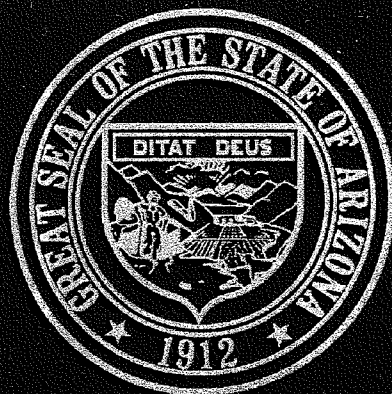


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ARIZONA
DEPARTMENT OF
WATER RESOURCES

ANNUAL REPORT

FISCAL YEAR
1994-1995

WR 1/1/1995
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ARIZONA DEPARTMENT OF WATER RESOURCES

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FIFE SYMINGTON
Governor

RITA P. PEARSON
Director

HONORABLE FIFE SYMINGTON

Governor of Arizona, and

HONORABLE MEMBERS

Arizona State Legislature:

I am pleased to submit to you the 1994-95 Annual Report of the Arizona Department of Water Resources. This report provides an overview of the Department's functions and highlights activities and accomplishments that occurred between July 1, 1994 and June 30, 1995.

The Department's efforts throughout the fiscal year focused on securing the State's long-term water resources. In support of this endeavor, the Department adopted new rules governing the Assured Water Supply program. This program limits groundwater use and promotes long range planning within Active Management Areas (AMAs). The new rules promote the use of renewable water supplies, such as effluent and Colorado River water delivered via the Central Arizona Project, to serve new development. The Department conducted an extensive public outreach effort associated with the development and implementation of the new rules. The new assured water supply rules are a critical component in the State's effort to ensure that Arizona's communities have a long-term dependable water supply.

Recognizing the need for flexibility in water conservation programs, the Department modified the Second Management Plans for all AMAs. The municipal water conservation program was amended to include an alternative to the Gallons Per Capita Per Day (GPCD) program, called the "Non-GPCD Program." This program allows water providers to adopt reasonable conservation measures for their service areas if the provider ceases to use mined groundwater as a water supply.

The Department also published the Arizona Water Resources Assessment, a complete overview of the water situation in Arizona. The Assessment describes the legal and institutional framework for water resource management, analyzes statewide water supply and demand, and discusses potential challenges to water resource management throughout the State. The Assessment will assist local leaders, planners and legislators to identify and direct the next generation of water management issues.

The Department of Water Resources is proud of its accomplishments during Fiscal Year 1994-95, and it will continue to implement Arizona's water management laws and programs to ensure that future generations of Arizonans have the quality of life and economic growth we've come to expect and enjoy.

Sincerely,

Rita P. Pearson
Director

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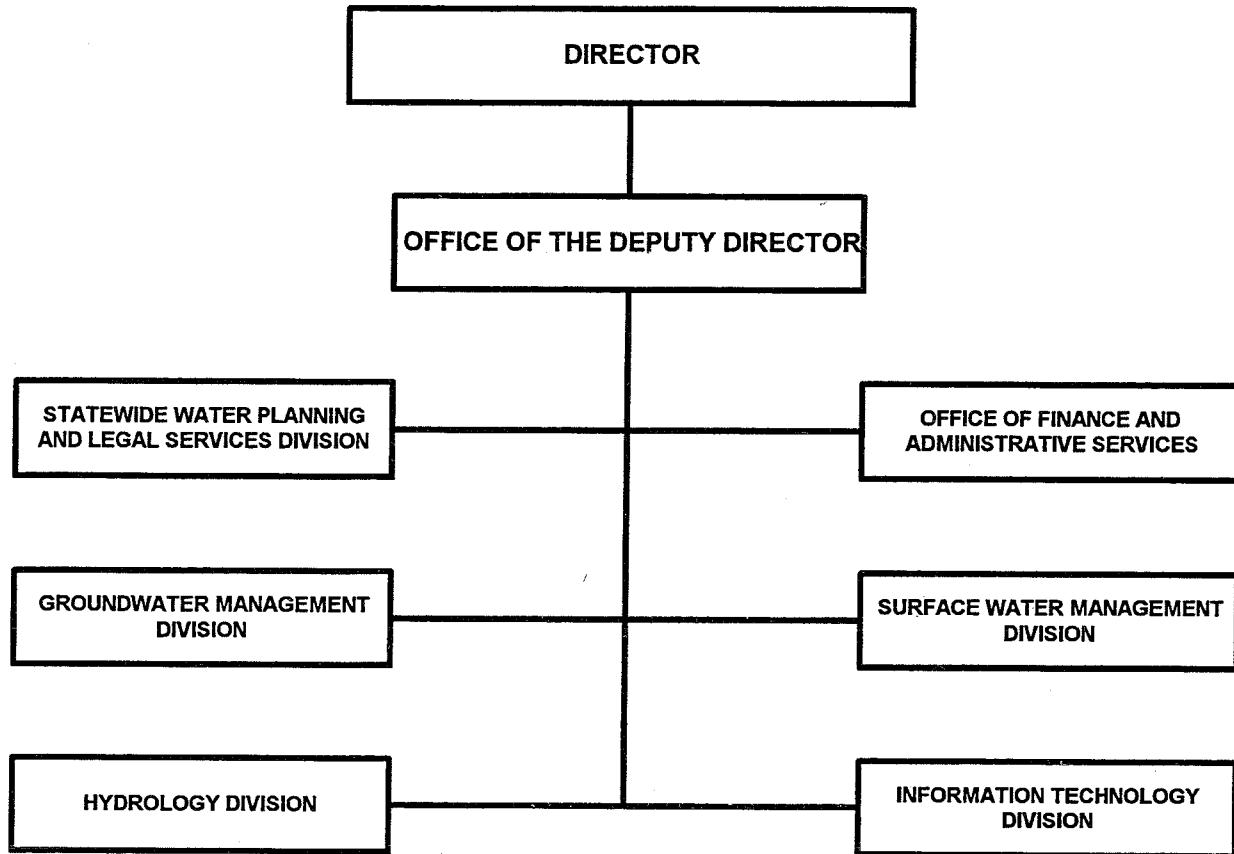
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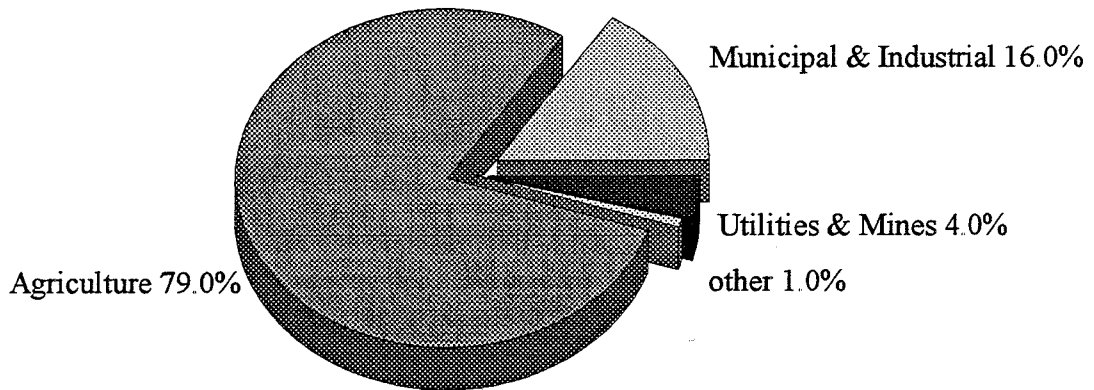
THE ARIZONA DEPARTMENT OF WATER RESOURCES

The Arizona Department of Water Resources was created in 1980 and entrusted with the responsibility of securing long-term water supplies for Arizona. Principle duties include implementing the Groundwater Management Code, registering all surface water and groundwater rights, supporting the adjudication of water rights, ensuring the safety of non-federal dams, assisting local entities to manage floodplains, providing technical assistance to the state's water users, and representing Arizona in interstate water discussions.

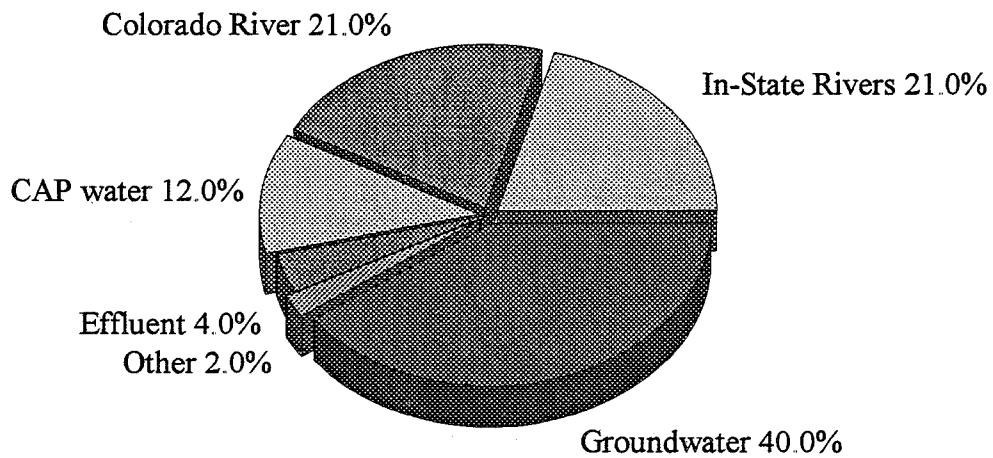


ARIZONA WATER SUPPLY AND DEMAND

Under normalized conditions, Arizona used approximately 6.8 million acre-feet of water in 1994. (One acre-foot equals 325,851 gallons) The following is a breakdown of 1994 water use.



The following water sources were used to meet 1994 demands.



LEGAL ISSUES

Litigation

The Department both initiates and defends against various court actions. During fiscal year 1994-95, activity occurred in the following cases:

Arizona Municipal Water Users Association v. ADWR, Arizona Court of Appeals No. 1 CA-1CV 91-0581; Arizona Supreme Court No. CV-94-0371-PR - ADWR appealed a Superior Court of Maricopa County decision which reversed the Director's decision in the Second Management Plan to count "recovered effluent" in determining a municipal provider's compliance with its gallons per capita per day requirements. The Arizona Court of Appeals reversed the Superior Court's decision, and the Arizona Municipal Water Users Association then filed a petition for review with the Arizona Supreme Court. The Arizona Supreme Court denied the petition for review and remanded the case to the Superior Court, which entered judgment in favor of ADWR.

San Carlos Apache Tribe, et al. v. Superior Court, et al., Arizona Supreme Court No. CV-95-0161-SA - The San Carlos Apache Tribe, the Tonto Apache Tribe and the Yavapai Apache Tribe petitioned the Arizona Supreme Court to challenge the constitutionality of House Bills 2276 and 2193, both passed in 1995. ADWR was named a party respondent under the original jurisdiction of the Court as the agency responsible for administering surface water rights and as technical advisor to the general stream adjudication courts, both of which roles are affected by the legislation. The petition requests injunctive relief against ADWR, prohibiting implementation of the new laws, and attorney fees. The Supreme

Court accepted special action jurisdiction over the petition and referred the case for hearing to the Gila River general stream adjudication trial court in Maricopa County. The case is scheduled for briefing in the trial court through March, 1996. Discovery is currently being sought against DWR.

City of Tucson v. ASARCO v. ADWR, Superior Court of Pima County - ASARCO filed a third party claim vs ADWR seeking a declaratory judgment on whether ASARCO's groundwater right would be lost or reduced by Plaintiff Tucson's condemnation of an easement over acres appurtenant to ASARCO's right. ADWR consented to court's jurisdiction to assure proper interpretation of water law, as applied to this property, and to help resolve this lawsuit, thus opening the door to additional recharge of CAP water underground.

Phoenix Agro-Invest Inc. v. ADWR, Superior Court of Maricopa County - Constitutional challenge to 1991 Water Transportation Act alleging that the exception granted to City of Phoenix from the Act's prohibition on water transfers from the McMullen Groundwater Basin was special/local legislation designed to favor only the City, and resulted in a taking of plaintiff's property right. ADWR assisted in passage of legislation in 1994 amending the statute in a manner that resolved the litigation. The case was dismissed.

Administrative Rules

ADWR adopted the following rules during Fiscal Year 1994-95:

Assured and Adequate Water Supply Rules - Effective February 7, 1995, ADWR adopted rules implementing the assured water supply statute. The rules contain criteria for the approval of applications for designations and certificates of assured water supply inside active management areas. ADWR adopted rules governing adequate water supply reports and designations outside active management areas.

Inspection and Audit Rules - Amendments to ADWR's Inspection and Audit Rules were adopted. The amendments conform the rules to recent legislative changes.

Water Measurement Rules - Amendments to ADWR's Water Measurement Rules were adopted. The amendments use more precise terminology, clarify record keeping requirements, describe accurate measurement devices and practices, and institute approval procedures for alternative water measurement devices and methods.

Fee Schedule Rule - An amendment to ADWR's Fee Schedule Rule was adopted, which replaced fees for underground storage and recovery projects with fees for underground water storage, savings and replenishment projects.

Administrative Cases

Enforcement Cases - During Fiscal Year 1994-95, ADWR began 30 administrative enforcement actions against suspected violators of Arizona water laws. Two enforcement cases were set for hearing, and one hearing was held. Sixty-nine enforcement

cases were closed during the fiscal year, thirty-three through stipulation and consent order and thirty-six through dismissal. ADWR collected a total of \$35,062.75 in late fees and civil penalties.

Administrative Review Cases - After adoption of the Second Management Plan in 1989, ADWR received over 2,000 requests for administrative review of conservation requirements. During the fiscal year, ADWR resolved 364 of these requests by settlement or dismissal.

Surface Water Applications - ADWR held hearings on three contested applications to appropriate surface water. The Director issued a decision in one of those cases. In addition, a contested case was commenced on an application filed by the United States Bureau of Reclamation to store water behind Modified Roosevelt Dam, and applications by the cities of Phoenix, Scottsdale, Glendale, Tempe, Chandler and Mesa to appropriate the water for beneficial use.

Miscellaneous

Virgin River Compact - During Fiscal Year 1994-95, ADWR participated in negotiations of a Virgin River Compact with Nevada and Utah.

LEGISLATIVE ISSUES

Water related legislation enacted in 1995 included:

Water Code Amendments (HB 2276) - This legislation clarifies surface water law and streamlines the adjudications hearing process. Provisions streamline the adjudications process in the following ways; allows water claimants to use ADWR's Hydrographic Survey Report as the basis of their claim; indicates that the Superior Court is responsible for appointing the Special Master in adjudications and specifies how the Special Master is to treat information presented in hearings; facilitates the file of late claims by existing water users; and creates a *de minimis* category of water users. *De minimis* users have a small enough water use that the use does not significantly impact other water users in the system.

The legislation also amended the surface water code to clarify provisions that might be subject to extensive litigation in the adjudication process before any water rights would be able to be addressed. By clarifying the water code provisions these provisions would not be litigated, thereby expediting the actual adjudications of water rights.

The constitutionality of this legislation has been challenged by the San Carlos Apache Tribe, the Tonto Apache Tribe and the Yavapai Apache Tribe in a motion filed before the Arizona Supreme Court on April 17, 1995.

Water Rights on Public Lands (HB 2193) - This legislation requires that water rights on State lands be issued in the name of the State except when the place of use is on State land and diversion is on private land or Federal

land, and when a water right was perfected on Federal land by a lessee before the Federal government transferred ownership of the land to the State. The bill also requires that ownership of water rights on Federal land be issued to and adjudicated in the name of the person who puts the water to beneficial use. This bill has also been challenged in the motion filed before the Arizona Supreme Court.

Settlement Judge (HCM 2001) - The Legislature requested the Arizona Supreme Court to establish a settlement judge in the adjudications process to conduct settlement conferences to try to resolve protested claims outside the restrictions of the judicial process.

Hydrologic Study for the Upper San Pedro Basin (SB 1147) - A \$100,000 appropriation to continue the hydrologic monitoring studies proposed by Cochise County's San Pedro Technical Review Committee. This appropriation is for the second year of a three-year study.

Omnibus Water Bill (SB 1289) - Each year ADWR proposes modifications to Title 45 (Water) of the Arizona Revised Statutes. These modifications clarify existing provisions, streamline administrative processes or address relatively minor issues. The following provisions were included in this legislation:

- Clarification of plumbing fixture standards.
- Amendments to 1994 legislation addressing small water rights.
- Inclusion of canal losses in the definition of incidental recharge related to the non-per

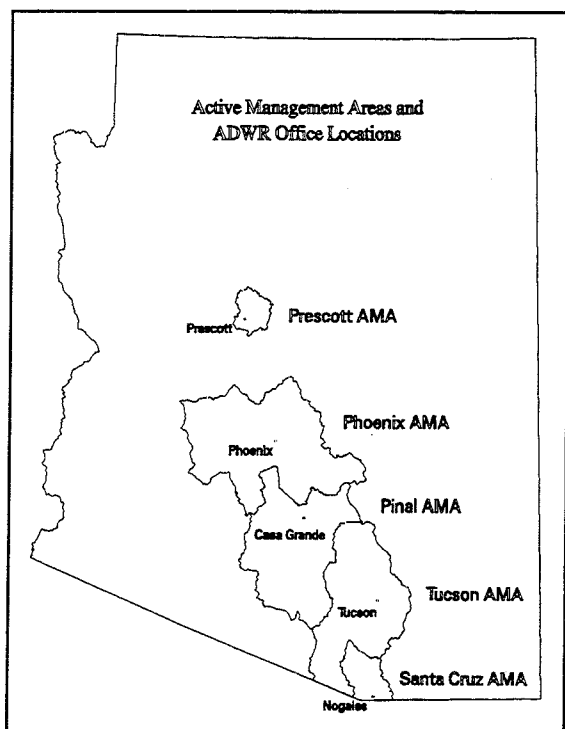
capita municipal water conservation program.

- Clarification of provisions in 1994 legislation creating the Santa Cruz AMA stating that the boundaries of the AMA are as shown in a map filed with the Secretary of State on June 10, 1994, resolving a conflict in code regarding issuance of mineral extraction permits, and clarifying that withdrawal fees apply to water withdrawn from wells even if the water is surface water.
- Establishes an emergency temporary well permit process for recovery of CAP water during a short-term, unplanned CAP canal delivery stoppage.
- Streamlines the process used for modification of water storage and exchange permits if the modification does not impact other water users and the modification is the addition of Colorado River water.
- Clarifies provisions pertaining to the administration of the flood warning system fund.
- Lifts the cap on revenues from property taxes levied within irrigation districts that do not contract for CAP water.
- Specifically states that any determination by ADWR pertaining to eligibility of water in the indirect recharge program is not a determination of appropriability under the surface water code.
- Modifies language passed last year to provide that capital repayment costs levied on municipal CAP subcontractors that are private water companies should be treated as a tax levy by the Arizona Corporation Commission.

ACTIVE MANAGEMENT AREAS

Active Management Areas (AMAs) are specially designated groundwater basins, which, due to excessive groundwater overdraft, require specific management and regulatory programs. There are five AMAs: Prescott, Phoenix, Pinal, Tucson and Santa Cruz.

The map below shows the location of the AMAs. The Department maintains an office in each AMA.



The individual AMA offices are primarily responsible for carrying out, within their respective areas, the provisions of the Groundwater Code, Second Groundwater Management Plan and ADWR rules and regulations. All efforts are designed to help achieve the water management goals in each AMA. In the Prescott, Phoenix and Tucson

AMAs the goal is to reach safe-yield of groundwater resources by the year 2025. The goal in the Santa Cruz AMA is to maintain safe-yield and to prevent local water tables from declining over the long-term. In Pinal, where a predominantly agricultural economy exists, the goal is to manage for planned depletion.

Each AMA carries out its programs in a manner consistent with these goals, while attempting to consider and incorporate the unique character of each AMA and the many water users within.

Within each AMA numerous programs and activities are conducted on an annual basis. These include:

- Keeping water user rights and data bases current and accurate.
- Evaluating water use characteristics of water right holders and determining their consistency with applicable code, management plan and rule provisions, as well as their relationship to the respective AMA goals.
- Implementing enforcement programs designed to insure compliance with code, management plan and rule provisions.
- Reviewing and evaluating the soundness of the various code, plan and rule requirements, and modifying such requirements when appropriate.
- Analyzing requests for water augmentation and water conservation proposals and recommending to the Director the approval of such projects and, when applicable, project funding.
- Conducting special studies on water management issues or problems unique to each AMA.

Modification to Second Groundwater Management Plan

The Department adopted a significant modification to the numeric Second Groundwater Management Plans (SMPs) for all AMAs in Fiscal Year 94-95. The Municipal Water Conservation program was changed to include an alternative to the Total Gallons Per Capita Per Day (GPCD) Program. This "Non-GPCD Program" is not based on restricting use by regulating per capita water consumption. Instead, the program allows water providers to adopt reasonable conservation measures (RCMs) for their service areas if the provider ceases to use mined groundwater as a water supply.

To qualify for the Non-GPCD Program, a water provider must either be a member of a groundwater replenishment district or have an Assured Water Supply Designation. A provider must agree to specific reasonable conservation measures for residential and non-residential interior and exterior water uses, public education on water conservation, and metering of all water uses.

PRESCOTT ACTIVE MANAGEMENT AREA

Overview

The Prescott AMA is in the north-central portion of the state and encompasses 485 square miles within Yavapai County. The physical environment in the AMA varies, with significant differences in elevation, climate, and precipitation within its borders.

There are four population centers in the AMA. Approximately 48% of the population of the AMA resides in the greater Prescott area; 13% in Prescott Valley; 9% in Chino Valley; and 4% in the Dewey-Humboldt area. The

remaining 26% of the population reside in unincorporated areas of Yavapai County.

Within the AMA, three large and 17 small water providers deliver municipal water. Approximately 97% of municipal water demand is supplied by the three large water providers.

The AMA's 6,100 agricultural acres are described in approximately 300 Certificates of Irrigation Grandfathered Rights. Non-agricultural water users are regulated through Non-Irrigation Grandfathered Rights and Groundwater Withdrawal Permits.

The AMA employs three permanent full-time staff members. Staff development is a high priority in the AMA. Training involves technical, educational, management and leadership development programs.

The Area Director, Phil Foster, received ADWR's 1995 Special Achievement Award. He was acknowledged for his supervisory effectiveness, management style and leadership abilities. He was also recognized for his community participation, project management and overall team contributions.

Management Plan Implementation

Nearly all water users within the Prescott AMA are in compliance with the conservation requirements contained within the *Second Management Plan 1990-2000 for the Prescott Active Management Area*. Potential compliance issues are typically addressed through education efforts and are resolved in cooperation with staff before they become formalized enforcement cases.

Water use characteristics of water right holders in the AMA are routinely evaluated to

determine consistency with management plan provisions and impact on safe yield conditions.

The AMA conducts and/or participates on special studies on water management issues within the area as needed or requested.

Community Assistance & Involvement

The Prescott AMA staff routinely fields public information requests from citizens throughout northern Arizona and regularly participates in community activities. The general public often credits the office for its high quality service. During Fiscal Year 1994-95 nearly 4,000 office hours were dedicated to public assistance. The AMA often contributes to water and natural resource presentations in the community. Water resource related information is presented and distributed to area schools and colleges as well as to community and business/professional groups.

The AMA, along with the Prescott AMA Groundwater User Advisory Council, organized a day-long seminar entitled "Prescott Active Management Area Water Monitoring and Our Riparian Areas," attended by over 40 members of the community.

Staff researched and implemented an ongoing adopt-a-highway program for State employees in the Prescott area as a community service project.

The AMA contributed to the continuing success of the joint Department of Water Resources/Department of Real Estate (ADRE) water law in Arizona education program. An AMA staff member was certified by ADRE to help present the program.

Cooperative Efforts

Yavapai-Prescott Indian Water Rights Settlement- The Prescott AMA office provided assistance and facilitation to the various parties during negotiation of the agreement. As a result of the agreement, the AMA will have a continuing role regarding water use and conservation.

Second Management Plan Irrigation Water Duty Study Contract Development & Contract Administration-The AMA continues to be involved in the evaluation, coordination and administration of this contract. Contract results will have far-reaching implications on agricultural water conservation programs in all the AMAs.

Water Monitoring Program- This program, still in the initial stage of development, has required local entity coordination and cooperation with ADWR Hydrology. This program will significantly impact future water resource decisions in the Prescott AMA.

Implementation of Legislation Relating to Well Site Location- Given the high concentration of exempt-domestic wells being drilled in the Prescott AMA, and in Yavapai County generally, coupled with residential septic waste water disposal systems, AMA staff have been actively involved in the development of the implementation strategy of this legislation. The purpose of this legislation is to ensure that new wells are drilled the prescribed distance from septic systems to protect water quality.

PHOENIX ACTIVE MANAGEMENT AREA

Overview

The Phoenix AMA encompasses approximately 5,646 square miles in central Arizona and includes seven groundwater sub-basins. The AMA has an estimated population of 2,120,000 and contains 14 large irrigation districts, 24 small irrigation districts, 48 large municipal water providers and 78 small municipal providers. During Fiscal Year 94-95 water use in the AMA totaled 1,580,000 acre-feet, of which agricultural water use was 916,000 acre-feet or 58%, while combined municipal and industrial use was 664,000 acre-feet or 42%.

Staff administer over 8,500 groundwater rights in the Phoenix AMA, Harquahala Irrigation Non-Expansion Area (INA) and Joseph City INA. Approximately 7,500 of these rights are irrigation grandfathered rights, 500 are Type 1 and Type 2 non-irrigation grandfathered rights, 126 are rights held by municipal water providers, 38 are rights held by irrigation districts. An assortment of other groundwater withdrawal authorities hold rights as well. During the fiscal year, the AMA processed 602 groundwater right conveyances and 19 water exchanges, reviewed 34 groundwater permit applications, reviewed eight applications for Certificates of Assured Water Supply to ensure consistency with the AMA management plan and goal, and conducted 40 field investigations.

Over 8,000 annual water withdrawal and use reports were processed this fiscal year, resulting in total groundwater withdrawal fees collected of over two million dollars. Of this amount, \$910,913 was collected for administration and enforcement activities, \$978,188 for conservation assistance and

augmentation programs, \$21,782 for late fees and non-payment charges and \$139,188 for the Water Quality Assurance Revolving Fund (WQARF). ADWR collects WQARF fees for the Department of Environmental Quality to address regional water quality problems.

AMA Program Efforts

Implementation of HB 2237 (Small Water Rights Deregulation).

- 3,900 irrigation grandfathered rights were deregulated (conservation requirements, withdrawal fees and annual reporting requirements were eliminated). This represents 52% of all IGFRs (3900 of 7500).

- 17 large municipal water providers were reclassified as small municipal water providers. GPCD requirements were eliminated. This represents 34% of all large providers (17 of 50).

Management Plan Implementation

The Second Management Plan (SMP) for the Phoenix AMA was modified. Numerous conforming changes were made. The most significant modification to the SMP was the addition of the Non-Per Capita Conservation Program, primarily for large municipal water providers that are experiencing disproportionate non-residential growth.

Administrative Reviews associated with the SMP conservation requirements continue to be processed and resolved: 325 agricultural applications have been resolved this year (1825 of 1900 are complete); 30 industrial applications have been resolved this year (37 of 90 are complete); 6 municipal applications have been resolved this year (6 of 20 are complete). The AMA offered settlement to 13 of the remaining municipal providers.

Groundwater Recharge -- Two Recharge Facility Permits were issued last year. These facilities are permitted to store 10,000 acre-feet of water annually. There are 19 recharge facilities in the Phoenix AMA permitted to store 464,000 acre-feet of water annually.

Cooperative Efforts

Phoenix AMA staff are active throughout the AMA. Staff serve on several cooperative committees including the Arizona Municipal Water Users Association Water Conservation Committee, the AMWUA Low Water Use Plant Committee, the Westmarc Water Resources Subcommittee and the Arizona Comparative Environmental Risk Project and the Salt River Project Joint Planning Committee. They also work regularly with all the major AMA cities, irrigation districts, Maricopa County Government, Soil Conservation Service, Maricopa Association of Governments, Agri-Business Council, U.S. Bureau of Reclamation and the Central Arizona Water Conservation District.

Westside Study Phase II -- Phase II of the Westside Study (projected future groundwater conditions) was completed. This effort represents one in a series of ongoing efforts by ADWR to assist the west side of the Phoenix AMA in becoming more reliant on renewable water resources. This Phase II effort also satisfies the provisions of HB 2239 (1994) which call for ADWR, working cooperatively with west side water interests, to develop long-term water planning strategies.

AMA Reorganization

After 14 years of being organized around two main sections (Planning, and Operations and Field Services), the AMA has reorganized into

nine program teams. The reorganization is designed to better focus on priorities, improve overall efficiency and improve staff development and satisfaction.

PINAL ACTIVE MANAGEMENT AREA

Overview

The Pinal AMA encompasses approximately 4,000 square miles in south-central Arizona and includes five groundwater sub-basins. The AMA has an estimated population of 80,000 people and contains four incorporated municipalities and four large irrigation districts. Farming is the largest and most vital industry in the AMA, with cotton and wheat the principal crops.

Prior to passage in the 1994 legislative session of the Small Rights Bill (HB 2237), the Pinal AMA administered about 1,500 Irrigation Grandfathered Rights, involving over 280,000 acres of farmland. When the bill became law, irrigation rights under ten acres in size and not part of an integrated farming operation were exempted from further administration. AMA staff mailed exemption notices to over 500 small irrigation rights, involving about 2,000 acres.

The Small Rights Bill also changed the definition of a large municipal provider to a provider serving over 250 acre-feet of water per year. In the Pinal AMA, six large providers became small providers. The AMA now has a total of six large providers and 21 small providers.

In addition to the over 1,000 non-exempt irrigation rights and 27 municipal providers, the Pinal AMA administers approximately 180 other groundwater rights and withdrawal

permits. During the fiscal year, 190 groundwater right conveyances were processed by the AMA, and all non-exempt irrigation right holders were notified of their flexibility account balances.

A total of 1,223 annual water withdrawal and use reports for calendar year 1994 were distributed in the Pinal AMA and 1,196 were filed, for a response rate of nearly 98 percent. All of the annual reports received were reviewed for completeness and accuracy by AMA staff, and nearly all right holders were found to be in compliance with the Groundwater Code.

The 1994 annual reports generated \$317,374 in administration and enforcement fees and \$158,687 in conservation assistance and augmentation fees.

Management Plan Implementation

The Pinal AMA received 277 requests for administrative review or variance from the Second Management Plan water conservation requirements. All but four of these requests involved irrigation water duties. By the end of fiscal year 94-95, AMA staff had analyzed all requests and 168 requests had been completed, with one request resolved through an administrative hearing.

In January 1995, the City of Eloy, which had been under a stipulated agreement since February 1991 to implement a conservation program, elected to be placed on the Alternative Conservation Program (ACP), rather than the Gallons Per Capita Per Day Program. The city is the only municipal provider in all five AMAs to be on the ACP.

Also in January 1995, after nearly a year of negotiations, the Arizona Department of

Corrections - Florence Prison Complex was designated as an institutional provider. The designation includes a stipulated conservation program.

Cooperative Efforts

The Pinal AMA staff continuously advocates sound water conservation and management practices and has facilitated the development of many cooperative conservation programs within its jurisdiction. Major cooperative activities during the fiscal year included:

Irrigation Management Service (IMS) --
The Pinal AMA funded the IMS for the eighth consecutive year. Total funding of this program over the eight years has been approximately \$600,000. IMS provides on-farm training to irrigators within the Pinal AMA to improve their management of irrigation water. During Fiscal Year 94-95, IMS provided season-long services to 17 growers and performed nine single event evaluations. The program is a cooperative effort involving the AMA, three local Natural Resources Conservation Districts (NRCDs), and the U.S. Natural Resources Conservation Service.

Management Improvement Program (MIP)
The Pinal AMA continued its participation on the Coordinating Group for the MIP for the Maricopa-Stanfield Irrigation and Drainage District (MSIDD). This program, the first of its kind in the United States, is a collaborative inter-agency approach to improve the profitability and sustainability of irrigated agriculture in the MSIDD area. The grower-led coordinating group sponsored town-halls, including a grower requested forum that led to the development of a pest-control district, and a newsletter. Other Coordinating Group participants include local growers, MSIDD,

the West Pinal NRC, the Central Arizona Water Conservation District, the University of Arizona Cooperative Extension, the U.S. Natural Resources Conservation Service, the U. S. Farm Services Agency, and the U.S. Bureau of Reclamation.

Pinal County Water Augmentation Authority (PCWAA) -- The Pinal AMA worked throughout the fiscal year to assist with the formation of PCWAA and the development of its water augmentation plan for the AMA. The authority was formed by the Pinal County Board of Supervisors in September 1994 pursuant to SB 1260 of the 1993 legislative session and 1994 amendments to that legislation. The board of directors for PCWAA includes representatives from Pinal County, the AMA's four incorporated municipalities, two of its four large irrigation districts, and two private water companies. The board retained the services of a consultant to assist with the development of the authority's water augmentation plan. PCWAA receives one-half of the AMA's unencumbered conservation assistance and augmentation monies collected for each calendar year. Through this fiscal year, the authority has received a total of \$105,372 from the AMA.

TUCSON ACTIVE MANAGEMENT AREA

The Tucson AMA covers 3,866 square miles in southeastern Arizona and includes the Avra Valley Sub-basin and the northern part of the Upper Santa Cruz Sub-basin. The Tucson AMA covers portions of Pima, Santa Cruz, and Pinal Counties. Incorporated cities include Tucson, South Tucson, Marana, Oro Valley and Sahuarita.

Groundwater supports almost all water requirements in the AMA. About 10,000

acre-feet of water demand is met with treated effluent supplies. Total water use in 1994 (not including effluent) was about 300,000 acre-feet. Municipal water use was 47% of water demand, agriculture was 33% and copper mining/sand and gravel was 16%. The majority (78%) of the population in the Tucson AMA is served by Tucson Water, operated by the City of Tucson. The Tucson AMA contains one consolidated irrigation distribution system which is operated by the Cortaro Marana Irrigation District. It serves over eighty farms.

Although the City of Tucson had planned to utilize CAP for 85% of its water supply by 1995, no CAP water has been used for municipal purposes since October 1, 1994. CAP deliveries resulted in rusty water and damage to pipelines and plumbing in the older neighborhoods, as a result of the difference in water chemistry between groundwater and CAP. In January of 1995, the City Council adopted a policy that they would not use CAP water for direct delivery until quality issues were resolved.

CAP related issues have required a substantial amount of time from TAMA staff. In addition to handling increased public inquiries, there have been numerous committees and public meetings associated with the Tucson Water delivery problems and the ramifications for other utilities. Tucson AMA staff also worked on reallocation concepts, terminal storage, and issues related to the Southern Arizona Water Rights Settlement Act.

The Tucson AMA is responsible for the regulation of over 1240 water rights in the Tucson area and the Douglas INA. Tucson AMA staff processed 1119 annual water withdrawal and use reports, involving total groundwater use of 262,753 acre-feet for the

AMA and 40,689 acre-feet in the INA. Staff completed 129 requests for water rights transactions, and notified all irrigation and large municipal right holders of their flexibility account balances.

Management Plan Implementation

As a result of deregulation of small rights, the Tucson AMA notified 268 agricultural users and 23 municipal users that the majority of their Second Management Plan conservation requirements were no longer in effect. Support for establishment of the new Santa Cruz AMA, including separation of the water rights data bases, required substantial effort in the fall of 1994.

Tucson AMA compliance activities in 1994 included 202 hand audits, nine office audits and/or field inspections. A total of four enforcement cases were resolved, one by means of an advisory letter and three through stipulated agreements.

Approximately 140 applications for administrative review and variance were filed with the Department following adoption of the Second Management Plan (SMP). The majority of these applications have now been resolved, either through a negotiated stipulation, or as a result of the applicant's decision to withdraw the application. The only outstanding applications (with two exceptions) are from agricultural users who are awaiting the outcome of an ADWR contract assessing the economic aspects of the SMP requirements.

During 1994, Tucson AMA planners assisted in the development of modifications to the SMP, including the Non-Per-Capita conservation program for the municipal sector. In addition, staff began developing the

data base for the Third Management Plan.
Cooperative Efforts

Tucson AMA staff are active in the community, attempting to facilitate resolution of numerous water issues. Following are examples of such efforts that occurred during fiscal year 1994-95:

Groundwater Recharge-- Recharge activities increased substantially. Tucson AMA staff held three pre-application meetings, two for underground storage and recovery projects and one for a potential groundwater savings facility. Additionally, two facility permit applications, two facility permit modifications, and two water storage permit applications were reviewed and processed. AMA staff have also been involved in the feasibility study for the Northwest Area Replenishment Program, a study involving three different potential recharge projects. The Rillito Recharge Project, an inter-governmental recharge demonstration project, has now been terminated as a result of the decision not to proceed with construction at the original location.

Northwest Area Hydrology Study -- During 1994 a request for proposals was issued by the Tucson AMA as directed by HB 2239 to develop a consistent data base for the Northwest portion of the Tucson AMA. Tucson AMA staff worked with an extensive list of cooperators to select the consultant, establish a project oversight committee, write the scope of work, and manage the project. The project was successfully completed in June of 1994.

SANTA CRUZ ACTIVE MANAGEMENT AREA

The Santa Cruz Active Management Area was created by the Legislature in 1994. The Santa Cruz AMA consists of 716 square miles of the southern portion of the upper Santa Cruz Sub-basin and is bordered to the north by the Tucson AMA and to the south by Sonora, Mexico.

The Santa Cruz AMA is currently clarifying its AMA goal, which will address the AMA's unique hydrologic, environmental and geographical characteristics. Currently the AMA's most important water resource, the Santa Cruz River aquifer, is presumed to be at safe yield; however, regional growth both in the United States and Mexico will increase pressure on local water supplies.

AMA staff administer over 100 grandfathered water rights. The water rights were modified and transferred from the Tucson AMA to reflect the creation of the Santa Cruz AMA. The public and Santa Cruz AMA right holders were notified through a public outreach effort.

AMA staff are beginning to assess water use in the AMA as part of the Third Management Plan. About 60% of all water withdrawn from wells in the Santa Cruz AMA is used for irrigation on forage and vegetable crops. In 1994, 6,320 acre-feet of water was used for municipal purposes. There are a total of 14 service area providers in the AMA with the three largest -including the City of Nogales, Rio Rico and Valle Verde- accounting for nearly 90% of the reported municipal water use. Additionally, there are over 600 exempt wells, many of which supply water for beneficial use in the AMA. The industrial sector accounts for less than 10% of the reported water use in the AMA. The primary

industrial water users are golf courses and, to lesser extent, sand and gravel operations. The amount of water used in the industrial sector is expected to increase as more golf courses are planned.

Santa Cruz AMA staff are currently administering an \$81,000 Augmentation Grant which will quantify effluent recharge and riparian water use in the Upper Santa Cruz River.

Management Plan Implementation

All water users within the Santa Cruz AMA are currently in compliance with the Second Management Plan conservation requirements.

There were a total of 16 requests for administrative reviews of the Second Management Plan conservation requirements by right holders now located in the Santa Cruz AMA. All but two of the requests have either been completed, withdrawn, disqualified or are no longer applicable.

Cooperative Efforts

Because of its geographical proximity to the State of Sonora, Mexico, the Santa Cruz AMA is involved with international water resources issues. The Department is supporting Arizona communities through the North American Development Bank and project certification by the Border Environmental Cooperation Commission. The Santa Cruz AMA staff is also attempting to develop improved data exchange with the State of Sonora's water resources planners.

The Santa Cruz AMA is also involved with important water quality issues which directly affect regional water resources. Santa Cruz AMA staff participated in a community

decision-making process which initiated a groundwater cleanup effort of a TCE contaminated site which threatens a local groundwater supply.

GROUNDWATER USERS ADVISORY COUNCILS

The Groundwater Code established a five-person Groundwater User Advisory Council (GUAC) for each Active Management Area. GUAC members are appointed by the Governor to six year terms. GUACs meet monthly. The GUACs review groundwater management programs in their respective AMAs, and provide advice to the Director and comments on such matters as management plans, proposed rules and pending legislation.

GUAC members serving fiscal year 1994-95 are listed below.

Prescott AMA

John Olsen, Chair
Michael Sanders
Lincoln Hathaway
Brad Huza
Ed Smith

Phoenix AMA

Eva Patten, Chair
Stephen Cleveland, Vice-Chair
Frank Fairbanks
Bruce Heiden
John Williams, Jr.

Pinal AMA

Oliver Anderson, Chair
David Snyder, Vice-Chair
Dean Weatherly
Tom Isom
Paul Prechel

Tucson AMA

Priscilla Robinson, Chair
Alan Lurie, Vice-Chair
Warren Culbertson
John Jones
Chuck Sweet

Santa Cruz AMA

Mr. Ron Morris, Chair
Mr. Duke Petty Vice-Chair
Ms. Sherry Sass
Mr. Bill Oliver
Mr. John Ellinwood

During the spring of 1995 each GUAC reviewed applications and made recommendations to the Director for Conservation Assistance and Augmentation Grants. Based on the GUAC's recommendations, the Director awarded 39 grants totaling more than \$2,269,588.

Each AMA's GUAC was also involved in a variety of diverse activities.

The **Prescott AMA GUAC** spearheaded the AMA's summer tour focusing on the area's water monitoring and riparian areas. The GUAC recommended that 1996 water withdrawal fees remain at \$1.00 and the Conservation/Augmentation fee remain at \$1.00. The GUAC also recommended that conservation and augmentation monies be available for water monitoring activities, a proposal that was enacted with the 1996 omnibus water bill.

The **Phoenix AMA GUAC** was active in a number of issues during this fiscal year including the review and comment on the 1995 Omnibus Bill, the implementation of the small water right deregulation bill, the draft Assured Water Supply Rules, the Non-GPCD Program of the SMP, and the Phoenix AMA

Compliance Program and Enforcement Actions. The GUAC also recommend the 1995 groundwater withdrawal fee of \$2.75 for the AMA to the Director, as well as funding recommendations for the Conservation Assistance and Augmentation Program.

The **Pinal AMA GUAC** passed resolutions of support for the Non-Per Capita Conservation Program (NPCCP) and other modifications to the SMP, met with the Director to discuss local concerns involving water banking and other Colorado River issues, recommended to the Director keeping the AMA groundwater withdrawal fee at \$1.50 per acre foot for 1995, held a joint meeting with the governing boards of the three local NRCDs to discuss future directions and funding for the IMS program, passed a resolution for the AMA to provide technical support to Pinal County in its continued effort to expand Picacho Reservoir for recharge and allied purposes, and monitored status of 1994 conservation assistance and augmentation contracts, 1995 water legislation, and PCWAA activities.

The **Tucson AMA GUAC** reviewed and commented on the proposed modifications to the Second Management Plan relating to the inclusion of the non-per capita program among other changes, the development of the Assured Water Supply Rules, funding of grants in the Conservation Assistance and Augmentation Grants Programs, the amount and proposed distribution of withdrawal fees for calendar year 1995, water related legislation, Colorado River/CAP Issues, including reallocation, the City of Tucson CAP Alternatives Study, statewide utilization strategies, water banking, CAP terminal storage, and interstate issues. The Tucson GUAC also reviewed policies related to issuing recharge credits in association with augmentation grants, the Agricultural

Alternatives Study, the Northwest Tucson AMA Hydrologic Study, small water rights bill implementation, the need for a statewide conservation resource person, and a conservation awards program.

The **Santa Cruz AMA** was created in 1994 and the Governor appointed members to the Groundwater Users Advisory Council shortly thereafter. Since then, the GUAC has served as a community forum for discussion of the water issues facing the region, including well head protection proposals, an effluent recharge study, and development of project concepts for Water Protection Fund grant applicants. The Council has also made recommendations regarding clarification of the AMA goal, water protection fund applications, and the disposition of water from a local groundwater cleanup project. Also, due to the Santa Cruz AMA's reliance on water inflows from Mexico, the GUAC has monitored international water issues as well as developments related to a Mexican water proposal for neighboring Nogales, Sonora.

GENERAL STREAM ADJUDICATIONS

Throughout the western United States, states have statutory processes for establishing the quantity and priority of surface water rights that have not been certificated under provisions of a state water code or are being integrated with other rights in a larger watershed. These processes are known as general stream adjudications. In Arizona, general adjudications are conducted according to Arizona Revised Statutes §45-251 to 45-260. Two major portions of Arizona are being adjudicated: the Gila and Little Colorado river systems. The Gila River general adjudication is assigned to Judge Susan Bolton of the Maricopa County Superior Court. The Little Colorado River general adjudication is being conducted in the Apache County Superior Court under Judge Allen G. Minker. Special Master John E. Thorson was appointed by the Arizona Supreme Court to conduct hearings and recommend a determination of rights for both adjudications. DWR's role in the process is to provide both administrative and technical assistance to the State Superior Court.

Administrative support includes notifying potential claimants of the need to file claims in the adjudication, receiving and transferring to the Court all filed claims, maintaining a central repository of all pleadings and documents filed in the proceedings, responding to public inquires, and assisting the Special Master and the Courts in records management.

The Technical role of DWR is to investigate all claims in the two ongoing general adjudications and prepare Hydrographic Survey Reports (HSRs) for Indian Reservations or watershed areas within each river system. HSRs contain several volumes

and include both a general assessment of the watershed and a detailed factual report on nearly all water uses within the watershed. Various other technical reports are also prepared at the request of the Court.

Gila River System Adjudication

In 1995, the Arizona Legislature amended many provisions of the surface water and adjudication statutes. The constitutionality of those changes was challenged by the San Carlos Apache Indian Tribe, the United States and several other Indian Tribes. Most of the ongoing legal proceedings in the Gila River adjudication have been suspended until these issues are decided by the Arizona Supreme Court. However, since many of the investigative aspects of the Department's function in the adjudication remain the same under either the amended or previous statutes, the Department has continued to proceed with its examination and verification of the more than 16,000 claims that have been filed in the Verde River watershed.

Little Colorado River System and Source

Litigation of water right claims remain suspended in this adjudication in order to provide the claimants an opportunity to settle the Indian and federal claims. To assist in that complex undertaking, the Department prepared six comprehensive technical reports for the settling parties, at Judge Minker's request, which inventoried the water uses on non-Indian land in the watershed. They are:

- "Assessment of Chevelon, Clear Creek, and Jacks Canyon Watersheds" (June 1994);

- "Inventory of Industrial/Commercial, Mining, and Power Uses in the Little Colorado River System" (July 1994);
- "Inventory of Irrigation, Reservoirs, and Stockponds in the Upper Little Colorado River Watershed" (July 1994);
- "Assessment of Closed Basins in the Little Colorado River System" (August 1994);
- "Inventory of Irrigation and Reservoirs in the Lower Little Colorado River Watershed" (September 1994);
- "Inventory of Large Reservoirs in the Little Colorado River System" (September 1994).

In September 1994, the Department released the "Preliminary Hydrographic Survey Report for Indian Lands in the Little Colorado River System" for inspection and comment by the claimants. However, in order to facilitate settlement efforts underway, Judge Minker requested that the Department refrain from filing the final version of this report with the court, which would have had the effect of initiating litigation of the Indian water rights claims.

ASSURED AND ADEQUATE WATER SUPPLY PROGRAM GROUNDWATER RECHARGE

The Department's Assured Water Supply and Recharge Programs require concerted efforts throughout the Agency. These "supply-side" programs are somewhat interrelated because many water suppliers undertake recharge activities as a means of satisfying assured water supply requirements. Efforts common to both programs include client outreach and assistance, application processing and policy development. The Department created a separate office to coordinate these activities.

ASSURED WATER SUPPLY PROGRAM

Arizona's Assured Water Supply Program is designed to support the State's economic health by preserving groundwater resources and promoting long-term water supply planning. The program mandates the demonstration of available water supplies for new subdivisions in Active Management Areas (AMAs). Also, the program is the regulatory component of Arizona's 1980 Groundwater Code that limits groundwater use in the AMAs. Outside of AMAs, new subdivisions must obtain an adequacy statement from DWR describing the availability of water.

Status

The major accomplishment in FY 94-95 was the adoption and implementation of the new Assured and Adequate Water Supply Rules (AWS Rules). Most of the core features of the new AWS Rules have been implemented. The new application review process is functioning smoothly and client feedback has generally been positive. Several policy issues have been generated through application filings and

through questions posed by potential applicants. Significant activities and accomplishments in FY 1995 included:

- Approval of the new rules by the Governor's Regulatory Review Council and the Attorney General
- Extensive public outreach associated with the development and implementation of the new rules.
- Development of new applications and detailed guidelines
- Establishment of application review procedures and standards, and improved tracking systems.
- Work with the Central Arizona Water Conservation District to integrate elements and processes common to both the Groundwater Replenishment District and the AWS program.
- Establishment of a process for extinguishment of grandfathered rights.
- Work to address related issues affecting communities and water providers throughout the state

A strong economy and the anticipation of the new AWS Rules resulted in a high rate of filings for assured and adequate water supply determinations in FY 1995. The Department received and processed a number of Certificate of AWS applications filed immediately prior to adoption of the new rules

(32 applications were pending at the time the new rules were adopted). Following adoption of the new Rules, the Department received ten applications for Certificates of AWS, two applications for Designation of AWS (both from "deemed" cities), one application for an Analysis of AWS and 25 requests for water adequacy statements.

RECHARGE PROGRAM

The Recharge Program was created by the legislature in 1986 and has evolved into a major groundwater management tool. The program encourages underground storage of renewable water supplies either directly (through discharge of water to recharge basins or stream channels), or indirectly (by replacing groundwater use with surface water or effluent). The program provides a sound and inexpensive alternative to constructing water treatment facilities for providers attempting to demonstrate an assured water supply.

Status

Department staff provide guidance to applicants, evaluate complex project proposals and resolve policy questions and maintain operational aspects of the program. Recharge application activity increased significantly in Fiscal Year 94-95 as municipalities and other entities prepared to meet assured water supply requirements. Activities included:

- Implemented most elements of 1994 legislation that streamlined the recharge statutes.
- Began upgrading recharge permit applications and hydrologic guidelines.
- Developed recovery well permit review procedures.

- Revised the recharge application review/approval process, and improved application tracking system.

- Provide assistance to several entities and communities interested in recharge.

- Processed numerous permit applications for underground storage facilities, groundwater savings facilities, water storage and recovery wells.

- Prepared annual report forms, evaluated completed forms and calculated credit balances

- Monitored expenditures and water accounting associated with State Demonstration Projects

During Fiscal Year 94-95, the Department re-issued all existing recharge permits to reflect new legislation, reviewed 13 applications for new recharge projects and over 350 applications for recovery wells.

COLORADO RIVER MANAGEMENT

The renewable water supplies of the Colorado River serve seven states and several Indian tribes. The Department works to promote, protect, and comprehensively manage Arizona's entitlement of 2.8 million acre-feet annually of Colorado River water. This entitlement is Arizona's water supply for future growth and is critical to the state's progressive water management policies.

The United States, through the Department of the Interior's Bureau of Reclamation, operates the Colorado River reservoir system and contracts for all uses from the River. DWR coordinates with the Secretary of the Interior on all matters related to the Colorado River, including recommending allocations and contracts for River water, consulting with the Department of the Interior regarding the Colorado River Annual Operating Plan and representing the State of Arizona in forums and work groups that address Colorado River issues. DWR works cooperatively with representatives of the other six Colorado River Basin states, various federal agencies, Indian tribes, the U.S. Congress, local governments and water users within Arizona. The activities generally require engineering, legal, environmental and economic analysis.

The major activities of the Department involving the Colorado River in Fiscal Year 1994-95 are as follows:

- Served on and provided technical support to several interstate and interagency committees, including the Bill Williams Corridor Committee, Seven Basin States/Ten Tribes Committee, Lower Colorado River Multi-Species Conservation Program Steering Committee, Colorado River Salinity Control

Forum, Lower Colorado River Program Management Work Group, Glen Canyon Environmental Studies Committee.

- Reviewed, analyzed, commented and participated with the Bureau of Reclamation and other parties in the negotiations of contracts for use of Colorado River water including the development of a Yuma County Water Users Association contract for converting Colorado River agricultural rights to Municipal and Industrial (M&I) rights, an M&I contract for Lake Havasu City and a contract for transferring M&I rights from the City of Kingman to the Mohave Valley Water Authority.

- Reviewed technical reports and studies of the Colorado River and its tributaries including the Virgin, Bill Williams and the Gila Rivers.

- Analyzed all Central Arizona Project issues requiring DWR involvement, including the division and transfer of the McMicken M&I allocation to several adjacent water providers and the preparation of a proposed recommendation for reallocation of 66,000 acre-feet of un-contracted M&I water.

- Developed Geographic Information System maps showing individual farm & irrigation district boundaries and municipal water provider and service area boundaries. Also, developed Colorado River and CAP contract area maps.

- Met with representatives of the Lower Colorado River Basin States, Lower Colorado River Indian Tribes, Bureau of Reclamation, and the U.S. Fish and Wildlife Service

regarding the development of a cooperative endangered species program for the lower Colorado River in response to the March 1994 designation of critical habitat for four listed endangered fishes. In August 1995, the Department of the Interior and the Lower Basin States entered into a Memorandum of Agreement establishing the development of an ecosystem-based multi-species conservation program.

- Participated in the public process associated with the Bureau of Reclamation's preparation of a biological assessment of the potential impacts and effects upon listed species and critical habitats through current River operations, facilities, and ancillary programs in the Lower Colorado Region.

- Participated in the Tri-state discussions, involving Arizona, California and Nevada, and concerning the future management of water resources in the Lower Basin Colorado River. Also participated with the technical subcommittee of this group.

FLOOD WARNING AND SAFETY OF DAMS

DWR manages floodplains and non-federal dams to reduce loss of life and damage to property. Responsibilities include conducting safety inspections of dams, assisting local flood management entities to administer the National Flood Insurance Program, and participating in the development of flood warning systems.

Safety of Dams

The Department oversees the design, construction, operation and maintenance of non-federal dams in Arizona, except for mine tailing dams. Dams under state jurisdiction are those 25 feet or more in height or with a storage capacity of more than 50 acre-feet.

As of June 30, 1995, there were 207 dams under state jurisdiction. During fiscal year 94-95, the Department made 91 construction and operational inspections, reviewed applications to construct four new dams (three approved) and to repair two existing dams (one approved), and supervised the construction work of four dams. The Department also investigated four structures constructed outside the state's jurisdiction.

Flood Management

The Department serves to ensure that Arizona's communities participate in the National Flood Insurance Program (NFIP) and to assist communities with any problems that may arise as a result of their participation in the NFIP. Department activities in this area during Fiscal Year 94-95 include:

- Compiled and distributed over 100 copies of *Handbook for Arizona Communities on*

Floodplain Management and the National Flood Insurance Program.

- Participated in the drafting of National Strategic Plan for Natural Hazard Mitigation with five other states, Federal Emergency Management Agency and other federal agencies.
- Participated in conferences designed to open communications with federal rule makers regarding the unique flood hazards in the arid Southwest.
- Reviewed 25 flood insurance studies for communities for revisions to Flood Insurance Rate Maps.
- Provided aerial mapping to assist Pima County Flood Control District with study of Brawley Wash.
- Presented four workshops for community officials on National Flood Insurance Program, including Arizona requirements for floodplain management.
- Assisted the State Standards committee which is developing standards for flood hazard mitigation through floodplain management.
- Visited 25 communities to assist with floodplain management activities and ensure their understanding of the NFIP and Arizona statutes.

Flood Warning

In 1994, the Legislature authorized the DWR to develop flood warning systems throughout the state. During Fiscal Year 94-95, the

Department completed the Clifton Flood Warning System, trained local personnel to monitor the Yavapai System and calibrated the Sedona system. Flood warning gages continued to be installed in the Gila County system and began to be installed in the Navajo County system.

The Department began planning with local entities for flood warning systems in Fountain Hills and the City of Glendale. Local systems for Santa Cruz and Mohave counties as well as Willcox, were in the planning stages with the Corps of Engineers. The Department also began to plan for a statewide flood warning system. Cost sharing with the Corps of Engineers could expedite its construction.

A base station located in DWR was established to receive real-time precipitation and water level data from more than 400 gauges statewide.

GROUNDWATER FILINGS

DRILLING LICENSES/SURFACE WATER PERMITS

The Department processes all surface water, groundwater and adjudication filings and well drilling licenses. Department staff assist the public in filing water rights documents, respond to information requests and collect permit and groundwater withdrawal fees. Groundwater and well drilling actions during Fiscal Year 1994-95 are as follows:

- Processed 8,561 annual groundwater withdrawal and use reports and deposited \$3,897,829 in withdrawal fees.
- Issued approvals to drill 5,776 new wells and updated ownership of 2,179 existing wells.
- Issued permits for 15 projects to recharge or store and recover groundwater.
- Issued 402 well-drill licenses and/or renewals.
- Issued 24 new groundwater withdrawal permits.
- Responded to 569 public requests for computer generated information on groundwater and surface water rights or copies of file documents.

Surface water actions during Fiscal Year 1994-95 are as follows:

- Processed 55 applications to appropriate surface water.
- Conducted administrative cancellation of three surface water right filings.
- Issued 288 permits to appropriate surface water.
- Issued 498 surface water right certificates.
- Processed 906 filings for change of ownership of surface water rights.
- Processed five new claims for stockpond water rights and issued one stockpond water rights certificate.
- Processed 211 statements of claimants submitted for inclusion in the ongoing water rights adjudication proceedings.

STATEWIDE WATER RESOURCE PLANNING

Though most of the Department's regulatory focus is on the five Active Management Areas, the Department assists with water resource planning statewide.

In 1994, the Department published the Arizona Water Resources Assessment. The last comprehensive assessment of the state's water resources issues was published in 1975. Since then, the State has experienced many changes, for example: over two million people have moved into the state; the long-awaited Central Arizona Project has been completed; the State is adjudicating the major watersheds in Arizona; Indian water settlements are being vigorously pursued; the State has established comprehensive groundwater management programs in central Arizona to eliminate overdraft; and there is a growing concern for protection of water quality and natural habitat. The Assessment's inquiry into the State's water supplies and demands is a valuable resource for water policy makers as well as the general public.

PLANNING ASSISTANCE

The Department focused a substantial amount of its planning assistance to two areas of the State, the Verde Watershed and the Upper San Pedro groundwater basin. These areas have expanding populations, limited groundwater resources and unique environmental features associated with free flowing reaches of the Verde River and San Pedro River. The Department assisted citizen organizations and local governments in both areas by providing technical information, analysis and advice regarding water issues.

Verde Watershed- The Department provided leadership to a Water Planning Subcommittee of the Verde Watershed Association. The Association adopted a recommended plan of study for the Verde watershed. Cooperative River Basin Study was begun to implement phase one of the Water Plan. This study is being led by the U.S. Department of Agriculture, Natural Resources Conservation Service. The Department is providing technical data and analysis to the project.

Upper San Pedro Groundwater Basin- The Department participated in the Cochise County Technical Committee by developing a groundwater modeling for a portion of the area. A large citizens' group, locally known as the Water Issues Group (WIG), debated ways to balance long term groundwater demand for Sierra Vista and Ft. Huachuca in order to protect the water supplies for the San Pedro National Riparian Conservation Area. The Department prepared draft water management legislation for the WIG, however it was not introduced due to a lack of community support. A federal water rights negotiating team for the San Pedro was initiated by the U.S. Secretary of Interior. The Department provided technical support as well as participating in the negotiations.

ARIZONA WATER PROTECTION FUND

The 1994 Arizona Legislature established the Arizona Water Protection Fund and Commission to provide grants "for the development and implementation of measures to protect water of sufficient quality and quantity to maintain, enhance and restore rivers and streams and associated riparian

resources." This includes fish and wildlife species that are dependent on these resources.

Funds for the program come from an annual State General Fund appropriation and are administered by a 15 member commission appointed by the Governor and the Legislature. The Department provides legal, technical and administrative support to the Commission.

Current Commission membership is as follows:

Martin Antone	Ak-Chin Indian Community
Michael Block	Metropolitan Domestic Water Improvement District, Tucson
Frank Brandt	Northern Audubon Society
Paul Brick	Natural Resource Conservation Districts
Jim Hartdegen	Central Arizona Project Contractor
John Keane	Salt River Project
Doug Koppinger	City of Tucson
Virginia Korte	CAWCD
Andy Laurenzi	The Nature Conservancy
Roger Manning	AZ Municipal Water Users Association
Paul Orme	Agriculture
Kay Otte	Town of Florence
Dennis Parker	Patagonia
Julie Stromberg	ASU Center - Environmental Studies
Gwendolyn Waring	NAU School of Forestry

Grants must acquire CAP water or effluent for the purpose of protecting or restoring rivers and streams; develop, promote and implement water conservation programs outside of the

five active management areas; support research and data collection, compilation and analysis; develop and implement capital projects or specific measures that are consistent with the purposes of the fund. In addition, man-made water resource projects may be funded, if the project directly or indirectly benefits a river or stream and creates or restores riparian habitat.

In Fiscal Year 94-95, the Commission began the first funding cycle for the program. Because of appropriations to the fund in FY 94-95 and Fiscal Year 95-96, there was approximately \$10 million available for AWPf grants this funding period.

By August 1, 1995, the Commission had received 82 applications, requesting a total of nearly \$28 million dollars. The Commission selected 24 proposals for projects totaling \$6.8 million.

HYDROLOGY SUPPORT

The Department's team of hydrologists provide technical support to the Agency, including statewide water resources data collection and analysis, and maintenance of the State's Groundwater Site Inventory (GWSI) database.

Groundwater Modeling - The Department develops hydrologic computer models for regional geographic areas and maintain hydrologic databases in a format accessible throughout the Department. The models are digital replicas of groundwater basin conditions and are used to assist the Department's water management and planning efforts. Modeling activities during Fiscal Year 1994-95 include:

- Completion of the Prescott AMA groundwater flow model. The model will provide data to assist water management in the Prescott AMA.
- Completion of hydrologic studies of the West Salt River Valley and Northwest Tucson area. The Legislature mandated these studies in 1994 to assist long-range water resources planning in both areas.
- Use of the Pinal AMA groundwater flow model to analyze the impact to Indian lands caused by groundwater pumping within the Pinal AMA.
- Development of the Upper San Pedro groundwater flow model. The model will assist local leaders in Cochise County to analyze the water situation in the Upper San Pedro Basin.

- Planning and technical support related to the development of hydrologic monitoring programs for the Prescott and Santa Cruz AMAs.

Special Studies - During fiscal year 1994-95, Department hydrologists performed several special studies, including:

- The Beaver Dam Wash hydrologic study to assess water resources in the Virgin River watershed. The Department cooperated with Utah, Nevada and the U.S. Geological Survey to complete this study.
- Technical studies to determine the impacts of groundwater pumping and surface water diversions on the state's riparian areas. The results were published in the Arizona Riparian Protection Program Legislative Report and over 200 copies were distributed.
- The Department also performed an analysis of the water supply and demand for the Carefree/Cave Creek Basin. The area is experiencing high growth, but has very limited water supplies.

Well Impact Analyses - Department hydrologists review and perform well impact analyses to determine if proposed wells within AMAs will adversely impact existing water users. In fiscal year 1994-95, the Department performed 61 well impact analyses. In addition, special studies for areas with anticipated high growth or water shortages were conducted.

Hydrology Data Collection - The Department collects groundwater data throughout the state. The data are evaluated,

reduced, quality assured, and made available to the public and other state and federal agencies.

The data collection program is in its 56th year of cooperation with the U.S. Geological Survey. Currently, the Department collects virtually all groundwater data in the State, while the U.S. Geological Survey is responsible principally for surface water data collection.

In FY 1994-95, Department staff measured nearly 3,000 water levels in the Tucson and Santa Cruz Active Management Areas, McMullen Valley basin, lower San Pedro basin, and Willcox basin; collected water-quality samples in the Verde Valley sub-basin of the Verde River basin; and performed discharge measurements on over 250 wells throughout the AMAs. As part of the annual well monitoring program, about 1,300 water levels were measured and about 130 water-quality samples were collected. In addition, nearly 2,100 public inquiries for historical well records and associated groundwater data were handled, a 20% increase over the past five years.

COMPUTER SUPPORT

During fiscal year 1994-95, the Department began a major transition to upgrade its computer support capability. After an extensive review of Agency requirements, the Department planned a three year transition to a computer system that will better meet the needs of the agency.

Relational Data Base\Client-Server-

Reflecting the Department's emphasis on improving access to data, the Department set out to transfer water resource's data and systems to a relational data base\client-server environment. The department acquired hardware and software to support this move, and the members of the application development team began preparing and training to migrate these systems to the new environment. Application development staff trained to learn how to support development of the systems. To enhance this training, consultants have served as mentors to train Department staff, which allowed us to develop staff experts in this new technology. The first client-server application, the Adjudication Information System, moved toward completion and implementation.

Geographic Information Systems (GIS) -

The Department integrated GIS tools into the general stream adjudication process, providing higher levels of accuracy and efficiency; developed and implemented a new method for mapping on aerial photographs, increasing the locational accuracy; began aggressively searching for new sources of digital data and researched alternative methods of data capture through Global Positioning System; and explored new ways to bring GIS tools to the staff.

Major GIS projects completed in 1994-95 include the completion of data input of all the data themes necessary for the creation of Watershed File Reports in the *Upper Little Colorado Watershed*, development of maps and research of additional data sources to assist in the investigation of the *Verde Watershed* and the *Gila River Indian Community*, providing maps and additional material for a two-day instructional seminar on the Adjudication process, and participating in the migration of the AIS database from the mainframe to client-server to ensure compatibility between the GIS data and the business applications.

FINANCIAL INFORMATION

Fiscal Year 1994-95

REVENUE TOTALS

Groundwater Withdrawal fees Deposited in the General Fund	\$1,758,000
Groundwater Enforcement Fund	\$26,600
General Adjudication Fund	\$16,800
Augmentation & Conservation Fund	\$2,764,500
Non-Emergency Dam Repair Fund	\$511,000
State Water Storage Fund	\$10,056,000
Administration Fund	\$6,500
Surface\Groundwater Trust Fund (Weather Modification)	\$891,900
Flood Control Loan Fund	\$79,800

FINANCIAL INFORMATION

Fiscal Year 1994-95

OTHER NON-APPROPRIATED FUND EXPENDITURES

GROUNDWATER ENFORCEMENT FUND

Personal Services	\$29,600
Employee Related Expenses	\$5,100
Other Operating Expenses	\$1,600
Total	\$36,300

SURFACE/GROUNDWATER TRUST

Professional & Outside Services	\$825,400
Travel	\$6,800
Other Operating Expenses	\$71,200
Equipment	\$5,400
Total	\$908,800

AUGMENTATION AND CONSERVATION FUND

Personal Services	\$88,400
Employee Related Expenses	\$24,000
Other Operating Expenses	\$108,500
Augmentation and Conservation Grants	\$735,200
Equipment	\$1,200
Total	\$957,300

FINANCIAL INFORMATION
Fiscal Year 1994-95

OTHER NON-APPROPRIATED FUND EXPENDITURES
(continued)

NON-EMERGENCY DAM REPAIR

Professional & Outside Services	\$5,300
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STATE WATER STORAGE FUND

Transfer to State Demonstration	\$7,903,000
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Project

ADMINISTRATION FUND

Revenue Refunds	\$2,800
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FLOOD CONTROL LOAN FUND

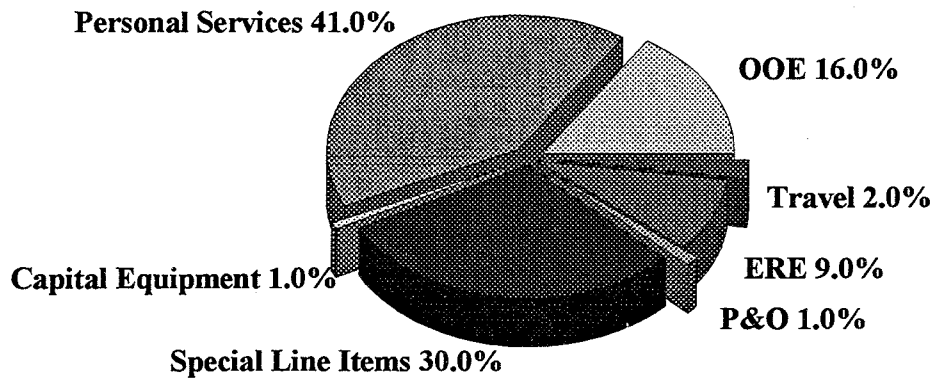
Transfer to Flood Warning System Fund/1021	\$150,000
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FINANCIAL INFORMATION FISCAL YEAR 1994-95

GENERAL FUND EXPENDITURES by Expense Classification

Personal Services	\$6,675,000
Employee Related Expenses (ERE)	\$1,465,600
Professional and Outside Services (P&O)	\$ 132,600
Travel	\$ 293,000
Other Operating Expenses (OOE)	\$2,677,800
Capital Equipment	\$ 157,400
Special Line Items	\$4,919,600
Total Expenditures	\$16,321,000

GENERAL FUND EXPENDITURES

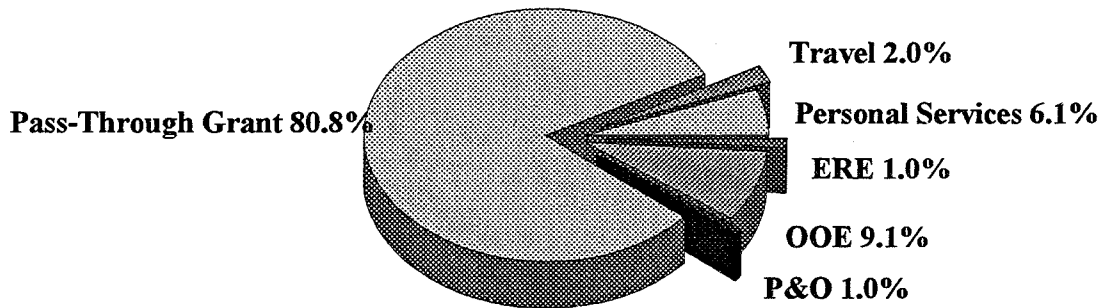


FINANCIAL INFORMATION
FISCAL YEAR 1994-95

FEDERAL FUND EXPENDITURES
by Expense Classification

Personal Services	\$ 60,700
Employee Related Expenses (ERE)	\$ 14,300
Professional and Outside Services (P&O)	\$ 14,049
Pass-Through Grant to University of Arizona	\$780,151
Travel	\$ 18,900
Other Operating Expenses (OOE)	\$ 83,900
Total Expenditures	\$972,000

FEDERAL FUND EXPENDITURES



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