effective Efficiency Measures: The implementation of effective efficiency measures is the ultimate objective of water management and conservation planning. The WCFSP is providing opportunities for both technical and financial assistance for water districts to begin implementing effective efficiency measures identified in their water conservation plans. Local programs provide cost-sharing, generally on a 50-50 basis, through cooperative agreements or grants.

Typical Activities include:

- Assist water agencies with implementing water conservation plans and water management practices
- Provide funds for implementation through cost-sharing activities
- Facilitate partnerships with other organizations to conduct implementation activities

The UC Region's WCFSP - In Summary

Staffing: Each office now has a coordinator guiding its local WCFSP. There are two coordinators for the Western Colorado Area Office—Dan Crabtree in the Grand Junction Office and Pat Page in the Durango Office. The Albuquerque Area Office Coordinator, David Allen, is stationed in El Paso, Texas, and there is a full-time Water Conservation specialist, Joseph Alderete, to assist in the Albuquerque Area Office. Janice Richardson is the Coordinator for the Provo Area Office. Each coordinator used local staff to assist with a variety of activities.

Area Office Coordinators have planned each local program and provided the basic WCFSP services. Their activities are described in considerable detail in subsequent sections of this report discussing each local program. The Regional Coordinator provided region wide program oversight and coordination along with technical support and training to Area Offices. The Regional Coordinator also participated with coordinators from other regions, along with staff from Denver and Washington, to develop and implement Reclamation wide policies and programs. Other regional staff have provided assistance in preparing cooperative agreements and grants, developing educational outreach materials, and performing miscellaneous administrative support.

Budget: The UC Region's WCFSP is funded from two sources—Water Management and Conservation (WMC) funds and Efficiency Incentives Program (EIP) funds. The WMC funds provide for the basic WCFSP program activities and administration, including technical assistance. Financial assistance for certain selected activities is also provided with WMC funds. The EIP funds were the principal source of financial assistance. Throughout the UC Region, WMC expenditures amounted to about \$1,476,900. Of that amount, \$314,200 supported 21 selected financial assistance activities.

The EIP funds are used exclusively for financial assistance that is provided in the form of grants and cost-shared cooperative agreements. One or more times each year, depending upon available funds, the UC Region calls for proposals from districts and other water-related organizations. In these proposals, the organization requests financial assistance to conduct an activity in one of the WCFSP's four areas of emphasis. Funding is awarded on a competitive basis so all proposals are evaluated and ranked. The number of highest-ranked proposals that are funded each cycle depends upon the amount of funds available. About 46 proposals totaling \$685,300 were funded in fiscal year 2000.

Program Accomplishments: This past year, the WCFSP has committed considerable time and resources to encourage and assist districts in preparing water management and conservation plans. Fifty seven districts are required to prepare and submit plans. To date, four districts have submitted final plans and another nine have submitted draft plans for our review and suggestions. However, as many as 48 districts have committed to prepare and submit plans before the December 31, 2001 deadline. The WCFSP staff members are working with the un-committed districts to encourage them and offer assistance. Interestingly, other water organizations not required to submit plans have requested and received assistance in preparing plans. This past year, the WCFSP has provided either

technical or financial assistance to a total of 49 districts and other water organizations that are preparing plans

Water education for both youth and adults is an important component of Area Office WCFSPs. The WCFSP staff has been active participants and organizers of numerous water fairs and other educational efforts. Technical and financial assistance by the WCFSP is helping nine different organizations develop a variety of water education materials. The WCFSP is providing financial assistance to about 18 state, local, and private water education activities, including Project WET and the National Energy Foundation. The WCFSP is providing funding to three research projects that are examining landscape water use issues. This research will ultimately provide information to help homeowners and landscape managers use water more efficiently.

The ultimate goal of the WCFSP is for districts to implement efficiency improvement measures. The WCFSP has provided technical and financial assistance to six districts to improve their water measurement capabilities. Three districts are receiving assistance in implementing improved management measures. A typical improvement is the adoption of computerized water accounting and billing. The WCFSP is providing assistance to five districts to modernize various components of their distribution systems.

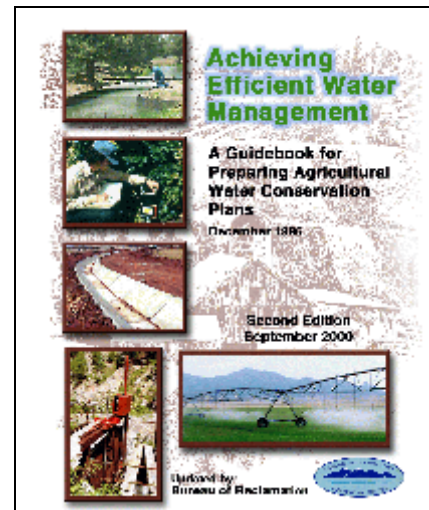
The WCFSP supports a variety of projects that demonstrate efficient water management practices to both urban and agricultural water users. Funds are being provided to support construction of one new Xeriscape garden. Nine activities are demonstrating efficient agricultural water use practices. These include irrigation methods, cropping practices, and the use of soil amendments.

In addition to the new activities described above, about 95 similar activities that were started in prior years were active in fiscal year 2000. Some of these activities were finished during the year. Others are expected to be finished in the next several months.

During fiscal year 2000, the Upper Colorado Regional Coordinator took the lead in updating and revising *Achieving Efficient Water Management: A Guidebook for Preparing Agricultural Water Conservation Plans, Second Edition*. This guidebook describes the planning process and helps water districts prepare their water management and conservation plans. It has been distributed to numerous organizations located throughout the 17-western United States.

Program Evaluation: By the end of the fiscal year, the nationwide WCFSP was fully staffed with capable and dedicated individuals. Local managers are now recognizing the agency's commitment to the WCFSP and are providing additional staff support to the program. Nationwide funding for the WCFSP was adequate.

Each Area Office WCFSP has been active in all four areas of emphasis. They are also focusing more attention to working with districts to get water conservation plans prepared and submitted. Agreements have been completed to get additional planning assistance from several state and Federal agencies. As local coordinators worked with the districts, they found considerable initial resistance by the districts to accept assistance from Reclamation. With continued effort by the coordinators, more districts are now requesting assistance from Reclamation. In addition, recent interest in financial assistance has been increasing, suggesting that more districts are becoming



more serious about preparing plans. Where coordinators have been providing direct assistance to districts in preparing plans, they find that the process is much more time consuming than originally anticipated. As a result, fewer plans have been completed than expected. However, more financial assistance is being provided to help some districts utilize consultants in the preparation of water conservation plans.

As stated above, the preparation and submission of water conservation plans by districts is a high priority. To help achieve this, Reclamation has committed staff to assist the districts. The following tables show to what extent each Area Office is responding individually and the UC Region is responding collectively.

Program Outlook: The Area WCFSP's are planning to expand emphasis on the preparation of water conservation plans and to provide the needed planning assistance. Thus, emphasis in other areas may be somewhat diminished. Eventually, as more water conservation plans are prepared, emphasis will shift to implementing the plans. The Area WCFSP work plans for fiscal year 2001 and beyond anticipate about the same level of staff utilization as in fiscal year 2000. However, projected budget tightening will probably reduce the amount of financial assistance that will be available in the future.

Summary Tables: The following tables summarize the activities of the WCFSP in the Upper Colorado Region during fiscal year 2000.

Staff Resources						
		AAO	PRO	WCAO	R.O.	Total
Total number of Reclamation staff days planned for FY 2000		475	550	713	350	2,088
WCFSP Coordinator Staff days used		125	211	436	193	965
Support Staff days used	Area Office	313	335	295		943
	UC Region		50	18	162	230
	Denver					0
Total number of Reclamation staff days used in FY 2000		438	596	749	335	2,138
Estimated number of staff days provided by other organizations	Federal Agencies		60			60
	State Agencies	320	100			420
	Water Districts		200			200
	Soil Cons. Districts	30		84		114
	Universities	60	50			110
	Schools		10			10

Funding Resources for Fiscal Year 2000													
	WMC Funds						EIP Funds						Program Totals
	AAO	PRO	WCO	R.O.	Total		AAO	PRO	WCO	Total			
Annual appropriation	441,500	326,100	555,400	203,000	1,526,000		338,500	148,800	168,300	655,600		2,181,600	
Carryover from prior years	13,900	55,300	8,000	2,700	79,900		20,000	9,500	700	30,200		110,100	
Transfers in or out	-37,300	-27,600	-46,900	-17,000	-128,800							-128,800	
Total funds available for FY 2000	418,100	353,800	516,500	188,700	1,477,100		358,500	158,300	169,000	685,800		2,162,900	
Program administration and technical assistance													
Staff salaries and overhead	239,400	192,000	349,200	170,300	950,900			1,300		1,300		952,200	
Travel	14,900	7,000	12,300	2,200	36,400			300		300		36,700	
Materials, supplies, and other expenses	52,300	38,000	69,000	16,100	175,400		4,900	700		5,600		181,000	
Total program administration and technical assistance	306,600	237,000	430,500	188,600	1,162,700		4,900	2,300		7,200		1,169,900	
Financial assistance contracts													
Planning	5,000	62,500	27,500		95,000		85,000	25,000	25,000	120,000		325,000	
Demonstration	5,000	10,300	4,000		19,300		84,000	15,000	5,500	104,500		123,800	
Implementation	20,000	25,000	20,000		65,000		65,000	50,000	25,000	140,000		205,000	
Education/training	81,500	19,000	34,400		134,900		119,100	66,000	18,500	203,600		338,500	
Total financial assistance	111,500	116,800	85,900		314,200		353,100	156,000	69,000	678,100		992,300	
Total WCFSF Expenditures for FY 2000	418,100	353,800	516,400	188,600	1,476,900		358,000	158,300	169,000	685,300		2,162,200	

WATER CONSERVATION FIELD SERVICES PROGRAM
Bureau of Reclamation - Upper Colorado Region
Annual Report - Fiscal Year 2000

Albuquerque Area Office Report

Local Program Description

The Bureau of Reclamation's (Reclamation) Albuquerque Area Office (AAO) in Albuquerque, New Mexico, serves most of New Mexico, and portions of Southern Colorado, and West Texas. Within this service area, the Area Office administers water delivery or repayment contracts with 18 separate organizations. The Area office also works closely with the New Mexico Office of the State Engineer's Water Conservation Program and is participating with the Western Colorado Area Office and the Eastern Colorado Area Office under a Memorandum of Understanding (MOU) with the State of Colorado Water Conservation Board. We are also following developments in the Texas State Legislature associated with legislation concerning water planning and conservation initiatives.

The Albuquerque Area Office's WCFSP strives for a multi-faceted approach covering all areas of assistance and cooperation.

Program Resources

Staff

The Area Office's WCFSP efforts continued to grow in FY2000 with existing and newly-developed partnerships with organizations such as the New Mexico Office of the State Engineer, the State of Colorado Water Conservation Board, the Natural Resources Conservation Service, the New Mexico Department of Agriculture and the New Mexico Association of Conservation Districts. The Area Office's WCFSP Team consists of .7 FTE for the WCFSP Coordinator, .2 FTE for a technical support position in the El Paso Field Office, and one full-time Water Conservation Specialist in the Area Office's Water Resources Management Division.

A table summarizing both estimated and actual use of staff resources is included in the previously-presented summary tables.

Budget

The Albuquerque Area Office WCFSP used a variety of program funds in FY 2000. Budgeted funds are included in the Water Management and Conservation (WMC) fund or the Reclamation Law Administration fund (allocated to administer the Reclamation Reform Act). Efficiency Incentive Program (EIP) funds are centrally budgeted and are allocated to the individual regions by the Commissioner's Office. Each region determines how EIP funds will be allocated to the Area Offices. The UC Regional Water Management Coordinator and the individual Area Office WCFSP Coordinators have agreed to

allocate the bulk of the EIP funds received from the Commissioner on a competitive basis from proposals solicited from water districts and other water management entities.

The Budget Resources Table in the Summary Tables Section of this report shows in some detail how funding was allocated to the various WCFSP activities. Nine technical assistance cooperative agreements were funded directly through the Area Office's discretionary budget. Fifteen financial assistance agreements were selected and funded through the UC Regional EIP on a competitive basis. The Area Office also funded the continuation of the cooperative agreement with the New Mexico Office of the State Engineer to provide a staff position for a joint water education program. The Area Office programed a total of \$418,100.00

AAO WCFSP Expenditures for FY 2000 are as follows:

-Salary and overhead	\$239,400
-Travel	14,900
-Materials and other expenses	52,300
-Cooperative agreement with NMOSE	50,000
-AAO Discretionary Conservation Agreements	<u>61,500</u>
	\$418,100

The AAO awarded 15 water management and conservation projects totaling approximately \$196,000 through proposals solicited and received from area water districts and entities under the Upper Colorado Region's Efficiency Incentive Program. A description of those projects can be found in the following sections. The AAO WCFSP presently has approximately 45 active cooperative agreements in progress.

Program Accomplishments

All districts under water supply contract with Reclamation were contacted and offered water conservation planning assistance in FY2000. Districts have been more receptive to updating water conservation plans with water management accountability becoming an issue under state laws and public concerns.

Water management plan development and implementation by AAO districts is key to accomplishing water management goals. Other emphasis areas (education, demonstration, and implementation) of emerging technologic and conservation practices, must be part of an overall strategy to be successful. In most AAO districts, there exists major opportunities to plan and implement water measurement, pricing incentives, and new technologies and operation improvements to achieve efficient water management.

Water Management and Conservation Planning Assistance

This year, the Water Conservation Field Services Program has funded two water management plans that are complete and submitted for review to Reclamation this year. These plans were submitted by Reeves County Water Improvement District #1 and Lea County Water Users Association.

Tierra y Montes Soil & Water Conservation District: This District is preparing a Water Conservation Plan that will include input from local ditch (acequias) leaders and water users in San Miguel County. Acequias are historic irrigation ditches which are community based and traditionally Hispanic. The

goal is to provide a plan useable to all users and to encourage irrigation practices which will result in significant water conservation and economic benefits.

Village of Cimarron: The Village of Cimarron is developing a Water Management Plan that will fit the needs of the community. Public meetings are being held to get citizen participation. This plan will help to prevent the drastic measures the village faced during the drought of 1996.

Village of Pecos: The Village of Pecos is developing a Water Conservation Program that will provide a metered structured rate system that will encourage water conservation. A water conservation ordinance will be proposed, water conservation materials will be distributed in English and Spanish, and an education program aimed at high school students will be developed.

City of Santa Fe: A Water Management and Conservation Plan is being developed by the City of Santa Fe to include: Aquifer recharge, storage options, Community outreach and education programs, structured water rates, maximizing water reuse and/or return flows, identifying pertinent uses for treated effluent and establishing appropriate rates for its use.

Santa Ana Pueblo: The Pueblo of Santa Ana is preparing an agricultural water management and conservation plan for the arable lands within its boundaries. The Pueblo's lands are intersected by two water sheds and comprise nearly 75,000 acres.

Valley Improvement Association: Valley Improvement Association has developed a draft Water Management and Conservation Plan that meets the Bureau of Reclamation's guideline's. The goals are to develop a plan for the Rio Grande Utility Corporation (RCUC) to better understand past water uses, facilitate more efficient and effective management, improved planning for future growth, help RCUC customers and reduce per capita water use.

City of Espanola: The City of Espanola, New Mexico is preparing an up-to-date water management plan as per Bureau of Reclamation guidelines. The City's goal is to write a plan that meets all current State and Federal requirements and provide water conservation education and information to the community.

Pojoaque Valley Irrigation District: The District is preparing a Water Conservation plan that meets all current State and Federal requirements. By implementing this plan the District will ensure that its water resources are managed wisely and used efficiently.

Arch Hurley Conservancy District: The District has retained a consultant to assist in preparing a Water Management/Conservation plan that meets all current State and Federal requirements. By implementing this plan the District will ensure that its water resources are managed wisely and used efficiently.

Town of Belen: The Town of Belen is developing a Water Management/Conservation Plan that fits the needs of the community. Public meetings are being held to get citizen participation.

Conservation Demonstration Assistance

Socorro S&WCD Drip System Demonstration and Research: This project is a demonstration project showing the benefits of using drip irrigation over sprinkler and flood irrigation. The ultimate objective is to show farmers the savings in terms of lower water use and increased yields by using drip

irrigation methods. Immediate plans are to provide three tours for farmers and other interested groups of the project site.

New Mexico State University (NMSU) Drip Irrigation System: The Albuquerque Area Office provided \$15,000 in 1999 to NMSU for the installation of drip irrigation facilities on lands within the extension service jurisdiction in Artesia, New Mexico. The drip irrigation facilities are installed. NMSU has had some problems with iron eating bacteria, rabbits, and gophers on this project. But the lessons learned from overcoming these problems will be useful for other entities who will be using drip irrigation in the area.. This project is scheduled to be completed by September 30, 2001.

Lea County Soil and Water Conservation District - Drip Irrigation System: Lea County Soil and Water Conservation District has received \$10,000 to install a drip irrigation system. This project is scheduled for completion in late winter or early spring of 2001. Plans are to irrigate 5 acres using the drip irrigation and well water from the Ogallala Aquifer. Since water supply from the Ogallala Aquifer is diminishing, farming using conservation techniques like drip irrigation is encouraged.

Elephant Butte Irrigation District (EBID) - Installation of Weather Stations: The AAO provided \$10,000 in funding to the Elephant Butte Irrigation District for the installation of two weather stations. The in-kind services provided by EBID includes the purchase of an additional weather station for \$5,000, as well as maintenance for the three weather stations. The weather stations will be part of the Agricultural Water Decisions Supports (AWARDS) program that Reclamation is developing along with NMSU. The AWARDS Program evaluates weather conditions in near real time and calculates the evapo-transpiration of plants. This information will be made available to farmers via the Internet which will allow the farmers to order water according to weather conditions and needs of plants. This project is scheduled for completion in September, 2001.

Texas A&M Extension Service—Developing and Establishing Guidelines for Landscape Irrigation with Reclaimed Saline Water: The Albuquerque Area Office provided funding to Texas A&M Extension Service to study which plants and soils could best use sewage effluent water made available under Title 16 funding. Texas A&M has published guidelines for sewage effluent use by lawn keepers of golf courses and other turf owners using information from this research. Also under this program, maps were made and are available to the public showing soil types of the El Paso Area. Workshops to promote water reuse for landscape irrigation will be conducted in 2001.

El Paso County Planning Department—Grey Water Re-Use Project: The Water Conservation Field Services Program awarded \$25,000 to El Paso County Planning Department to develop a grey water re-use demonstration project. The objective is to use treated grey water from a community service center to water landscape shrubs and the lawn of an adjacent playground. Also, El Paso County Planning Department is planning to install low-flush toilets at the community center. This project will be completed by September, 2001.

La Union Soil and Water Conservation District—Holistic Irrigation Technologies: Reclamation provided \$25,000 to La Union Soil and Water Conservation District for Holistic Irrigation Technologies (HIT). One of the goals of the HIT is to scientifically determine the water and chemical needs of crops by monitoring the stress levels of plants through sensing and photographing the amount of infra-red and near infra-red light emitted by the leaves. Recommendations for fertilizer, water, pesticides, and other crop needs can be made by noting the change of the emitted infra-red and near infra-red light from the plants. This information is provided in a service available to the farmers via the Internet. La Union Soil and Water Conservation District and the National Resource Conservation Service have managed the program, and the project has been funded since April, 1998. Reclamation has added funds to the program every year because of the increasing number of farmers participating in the project.

La Acequias de la Otra Vanda: The Fast Ditch Company in conjunction with the Natural Resources Conservation Service and local Soil and Water Conservation District, is demonstrating the use of a "Fast Ditch" ditch lining system. The demonstration project will evaluate the ease of installation, durability, flexibility, and cost of installation and maintenance of the lining system as compared to the conventional concrete ditch lining methods. The Water Conservation Field Services Program provided major funding for the project. Research and evaluation of this ditch lining system is on-going.



An installed reach of "Fast Ditch" ditch liner

Middle Rio Grande Water Assembly: The principle focus of this project is to provide water budget information in the form of a water model to focus groups involved in the Middle Rio Grande Regional Water Plan. The project will allow groups to see the model demonstrate the current situation as well as what might happen if certain adjustments are made such as: conservation, recycling water, increasing efficiency, changing uses, etc.

Installation, Monitoring High Tech. Systems (Chavez County): This project is a demonstration project showing the benefits of using high tech equipment to increase yields and reduce water consumption in the farming areas of Chavez County. The project is using Graphical Information System (GIS), Infra-red photography, Global Position System (GPS), soil sampling, leaf tissue analysis, and tensiometers.

Conservation Measure Implementation Assistance

Reeves County Water Improvement District #1(Reeves County)–Replace Control Gate at Balmorhea Lake: Reclamation has a cooperative agreement for \$10,000 with Reeves County to replace a control gate at the Balmorhea Lake. This project was identified as a high priority item in the water conservation plan submitted by Reeves County on September, 1999. This project is still in the planning stage, but estimated completion is Fall of 2001.

Taos Valley Acequias Association: The purpose of this multi-year project is to design a model for Acequia (Spanish community irrigation ditches) Water Conservation Programs; establish conservation programs for the 90 acequias of the Taos Valley and Rio de Chama regional Acequia associations; create regional Acequia water banks to serve the water information management needs of the Acequias, state, and the public, develop regional Acequia Geographic Information Systems.

City of Santa Fe: This cooperative agreement supports the development of a brochure describing the criteria for landscaping and irrigation standard for any properties being dedicated to the City of Santa Fe. The irrigation standards will meet or exceed the Uniform Plumbing Code and may be used by other entities besides the city of Santa Fe.

Middle Rio Grande Conservancy District: The automated control installations are being made at two diversion sites. These activities and other progressive water measurement and management activities will be included in a complete water management plan to be developed by the District. Implementation of these measurement programs will promote water conservation.

Education, Training, and Technology Transfer Assistance

Waste-management Education & Research Consortium (WERC)--Tri-City, Tri-State, Bi-National Water Festival: Waste-management Education & Research Consortium (WERC) is a entity whose participants are New Mexico State University, University of New Mexico, New Mexico Institute of Mining Technology, Navajo Community College, Department of Energy, Los Alamos National Laboratory, and Sandia National Laboratories. WERC is the managing entity of the annual Tri-City, Tri-State, Bi-National water festival which focuses on water education and conservation for elementary, middle school, and high school students. Reclamation participates in this activity by providing \$20,000 in funds for this year's festival and \$20,000 for last year's festival. Also, Reclamation manned a booth with a display during the water festival that highlighted our activities.

The Tri-City, Tri-State, Bi-National Water Festival is unique because it focuses on water conservation issues in Mexico and the United States. The festival has had an attendance of 10,000 students both this year and last year. Locations of the festival were Las Cruces, New Mexico, El Paso, Texas, and Juarez, Mexico.

Carlsbad Soil and Water Conservation District--Best Management Practices: This project highlighted best management practices with emphasis on water conservation activities for senior high students. Selected senior high students participated in a camp and toured water conservation projects in the Carlsbad area. Lectures discussing water conservation practices such as the Holistic Irrigation Techniques and drip irrigation were conducted. Reclamation provided \$7,000 in funding for this project.

Rio Grande County Museum: The principal focus of this project is to raise consciousness by compiling, archiving, and presenting all available information in ways that a broad audience can learn more about this complex resource and it's proper stewardship.

Mobile River Study Centers: The Mobile River Study Center's Water Education Trailers are educational tools which provide demonstrations of river and riparian education for school children. The trailers also provide public information and training on river systems to teach teachers and other interested personnel. Soil and Water Conservation District, state, federal and other personnel are trained on the use, care and curriculum of the trailers. These personnel are also provided information for administration, storage, and maintenance of the trailers. This project was made possible through cooperation with the Bureau of Reclamation, Natural Resources Conservation Service, State of New Mexico Department of Agriculture, and the New Mexico Association of Conservation Districts.



Adults being trained in the use of Water Education Trailers

New Mexico Water Dialogue: The activity, a series of articles, will disseminate information about sound water stewardship principles or practices. The articles will contribute to communication about the principles and practices, and improved understanding of them, among a wide range of constituents.

Children's Water Festival: The main purpose of this activity is to educate students about water and its relationship to other human and natural resources in a fun and interactive atmosphere. The Children's Water Festival provides effective community education about water by teaching children and enabling them to educate their friends, parents, and other family members.



Closeup view of trailer layout

New Mexico Office of the State Engineer: Activities for this cooperative agreement included developing a Water Conservation Guide and holding a conservation workshop to assist small and medium-sized municipal water suppliers with developing a water conservation component for their water management plans.

Entranosa Water & Wastewater CO-OP: The purpose of this cooperative agreement is to implement some of the educational requirements of the Entranosa Water Conservation Plan. Specifically, to reinforce the traditional water conservation techniques and practices of the region and to introduce new residents to the concept of conservation and to explain why they are important.

Rio Grande Community Farms: Farmers are being educated about the different efficient systems by demonstrations i.e., solar-powered surge valve; and three different types of drip systems A) surface, B) subsurface, and C) subsurface with mulch. The farmers will also be shown how to monitor their water use as a help with their management.

City of Las Vegas, NM Water Department: Expected result of this activity is to educate the broader community of Las Vegas, New Mexico on: wise water use, drought awareness, water consumption surcharge and rebate incentive programs, water harvesting, retro-fit and low water kit programs, and Xeriscape landscaping.

Program Evaluation

Water management challenges in the AAO include development and implementation of quality water management plans and maintaining good working relationships with irrigation districts and other water entities to pursue joint water efficiency initiatives.

Several projects were developed with the irrigation districts along with a spirit of partnership. We have provided assistance to several districts and municipalities for preparation of water management plans and fourteen are in progress. These working relationships require continued contact and maintenance.

Staffing commitment to the AAO WCFSP has continued with a full-time Water Management Specialist in our Albuquerque office, 0.70 FTE in the El Paso office, and approximately 0.50 FTE for the AO

coordinator, as well as agreements with the States of Colorado and New Mexico and NRCS to provide program support.

Program Outlook

As in FY2000, the FY2001 program will prioritize maintaining working partnerships with the irrigation districts, states, and municipalities, develop relationships with Native American Pueblos, and development of water management/conservation plans for irrigation districts and M&I water providers which receive water under delivery contracts with Reclamation.

Other components of the program (demonstration and implementation) should be associated with the long-term plan. The AAO plans to continue to expand partnerships with NRCS and soil and water conservation districts in the spirit of the "Bridging the Headgate" MOU, especially on farm and irrigation system water efficiency improvements. A FY2001 schedule of AAO WCFSP directed at accomplishing the four areas of program emphasis is as follows: Education, Implementation, Planning, and New technologies. Cooperative agreements that will be awarded for 2001 are as follows:

ENTITY	ASSISTANCE TYPE
City of Belen	Water Conservation Plan
Ft. Sumner Irrigation District	Water Conservation Plan
De Baca Soil & Water Conservation District	Education
City of Las Vegas, New Mexico	Education
New Mexico Highlands University	Education
Ciudad Soil & Water Conservation District (Albuquerque)	Education
Valley Improvement Association (Los Lunas)	Implementation
New Mexico Museum of Natural History	Education
ARCH Hurley Conservancy District	Implementation
Ft. Sumner Irrigation District	Education/Implementation
New Mexico Association of Conservation Districts	Education
Upper Hondo Soil & Water Conservation District	Implementation
Carrizozo Soil & Water Conservation District	Education
Central Valley Soil & Water Conservation District	New Technology
Children's Water Festival	Education
Xeriscape Conference	Education

Water Conservation Planning

To achieve this initiative, Reclamation has entered into an on-going agreement with the New Mexico Office of the State Engineer entitled "Water Management Program for Acequia Organization" which will provide water management planning and technical assistance to improve water use and efficiencies for acequia organizations in New Mexico. Additionally, the AAO will offer conservation planning assistance to all of the remaining districts in our area which are under water delivery contracts with Reclamation. This action is intended to meet Reclamation's GPRA goal of the development of completed plans from all water districts by the end of FY2001.

The AAO will provide funding and/or technical support for water conservation plan preparation in 2001 for the following districts and municipalities: ARCH Hurley Conservancy District, Carlsbad Irrigation District, City of Albuquerque, City of Espanola, Conejos Water Conservation District, El Paso Co. WID #1, Elephant Butte Irrigation District, City of Elephant Butte, Ft. Sumner Irrigation District, Udspeeth County C&RD, Reeves County WID #1, Pojoaque Valley Irrigation District, Santa Ana Pueblo, City of Santa Fe, Town of Belen, Town of Taos, Valley Improvement Association, Vermejo Conservation District, and the City of El Paso, Texas.

Conservation Demonstration

Conservation demonstration and conservation measure implementation projects will be considered for funding under Reclamation's Efficiency Incentive Program. Prioritization will be given to those projects which are components of a long term plan.

The AAO, through existing and expanded partnerships under our recently signed MOU's with the Natural Resource Conservation Service and the Association of Soil and Water Conservation Districts, will proactively seek joint activities for conservation demonstration and implementation projects.

The AAO has made contact with several Native American Pueblos under the Efficiency Incentive Program to promote technical and financial assistance and training under the AAO-WCFSP. We plan to continue a proactive approach in conjunction with the AAO Native American Affairs Coordinator to provide assistance to two or more Pueblos in New Mexico in FY2001.

Education, Training and Technology Transfer

These activities will be accomplished through several programs which will include the following:

1. An Acequia Water Management Workshop will be conducted by Reclamation and the New Mexico Office of the State Engineer for the New Mexico Acequia Commission in the fall of 2001. This workshop will include sessions on water rights, crop selection, rodent control, noxious and alien weed control, organic certification, vineyards, and water control technologies. We will also present information regarding financial and technical assistance.

2. Through our interagency agreement with the New Mexico Office of the State Engineer, the AAO will participate in funding for conservation education to accomplish our common objectives in this area. Goals for 2001 include:

- a. Provide support for joint Office of the State Engineer - Reclamation Water Management Workshops and water conservation education water fairs in New Mexico.

b. Work with schools and municipalities to develop and implement water conservation education materials and programs including "water wise" activities.

c. Serve as Office of the State Engineer and Reclamation representatives for Project WET in New Mexico.

FY2001 Staffing and Funding for WCFSP

The projected AAO staffing for the WCFSP include .7 FTE AAO Water Management Coordinator; 1.0 FTE Water Management Specialist in Albuquerque, New Mexico; 0.2 FTE Water Management Specialist in El Paso, Texas. Discussions are underway on a potential joint agriculture water conservation position under the Bridging the Headgate MOU.

Technical assistance will be provided by Reclamation's TSC under service agreements to furnish on-site water control and measurement training to irrigation districts. In addition, under agreements with the State of New Mexico and NRCS, the AAO will fund activities through partnerships with these organizations.

Program Direction and Long-Term Goals

1. Complete all required Water Management Conservation plans in accordance with guideline standards by end of FY2001.
2. Maintain working relationships with the states of Colorado, Texas, and New Mexico in pursuing the Water Conservation Education and Technology Development and Transfer Programs. The New Mexico Office of the State Engineer has expressed an interest in partnership for a statewide Water Measurement Program which is needed in New Mexico. The AAO proposes to target providing technical and other assistance for this program.
3. Continue long-term development of WCFSP activities with the Native American Pueblos in New Mexico.
4. Work with districts toward implementation of program elements in their water management plans when they have been developed.
5. Facilitate water efficiency projects that could be funded by M&I interest to provide sharing of the water savings to growing cities and towns.
6. Continue to enhance working relations and develop joint projects with NRCS, NMACD and local soil and water conservation districts under the guidance of the Bridging the Headgate MOU.

Water Management and Conservation Plan Status

Upper Colorado Region, Albuquerque Area Office

District	Project	Acres Served	M&I Population	Last Plan Date	Next Plan Date	Plan Req'd ¹ (Y/N)	Comments
Arch Hurley Conservancy District	Tucumcari	41,400		3/92		Y	District is contracting consultant to write plan. Plan will be developed by 12/30/01
Carlsbad Irrigation District	Carlsbad	25,100		4/92		Y	District is contracting with consultant. Plan scheduled for 11/01.
City of Albuquerque	San Juan - Chama		750,000	5/92		Y	City has completed some plan components. Reclamation is currently working with the city to complete final plan.
City of Espanola	San Juan - Chama		12,171			Y	City has entered into an agreement to write plan. No target date has been set to provide plan
Conejos Water Conservation District	San Luis Valley	81,000		8/87		Y	Conejos District has submitted a draft plan. Reclamation will review and provide comments.
El Paso Co. WID No.1	Rio Grande	76,133		8/00		Y	Completed plan received. Comments were provided by Reclamation
Elephant Butte Irrigation District	Rio Grande	102,000		8/89		Y	Plan preparation underway. Scheduled for completion 7/01.
City of Elephant Butte	Rio Grande					N	City has submitted plan draft. Reclamation will review and provide comments
Fort Sumner Irrigation District	Fort Sumner	65,000		10/90		Y	District is under agreement to write plan and is currently doing so.
Hudspeth County C&RD	Rio Grande	18,342				Y	Draft plan under review by Reclamation.
Reeves County WID No. 1	Balmorhea	10,608		9/00		Y	Completed plan received. Comments were provided by Reclamation.
Middle Rio Grande Conservancy District	Middle Rio Grande	89,652		4/92		Y	Reclamation has sent a letter to M.R.G.C.D. to provide plan assistance. Reclamation will be scheduling a meeting to discuss options.
Pojoaque Valley Irrigation District	San Juan - Chama	2,768		6/87		Y	District is under agreement to write plan and is currently doing so.
Santa Ana Pueblo	Middle Rio Grande					N	Pueblo has entered into an agreement to write plan. No target date has been set to provide plan

District	Project	Acres Served	M&I Population	Last Plan Date	Next Plan Date	Plan Req'd ¹ (Y/N)	Comments
City of Santa Fe	San Juan - Chama		98,928			Y	City is under agreement to write plan and is currently doing so.
Town of Belen	San Juan - Chama		6,900			Y	City is under agreement to write plan and is currently doing so.
Town of Bernalillo	San Juan - Chama		8,000			Y	Reclamation has sent a letter to Bernalillo to provide plan assistance. No response has been received. Reclamation will be scheduling a meeting to discuss options.
Town of Taos	San Juan - Chama		5,350			Y	Meeting has been scheduled to discuss plan preparation.
Valley Improvement Association	Middle Rio Grande		6,500			N	Association has submitted draft plan for approval from Reclamation
Vermejo Conservation District	Vermejo	7,379		4/92		Y	District has agreed to write plan as required. No target date has been set to provide plan.
Village of Cimarron	Cimarron		925			N	Village has an agreement to develop and write plan and is currently doing so.
City of El Paso, Texas	Rio Grande		700,000	9/00		Y	Completed plan received. Comments provided by Reclamation

¹A plan is required by either the Reclamation Reform Act of 1982 or by specific contract provisions.

WATER CONSERVATION FIELD SERVICES PROGRAM
Bureau of Reclamation - Upper Colorado Region
Annual Report - Fiscal Year 2000

Provo Area Office Report

Local Program Description

Reclamation's Provo Area Office, headquartered in Provo, Utah has implemented a local WCFSP. The Provo Area Office serves most of Utah and parts of Nevada, Idaho, Arizona, and Wyoming. The service area for the Provo Area Office includes the following Utah counties: Box Elder, Cache, Rich, Weber, Morgan, Davis, Summit, Tooele, Salt Lake, Wasatch, Duchesne, Uintah, Daggett, Juab, Millard, Sanpete, Utah, Carbon, Emery, Beaver, Sevier, Grand, Iron, Piute, Wayne, Garfield, San Juan, and Kane. Counties served in Nevada include Elko and White Pine. Idaho counties within the service area include Oneida, Franklin and Caribou. Wyoming counties include Sweetwater, Uinta, Lincoln and Sublette.



Janice Richardson - Water Conservation Field Services Program Coordinator - 801-379-1069



Joe Whittaker - Technical Assistance (and all around nice guy!) - (801) 379-1169



Florence Stepp, Education Specialist - (801) 379-1240

Introducing the Provo Area Office Water Management Team

developed with others (federal, State, and local agencies; universities; schools, etc.) to mutually strengthen each other's programs.

The Provo area office jurisdiction includes highly urbanized areas experiencing explosive growth along the Wasatch Front in Utah and rural economies relying on agriculture, mineral extraction, and tourism. These trends, coupled with desert climate, but seemingly abundant mountain snowfall complicate perceptions and practices. The State of Utah has actively supported improved water management and conservation.

Conservation Issues to be Addressed

The local WCFSP is intended to address local problems, needs, and opportunities. Local stakeholders have an opportunity to provide input during the process of developing the annual area office WCFSP plan. Several issues involving local problems, needs, and opportunities are being identified at this time.

Conservation Planning Assistance: About 23 districts are required to prepare and submit water management and conservation plans. The table on page 34 contains a summary of districts and the status of their plans. During FY 2000, several "draft" plans were submitted for review and comment. Numerous one-on-one meetings took place to provide technical assistance, comments and reassurance that they were on the right track.

The recently revised "Guidebook" and computer software were also provided to any entity requesting assistance.

Conservation Demonstrations: Project operators vary widely in water management skills and understanding. Some of the Reclamation projects are operating with the original equipment and water use paradigms from the 1920's and 30's. Others use state-of-art electronic control to manage high value municipal and industrial supply and distribution systems. At times, some portions of the project lands do not receive timely delivery of water. At other times, there are system spills.

Farm operators use a variety of irrigation practices. On-farm irrigation practices in some districts reflect irrigation technology from the 1850's with little change, while other farmers have adopted sprinkler and drip application methods. Vehement adherence to traditional methods restricts willingness to adopt newer technologies. High capital costs and lack of understanding of the potential benefits also limits change. The demonstration of newer practices and technologies are needed to show benefits of improved water use and to shift old paradigms.

Effective long-term storage and distribution projects have created an illusion of plenty in a culture that exists at the edge of a desert. Household and commercial irrigation practices based on the notion of abundant water have led to very high per-capita consumption and widespread inefficient water use. Urbanization of former agricultural lands have forced shifts in production areas and differing acceptance of previous practices such as return flows, spills, and deep percolation.

Conservation demonstration activities provide technical and financial assistance to districts and interested third-party participants for the demonstration and evaluation of effective water management measures. As previously noted, effective water management measures may be unknown or misunderstood by local water users. As a result, their adoption may be resisted by those water users. The availability of technical assistance and financial grants or cost sharing is intended to encourage local water users to evaluate and adopt more efficient water management measures and practices.

Conservation Measure Implementation: Many operating practices and procedures, as well as system facilities, in use by project operators and water users are often far behind the state-of-art. Some sound water management practices are nonexistent on some projects. The role of the WCFSP in this area of emphasis is to provide some technical expertise and limited funding to get the process of change started.

Conservation measure implementation activities are intended to provide incentives for water users to implement measures that have been selected as components of a water management or conservation plan. These activities will either supplement an organization's technical expertise through technical assistance or provide "seed money" to get the implementation of a measure started. Major system rehabilitation and modernization activities are beyond the scope of this program. However, water users are still encouraged to pursue these activities when other sources of funding are available.

Education, Training and Technology Transfer: Project operators vary in skill and understanding of good water management practices. Training for irrigation distribution system managers and staff is not readily available. What training there is available requires long-term, time commitments. Lack of information concerning training opportunities makes it difficult for system operators to obtain knowledge of technology and systems.

Likewise, farmers' understanding of good irrigation practices varies greatly. The Natural Resources Conservation Service (NRCS) and the Utah Association of Conservation Districts (UACD) have an aggressive on-farm technology transfer program which operates through Resource Conservation Districts throughout service areas. The NRCS and UACD technicians are respected in the agricultural community and have a high level of organizational support. University Extension Service programs already exist in all counties within the office area which can be utilized by local districts and farmers to improve their use of water. The opportunity exists to expand partnerships between NRCS, UACD, water districts, Soil Conservation Districts (SCD's), local work groups, Reclamation, universities, and farmers to demonstrate innovative on-farm irrigation practices in a variety of local conditions and operating regimes. Reclamation can support these partnerships through existing programs and organizations while reaching local water use leaders whose influence is widespread among other irrigators in their communities.

Further, significant segments of the public do not understand how their water use habits impact local water supplies. The Utah Water Conservation Forum is an alliance between industry, academic institutions, government, and water users whose purpose is to promote the wise use of Utah water resources. The Forum's activities include education, consulting, technology transfer, public awareness, and sponsoring research specific to Utah water needs and problems. By participating in and supporting the Forum, Reclamation can leverage water conservation information transfer and public education.

The State of Utah has adopted water education as science core curriculum for grades 4-12 in public schools. The Utah Division of Water Resources has a major long-term commitment to water education in Utah through Project WET which provides in-service training and materials to teachers for use in their classrooms. By supporting the State of Utah in its water education program, Reclamation and its districts can reach large audiences with a consistent message without the expense of uniquely designed and implemented local programs. Expanding coordination to Project WET programs in Wyoming, Idaho, and Nevada, Reclamation can use established, functioning programs to reach children and their families in areas where our presence has been limited in the past.

Education, training and technology transfer activities provide cost-sharing incentives to districts and interested third-party participants for the planning and conducting water user specific and general wise water use education programs and activities. Financial assistance will provide flexible site-adapted

activities to obtain specific expected results. The purpose of this component of the WCFSP is to encourage districts and other organizations to participate in water education activities within their service areas. Assistance is provided to agencies or groups having regional or state-wide audiences. Assistance may include such activities as:

1. Irrigation application workshops for farmers using project water.
2. Conservation inserts or mailers to customers.
3. Water fairs conducted for school age children or adult audiences.
4. Cooperative sponsorship of Resource Conservation District Field Days and Demonstration activities.
5. Preparation of conservation-related materials for public conservation promotion.
6. Assistance in funding in-school education programs such as Project WET or "Learning to be Water-Wise."
7. Cost sharing for expenses for district operations and management staff to participate in Irrigation Management short courses or workshops at the Irrigation Training and Research Center or International Irrigation Center.
8. Preparation and display of conservation presentations and materials at fairs, trade shows, workshops, meetings, and conventions relating to conservation activities.



Classroom demonstration of "Water, Water Everywhere"

Program Resources

Staffing

The Provo Area Office continues to utilize an interdisciplinary team approach to provide WCFSP services to water users and interested individuals within its jurisdiction. The WCFSP is directed by a full-time coordinator who serves as the Water Conservation and Management Team leader. Team members are drawn from existing Provo Area Office staff on an as-needed basis to meet the needs of the districts. Skills not available locally are obtained from other Reclamation offices, the Technical Service Center, universities, cooperative extension service, cooperating water districts, state water resource agencies, other government agencies or community volunteers. Where appropriate, the Provo Area Office is working cooperatively with other Area Offices to provide WCFSP services in locations where area office jurisdictions are divided.

Staff activities have concentrated on direct visits to water customers to encourage and assist in water conservation plan preparation. Other activities included organizing and presenting training sessions, soliciting demonstration partners and venues and implementing demonstration projects. Each of these activities involved the use of professional staff time to meet the needs of the water districts. Continuing

administration of existing demonstration projects and public involvement activities will also be included in the activities of the WCFSP staff in the future. In addition to the full-time WCFSP coordinator, the program has and will continue to require clerical, technical, professional, and supervisory support. The collective number of Reclamation staff days totaled 600 for FY2000 at a cost of \$193,300. Expenditures for travel, materials, supplies and other expenses totaled \$45,923.

Budget

The Water Management and Conservation (WMC) fund and Efficiency Incentive Program (EIP) funds are the basic sources of funds for the WCFSP. Individual Area Office WCFSP Coordinators allocate the EIP funds on a competitive basis. Depending on the financial relationship existing between Reclamation and their employing agencies, some work tasks may be covered by cost reimbursement or service-for-fee agreements. Some activities may be supported by grants or cost-sharing arrangements. The Technical assistance cooperative agreements are to support on going activities. Financial assistance contracts for planning, demonstrations, implementation and education/training totaled \$205,618 for FY2000.

Partnerships

A key to the successful implementation of the WCFSP is the development and expansion of partnerships. Partnerships are required at every level of program involvement. The purpose of partnerships is to define agenda, synthesize action, and collaborate in goal achievement.

In order for partnerships to be effectively used, the needs, characteristics, and goals of potential partners must be known and understood. Once the mutual benefit of partnership is identified, the interpersonal relationships need to be nurtured to develop trust and confidence. Partnership activities are dynamic and must change to meet the evolving needs of all partners.

The Provo Area Office partnerships include: the Natural Resources Conservation Service, University Extension Service, Fish and Wildlife Service, Utah Division of Natural Resources, Utah Water Conservation Forum, Wyoming Water Resources Center, Local Water Districts, Forest Service, Bureau of Land Management, National Park Service, Environmental Protection Agency, US Army Corps of Engineers, Bureau of Indian Affairs, Department of the Airforce, local Soil Conservation Districts, Universities, Indian Nations, Internal Reclamation Partners, "Bridging-the-Headgate" which includes National Association of Conservation Districts, National Association of State Conservation Agencies, and most recently the National Water Resources Association, Resource Conservation and Development, the Utah Partners for Conservation and Development and last but not least, the Utah Association of Conservation Districts.

Each fiscal year the Commissioner of Reclamation presents regional water conservation awards which recognize outstanding efforts shown in water conservation efforts. This year the Provo Area Office nominated Gordon Younker, Executive Vice



Gordon Younker, UACD Executive Vice President, is presented with the Commissioner's Upper Colorado Regional Conservation Award by Jay Henrie from the Provo Area Office

President of the UACD for his outstanding efforts to educate soil conservation district supervisors and their district members within the State of Utah, about Reclamation and the WCFSP.

Program Accomplishments

A summary of efforts include the following:

- ! The Provo Area Office participated with other Area Offices within the UC Region in an open season for proposals of activities that promoted water management and conservation planning, implementation of water management and conservation planning, demonstration of water management/conservation measures or technology and water management/conservation education or research activities.
- ! Support for Reclamation's WCFSP, nationwide, was provided at the National Resource and Conservation Development Conference held in Ogden, Utah.
- ! Personal contacts were made with 18 districts to assist in the review of draft plans, provide technical assistance or provide the opportunity to participate in the financial assistance proposal process for dollars to prepare water management and conservation plans.
- ! Several scholarships to ITRC courses, Reclamation's 2000 Water Management Workshop, the annual Water Systems Operation and Maintenance Workshop, the Basic Principles and Developments of Flow Measurement sessions, Canal Automation and Flow Measurement and a Geosynthetics Seminar were funded through the WCFSP. These scholarships were provided to UACD, NRCS and irrigation district managers.
- ! Provided technical assistance to several counties with canal automation, real-time monitoring and water measurement techniques.
- ! Participated in the Utah Association of Conservation Districts, the Utah Water Users, and the Rural Water Users Annual Conventions. Provided presentations and display booths highlighting the WCFSP and the Bridging-the-Headgate partnership.
- ! *Achieving Efficient Water Management: A Guidebook for Preparing Agricultural Water Conservation Plans* manuals, *Water Measure Manuals* and *Incentive Pricing Handbooks for Agricultural Water Districts* were distributed throughout the Area's office boundaries.
- ! Participated in the Orem City, and Timpanogos/Nebo Soil Conservation District's Urban Water Conservation Fair with a booth display, handouts and tips for efficient water use methods were provided.
- ! The Provo Area Office officially became a signatory partner in the Utah Partners for Conservation and Development. This partnership's mission is to provide unified leadership to achieve a more productive Utah in cooperation with property owners/users while keeping in harmony with a sustainable quality environment for all Utah citizens.



Cooperative partnership effort for the community

- ! Gave several “Bridging-the-Headgate” presentations in cooperation with the other BTH partners to promote BTH activities at local water users meetings.
- ! The 2nd “Bridging-the-Headgate” conservation partnership meeting was held in Park City, Utah. Assistance with conference preparation was provided.



Bridging-the-Headgate conference held in Park City, Utah



Attendees at the Bridging-the-Headgate Conference came from the 17-western States

Specific activities include:

Water Management and Conservation Planning Assistance

Financial and technical assistance was provided to several irrigation companies, water conservancy districts, and canal companies with FY 2000 funding. Several draft plans have been submitted for review at this time. Five draft plans were submitted by “required” districts.

Conservation Demonstration Assistance

Weber State University: The Weber State University developed a water-wise demonstration garden on campus. At the completion of this project they felt that the entire process of designing the xeriscape, setting up the drip irrigation system, and putting in the plants etc. was an educational experience in itself to the students and teachers that were involved. The University is developing a sign that will explain principles of water conservation and xeriscaping.

Cedar City, Utah: Dollars were provided for a water system leak detection and repair program in Cedar City, Utah. The goal of this activity was to reduce the amount of unaccounted for water in the Cedar City culinary water supply system by 10 percent of the total water supply.

Conservation Measure Implementation Assistance

City of West Jordan, Utah: A major goal of the City of West Jordan’s water management and conservation plan was to implement a new water rate schedule. WCFSP funding was provided to:

1. make major computer software programming changes;
2. redesign the city’s utility bills;
3. install a weather station and establish a method to report evapotranspiration rates on customer’s bills;

4. experiment with various methods of data collection to determine the most efficient and effective way to build the irrigation portion of the database; and
5. develop formal responses to community concerns regarding water allocations.

Education, Training and Technology Transfer Assistance

Utah State University - Urban Water Analysis: Urban per capita water use in the State of Utah is among the highest in the nation while Utah's annual water supply is one of the lowest in the nation. Nearly two-thirds of the urban water use is attributed to landscape irrigation. Utah State University performed an analysis of water districts in the Salt Lake Valley as to the feasibility of developing water budgets given the structure of their billing data and the availability and accessibility of landscape area for a given billing customer. The intent is to help communities to determine the amount of water available to conserve and the feasibility of developing water budgets.

Utah State University - Avian Botulism Study: In 1997, 400,000 - 500,000 birds died of avian botulism in the Bear River Delta of northern Utah. Utah State University conducted a study that determined winter-spring precipitation amounts and summer streamflows could be used to predict the outbreak occurrence. Preliminary data indicated that changes in water quality attributed to inflow sources and/or basin characteristics may impact the ecology of wetland sediments and contribute to outbreak initiation. The purpose of this project was to establish relationships between water and sediment chemistry variables and water-level fluctuations in impounded marshes on the Bear River Delta. Special emphasis concentrated on fluctuations attributed to irregular and high Bear River streamflows. This information determined the effects of these environmental perturbations on the probability of avian botulism outbreaks, and made water management recommendations aimed at reducing their probability of occurrences.

Utah Water Conservation Forum: The Utah Water Conservation Forum provided spring and fall workshops that were aimed at educating participants in water conservation management principles with the goal of encouraging increased cooperation and collaboration between all interests, both private and public. An annual conference with speakers and presentations that assist water districts and municipalities in planning and implementing more effective water conservation management plans and programs was held. Presentations were provided at various conferences, workshops and other meetings that promoted water conservation management planning and programs.

Utah Association of Conservation Districts (UACD) - Education Program: The UACD promoted wise use of water through hands-on classroom presentations, county fairs, and natural resource festivals by providing educational tools and activity funds for water quality and water conservation education programs. Three Enviroscope models, purchased to demonstrate water pollution and its prevention, were effective in illustrating water conservation. An outreach program sponsored primarily by UACD was used to educate high school students concerning forestry, soils, aquatics, wildlife, and wetlands management.

Utah Association of Conservation Districts - Billboard Project: This UACD project called for education of the general public concerning water conservation in urban businesses, homes, landscaping, etc., through an ad campaign concentrated on the Wasatch Front. A billboard ad was chosen, with Reclamation's approval, to be displayed in a high-traffic area of I-15. Approximately 1.7 million Utah residents regularly travel Interstate-15, resulting in exposure to billboard ads almost daily. Knowledge addressing water conservation/usage and suggestions in the "how to" process of implementing that knowledge are considered to be major factors in accomplishing change in behavior patterns of water consumption.



UACD's billboard advertisement

Utah Association of Conservation Districts - Annual Meeting: The UACD used its annual meeting as an opportunity to educate Soil Conservation District supervisors and conservation partners and to provide networking opportunities. The meeting, as well as continuing education throughout the year, focused on:

1. wise use and management of natural resources;
2. methods of securing technical, financial and education resources to assess and address local resource conditions; and
3. coordination of conservation work on both private and public lands by encouraging cooperation among conservation districts and public and private conservation agencies and groups.

Reclamation also played a part in the activities by providing a Water Conservation Field Services Program booth with information on the WCFSP and staff to answer questions.

Other worthwhile accomplishments

Water Fairs and Special Education Activities:

The Provo Area Office participated in 7 Water Fairs during fiscal year 2000. The purpose of a "Water Fair" is to teach students the importance of water in our lives and to give them an overview of all areas in which water is used. Water fairs were sponsored jointly by the Utah Department of Natural Resources, Utah Association of Conservation Districts, Soil Conservation Districts, Reclamation, Project WET and many other State and local water-related entities.

Orem City Urban Conservation Fair: Reclamation participated in the Orem City Urban Conservation Fair. This provided the opportunity to educate adults and children on water conservation in the home and on the landscape including the proper use of low water use plants, and of course, Otto Otter was there to help promote canal safety for children.



Our nation's future water managers



Otto Otter promotes canal safety

Utah Envirothon: The Utah Envirothon is a competitive two-day state level natural resource education event which tests high school students on their knowledge of natural resources in an outdoor setting. The five-member teams study throughout the year to prepare for the event. Teams are scored by a panel of judges on 10-minute oral presentations on a subject related to a current environmental issue and then participate in five in-the-field test stations to hear presentations by resource professionals and then are tested on their knowledge in five study areas: forestry, soils, aquatics, wildlife and a current environmental issue. Following the state competition, the winning team goes on to a national competition. Reclamation was invited and given the opportunity to participate, by judging this local Envirothon competition.

Con Amore Fishing Day: Reclamation, along with many other partners, helped to sponsor the Dinosaurland RC&D organized Con Amore Fishing Day. Kids from local high schools near the rural community of Duchesne, Utah spend a day bonding with younger Con Amore children. The school works with children who have developmental difficulties. The local high school kids are involved as a great opportunity for them to interact with these kids and mostly because they can keep up with them! Reclamation is always looking for opportunities to participate in venues that help support the community and provide an entity, a face to these kids.



Fishing Day brings kids, Reclamation, and many other partners together

Program Evaluation

The Provo Area Office seems to be breaking through the barriers that previously existed with districts since the WCFSP has come into existence. The water management presentations, booth displays, workshops and financial assistance program has been very successful in gaining acceptance from districts and gives the WCFSP exposure to numerous water user groups. Participating in UACD, the Water Users and the Rural Water Users Association conventions with display booths and presentations that promote the WCFSP and water efficiency has brought recognition and interest from entities that were unaware of our existence and the assistance that could be provided to them through the WCFSP.

The "Bridging-the-Headgate" partnership has brought attention to the WCFSP from locally led conservation leadership. Several presentations have been made to conservation districts in Utah to promote the WCFSP and to encourage



The local Bridging-the-Headgate partnership (l/r) UACD, Ut DWR, NASCA, NRCS, Ut Water Users, Reclamation

participation in the annual financial assistance proposal program.

Participation in community Water Fairs appears to be a great way to reach the general public with water conservation messages that they can take home and use in their own homes and backyards. There appears to be a real need for public education in use of water as applied to agriculture and home landscapes. Coordination of partnerships with districts and their communities could help educate both the average home owner and agricultural communities alike.

The Provo Area Office would like to promote it's WCFSP through more participation and general exposure in water conservation community efforts.

It is anticipated that additional staff and travel time will be needed for fiscal year 2001 as the districts begin to develop their plans. Some districts are very small and will require more hands on assistance than others through the process. Training has been provided to local consultants and they are providing some technical assistance to the districts. We're also working on an agreement with NRCS and UACD for technical assistance to the districts. Also a large amount of time will need to be dedicated to administering the cooperative agreements that are established through the WCFSP.

Program Outlook

In fiscal year 2001 and beyond, the primary goal of WCFSP in the Provo Area Office will be to work closely with districts required to submit and/or update their water management and conservation plans. We're finding that there is a lot of interest out there through the efforts of the WCFSP in developing water management plans. Developing partnerships is anticipated as becoming a very successful way of assisting districts with their planning efforts. Financial as well as technical assistance will be provided to districts to prepare their plans. Financial and technical assistance will also be made available for the other three areas of the WCFSP in FY2001.

Water Management and Conservation Plan Status

Upper Colorado Region, Provo Area Office

District	Project	Acres Served	M&I Population	Last Plan Date	Next Plan Date	Plan Req'd ¹ (Y/N)	Comments
Bountiful Water Sub-CD	SRPA - Weber Basin	3,294				Y	Say they've done one, but no copy submitted
Bridger Valley Water Cons Dist	Lyman	37,916		12/89		Y	Declined assistance
Cottonwood Creek Consolidated Irrigation Co	Emery County	5,161		07/87	12/01	Y	Providing technical assistance, working on at own expense
Eden Valley IDD	Eden	17,010			12/01	Y	
Emery Water Cons Dist	Emery County	18,775		05/87	12/01	Y	Providing technical assistance, working on at own expense
Ephraim Irrigation Co	Sanpete	7,661		07/87	12/01	Y	Under cooperative agreement
Farmington Area PID	SRPA-Weber Basin	2,768			12/01	Y	
Haight's Creek Irr Co	SRPA-Weber Basin	2,814			12/01	Y	Declined dollar assistance
Hooper Irr Co	SRPA-Weber Basin	9,900			12/01	Y	Working on in coop. with UACD
Horseshoe Irr Co	Sanpete	7,085	671		12/01	Y	Under cooperative agreement
Huntington/Cleveland Irr Co	Emery County	11,609		07/87	12/01	Y	Coop. agreement with UACD & RC&D
Ogden River Wtr Users Assoc	Ogden River	24,662		04/87	12/01	Y	Under cooperative agreement
Pr, Riv, & Mink Cr Canal Co	Preston Bench	5,571		10/89	12/01	Y	Under cooperative agreement
Provo River Water Users Assoc	Provo River	48,156		05/87	12/01	Y	Declined assistance
Roy WCSD #1	SRPA-Weber River	4,072			12/01	Y	Under cooperative agreement
South Cache Water Users Assoc	Hyrum	6,800			12/01	Y	
Springville-Mapleton Irr Co	Strawberry Valley	9,220		07/87	12/01	Y	Under cooperative agreement
Strawberry Highline Canal Co	Strawberry Valley	17,270		07/87	12/01	Y	Under cooperative agreement

District	Project	Acres Served	M&I Population	Last Plan Date	Next Plan Date	Plan Req'd ¹ (Y/N)	Comments
Strawberry Water Users Assoc	Strawberry Valley	18,078		08/90	12/01	Y	Declined assistance
Jintah Water Cons Dist	Jensen Unit, CUP	4,080		07/87	12/01	Y	Under cooperative agreement
Jintah Water Cons Dist	Vernal Unit, CUP	14,781		07/87	12/01	Y	Under cooperative agreement
Weber Basin Water Cons Dist	WeberBasin	90,501	350,000	05/92	12/01	Y	Under cooperative agreement
Weber River Water Users Assoc	WeberRiver	94,154		07/87	12/01	Y	Under cooperative agreement
Metropolitan Water Dist of SLC	Provo River	0	343,345	05/87	12/01	N	Courtesy copy submitted
Dutch John					12/01	N	Providing technical assistance
San Juan Water Cons Dist		8,476	13,284	01/99		N	Cooperative agreement provided
Otter Creek Reservoir Co				06/01		N	Under cooperative agreement
Central Iron County Water Cons Dist		68,740	36,687	03/01		N	Cooperative agreement provided
Duchesne-Strawberry		70,420	0	03/01		N	Cooperative agreement provided
Weston Creek Irrigation Co			0	07/01		N	Under cooperative agreement
South Bench Irrigation Co				04/01		N	Cooperative agreement provided
Independent Canal Co		2,713	0	02/01		N	Cooperative agreement provided
Fremont Irrigation Co				06/01		N	Cooperative agreement provided
Sanpete Water Cons Dist		101,760	17,513	05/00		N	Cooperative agreement provided

¹A plan is required by either the Reclamation Reform Act of 1982 or by specific contract provisions.



The End

WATER CONSERVATION FIELD SERVICES PROGRAM
Bureau of Reclamation - Upper Colorado Region
Annual Report - Fiscal Year 2000

Western Colorado Area Office Report

Local Program Description

The Western Colorado Area Office (WCAO) serves western Colorado, northwestern New Mexico, and northeastern Arizona, an area of over 49,000 square miles (see map below). The geographical description of the area, from the Grand Valley in Western Colorado, to the rugged San Juan Mountains in southwest Colorado, to the arid Colorado Plateau, is as diverse as the people who inhabit it. The WCAO's Water Conservation Field Services Program (WCFSP) provides assistance to over 20 irrigation districts and 4 Native American Tribes in 17 Reclamation projects providing an irrigation supply to approximately 352,900 acres and a municipal and industrial (M&I) supply to over 7,000 taps. Because of geographical constraints, and to better serve our customers, the WCAO WCFSP consists of two program coordinators; one located in Grand Junction, Colorado, and one located in Durango, Colorado. The WCAO is committed to improving water management by actively implementing the WCFSP.

Fiscal Year 2000 was a good year to promote effective water management and efficient water use. A mild winter and a hot, dry summer made the 2000 water year one of the driest in recent history. Water managing entities in the area did an excellent job of managing their water supplies. Many entities benefitted from the technical and financial assistance they have recently received from the WCFSP. Newly installed water measurement structures, water management software, efficiency improvements to delivery systems, and better informed water users all contributed to better overall project management, which enabled most water users to receive their full supply of water, despite the dry conditions.



Jackson Gulch Reservoir (Photo taken 10/13/2000)



Vallecito Reservoir (Photo taken 10/13/2000)



Jurisdiction of the Western Colorado Area Office

The **Durango Office's** WCFSP focuses on water management needs and issues in southwestern Colorado, northwestern New Mexico, and northeastern Arizona (in the Upper Colorado River Basin of the Navajo Nation). The office serves eight water districts and four Native American Tribes. The size of the irrigation districts range from 3,900 irrigated acres (Hammond Conservancy District) to 54,160 irrigated acres (Dolores Water Conservancy District). In Fiscal Year 2000, the Durango office emphasized assisting water management entities in developing their respective water management plans. This entailed working with the Ute Mountain Ute Tribe on their plan for the Farm & Ranch Enterprise, and initiating plans and obtaining commitments from the Dolores Water Conservancy District, the Hammond Conservancy District, the Pine River Irrigation District and the Florida Water

Conservancy District. The Durango office was also involved in demonstration and implementation projects as well as education and information programs.

The **Grand Junction Office** assists 12 water user districts located in north and west-central Colorado ranging from Steamboat Springs (Stagecoach Reservoir) to Bostwick Park (Silver Jack Reservoir) near Montrose. The irrigation districts range from 611 irrigated acres (Leroux Creek Water Users Association) to 68,581 acres (Uncompahgre Valley Water Users Association). During FY2000, the Grand Junction office focused on finishing the water management plan for the Silt Water Conservancy District, developing a draft plan for the Uncompahgre Valley Water Users and starting plan development for Bostwick Park and Crawford Water Conservancy Districts, Grand Valley Water Users, and Orchard Mesa Irrigation District.



Pat Page, left, and Dan Crabtree Water Management Coordinators for the Western Colorado Area Office

In addition, the Grand Junction Office was involved in various water education activities such as childrens' water festivals, conservation workshops, and presentations. The Grand Junction office was also involved in demonstration and implementation projects with various districts. These projects included remote controls for headgates, polymers to reduce canal seepage, and diversion improvements.

In FY2001 both offices will continue to place high priority on helping water districts develop their water management plans.

Problems, Issues, Goals, and Objectives

In order to deliver an effective Water Conservation Field Services Program (WCFSP) it is necessary to focus on the water management needs of the WCAO customers. These needs are wide and varied and will continue to change as time progresses. Therefore, it is important that the WCFSP maintain the flexibility necessary to remain effective as needs change. Continuous data gathering will be undertaken in order to stay in touch with the current needs of potentially affected interests. The Area Office will use various existing committees and forums to collect this information. These include meetings with local agriculture committees; local Soil Conservation Districts; monthly and annual water user meetings; and one-on-one contacts. As scoping information is collected, program goals and activities will become more specific and focused. The WCFSP provides assistance in four main areas of emphases: Water Management Planning, Demonstration of Innovative or Unique Measures, Implementation of Water Management Measures, and Education and Information Outreach. Following is a summary of local problems and goals the Area Office has identified to address in these four main areas of emphases:

Water Management Technical and Planning Assistance: The primary objective of the WCFSP is to provide assistance in the development of more meaningful and implementable water management plans. The WCAO WCFSP coordinators have concentrated their efforts on assisting those entities that are required to develop plans pursuant to the Reclamation Reform Act (RRA) and/or through contractual obligations in the form of repayment or water supply contracts with the United States. Within the

WCAO, 17 districts and 1 Native American Tribe are required to develop plans. The goal of the WCAO WCFSP is to provide sufficient assistance to ensure that all these entities have an opportunity to develop and submit effective water management plans by the year 2002.

Water Management Implementation Activities: Some of the earliest projects in Reclamation's history are located within the Western Colorado Area . These include the Uncompahgre Project, completed in 1909, and the Grand Valley Project, completed in 1914. Additionally, Federal involvement in irrigation projects on the Navajo Nation near Shiprock, New Mexico, date back to 1904. Most of the remaining projects within the WCAO boundary are at least 30 years old. Consequently, many of the water delivery facilities in the area need improvements and modernization. A goal of the WCAO WCFSP is to provide assistance to irrigation districts, Native American Tribes, and local water management entities to upgrade and improve their existing systems. The WCAO is also working with these entities to upgrade their water accounting systems and methods to enable them to better manage their water resources and overall projects.

Water Management Demonstration: The demonstration of modern technologies and methods has been, and will continue to be, an integral part of the WCAO WCFSP. As noted above, most of the projects in the area are more than 30 years old and consequently, the delivery systems are outdated and in need of repair or improvement. Furthermore, many farmers and urban water users are using inefficient irrigation methods and techniques. Demonstration projects allow water management entities and water users to see, first-hand, the benefits of utilizing new methods and technology. The WCAO WCFSP partners with Federal, State, Tribal, and local water management entities to demonstrate new irrigation techniques that are more efficient, less labor intensive, and that reduce non-point discharges. The new techniques and methods will enable water providers and users to save time and money, increase crop yields, and improve water quality.

Water Conservation Information and Education: The service area of the WCAO, specifically western Colorado and northwestern New Mexico, is experiencing tremendous growth. Regional water supplies are being strained. In many cases this growth has caused agricultural lands to become "urbanized." Many new landowners are unfamiliar with irrigation methods, laws, and cultures. This unfamiliarity can cause water management problems. Also, with the abundance of rivers, streams, lakes, and reservoirs in the area, the perception is that water resources are plentiful. The fact remains, however, that the region receives only 9 to 18 inches of precipitation annually. This misconception of a water-rich region is yet another challenge that the WCFSP coordinators must overcome.

The WCAO WCFSP includes an education and information outreach program designed to educate water management entities and the general public on water conservation and other water resource-related issues. The education and information outreach program targets users of all kinds; young and old, agricultural and municipal, urban and rural. The goals of the program are to better inform the public on water management and water resource issues and alternatives, educate district and tribal water management staff on new specialized technologies and methods, and assist water management entities in communicating with the public.

Program Resources

Staff

The Western Colorado Area Office, WCAO, has two full-time Water Management Coordinators, one in each office, funded through the Water Conservation Field Services Program (WCFSP). Their main responsibility is to provide and coordinate technical and financial assistance to water districts and

Native American Tribes. They are supported by a variety of Reclamation personnel in both offices, including public information specialists, hydraulic engineers, geologists, water quality and NEPA experts, civil engineers, contract specialists, and administrative staff. The Area Office Coordinators also work closely with Coordinators from other parts of the State and Region. This cooperation and communication ensures that the WCFSP will continue to be successful.

Budget

To carry out the WCFSP in 2000, the WCAO projected a need for 3.1 FTE's and a budget of \$557,500. The actual amount obligated in FY2000 was \$516,525 and FTE usage was 3.25.

Partners

The WCAO has worked with numerous non-Reclamation entities in order to make our program a success. These include Natural Resources Conservation Service, Navajo Nation, Southern Ute Indian Tribe, Ute Mountain Ute Tribe, Colorado Association of Soil Conservation Districts, various local Soil Conservation Districts, Colorado Division of Wildlife, Colorado Water Conservation Board, Colorado Soil Conservation Board, Bureau of Land Management, Colorado State Forest Service, U.S. Forest Service, Colorado Department of Education, non-profit organizations, municipalities, universities, and local schools. The involvement of these entities ranged from participating in water festivals and other education activities to providing technical assistance to districts for water management plan development.

Other Programs

Other Reclamation programs have been used to assist in water management. For instance, in Durango, the WCFSP coordinator continues to work closely with the Native American Affairs Program coordinator to ensure that the assistance provided by the two programs meets the needs of the requesting tribes. Partnerships with other Reclamation Area Offices and Regions have also been developed to provide assistance to customers common to more than one office or region.

Program Accomplishments

During Fiscal Year 2000, the Western Colorado Area Office (WCAO) provided direct technical and/or financial assistance to 34 entities in western Colorado, northwestern New Mexico, and northeastern Arizona. Among these entities were irrigation districts and Native American Tribes responsible for supplying irrigation water to over 300,000 acres. The WCAO Water Conservation Field Services Program (WCFSP) provided assistance in four areas: **Water Management Planning**, **Demonstration** of innovative methods and technologies, **Implementation** of water management measures, and water **Education**. Following is a summary of accomplishments in each of these program emphasis areas for FY-2000:

Water Management Planning

Before the initiation of the WCFSP, Water Conservation Plans, for the most part, were more like operation and maintenance checklists, with primary emphasis on repairing existing features and plugging leaks. Plans weren't supported by Reclamation in that no real technical support or planning

guidance was provided. A major goal of the WCAO is to improve the quality and number of meaningful and implementable plans.

Plan requirements and a schedule of when plans are due have been discussed with all districts and Native American Tribes who are required to develop water management plans. It is apparent that each of the entities have raised their awareness of the fundamental water management measures. Two entities have submitted final plans and Reclamation has reviewed them (Silt Water Conservancy District and the Ute Mountain Ute Tribe). Four entities are in the final stages of plan development and submittal. These are the Smith Fork, North Fork, Bostwick Park, and Dolores Water Conservancy Districts. The Florida Water Conservancy District, the Pine River Irrigation District, and the Hammond Conservancy District have all initiated plan development and anticipate plan submittal by Fall 2001. All districts (except the Upper Yampa Water Conservancy District and the Montezuma Valley Irrigation Company) who are required under RRA or contractually to submit plans have either done so or are in the process of developing them. These districts are also doing such things as: appointing water management coordinators, becoming more aware of the importance of water measurement, discussing incentive pricing, and getting more involved in community water education.

The WCAO WCFSP also provides planning assistance to entities who are not required to develop plans. The Animas-La Plata Water Conservancy District developed a plan for the western portion of La Plata County, Colorado, and submitted it in July 2000. In FY2000, five entities including, the Mancos and Upper Gunnison Water Conservancy Districts, the Farmers' Irrigation District, and the San Juan River Dineh and Tsaille/Wheatfields Water Users Associations, received financial and technical assistance for preparing plans, even though they are not "required".

Examples of specific planning activities conducted in FY-2000 include:

Colorado Water Conservation Board: To help in the planning effort, a Memorandum of Understanding between the Colorado Water Conservation Board and Reclamation Area Offices serving Colorado was put into place during FY-1997. This agreement sets-forth a working understanding and guidance for the delivery of water management programs for the State of Colorado and the Bureau of Reclamation. The agreement was modified in FY2000 making available, a Reclamation employee to assist districts in developing water management plans to fulfill the districts' requirements under the RRA. The agreement provides the basis for a long-term relationship between the State of Colorado and Reclamation Area Offices within the state in accomplishing mutual objectives for water management and conservation planning, education, and program implementation.

Ute Mountain Ute Tribe's Farm and Ranch Enterprise:

The Ute Mountain Ute Tribe's Farm & Ranch Enterprise submitted their updated water management plan in December 2000. The plan, adopted by the Tribe and signed by the Farm & Ranch General Manager and the Tribal Chairman, now serves as the basis for annual operating plans developed by the Enterprise. The plan is unique in that it addresses both off-farm and on-farm water management issues.

Bostwick Park Water Conservancy District: Bostwick Park Water Conservancy District, through a cooperative agreement, contracted with Earth / Stone Ltd., a private consulting firm, to develop their water management plan.



One of 110 center pivot sprinklers on the Ute Mountain Ute Farm & Ranch.

The plan was submitted and reviewed in August of 2000. The District subsequently revised and finalized the plan and resubmitted it in FY2001.

Smith Fork Water Conservancy District: The Smith Fork Water Conservancy District developed and submitted a draft plan in FY2000. Their plan was developed by District staff. The plan is currently being reviewed by Reclamation.

Animas-La Plata Water Conservancy District: In July 2000, the Animas-La Plata Water Conservancy District (ALPWCD) submitted a water management plan for the western portion of La Plata County. While not required to develop a plan under RRA or through contractual obligations, the District took a proactive approach in addressing the water resource issues in this very water-short part of the county. The plan addressed the feasibility of a municipal water delivery system, the potential for water savings through efficiency improvements, and the potential for new water storage reservoirs. The District is in the process of hiring a water management coordinator for the implementation of plan elements.

Grand Valley Water Users Association: The Grand Valley Water Users Association (GVWUA) hired a consultant in FY-1998 to assist them in completing their water management plan. Through a cooperative agreement with Reclamation, they will receive \$5,000 for the consultant to develop a plan that will fulfill the needs of the Association and RRA requirements. This planning effort continued in FY2000.

Uncompahgre Valley Water Users Association: The Uncompahgre Valley Water Users are in the process of developing their water management plan. Along with a written document, they plan to include a multi-media presentation suitable for use at local service club meetings. Their first working draft was submitted to Reclamation in October 1998. A second working draft was submitted in 1999 for informal review. Work on the plan continued in FY2000. UJVWUA recognizes the importance of a document that describes agriculture as the economic backbone of Montrose and Delta Counties.

Mesa Water and Sanitation District: The Mesa Water and Sanitation District has been granted financial assistance through the Efficiency Incentives Program to help them develop a water management plan. Their District is located at the town of Mesa and does not receive water through a Reclamation project and is not required to submit a plan. However, they are experiencing a lot of growth and recognize the importance of a good water management plan. In 1999, they began their planning effort by gathering pump yield data from their water supply wells. A draft plan was initiated in FY2000.

Orchard City Irrigation District and North Fork Water Conservancy District: The Orchard City Irrigation District and the North Fork Water Conservancy District are being assisted in plan development by the Delta Soil Conservation District (SCD). A cooperative agreement between Reclamation and the Delta SCD provides funding for plan development. A rough draft of the North Fork's plan was submitted in FY2000 and a final draft is in the works. Planning efforts are in full swing for Orchard City. Their plan should be submitted well ahead of the December 2001 deadline.

California Polytechnic University: As part of the recovery program for endangered fish, the California Polytechnic University (Cal-Poly) is doing a water management study for the Orchard Mesa Irrigation District (OMID) under a cooperative agreement. With funding from the WCFSP, Cal-Poly has agreed to gather additional public input at local District Board meetings and other data needed for a water management plan. Reclamation is assisting OMID in completing their plan.

Upper Gunnison Water Conservancy District: The Upper Gunnison Water Conservancy District, a non-Reclamation district, has entered into a cooperative agreement with Reclamation to develop a water conservation plan. The District has started a comprehensive watershed planning and management process.

La Plata Soil Conservation District and San Juan Resource Conservation and Development Council: Partnered with the La Plata Soil Conservation District and the San Juan Resource Conservation & Development Council to host "Water 101", a public informational meeting for water users within the Florida Project. Representatives from the Florida Water Conservancy District, the Colorado Division of Water Resources, and private ditch companies were on hand to give information and answer questions. Approximately 80 people attended this meeting which served as a kickoff meeting for the District's water management planning process.



A packed audience listens intently during the "Water 101" meeting.

Hammond Conservancy District: During FY2000, the Hammond Conservancy District, the Pine River Irrigation District, and the Dolores Water Conservancy District initiated their respective planning processes. Their plans are anticipated to be submitted during FY2001.

Mancos Water Conservancy District and Farmers' Irrigation District: The WCAO provided financial assistance to 2 "non-required" entities in FY2000. Both the Mancos Water Conservancy District and the Farmers' Irrigation District entered into cooperative agreements with Reclamation for the purpose of developing plans. The planning process for these plans has been initiated.

Navajo Nation - Water Users Associations: The WCAO has continued to support the formalization of Water Users Associations on the Navajo Nation. A temporary board has been appointed to investigate community interest in the formation of a water users association in the Shiprock, New Mexico, area, and to draft a set of articles of incorporation that the Farm Board could then present for approval in a series of public hearings. The farm boards are now awaiting action by the Navajo Nation legislature which would allow them to collect water use fees from irrigators, thus giving them the necessary revenue to operate and maintain their respective irrigation projects.

Tri-County and Collbran Water Conservancy Districts: The Tri-County and Collbran Water Conservancy Districts were contacted in FY2000 to inform them of the assistance available for plan development. They have both shown interest in entering into cooperative agreements to help in this effort.

San Juan River Dineh Water Users Association: With technical and financial assistance from both the WCAO and the Navajo Nation, the newly formed San Juan River Dineh Water Users Association in Shiprock, New Mexico, is preparing a water management plan for the three Navajo irrigation projects along the San Juan River (Fruitland, Hogback, and Cudei). The water users association was formed as a result of technical and financial assistance provided by the WCFSP and Colorado State University and is designed to act as a water managing entity that collects water assessments in order to operate and maintain the irrigation delivery facilities.

Demonstration Activities

Many of the districts in Western Colorado have been in existence since the early 1900's and are using

outdated technology. Therefore, one of the primary goals of the WCAO's efforts is to provide technical and financial support to districts who are willing to try new technology. In FY-2000 the WCAO assisted entities in the following activities:

Uncompahgre Valley Water Users Association:

For the third year, the Uncompahgre Valley Water Users are working on a demonstration project to show how polyacrylamide (PAM) attracts sediment in water, settles into cracks, and helps to seal ditches and canals. WCAO has provided technical assistance by installing observation wells at selected locations. The demonstration sites are located in different types of soils ranging from cobble rock to fractured shale. Water levels have been measured in the wells over the course of the irrigation season under reaches of canal that haven't been treated. Many of these sections were treated early in the irrigation season and monitoring will continue.



In 2000 the Uncompahgre Valley Water Users sprayed a polyacrylamide solution on 13 miles of canals and laterals as part of a canal sealing demonstration.

In cooperation with the National Irrigation Water Quality Program (NIWQP), the Water Users applied PAM to about 13 miles of earth laterals in the Sunflower Drain watershed area. This area had previously been monitored by the USGS to obtain baseline data for selenium and salt loading. Preliminary results from this demonstration showed about a 30% decrease in selenium loading to the Gunnison River.

Colorado State University: Through a separate cooperative agreement, Reclamation is assisting Colorado State University in studying the effects of polymer use during corn seed drilling. The polymer may hold moisture near the seed and improve germination rate and yields. Preliminary results from 2000 showed that the use of cross-linked polymer can reduce the number of required irrigations but maintain the same yield.

Colorado State University Research Farm: The WCAO entered into a cooperative agreement with Colorado State University's Research Farm in Yellow Jacket, Colorado, for improving infiltration through the use of PAM and dammer/diker technology. The purpose of the project is to demonstrate the effectiveness of these new technologies to help reduce erosion and increase water infiltration. The project is ongoing.



Preparing the Diné College Demonstration farm for it's first planting.

Diné College: Providing technical and financial assistance to Diné College to establish a multi-irrigation demonstration farm near Shiprock, New Mexico. The college has hired a farm manager and the farm should be operational in FY2001.

Implementation Activities

Through the WCFSP, the WCAO provides technical and financial assistance to entities for the implementation of water management measures. The WCAO stresses the implementation of the

fundamental measures identified in the Guidebook. These are: water measurement, incentive pricing, education, and the establishment of a water management coordinator. Of these, water measurement is probably the most widely adopted measure among districts on the Western Slope who have planning requirements under the RRA. Many districts are managing projects which have been in operation for over 50 years. In some cases they have no measuring devices, or they are improperly installed or in disrepair. Several of these entities have benefitted from the WCFSP by entering into cost-share agreements with Reclamation to repair, improve, or install water measuring devices. Few, if any, Western Slope districts have implemented true incentive pricing measures. However, some districts do charge an "overage" if the individual water user uses more than his/her allotment for the year. Also, some districts have a "small-tract policy" in place to address the urbanization of agricultural lands in their area. Districts are becoming more active in disseminating information in an attempt to inform and educate the public. Six water conservancy districts in southwestern Colorado provide funding to the Southwestern Water Conservation District's Water Information Program (WIP). The program was initiated by the districts to assist with the distribution of information to the public on water-related issues and to educate water users on the prudent use of the resource. In addition, many districts (Uncompahgre Valley Water Users Association, Dolores and Mancos Water Conservancy Districts, and Southwestern Water Conservation District) are becoming more active in local water festivals.

As districts complete their planning efforts, Reclamation will be providing technical and financial assistance for plan implementation. Although some measures may be beyond the financial scope of the WCFSP program, WCAO is committed to assisting districts to every degree possible so that water management measures will be implemented to their fullest extent.

Examples of specific implementation activities conducted in FY-2000 include:

Florida Water Conservancy District: During FY2000, the Florida Water Conservancy District received financial assistance to install a ramp flume, complete with a remote monitoring device, at the Florida Farmers Diversion Dam. The equipment allows for real-time water measurement data to be collected which will improve the management efficiency of the project.



Ramp flume constructed in the Florida River below Florida Farmers Diversion Dam.

Silt Water Conservancy District: The Silt Pumping Plant, along with other Project facilities, was constructed in the mid-1960's. Water has been diverted using a "rock and brush" diversion. The river



The Silt Diversion before improvements



The improvements to the Silt Diversion were completed in FY2000

channel has scoured downward 3 to 4 feet since the Project was constructed and in order to continue to divert water, it became necessary to move the diversion further upstream. High spring flows routinely washed away parts of the diversion requiring the use of heavy equipment for reconstruction.

To remedy the problem, the District constructed a small concrete diversion which establishes a permanent control point on the river. The project, completed in 2000, was a cooperative effort between the NRCS, Reclamation, and the Colorado River Water Conservation District. The new system worked well during its full irrigation season.

Hammond Conservancy District: The WCAO is providing assistance to the Hammond Conservancy District for the installation of remote data recording devices to record and monitor flows at key wasteways along the district's main canal.

Ute Mountain Ute Farm and Ranch Enterprise: One of the fundamental measures addressed in the Ute Mountain Ute Farm & Ranch Enterprise's water management plan was information and education for staff and local water users. The WCAO provided financial and technical assistance to help the Tribe implement this portion of their plan, including support for the third annual SWAGMan (Soil, Water, and Groundwater Management) Symposium.

Education/Information Activities

There are countless benefits associated with a water education and information program. Not only do education activities provide a great way to convey a water management message, but they also provide a chance to meet and work with staff from other agencies and develop working relationships with other unlikely partners. The basic goals of



One of four key spill sites to be measured on the Hammond Main Canal.

the WCAO education program are to: Educate new water users about the irrigation culture in Western Colorado, bring project operators up-to-date in skill and training, inform water users about water management issues and alternatives, provide a chance for Reclamation staff to be better informed and involved in the WCFSP.

The WCAO participates in several water festivals each year because we believe that one of the most effective ways to have an educated adult population is to educate people before they become adults. In this way, we not only educate the future adults but kids have a tremendous ability to bring information home to their parents and influence them as well.

Examples of specific education and information activities conducted in FY2000 include:

Children's Water Festivals: WCAO co-sponsored and participated in six children's water festivals in Durango, Cortez, Montrose, Delta, and Grand Junction in Colorado, and in Farmington, New Mexico. Through these events over 3,600 4th and 5th grade children were exposed to a wide variety of water-related concepts.

Colorado Association of Conservation Districts: Along with the Eastern Colorado Area Office and the Albuquerque Area Office, WCAO signed a "Bridging the Headgate" Memorandum of Understanding with the Colorado Association of Soil Conservation Districts on May 14, 1999. The purpose of the MOU is to provide a framework for cooperation that supports common goals and interests in the development of information and education projects that will further the conservation of the natural resources of the State of Colorado. A Cooperative Agreement was signed to provide \$15,000 per year for the following three years to CASCD for the purposes of carrying out activities identified in the MOU.

Colorado Association of Conservation Districts - Colorado Teachers Conservation Workshops: The WCAO has assisted the Colorado Association of Soil Conservation Districts in planning and implementing the annual Colorado Teachers Conservation Workshop from 1996 through 2000. The WCAO WCFSP and the La Plata Soil Conservation District hosted the event in Durango in 1999 and will do so through 2001. The purpose of the workshop is to get K-12 teachers interested in and knowledgeable about natural resources so that they may, in turn, incorporate natural resource issues into the classroom curriculum. Over 20 different local, state, tribal, and federal agencies have partnered with Reclamation in organizing and conducting the event which has drawn over 80 teachers in the last two years.



Teachers "surfing" the world wide web to learn about natural resources.

Water Management Workshop Scholarships: WCAO sponsored several training scholarships to help water managers attend Reclamation's annual Water Management Workshop and other technical workshops.

Southwest Water Conservation District: In support of the Southwest (Colorado) Water Conservation District's *Water Information Program*, the WCAO entered into a multi-year cooperative agreement with the District. The WCAO will provide financial and technical assistance for implementing education and information activities provided by the *Water Information Program*.

Ute Water Conservancy District: In partnership with the Ute Water Conservancy District, Reclamation continued sponsorship in the development and implementation of a water education

curriculum called *Water Ways* for third and fourth graders in Western Colorado. The curriculum is standards-based and will address multiple scholastic subjects, math, science, social studies, reading and more. Interest of the program has spread across the state. Due to this increased interest, the Colorado Water Conservation Board has also joined in the sponsorship of the program and it will be reaching many more students throughout Colorado in the near future.

Dolores Water Conservancy District: The WCAO partnered with the Dolores Water Conservancy District and the Colorado State University Research Center in Yellow Jacket, Colorado, to conduct a one-day irrigation management workshop. The WCAO and DWCD offered incentives for area farmers to attend by crediting a small portion of their allocated Dolores Project water for the 2000 water year. The WCFSP Coordinator in Durango was among the presenters at the workshop.

Special Water Presentations: In FY2000, the WCAO WCFSP coordinators continued to promote the WCFSP by giving presentations, writing articles in conservation-related periodicals, and staffing displays at many different venues. Presentations were given at the Ute Mountain Ute SWAGMAN symposium, the Navajo Nation Soil and Water Conservation District annual meeting, and the Four States Irrigation Council annual meeting. Articles describing the WCFSP and highlighting WCFSP accomplishments were prepared and published in CASCD's *"The Conservator"*, and the Water Information Program's *"Water Letter"*. The WCAO developed an interactive exhibit which highlights WCFSP accomplishments and showcases examples of educational computer software funded through the program. The program was displayed at the Colorado Water Workshop, the Colorado Association of Conservation Districts Annual Meeting, the Southwest Water Conservation District annual seminar, and the La Plata County Fair.

Colorado Foundation of Agriculture: The Colorado Foundation for Agriculture, in cooperation with Reclamation, continues development of an information booklet on the Colorado River for distribution to Colorado students. In addition, a multi-media CD on Colorado Water is being developed for free distribution to Colorado schools.

Ute Water Conservancy District, et al - Fifth Grade Water Education Program: The WCAO partnered with Ute Water Conservancy District, the City of Grand Junction, Public Service Company of Colorado and the Colorado Energy Assistance Foundation to deliver a water and energy conservation program to area 5th graders. Over 1000 students participated in the program which provided water and energy conservation kits for household improvements, including low-flow showerheads and sink aerators. It is estimated, that over a 5 yr period, this year's program will save over 400 acre feet of water and make over \$800,000 in family disposable income available for other use. 2000 marked the third year of Reclamation's sponsorship of this program. Each year the program is implemented, an additional 400 acre feet of estimated savings should be accrued.

Durango Nature Studies, et al: The WCAO partnered with Durango Nature Studies and the U.S. Forest Service to conduct water education activities and develop water-related curriculum to local elementary schools, and to conduct a class entitled "Environmental Education Made Easy", a one-day workshop designed to help natural resource experts convey their experiences and expertise to children and adults. Over 50 agency personnel attended.

Youth Water Education Programs: In addition to the above mentioned activities, the WCAO partnered with other environmental education coordinators from various agencies to educate youths and adults on natural resources. Activities included presentations to schools (both in the classroom and outdoors), participation in the Colorado Division of Wildlife's "Teaching Environmental Science Naturally" (TEN's) program, funding a workshop sponsored by Durango Nature Studies for home-schooled children, and supporting programs such as Project WET and River Watch.

Program Evaluation

Planning

We've emphasized that our major focus is the need for sound water management planning. As such, in FY2000, almost 60% of the financial assistance contracts awarded by the WCAO were for planning assistance. There are several districts and Native American Tribes (Mesa Water and Sanitation District, Upper Gunnison Water Conservancy District, Bostwick Park Water Conservancy, North Fork Water Conservancy District, Orchard City Irrigation District, Grand Valley Water Users, Silt Water Conservancy, Uncompahgre Valley Water Users, Orchard Mesa Irrigation District, Smith Fork Water Conservancy, Ute Mountain Ute Farm and Ranch Enterprise, Florida Water Conservancy District, the Navajo Nation, Animas La Plata Water Conservancy District, and Pine River Irrigation District) that have either already submitted their water management plans or are actively developing them. Each of these recognizes the importance and benefits of a good plan. We have contacted other districts who also recognize the need for a good plan and will be working on theirs in the future. The December 10, 1996 Reclamation Policy Memorandum which established the WCFSP specifies that "... all districts will have the opportunity to have plans updated no later than five years from the date of this policy." Our goal, then, is to work with each district in our area to ensure that they have this opportunity before December 10, 2001. We have established a schedule for plan development, and, have encouraged districts to seek help in the form of outside consultants and possibly university students in order to reach the 2001 goal. We've made great strides toward reaching the 2001 goal and our commitment to ensure water management plans are completed continues.

Implementation and Demonstration

The implementation and demonstration portion of the WCFSP has helped a variety of entities with their water management activities. The implementation and demonstration program has generated some good water management activities that address the four fundamental measures and it has also provided an opportunity for Reclamation to develop a working relationship with other entities and show that we are serious about the program. Not all of these entities have been in the category of users that are required to submit water management plans under the RRA. By working with these entities, we have demonstrated the potential of the WCFSP and Reclamation's commitment to the program. Implementation and demonstration activities have provided a means for districts to see what the program is all about and the importance of developing sound water management plans.

As water districts and Native American Tribes complete their water management plans required by RRA and begin to implement them, funding will be shifted away from non-Reclamation areas and toward these entities. Reclamation is committed through the WCFSP to help districts, either through technical or financial assistance, in implementing their water management plans. This will require funding and FTE's above what we have had in the last two years. Future budget requests will reflect this need. While the focus will be on assisting those entities who are required to develop plans, Reclamation will, subject to available funding, also provide implementation assistance to those "non-required" entities who have taken the proactive approach and developed plans.

Most all of the demonstration and implementation activities planned for 2000 are complete or underway. A few projects are moving ahead slowly for various reasons. The Mesa Soil Conservation District agreement for development of an educational waterpark which had been inactive for some time, has begun the project and should complete it in the Spring of 2001. The same is true for the Dine' College Multi-Irrigation Demonstration Farm. It is anticipated that 2001 will mark the first growing season for this project, located in Shiprock, New Mexico.

Education

The year 2000 was another successful year in regard to water education. The WCAO participated in many education activities for children and adults. Water festivals, workshops, one-on-one presentations, and demonstration activities were conducted extensively. The Durango coordinator, once again, did a tremendous job of organizing the 2000 Colorado Teacher's Conservation Workshop. Held for the second time in Durango, the Workshop was an immense success. We continue to find a tremendous need for water education in local schools. There is a great opportunity to educate young people and adults about who we are, what we do, and the importance of good water management. A localized water education curriculum for third and fourth graders has been developed and was a success in the 1999-2000 school year. Education and information outreach are critical components of a comprehensive water management program, however, it is a time consuming endeavor. The coordinators must continue to balance resources between all four components (planning, demonstration, implementation, and education) of the WCFSP.

Program Outlook

Reclamation initiated the WCFSP in FY97. During that time WCAO water management coordinators have focused on the promotion of the WCFSP and informing and demonstrating to water management entities the assistance opportunities available through the program. The result of this approach, for the most part, has been that districts have realized that the supportive and cooperative nature of the WCFSP is far better than the regulatory approach that was first considered by Reclamation to mandate water management plans. More and more entities are "buying-into" the program and it is recognized by most of the districts as being a program that can truly benefit them.

The primary goal of the WCAO WCFSP will be to work closely with those entities who are required, either through RRA or contractually, to submit/update water management plans. Planning assistance is currently being provided to 16 of the 18 entities that are required to prepare a plan. Furthermore, as a result of promoting the benefits of the program, 5 "non-required" entities continue to receive planning assistance. Technical and financial assistance will continue to be offered to help districts plan, develop, implement, and monitor effective plans. One way this will be accomplished is by providing cost-share funds to districts to obtain the services of private consultants to help in plan development. As more entities develop water management plans, more effort (and money) will be directed towards implementing water management measures identified in the plans.

While the main emphasis will be directed towards planning efforts with water districts, the WCFSP will continue to cooperate with and support other water management entities, organizations, and educational institutions whose goals are to promote, educate, demonstrate, and implement efficient water use. Partnerships, both traditional (tribes, water districts, ditch companies, other federal agencies, etc.) and non-traditional (school districts, soil conservation districts, non-profit entities) are being formed. Reclamation's name and logo are showing up in places that receive positive publicity and support which can carry over to other programs and activities. In order to maintain the positive program that the WCFSP has become, the prodigious support and commitment from the WCAO and Reclamation management must continue.

Water Management and Conservation Plan Status

Upper Colorado Region, Western Colorado Area Office

District	Project	Acres Served	M&I Population	Last Plan Date	Next Plan Date	Plan Req'd ¹ (Y/N)	Comments
Animas-La Plata Water Conservancy District	N/A	10,000		N/A	N/A	N	Submitted final plan in June 2000
Bostwick Park Water Conservancy District	Bostwick Park	5,180		7/92	1/06	Y	Final Draft submitted
Collbran Conservancy District	Collbran	22,210		4/93	1/99	Y	Plan initiated - Hiring consultant to complete
Crawford Water Conservancy District	Smith Fork	9,497		2/93	1/06	Y	Draft Submitted
Dolores Water Conservancy District	Dolores	27,860	4,000 (est)	3/92	10/01	Y	Plan initiated.
Farmers Irrigation District	N/A	4,000		N/A	N/A	N	Cooperative Agreement in place. Plan has not been initiated.
Fire Mtn. Canal & Reservoir Co. *	Paonia	10,300		4/93	1/00	Y	Rough Draft submitted - Developed by Delta SCD
Florida Water Conservancy District	Florida	18,665		3/92	12/01	Y	Plan initiated.
Grand Valley Water Users Association	Grand Valley	23,341		3/91	1/98	Y	Initiated plan development, gathering data, providing one-on-one assistance
Hammond Conservancy District	Hammond	3,933		3/92	10/01	Y	Plan initiated. Public meetings being held.
Leroux Creek Water Users Association *	Paonia	611		n/a	n/a	N	Plan in conjunction with North Fork & Fire Mtn
Mancos Water Conservancy District	Mancos	13,746		N/A	N/A	N	Plan underway through cooperative agreement
Mesa Water & Sanitation District	N/A		328	N/A	N/A	N	Plan Underway through cooperative agreement
Montezuma Valley Irrigation Company	Dolores	26,300		---	?	Y	Plan has not been initiated
North Fork Water Conservancy District *	Paonia	15,300		7/92	1/00	Y	Rough Draft submitted - Developed by Delta SCD
Orchard City Irrigation District	Fruitgrowers Dam	2,690		01/93	1/00	Y	Being Developed by Delta SCD

District	Project	Acres Served	M&I Population	Last Plan Date	Next Plan Date	Plan Req'd ¹ (Y/N)	Comments
Orchard Mesa Irrigation District	Grand Valley	10,027		4/87	1/01	Y	Water Study by Cal Poly Cal , Reclamation completing
Pine River Irrigation District	Pine River	45,000		3/92	10/01	Y	Plan initiated. Public meetings being held.
San Juan River Dineh Water Users Association	N/A	13,680		N/A	N/A	N	Plan initiated. Public meetings being held.
Silt Water Conservancy District	Silt	7,044		7/92	1/04	Y	Complete
Tri-County Water Conservancy District	Dallas Creek		5,000 taps	10/96	10/01	Y	Plan submitted 10/96 under Colorado Criteria - Plan Update Underway
Tsaile/Wheatfields Farm Board	N/A	800		N/A	N/A	N	Plan underway through cooperative agreement
Upper Gunnison River Water Conservancy District	N/A	60,000		N/A	N/A	N	Plan underway through Cooperative Agreement
Uncompahgre Valley Water Users Association	Uncompahgre	68,581		3/93	1/98	Y	Plan 50% complete
Upper Yampa Water Conservancy District	Stagecoach	1,280		n/a	n/a	Y	Determination needed as to plan requirement.
Ute Mountain Ute Tribe	Dolores	7,634	1,000 (est)	12/99	12/04	Y	Plan received 12/99. Review has been made and implementation has commenced.

¹A plan is required by either the Reclamation Reform Act of 1982 or by specific contract provisions.