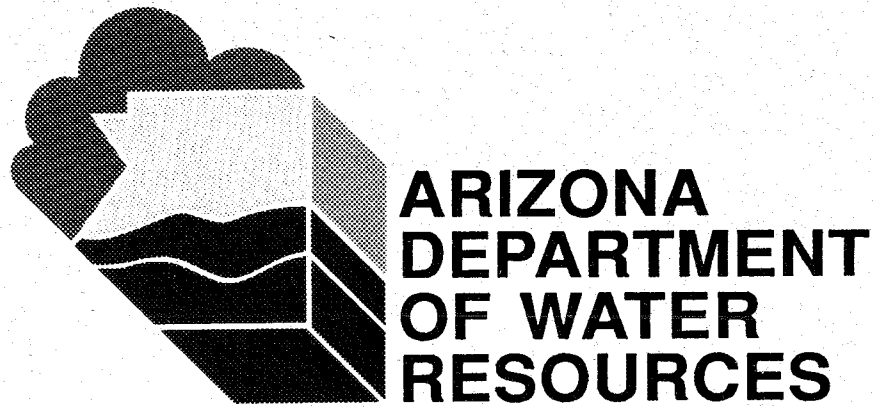


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ANNUAL REPORT

1990-1991

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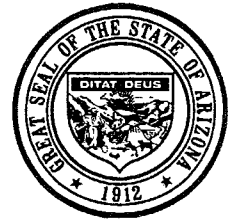
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ARIZONA DEPARTMENT OF WATER RESOURCES

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FIFE SYMINGTON
Governor

ELIZABETH ANN RIEKE
Director

HONORABLE FIFE SYMINGTON
Governor of Arizona, and

HONORABLE MEMBERS
Arizona State Legislature:

I am pleased to submit to you the Annual Report of the Arizona Department of Water Resources for fiscal year 1990 - 1991. This report has been published as required by A.R.S. § 45-111. The report contains an overview of the agency's functions and provides a summary of activities and accomplishments that took place between July 1, 1990 and June 30, 1991.

The year was characterized by change: a new agency Director beginning in April 1991, a reduced and reorganized Department staff, an expanded and reconfigured Arizona Water Commission and two major new pieces of water legislation.

As the fiscal year was drawing to a close it became apparent that a reorganization and reduction of staff would be necessary for the agency to operate within tightening budget constraints. Over twenty-two previously authorized positions were eliminated from our organization, which reflects a ten percent reduction in staff. Our goal in the downsizing was to minimize any layoffs in personnel and to prioritize our functions to assure we can effectively carry out our principal statutory responsibilities. The chart included in this report reflects the new organizational structure that was implemented in response to the downsizing.

The Arizona Water Commission, previously a body of seven members, was expanded to fifteen members representing specific areas of the state. The Commission provides the Director valuable advice and insight on major water issues.

Two significant pieces of water management legislation were enacted during the year: the Groundwater Transportation Act and the Groundwater Replenishment District Act. Department staff provided important technical expertise during the development of these new laws.

I am extremely proud of the dedicated, highly-qualified professional staff that make up this agency. Along with them, I am committed to implementing Arizona's water management laws and programs to achieve the mission and goals of the Arizona Department of Water Resources.

Sincerely,

A handwritten signature in cursive script that reads "Betsy Rieke".

Elizabeth Ann Rieke
Director

MISSION STATEMENT
ARIZONA DEPARTMENT OF WATER RESOURCES

The mission of the Department of Water Resources is to assure a dependable water supply for Arizona's future and protect against floods by developing and implementing programs to conserve, control, protect, augment, allocate and understand our water resources.

GOALS

WATER RESOURCES PLANNING AND MANAGEMENT - Manage the State's water resources through allocation, conservation and augmentation programs to guarantee that a dependable supply of water will be available for the benefit and welfare of this and future generations.

INTERSTATE AND FEDERAL ACTIVITIES - Promote and protect Arizona's rights and interests in interstate waters and in Federal actions that affect the Department's mission.

PROTECTION OF LIFE AND PROPERTY - Prevent property damage, loss of life and personal injury from flooding and dam failure.

WATER QUALITY - In coordination with the Department of Environmental Quality, develop and manage programs to protect and restore the State's water resources from pollution.

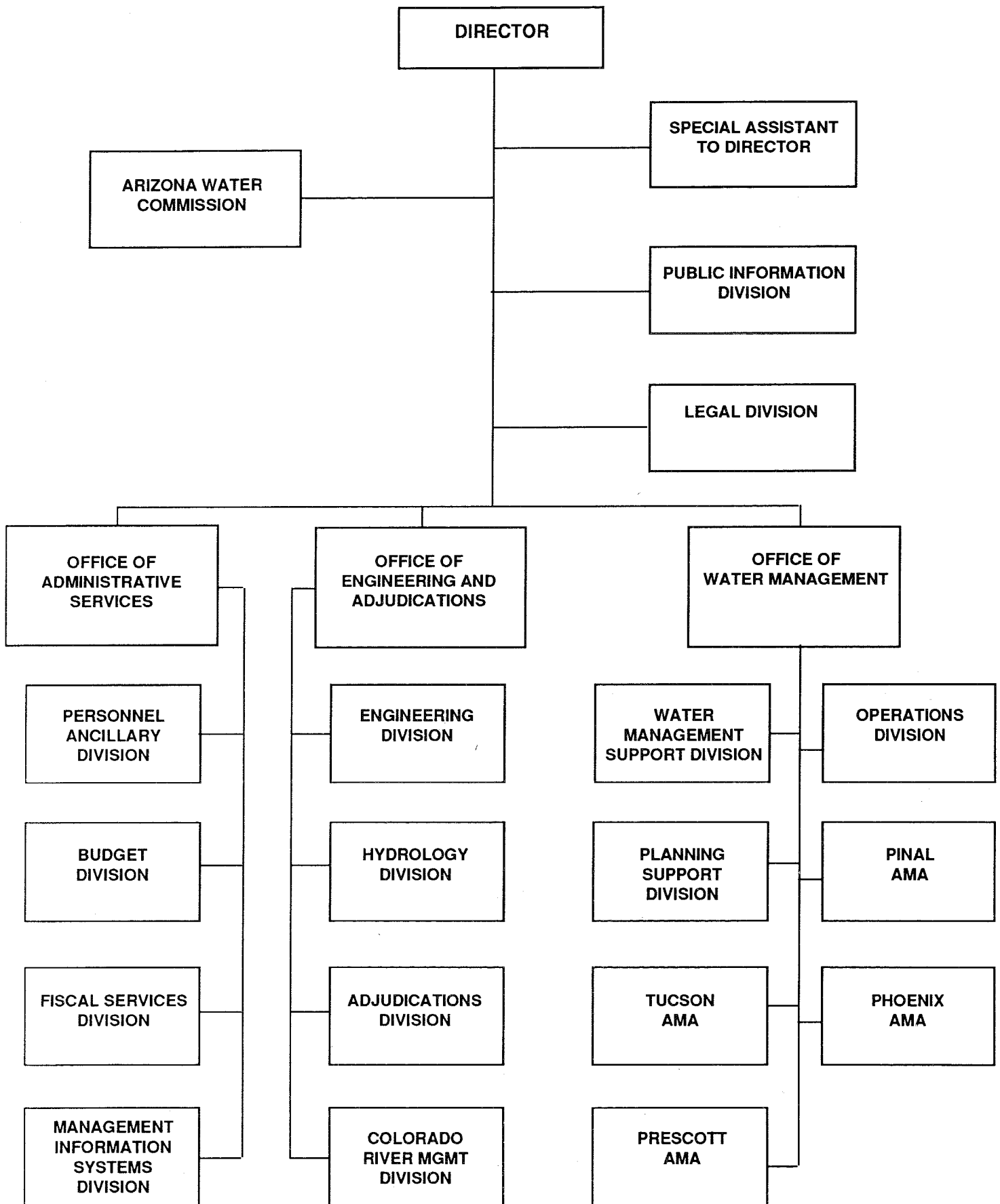
WATER RESOURCES INFORMATION - Provide the public, other agencies and elected officials the basic data and information required to make sound water management decisions.

PUBLIC EDUCATION AND PARTICIPATION - Educate the public on water management issues and encourage public participation in water management decisions.

EMPLOYEE MANAGEMENT AND RETENTION - Attract and retain dedicated and competent employees by providing opportunities for development of professional capabilities and rewarding and challenging careers.

STANDARDS OF EFFECTIVENESS AND EFFICIENCY - Administer the State's water laws fairly, efficiently and progressively and make timely, equitable and technically sound decisions.

**ARIZONA DEPARTMENT OF WATER RESOURCES
ORGANIZATIONAL CHART FOR FISCAL YEAR 1991-92**





ARIZONA WATER COMMISSION

The Arizona Water Commission is an advisory body to the Director of the Arizona Department of Water Resources (DWR or Department). In 1990, the Arizona Water Commission underwent a sunset review, which resulted in the Arizona Legislature extending the life of the Commission until July 1, 1993 and amending the membership qualifications and duties of the Commission. The Commission was expanded from six to fifteen members. The Legislature also directed the Commission to prepare a recommendation on the need for a permanent water resources advisory body.

In response, the Commission focused its efforts on preparing legislation clarifying the function of the Arizona Water Commission and the terms and qualifications for membership. (This legislation was enacted during the 1992 legislative session.)

Members of the Commission serving during fiscal year 1990-91 are listed below, including the Active Management Area (AMA) or groundwater basin they represent and the year their term expires:

Pete Shumway, Chairman, Little Colorado River Plateau, 1994
Carol Anderson, Sacramento Valley, 1996
Karen Barfoot, Phoenix AMA, 1992
Bob John Barker, Verde River, 1992
Barabara Boltz, Phoenix AMA, 1994
George Britton, Phoenix AMA, 1994
Marybeth Carlile, Tucson AMA, 1996
Clyde Gould, Lower Gila, 1992
Jim Henness, Pinal AMA, 1994
C. Marshall Pattea, Phoenix AMA, 1996
Ronald Rayner, Phoenix AMA, 1992
Marco Rivera, Tucson AMA, 1992
Oren Thompson, Phoenix AMA, 1996
Fred Zumwalt, Duncan Valley, 1996

OFFICE OF THE DIRECTOR

The Director of the Department of Water Resources is responsible for overseeing the development and implementation of policies and programs to fulfill the agency mission of assuring a dependable water supply for Arizona's future and protecting against floods and dam failures. The Deputy Directors for the Office of Water Management and the Office of Engineering and Adjudications, the Assistant Director for the Office of Administrative Services and the Chief Legal Counsel report to the Director. The Special Assistant to the Director and the Public Information Officer are within the Director's Office.

During this fiscal year the Director was asked to oversee the development of a State Water Resources Assessment. The assessment work team is comprised of employees from various divisions within the Department.

The Director guides the Department's legislative efforts. A number of bills were enacted this year that affect Department activities and they are summarized in this report.

PUBLIC INFORMATION OFFICE

The Public Information Officer coordinates the agency's contact with the news media, and prepares news releases, brochures, reports, speeches and audio-visual productions explaining the Department's activities. This office also responds to general requests for information about DWR's programs and water management issues affecting Arizona.

In addition to these routine duties, two special assignments carried out this year are noteworthy. The Public Information Office coordinated the Department's participation in "Conserv 90: The National Conference and Exposition Offering Water Supply Solutions for the 1990's." Conserv 90 was held in August 1990 in Phoenix. DWR staffed a booth that provided information on the Groundwater Code and Arizona's water conservation programs. Numerous Department employees participated in the conference by giving oral presentations, conducting workshops, participating in panel discussions or presenting poster displays. Approximately 1,200 water resource professionals

attended Conserv 90.

Another significant work effort was the coordination of a series of public meetings to obtain input for the State Water Resources Assessment. Meetings were held in Show Low, Flagstaff, Camp Verde, Payson, Phoenix, Sierra Vista, Nogales and Tucson.

LEGAL DIVISION

The Legal Division provides in-house counsel to the Department of Water Resources. It is comprised of nine attorneys occupying eight full time positions. The Legal Division is responsible for representing the Department's interests in litigation involving water issues in both state and federal courts; for advocating the Department's interests in all contested administrative hearings conducted by the Department; for drafting and reviewing proposed legislation; for assisting the Department in the adoption of administrative rules and management plans; for negotiating inter-governmental agreements and business contracts; and for providing legal analysis and advice on specific questions of law related to the Department's programs. Highlights of the division's activities for

fiscal year 1990-91 are summarized below.

Litigation

The Department both initiates and defends against various court actions. During this fiscal year, activity occurred in the following cases where the Legal Division represented DWR:

AMWUA v. ADWR, Maricopa County Superior Court Cause CV 90-1776 -- The Arizona Municipal Water Users Association ("AMWUA") filed this action to have two specific aspects of the Second Management Plan declared invalid. An extensive administrative record was prepared by the Legal Division and forwarded to the Superior Court. The case was briefed and prepared for oral argument held in July of 1991. (Note: During the fiscal year that followed the Court rendered a decision adverse to the Department. The Legal Division then filed for review by the Court of Appeals, prepared and filed an opening brief and a brief in reply to AMWUA's brief. Oral argument has not been scheduled.)

CAIDD v. Plummer, Pinal County Superior Court Cause CIV 38812 -- Three irrigation districts in central Arizona filed this action against the Director of the

Department seeking a writ of mandamus ordering the Director to complete a reallocation proposal for Central Arizona Project water. The Legal Division filed a motion to dismiss the action. Although the motion was eventually denied, the intervening time period allowed the Department to complete its research on the reallocation issue and prepare the reallocation proposal in such fashion as to allow the case to be settled before a final judgement and order was entered.

ADWR v. Herdegen, Pima County Superior Court Cause CIV 274017, Pinal County Superior Court Cause CIV 39269 -- The Department filed these two actions against a well driller in central/southern Arizona believed to be defrauding customers and posing a threat to the aquifers of the state by failing to observe mandatory construction standards. The Department had already revoked Mr. Herdegen's well driller's license. In these actions the Department is seeking civil damages in excess of \$200,000.

Rules

As a relatively new department of State government, DWR continues to develop rules to carry out its legislative

mandates. The Legal Division is responsible for guiding these rules through the formal adoption process. This task involves the drafting of the proposed rules after the underlying concepts have been developed, appearances before the Governor's Regulatory Review Council, certification by the Arizona Attorney General's office and final adoption by the Secretary of State. In fiscal year 1990-91, the following progress was made:

Annual Reporting Rules -- The Legal Division participated in developing substantial revisions to the Department's Annual Reporting Rules for water users within the state. The rules were certified by the Attorney General's office on December 11, 1990 and became effective on December 12, 1990.

Audit and Inspection Rules -- The Legal Division participated in development of Audit and Inspection Rules which formalize the procedures for entry upon private lands and inspection of records to determine compliance with the Arizona Groundwater Code. It is anticipated that these rules will be adopted and become effective in fiscal year 1991-92.

Fee Rules -- The Legal Division participated in development of a revision to

the Department's schedule of fees for applications, permits and administrative services to the public. The Department anticipates these rules will be approved internally and proceed to the Governor's Regulatory Review Committee during the next fiscal year.

Water Measuring Device Rules -- The Legal Division has worked with the Department's Compliance Committee to begin drafting a comprehensive set of rules governing the proper measurement of water withdrawal and use. The Department anticipates these rules will be approved internally in the next fiscal year and will then be released for public comment.

Assured Water Supply Rules -- The Legal Division continues to advise the Department concerning new concepts for a comprehensive set of rules governing assured water supply in new developments.

Procedural Rules -- To remain current with changes in the law of procedure, the Department is substantially revising its Rules of Administrative Procedure. Because of the legal nature of this task, the Legal Division has accepted primary responsibility for these revisions. The draft changes have not yet been prepared.

Legislation

The Legal Division assists the Directorate staff in the analysis and drafting of legislation affecting the Department. In fiscal year 1990-91, the Legal staff devoted substantial time to the Phoenix AMA Groundwater Replenishment District Act (H.B. 2499); the Groundwater Transportation Act (S.B. 1055) and the amendments to the agricultural operating flexibility account statutes (H.B. 2340).

Administrative Hearings

Enforcement Cases -- The Legal Division represents the Department in administrative and judicial actions against suspected violators of Arizona's water laws. In fiscal year 1990-91, the Legal Division processed over 200 such cases, collecting over \$25,800.00 in civil penalties and over \$4,800.00 in delinquent fees. Also, 53 administrative cases were set for hearing.

Administrative Review Cases -- When water users are notified of mandatory conservation requirements imposed by the Management Plans, they are entitled to request administrative review of the reasonableness of those requirements. After adoption of the Second Management

Plan in 1989, the Department received in excess of 2000 such requests. The Legal Division oversees disposition of all these requests, through settlement or hearing. In fiscal year 1990-91, 133 such requests were settled, hearings were conducted in five cases and many more were partially processed toward eventual completion.

Miscellaneous Administrative Cases --

The Department generally regulates the issuance of certificates of right to withdraw groundwater and divert surface water. In the event that one or more parties contest the issuance or denial of such a certificate, the Legal Division advances the Department's interests throughout the administrative proceedings and through the courts, if necessary. In addition, the Legal Division reviews applications for designation or certificates for assured water supply inside the AMAs and for water supply adequacy outside the AMAs. The Legal Division reviews agreements with other state and federal agencies on issues which impact the state's water resources. The Legal Division also negotiated on behalf of the Department in four Federal Superfund clean up sites, leading to the Department's participation in consent orders and decrees.

STATE WATER RESOURCES ASSESSMENT

In February of 1990, DWR began preparation of an assessment of water resources for the entire State of Arizona. The objectives of the State Water Resources Assessment are to describe the physical occurrence of water in the State, explain the legal framework for water resource management, and identify areas of the state that may experience significant water resource management problems during the next 50 years.

The assessment will include two reports: the first will describe the water supplies in the state and the second will discuss the major water resource issues for the state's six planning areas.

During the first year of the preparation of the assessment, an extensive data gathering and public information program was initiated. The focus of the information gathering process has been on compiling the best information available, determining the assumptions used in analyzing the data, and identifying where further data is needed. The public involvement process included numerous meetings around the state. During these public meetings the planning process and objectives of the

assessment were described, and individuals were given the opportunity to contribute information and voice concerns that could be addressed through the Department's work effort.

The State Water Resources Assessment will provide a comprehensive look at Arizona's current water supplies and will identify future directions to insure that we will be able to meet our future water needs.

MAJOR NEW LEGISLATION AFFECTING DEPARTMENT ACTIVITIES

Major new legislation was passed in 1992 that affects DWR activities. The following summaries highlight some of the most important provisions in the new legislation.

Groundwater Transportation Act (S.B. 1055)

This new law restricts the transfer of groundwater from rural groundwater basins to active management areas (AMAs), and from the Pinal AMA to other AMAs. The legislation includes provisions for in-lieu taxes for remote municipal properties, and water transportation fees for each acre-foot

transferred. A detailed summary of this legislation is available from DWR.

Groundwater Replenishment Districts (H.B. 2499)

This law authorizes the establishment of a groundwater replenishment district for the Phoenix AMA. When established, membership will be mandatory for all municipal and industrial groundwater users. The legislation provides for the assessment of a replenishment tax for the withdrawal of each acre-foot of overdrafted groundwater. The district would use the fees to obtain supplemental water to replenish the aquifers in the Phoenix AMA. The obligation of the district to replenish the supply is phased in over a fifteen year period beginning four years after the district is formed. As long as the district meets the obligation, district members are deemed to have an assured water supply. A detailed summary of this legislation is available from DWR.

Omnibus Water Code Revisions (S.B. 1171)

The Department's annual legislation addressing technical amendments to the water codes includes provisions: 1) to

allow the Department to enter into arbitration as an alternative means of dispute resolution; 2) to exempt Superfund projects involving reinjection from withdrawal right requirements; 3) to authorize issuance of groundwater recharge testing permits; 4) to assure that persons proposing to drill wells along the Colorado River have authority to pump Colorado River subflow; 5) to give the Department authority to issue grants to qualifying entities for use of augmentation and conservation assistance funds; and 6) to make technical changes relating to underground storage permits.

Regulating Effluent (S.B. 1254)

This legislation, initiated by the Department, revises the definition of "effluent", allows effluent to be considered a water resource in demonstrating an assured water supply, and creates a permanent incentive for farmers in Active Management Areas to use effluent. The effluent adjustment for farmers prescribed by the Second Management Plan is also repealed.

Reverse Retirement of Irrigated Land (H.B. 2190)

This law is designed to assist farmers who have sold a farm in an AMA and later regained title to the farm through foreclosure or other involuntary reversion. Those farmers can apply to the Director of the Department Water Resources to have any water rights changed by the buyer restored to their status at the time of the sale.

Operating Flexibility Accounts (H.B. 2340)

This law allows farmers within an irrigation district who anticipate accumulating excess debits in their flexibility accounts to purchase credits from other farmers in the same district. The credits available for sale are limited to those accrued in the prior calendar year.

Clifton Flood Control Appropriation (H.B. 2098)

Under this law, approximately \$535,000 was transferred from the Department's Flood Control Loan Fund to the Flood Control Assistance Fund. This law grants the money for flood control improvements to the town of Clifton.

OFFICE OF WATER MANAGEMENT

The Office of Water Management has the primary responsibility for administration of the surface water and groundwater codes. It is comprised of the four Active Management Area offices, the Operations Division, the Water Management Support Division and the Planning Support Division. The office is responsible for development and implementation of groundwater management plans, administrative rules, general planning activities, and public involvement activities which are associated with those functions. Representatives from the Office of Water Management also participate on many inter-agency coordinating committees such as the Riparian Area Task Force, Commission on the Arizona Environment, and Small Water Systems Coordinating Council.

ACTIVE MANAGEMENT AREAS

Active Management Areas (AMAs) are specially designated groundwater basins which, due to high groundwater overdraft, require specific management and regulatory programs. There are four initial Active

Management Areas: Prescott, Phoenix, Pinal and Tucson. The Department maintains an office in each AMA. The Groundwater Code authorizes establishment of subsequent Active Management Areas either by local initiation or by order of the Director. During 1991, an election was held in the Virgin River Basin to designate the basin as an AMA. The voters in the basin defeated the proposal and an AMA was not established.

PRESCOTT ACTIVE MANAGEMENT AREA

The Prescott Active Management Area is situated in the north-central portion of the state, approximately 80 miles northwest of Phoenix, and encompasses roughly 485 square miles. The physical environment in the Prescott AMA is varied, and there are significant differences in elevation, climate, and precipitation within its borders.

There are currently over 200 grandfathered rights within the Prescott AMA's jurisdiction, most of which were granted for crop irrigation. Three large municipal providers are located within the AMA: the

City of Prescott, Shamrock Water Company (serving Prescott Valley), and Triangle Development (serving Diamond Valley). There is one irrigation district which serves only surface water to its customers.

Prescott AMA staff routinely administer and field monitor water rights within their jurisdiction. This involves on-site or drive-by verification of approximately 4,000 acres with irrigation grandfathered rights, and frequent interaction with municipal and industrial rightholders. For calendar year 1990, \$15,950.40 in withdrawal fees was collected from AMA rightholders for general administration of the Groundwater Code, while an additional \$15,963.05 was collected for augmentation and conservation assistance.

Prescott AMA activities center around implementation of the Groundwater Code, including the Management Plan conservation requirements, and involvement in community water issues. Due to the office's location in north-central Arizona, the Prescott AMA is generally viewed as the northern Arizona branch office of DWR and the work load goes far beyond activities typically associated with AMAs.

Prescott AMA staff performs many tasks normally handled by the Operations or Adjudications Divisions. The Prescott AMA received over 5,000 telephone inquiries and over 2,000 walk-in inquiries this year.

First Management Plan Compliance

Almost all water users within the Prescott AMA are in compliance with the First Management Plan conservation requirements. There was one agricultural violation during the year for using more water than allowed under the Groundwater Code. Generally, potential compliance issues within the AMA are resolved before they become enforcement cases.

Second Management Plan Implementation

Five requests for administrative review of the Second Management Plan conservation requirements adopted in December, 1989 were received by the Prescott AMA. Two requests were from agricultural users in the Chino Valley area, and three were from the City of Prescott.

Cooperative Efforts

During this fiscal year, a Regional Water Steering Committee was formed by concerned citizens and local elected officials from each of the towns and rural districts within the Prescott AMA. The committee was designed to address water related issues within the AMA in a concerted fashion, and to implement local control of water resources within the basin. The Prescott Chamber of Commerce was a major sponsor of this effort, and Prescott AMA staff serve as technical advisors.

PHOENIX ACTIVE MANAGEMENT AREA

The Phoenix AMA covers an area of 5,646 square miles of central Arizona and is responsible for the regulation of 7,340 irrigation grandfathered rights, encompassing 342,640 acres of irrigated farmland, and Arizona's largest metropolitan area with a 1990 estimated population of 2,100,000 people. Within the Phoenix AMA boundaries, there are 14 major irrigation districts including the Salt River Project, Maricopa Water District, Roosevelt Water Conservation District and Roosevelt Irrigation District. There are also 55 large municipal water providers

including the Cities of Phoenix, Scottsdale, Mesa, Tempe and Glendale.

During this fiscal year the Phoenix AMA processed 1990 annual water withdrawal and use reports, collecting \$1,107,993 for general administration of the Groundwater Code and \$1,101,163 for augmentation and conservation assistance.

First Management Plan Compliance

Through the use of satellite imagery, the Phoenix AMA identified 25 apparent illegal irrigations. The Phoenix AMA staff completed 91 agricultural flexibility account audits, 400 annual report hand audits and 23 municipal provider audits for 1990. Staff developed a new process for determining annual service area population for use in calculating annual compliance for municipal conservation requirements.

Scottsdale's request for a modification of their First Management Plan conservation requirements was approved and a negotiated agreement for implementation of alternative requirements was completed. The Department also finalized an administrative review allowing the City of Scottsdale to deliver interim untreated Central Arizona Project (CAP) water to several golf courses in North Scottsdale

and the Carefree/Cave Creek areas. The delivered CAP water will not be counted against the City of Scottsdale's conservation requirements. In return, Scottsdale has agreed to replace the CAP deliveries with effluent within ten years. This agreement helps resolve a serious groundwater overdrafting problem in this area.

Second Management Plan Implementation

The Phoenix AMA has received 2,012 requests for administrative review and/or variance of the Second Management Plan conservation requirements. Of these, 1,892 requests came from the agricultural sector. This represents a large on-going workload for the AMA. Needed changes in the Second Management Plan were identified and staff developed several proposals for modification of the SMP.

Cooperative Efforts

Close working relationships are maintained with a number of private, State and Federal agencies. Phoenix AMA cooperative efforts include participation with a Corporation Commission/private water company task force to develop a

Corporation Commission directive that would establish guidelines for cost recovery of conservation measures for private water companies. This effort is ongoing. The Phoenix AMA also serves on a regional task force that is developing a regional water plan for the Phoenix AMA. This Task Force is comprised of representatives from many of the AMA's large municipal providers, the Salt River Project, Agri-Business Council and AMWUA (Arizona Municipal Water Users Association). This effort is also ongoing.

DWR, through the Phoenix AMA, entered into a three year contractual agreement with the Maricopa County Municipal Water Conservation District Number One and the Agua Fria-New River Natural Resource Conservation District (NRCD) to help finance an irrigation management service for farm lands within the Agua Fria-New River NRCD.

Staff serve on several cooperative committees including the AMWUA Water Conservation Committee, the AMWUA Low Water Use Plant Committee 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 (CAWCD).

PINAL ACTIVE MANAGEMENT AREA

The Pinal AMA covers approximately 4,000 square miles in central Arizona and includes five groundwater sub-basins. The AMA has an estimated population of 70,000 people and contains four major irrigation districts, six small irrigation districts, and 13 large municipal water providers. Farming is the largest and most vital industry in the Pinal AMA, with cotton as the principal crop.

The Pinal AMA administers nearly 1,500 Irrigation Grandfathered Rights, involving over 280,000 acres of farmland. Approximately 250 other groundwater rights and withdrawal permits belonging to various municipalities, private water companies and industries are also handled. For calendar year 1990, \$392,981 of withdrawal fees were collected for general administration of the Groundwater Code and \$99,435 was deposited in the AMA's conservation assistance and augmentation fund.

First Management Plan Compliance

During the year, Pinal AMA staff investigated 218 possible violations of the Groundwater Code, of which 141 resulted in further enforcement action. Violations of the Code included irrigation of lands without water rights, withdrawals or use of water in excess of water rights, and discrepancies in reporting of water use. A consent order was negotiated with the City of Eloy which required the city to develop an extensive water conservation program and to use CAP water. The AMA reviewed all of the 1,733 annual groundwater withdrawal reports filed in the spring of 1991 for completeness and correctness. These reviews resulted in 64 in-depth audits involving both the water user and Pinal AMA staff. Only 12 water right holders failed to file annual groundwater withdrawal reports by July 1991.

Second Management Plan Implementation

The Pinal AMA received 269 requests for administrative review or variance from the Second Management Plan water conservation requirements. All but four of the requests involved irrigation water duties. By July 1991, staff had completed 51 of

the requests and an additional 187 requests had been analyzed.

The Pinal AMA was responsible for coordinating the development of the conservation assistance program for all four AMA's Second Management Plans. The program will provide each AMA with a dedicated funding source for implementing conservation projects which will benefit local water users.

Cooperative Efforts

Pinal AMA staff continuously advocate for strong water management and conservation and have facilitated development of many cooperative conservation programs within the AMA. Staff worked closely with the City of Casa Grande, the largest city in the AMA, to heighten the city's awareness of the need for water conservation and long-range water resources planning. This effort led to the development of several water conservation ordinances passed by the city council in the fall of 1991.

The Department renewed its funding for the fourth consecutive year for the Irrigation Management Service (IMS). This program was the first of its kind in Arizona. IMS provides extensive on-farm

training to irrigators within the Pinal AMA to improve their management of irrigation water. The program is a cooperative effort which involves DWR, three local Natural Resource Conservation Districts, and the U.S. Department of Agriculture, Soil Conservation Service (SCS).

The Pinal AMA staff began participation in a comprehensive Inter-agency Management Improvement Program (IMIP) with the U.S. Department of Agriculture's Agricultural Research Service, SCS, U.S. Bureau of Reclamation, Arizona Department of Environmental Quality, Cooperative Extension, and the University of Arizona College of Agriculture. This on-going pilot study is evaluating the operation of the Maricopa-Stanfield Irrigation District and its member farms to increase the efficiency of water use in order to improve the sustainability of irrigated agriculture. The results of the study will be published, so the IMIP process may be applied to other irrigation districts throughout the western United States.

TUCSON ACTIVE MANAGEMENT AREA

The Tucson AMA is responsible for the regulation of over 1,500 water rights in the Tucson Basin and the Douglas INA.

Tucson AMA staff processed 1,560 annual water withdrawal and use reports, collecting \$254,191 in general administration fees and \$252,734 in augmentation fees for calendar year 1990. The Tucson AMA staff completed over 280 annual report audits. Staff also completed 133 requests for water rights transactions and notified all irrigation grandfathered rightholders of their flexibility account balances.

First Management Plan Compliance

In July of 1990, the City of Tucson signed a stipulation and consent order related to exceeding the First Management Plan gallons per capita per day requirement -- the first signed by a major water provider in response to a conservation requirement compliance case. Three other large providers also signed stipulations during this period.

Second Management Plan Implementation

Following adoption of the Second Management Plan in December of 1989, applications for administrative review and variance of the Plan's conservation requirements were filed by groundwater right holders. By July 1991, Tucson AMA staff had reviewed all the applications and resolved some of them. Resolution of a number of the issues raised depend on the outcome of legislative or consultant studies.

Approximately 120 administrative review and variance applications were filed by the agricultural sector, with most related to poor soils and irrigation efficiency issues.

The Tucson AMA received 17 applications for administrative review or variance from the municipal sector. The main issues related to growth projections, corrections to data, possible overestimates of conservation potential, questions about the target setting methodology, and costs associated with implementing conservation programs. Several of these cases were resolved in fiscal year 1990-91.

Seven golf courses also filed administrative review or variance applications.

Their issues of concern included limiting soils, climatology, irrigation system design and water requirements for grass species.

In the spring of 1990, the Legislature amended the Groundwater Code to allow withdrawal fees to be used to establish a conservation assistance program. The Tucson AMA was actively involved in developing the conservation assistance chapter for the SMP, including drafting the chapter and holding meetings to receive public input.

Cooperative Efforts

Tucson AMA staff participate in a wide variety of community issue coordination activities, including the following:

Tucson AMA Augmentation

Authority - Legislation passed in the Spring of 1990 authorized the establishment of a new agency in the Tucson AMA, which is designed to facilitate regional water supply coordination. Staff activities focused on obtaining the necessary approvals, and participating in numerous presentations and public forums to facilitate the establishment of the Authority. The Authority has until November 1993 to develop a plan of

operation and determine whether it should be continued on a permanent basis.

CAP Reallocation/Terminal Storage

- Tucson AMA interests are vitally concerned with the reallocation process for CAP. Numerous issue papers and meetings on this subject required Tucson AMA input.

SAWARA, the Southern Arizona Water Resources Association, formed a committee in 1990 to provide input to the Bureau of Reclamation on terminal storage options, which would provide a reliability feature for Tucson area water users. The Tucson AMA participates on this committee and also on a technical review committee.

Nogales/Santa Cruz Issues - AMA staff provided assistance with a number of water supply and water quality issues in the Nogales/Santa Cruz area including contamination of the Nogales Wash, assured water supply, CAP contract questions and the EPA border plan.

Rillito Recharge Project - The Rillito Recharge Project is an inter-governmental groundwater recharge demonstration project. The Project is one of twelve in the United States which receives funding under the Federal High Plains Act.

During fiscal year 1990-91, staff renegotiated the second inter-governmental agreement (IGA) between DWR, Tucson Water and the Pima County Flood Control District. This new IGA will take the project through preliminary design. The Tucson AMA manages the design consultant.

Tanque Verde/Well Spacing - Severe declines in the groundwater levels in the Tanque Verde area affected a number of private wells as well as riparian vegetation in late 1989 and early 1990. AMA staff worked with DWR's Hydrology Division, the private well owners, and Tucson Water to evaluate the cause of the declines and prepare recommendations to mitigate future impacts.

GROUNDWATER USERS ADVISORY COUNCILS

The Groundwater Code established a five person Groundwater Users Advisory Council (GUAC) for each Active Management Area. Council members are appointed by the Governor to six year terms. Advisory Council meetings are held either monthly or bi-monthly in each of the AMAs. The Advisory Councils review groundwater management programs in their

respective AMAs, and provide advice and comments on such matters as management plans, proposed rules and pending legislation. Following is a list of the GUAC members during fiscal year 1990-91:

Prescott AMA

Ken Shafer, Chairperson
Marshall Hartman
Linc Hathaway
Ed Smith

Phoenix AMA

Sue Lofgren, Chairperson
Kent Cooper
Frank Fairbanks
Bruce Heiden
John Lassen

Pinal AMA

Russell Schlittenhart, Chairperson
Dean Weatherly, Co-Chairperson
Oliver Anderson
Jamie Gillum
David Snider

Tucson AMA

Hugh Holub, Chairperson through 2/91
Ronald Morriss, Chairperson starting 3/91
Warren Culbertson
William Ealy
Priscilla Robinson

Highlights of GUAC Activity

The Prescott AMA GUAC unanimously resolved that up to 100% of the funds generated by the augmentation fee may be

utilized toward conservation assistance. Prescott GUAC members also unanimously opposed Senate Bill 1148, a bill which would have initiated a study commission to determine whether the Prescott AMA should be replaced or supplemented with a local water management agency.

The Phoenix AMA GUAC provided valuable direction in dealing with important water issues including the Second Management Plan modifications and various legislative initiatives including statewide plumbing fixture requirements and the Phoenix AMA Replenishment District. The GUAC provided advice and direction in the development of the Phoenix AMA augmentation assistance and conservation assistance grant programs.

The Phoenix AMA GUAC supported the development and adoption of Executive Order 91-3, Water Conservation for State Facilities.

The Pinal AMA GUAC continued to voice its strong support for the conservation assistance program. The GUAC identified the establishment of a centralized information clearinghouse, the continued operation of the Irrigation Management Service, and the development of K-12 education programs as the three conser-

vation projects meriting the highest priority for funding in the AMA. The GUAC was also instrumental in the passage of House Bill 2340, which permits a farmer to sell flexibility account credits to another farmer within the same irrigation district.

The Tucson AMA GUAC was active in the last months of 1990 with its statutory duties related to the formation of the Augmentation Authority. It advertised for and nominated three members to the initial Board of Directors representing the general public, mining interests and private water companies.

The Tucson AMA GUAC sent letters voicing its opinions on a variety of matters including, House Bill 2340, the Groundwater Operating Flexibility Account Bill; the Executive Budget, as it would affect the Tucson AMA budget; House Bill 2499, the Replenishment District Bill; and the CAP agricultural reallocation. Other issues addressed by the Tucson GUAC during the year include: Rillito Recharge Project, State Water Resources Assessment, joint GUAC meeting, conservation assistance, alternatives to GPCD, Corporation Commission policy on conservation, Tucson Water compliance stipulation, and Tanque Verde issues.

OPERATIONS DIVISION

The Operations Division is responsible for processing all surface water, groundwater and adjudication filings and well drilling licenses. As the custodian of most public records for the Department, the Operations Division manages both computer and physical files. The division staff assists the public in filing water rights documents, responds to information requests and collects permit and groundwater withdrawal fees. Two main sections make up the Operations Division: groundwater systems and surface water rights.

Groundwater Systems Section

During fiscal year 1990-91, the Groundwater Systems Section completed numerous functions required by statute and rule. These functions included:

- Processing 11,200 annual groundwater withdrawal and use reports and depositing \$3,218,211 in withdrawal fees.
- Issuing approvals to drill 3,548 new wells and updating ownership of 1,809 existing wells.
- Issuing permits for 11 projects to recharge or store and recover groundwater.
- Issuing 296 well-driller licenses.

- Issuing 43 new groundwater withdrawal permits.
- Responding to 416 public requests for computer generated information on groundwater and surface water rights or copies of file documents.

Surface Water Rights Section

The Surface Water Rights Section performed numerous administrative actions required by statute and rule involving rights to use surface water. Administrative actions this fiscal year included:

- Accepting and processing 43 applications to appropriate surface water.
- Conducting administrative cancellation of 27 surface water right filings.
- Issuing 250 permits to appropriate surface water.
- Issuing 164 surface water right certificates.
- Processing 1,093 filings for change of ownership of surface water rights.
- Accepting and processing 3,087 statements of claim forms for the right to use surface water based on use prior to enactment of the 1919 Surface Water Code.

- Accepting and processing 726 claims for stockpond water rights and issuing 31 stockpond water rights certificates.
- Accepting and processing 1,475 statements of claimants submitted for inclusion in the ongoing Gila River and Little Colorado River water rights adjudication proceedings.

WATER MANAGEMENT SUPPORT DIVISION

The Water Management Support Division provides technical assistance to the Department in the area of water quality and promotes public awareness and appreciation of the nature and importance of water. The division is responsible for the integration of water quality concerns in the Department's water resource management and planning programs. In addition, the division provides conservation and education assistance to water users and providers to ensure wise water use.

Water Quality Section

The Water Quality Section has been involved in overseeing remedial investigations and remedial actions on a number of federal and state superfund sites during the past year. Staff participated in legal

negotiations for groundwater cleanup on several sites and these cleanups are now underway. At these sites, the Department's primary role has been to assure that responsible parties adhere to Groundwater Code requirements for withdrawal and beneficial end use of groundwater. In many cases, the Department has issued poor quality groundwater withdrawal permits for those actions. In order to streamline the permitting process, the division has developed a new standardized permit and supplemental permit application form.

Section staff also provided computer drafting expertise in the development of the State Water Resources Assessment.

Considerable time has been spent working with the Department of Environmental Quality and the Environmental Protection Agency on issues relating to reauthorization of the Clean Water Act and development of a national groundwater protection strategy.

Education Section

The Department's education staff is responsible for creating and providing water resources information materials and in-service training to educators and the

public. This year staff expanded its distribution of water educational materials and its participation in environmental education conferences, seminars, workshops and public events to reach more people than ever before. DWR's participation in the 1991 Environmental Expo at the Maricopa County Fair alone, brought staff face-to-face with more than 250,000 people.

Education staff also expanded in-house services through its "brown bag" lunch presentations program. This program provided a forum for staff to learn about and discuss topics affecting numerous Department activities.

PLANNING SUPPORT DIVISION

The Planning Support Division is responsible for water resource planning activities within the Department which includes planning assistance to outside organizations. In addition, during this fiscal year the Planning Support Division edited and published the Second Management Plans for all four active management areas. This year's water resource planning activities included:

State Water Resources Assessment -
The State Water Resources Assessment

will describe the current water supply and demands in Arizona and the projections for the next 50 years. Staff prepared baseline population estimates and projections for all groundwater basins in the state, population analyses and water use by sector.

Geographical Information System support was provided as well as assistance in drafting text for the region profiles.

Verde River Corridor Study - The Verde River Corridor Project is a locally directed, multi-objective planning process that covered a stretch of the Verde River in Yavapai County that starts upstream from the Town of Clarkdale and continues downstream to the confluence with West Clear Creek. Division staff participated in this study as members of the Water Issues Subcommittee.

Upper San Pedro Water Management Council - The San Pedro Water Management Council was created by the Cochise County Board of Supervisors to evaluate water resource issues and management options within the Upper San Pedro Basin. Division staff represents the Department on the Council and chairs the Technical Review Subcommittee.

Geographical Information Systems (GIS) Support - GIS gives DWR the

ability to analyze and display spatial water resource data to assist in planning and management programs. During fiscal year 1990-91, division staff developed methods to integrate water provider service areas with 1990 census data; mapped instream flow applications, perennial streams in Arizona, and aquifer production potential for each groundwater basin; and assisted the Arizona Rivers Coalition by producing a map that showed thirty-nine river reaches that they were proposing to add to Arizona's Wild and Scenic Rivers system.

Assured Water Supply Analyses - Division staff assisted with the assured water supply program by developing methods for the use of demographic and economic analysis in evaluating the 10-year buildout provision in the assured water supply rules, and providing financial analysis of documents submitted to demonstrate financial capability to construct a water system.

Second Management Plan Augmentation Program - The Groundwater Code required the Department to include a water supply augmentation program in the Second Management Plans. The following studies were underway during the year:

- Arizona Atmospheric Modification Program - Supported by a team of atmospheric scientists from the University of Arizona, the National Oceanic and Atmospheric Administration and the National Center for Atmospheric Research, the Department is exploring the feasibility of utilizing cloud seeding to increase water supplies in Arizona. The Department's role in this multi-year program is to manage the funding and coordinate activity among the various agencies.
- Arizona Water Resources Study - Through the U.S. Department of Agriculture River Basin Program, this study is evaluating the economic and environmental impacts of managing watersheds for multipurpose objectives including increased water yield. During the year, the Planning Support Division represented the Department on the study management committee and provided staff support to the study work team.

OFFICE OF ENGINEERING AND ADJUDICATIONS

The Office of Engineering and Adjudications is comprised of four divisions: Colorado River Management, Hydrology, Adjudications and Engineering. Each division has distinct responsibilities. In addition to the specific responsibilities of the four divisions, the Office of Engineering and Adjudications represents the Department in Indian water rights settlement negotiations, coordinates with members of Congress in developing federal legislation which affects Arizona's water resources and consults and cooperates with federal agencies and representatives from other states on federal and interstate water resource matters which affect Arizona. In fiscal year 1990-91, the office was involved in the development of the Arizona Desert Wilderness Act which established a number of federal wilderness areas in Arizona and authorized the settlement of water rights for the Ft. McDowell Indian Community.

COLORADO RIVER MANAGEMENT DIVISION

One of the Department's major functions is protecting Arizona's rights to the water resources of the Colorado River. The Department's responsibilities include recommending to the Secretary of the Interior to whom Colorado River water should be allocated, reviewing other activities relating to the use of the Colorado River, consulting with the Department of the Interior in the development and administration of the Colorado River annual operating plan and representing the State of Arizona in the various forums and work groups which address Colorado River issues. These activities are accomplished through working with the other basin states, other Colorado River state agencies, 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 Colorado River Management Division in fiscal year 1990-91 were:

- Recommending to the Secretary of the Interior a reallocation of the uncontracted CAP non-Indian agricultural water supply.
- Participating in reviewing the long-range operating criteria for the Colorado River reservoir system.
- Participating in the drafting of rules and regulations governing the administration of Lower Basin Colorado River entitlements.
- Participating in the National Environmental Protection Act process associated with the Glen Canyon Environmental Impact Statement and reviewing information developed for the Glen Canyon Environmental Studies.
- Participating in various interstate committees, including the Colorado River Salinity Control Forum, Colorado River Water Quality Advisory Council, Western States Water Council, Colorado River Management Work Group, and Vegetative Management Work Group.

During this fiscal year, DWR began meetings with the Colorado River Basin State representatives to discuss proposals by California water users which would modify operations of the Colorado River reservoir system. The proposed modification would allow use of more Colorado River water by California until such time as programs are implemented in California to resolve their water supply problems without reliance on additional Colorado River water.

HYDROLOGY DIVISION

The Hydrology Division serves as a technical arm of DWR. Its main functions are statewide water resource data collection and analysis, maintenance of the State's Groundwater Site Inventory (GWSI) database and provision of technical assistance to other areas of the Department. The division consists of four sections: Water Supply, Surface Water/Recharge, Groundwater Modeling and Basic Data.

Water Supply Section

The Water Supply Section is responsible for processing applications for water supply determinations. Under Arizona's Groundwater Code, real estate developers

must demonstrate that sufficient water exists for new developments. This provides consumer protection for new home buyers and assists in managing the State's water supplies. Depending on the type of water provider and geographic location of the development, the following determinations and reviews are conducted: certificates of assured water supply inside of AMAs; designations of water provider's service areas throughout the state; and adequacy statements for subdivisions outside of AMAs. Staff review applications to determine compliance with rules and policy, and to assure the hydrologic availability of the water supply is sufficient for future development.

Staff perform or review well impact analyses to make sure proposed wells in AMAs do not adversely impact existing water users.

The Water Supply Section also undertakes special studies for areas with anticipated high growth or water shortages. Staff assisted in preparing the State Water Resources Assessment by analyzing aquifer systems to determine future water production and dependability.

During the year, this work unit reviewed and issued 11 certificates of

assured water supply, 36 water adequacy statements, 11 domestic water reports, 3 hydrologic studies, 44 well impact analyses and 46 groundwater basin assessments.

Surface Water/Recharge Section

The Surface Water/Recharge Section is responsible for reviewing applications for underground storage and recovery project permits. The review process includes holding meetings with applicants at both the pre-application and application stage. Eighteen groundwater recharge conferences were held during the year. Staff also provided input during the development and finalization of a recharge concept paper.

This section conducts special studies in support of the ongoing Gila River and Little Colorado River general stream adjudications. During this fiscal year, staff completed a special study on surface water/groundwater interaction and water appropriability, and prepared the hydrologic chapters for the San Carlos Apache Indian Reservation and the San Pedro Basin Hydrographic Survey Reports.

Analysis of technical data is provided by this section in support of a wide variety of Department projects, including: reviewing proposed augmentation projects,

developing concepts relating to riparian legislation proposals, assisting in developing guidelines for filing of instream flow water rights and providing hydrologic services for the State Water Resources Assessment.

Modeling Section

The Modeling Section is responsible for two principal functions: developing hydrologic computer models for specific geographic areas and maintaining an updated hydrologic database in a form accessible to other DWR divisions and the public. The models are digital replicas of groundwater basin conditions, and are used as predictive and planning tools in support of many of the Department's mandated functions.

Aside from Groundwater Code activities, modeling efforts support the adjudication program, cooperative efforts with ADEQ, development of riparian protection strategies, recharge programs, Colorado River planning, local government planning efforts (Upper San Pedro and Yuma areas), and Department responses to legislative requests.

Projects accomplished during the year included: analysis of various water

management scenarios after completion of the Pinal AMA model; completion of modeling efforts on three Superfund sites under contract to the Environmental Protection Agency; support for the replenishment district legislation; analysis of Phoenix AMA water management scenarios for utilization in the Phoenix AMA model; and developing and maintaining data bases for several state and federal agencies and private consulting firms working on local and regional projects.

Basic Data Section

The Basic Data Section is responsible for the timely, accurate collection and dissemination of groundwater data for the state of Arizona. Reports depicting general groundwater conditions are compiled and published in the hydrologic map series.

The section maintains the fixed station groundwater quality monitoring program, and the water level index line program for the state. Over 1,600 wells are monitored on at least an annual basis for water levels, and approximately 250 water quality samples are collected. This information is entered into the Department's Groundwater Site Inventory System.

During fiscal year 1990-91, the Basic

Data Section collected data and published hydrologic map series reports for four basins: San Simon, Gila Valley, Sacramento Valley and Virgin River.

As a cooperator to the U.S. Geological Survey (USGS), the Basic Data Section provided field groundwater data from the following basins: Aravaipa, San Bernardino, Upper San Pedro, Lower San Pedro and Virgin River. Statewide, approximately 1,400 water levels, 130 water wells, 700 discharge measurements and 1,700 public inquiries were handled by Basic Data. During this fiscal year DWR completed transition of the statewide index line from the USGS to DWR. The USGS presently maintains the surface water data collection program in Arizona while DWR collects groundwater data.

ADJUDICATIONS DIVISION

Throughout the western United States, each state has adopted its own form of a general adjudication process to determine and finalize water rights. In Arizona, general adjudications are conducted under the authority and procedures of Arizona Revised Statutes §§ 45-251 to 45-260. The Arizona Supreme Court assigned the general adjudication of the Gila River System

and Source to Judge Stanley Z. Goodfarb of the Maricopa County Superior Court. The Little Colorado River adjudication is being conducted in the Apache County Superior Court under Judge Allen G. Minker. Special Master John E. Thorson was appointed by the Supreme Court to conduct hearings and recommend a determination of rights for both adjudications.

The Arizona adjudication statutes direct DWR to provide both administrative and technical assistance to the Superior Court and the Special Master. The Adjudications Division is responsible for those functions.

The Adjudications Division has five sections: Administrative Support, Litigation Support, Investigations, Water Resources Analysis and Technical Support.

The Adjudications Division investigates all claims in the two ongoing adjudications and prepares comprehensive Hydrographic Survey Reports (HSR) and technical reports for the Court. Administrative support includes notifying potential claimants of the judicial proceedings pending before the Court, receiving and transferring to the Court all filed claims, responding to public inquiries and assisting

the Special Master and the Court in records management and resolution of objections.

During fiscal year 1990-91, the division published two HSRs: the Silver Creek watershed final HSR in the Little Colorado adjudication, and the San Pedro River watershed preliminary HSR in the Gila adjudication. Filing the final HSR with the Court commenced a 180-day objection period. In the Silver Creek proceeding 3,455 objections were filed with the Court.

Silver Creek is one of 4 sub-watersheds the Department will investigate as part of the Little Colorado River adjudication. Over 11,000 claims have been filed in the Little Colorado adjudication. The Silver Creek report is the first HSR to be finalized in either adjudication. In preparing the Silver Creek final HSR, the division reviewed 1,788 claims.

For the San Pedro preliminary HSR, 8,017 claims were investigated. Over 66,000 claims have been filed in the Gila proceeding, which has a total of seven watersheds.

The HSRs report all water uses found in the watershed and provide diversion and entitlements information which will be

used by claimants and the Special Master to determine water rights. The information is gathered from water rights filings and claims, historical and public records and field investigations. Claimants have numerous opportunities to add to the reported information.

The division also prepared a technical assessment of the Salt River Pima-Maricopa Indian Community Water Rights Settlement Agreement, which was approved by the Maricopa County Superior Court. This was the first Indian water rights settlement agreement in the Nation approved by an adjudication court.

Division staff sent out 1,411 notifications in the Gila adjudication and answered over 2,500 inquiries.

ENGINEERING DIVISION

The major function of the Engineering Division is to carry out the Department's statutory responsibilities related to flood control and safety of dams. The division has three sections: Safety of Dams, Floodplain Management and Flood Control.

Safety of Dams Section

The Department oversees the design, construction, operation and maintenance of

nonfederal dams in Arizona except for mine tailing dams. Dams under state jurisdiction are those 25 feet or more in height or with a capacity of more than 50 acre-feet.

As of June 30, 1991, there were 199 dams under state jurisdiction. During the fiscal year, the Safety of Dams Section made 111 construction and operational inspections and reviewed ten applications for construction of new dams or the repair of existing dams.

Flood Management Section

The function of the Flood Management Section is to assure that all communities are participants 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.

During fiscal year 1990-91, the Community Rating System was introduced by the Federal Emergency Management Agency. This program credits communities for floodplain management activities more stringent than those required by the NFIP regulations and allows for insurance premium reductions for buildings in those communities. DWR staff assisted Arizona

communities in completion of their applications for the program. Twenty-four communities qualified for a 5% credit in the first year.

Three workshops on floodplain management were held for local officials, and four quarterly floodplain management newsletters were completed.

A work group was formed to present additional technical and administrative criteria for floodplain delineation to DWR's Director. The new floodplain delineation criteria may be adopted as standards to be used in Arizona.

Staff represented DWR on both the Federal and State Hazard Mitigation Teams and are participating in writing the State Hazard Mitigation Plan, which will identify ways to decrease damage from future floods. Hazard mitigation strategies to reduce flooding can include evacuation plans, removing, relocating or flood-proofing existing structures or installing flood warning systems.

Flood Control Section

The Flood Control Section performs activities related to flood control, including providing assistance in developing flood control projects, construction of early flood

warning projects, delineation of floodplains and setting state standards for floodplain management.

In fiscal year 1990-91, the section performed two studies for potential flood control projects and provided funding assistance for six projects. A total of \$42,000 was disbursed, and \$1,900,000 is committed or available for completion of the following projects: Rio de Flag in Flagstaff, City of Willcox, Santa Cruz River, City of Clifton, Southern Bullhead City and Nutrioso Creek. Two additional projects in Nogales and Bullhead City are approved for construction and are awaiting funding to move into final design and construction.

The state cooperates with the National Weather Service and the USGS in a state-wide flood warning system which includes thirty-four satellite telemetered gages. In addition, DWR is state coordinator for six flood alert systems. The Department assisted in the design, installation and construction of systems in Sedona, Prescott, Gila County, Pinal County, Mohave County and Clifton.

OFFICE OF ADMINISTRATIVE SERVICES

The Office of Administrative Services has two divisions: Administration and Management Information Systems. Both divisions provide important support to all areas of DWR and help the Department to run more efficiently.

ADMINISTRATION DIVISION

The Administration Division is responsible for the administrative functions of the Department, including administrative policy and procedures, budget development and implementation, personnel and affirmative action, fiscal monitoring and reporting, accounting and payroll, purchasing, risk management, contracts, mail delivery, motor pool, volume copying and property management.

During fiscal year 1990-91, the Administration Division implemented the Department's internal computerized accounting and capital inventory system. The division also played a supportive role in the Arizona Department of Administration's implementation of the new computerized human resource management and payroll system. These

computerized systems have significantly streamlined the accounting process.

The division developed internal contract review procedures to assure consistent and timely review of proposed contracts. The Administration Division also implemented EPA guidelines on financial management and record keeping for Superfund grants.

MANAGEMENT INFORMATION SYSTEMS DIVISION

The Management Information Systems Division (MIS) supports the information processing requirements of the agency. The division's responsibilities include development and maintenance of the administrative and water rights data bases, support of compliance surveillance and other programs using remote sensing and geographic information system (GIS) techniques, hardware operation and support, word processing, and training for applications software.

During fiscal year 1990-91, the MIS Division was involved in a number of projects aimed at enhancing the availability

and security of agency data. Installation was begun on a network to link the agency computers. Major communications upgrades were purchased and installed. Steps were taken toward addressing customer requirements for simplified data access by the addition of new mainframe data base software, and a long-term project was begun to convert existing systems to this software.

FINANCIAL INFORMATION

FISCAL YEAR

1990 - 1991

**ARIZONA DEPARTMENT OF WATER RESOURCES
FINANCIAL INFORMATION
1990 - 1991**

REVENUE TOTALS

WITHDRAWAL FEES DEPOSITED IN THE GENERAL FUND	\$1,957,100
GROUNDWATER ENFORCEMENT FUND	28,100
GENERAL ADJUDICATIONS FUND	52,300
AUGMENTATION & CONSERVATION FUND	1,650,300
EMERGENCY DAM REPAIR FUND	460,000
NON-EMERGENCY DAM REPAIR FUND	3,281,200 *
ADMINISTRATION FUND	2,700
SURFACE/GROUNDWATER TRUST FUND (WEATHER MODIFICATION)	82,500
FLOOD CONTROL LOAN FUND	79,700

*NOTE: Of this total, \$2,500,000 is an accounts receivable which is received in annual installments of \$351,305 per year.

**ARIZONA DEPARTMENT OF WATER RESOURCES
FINANCIAL INFORMATION
1990 - 1991**

OTHER NON-APPROPRIATED FUND EXPENDITURES

GROUNDWATER ENFORCEMENT FUND

	<u>AMOUNT</u>
Personal Services	\$52,200
Employee Related Expenses	8,600
Travel	500
Other Operating Expenses	23,100
Equipment	<u>15,800</u>
Total	\$100,200

GENERAL ADJUDICATION FUND

Other Operating Expenses	\$82,200
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AUGMENTATION AND CONSERVATION FUND

Professional and Outside Services	\$20,300
Other Operating Expenses	<u>2,200</u>
Total	\$22,500

NON-EMERGENCY DAM REPAIR

Professional and Outside Services	\$7,000
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SURFACE/GROUNDWATER TRUST

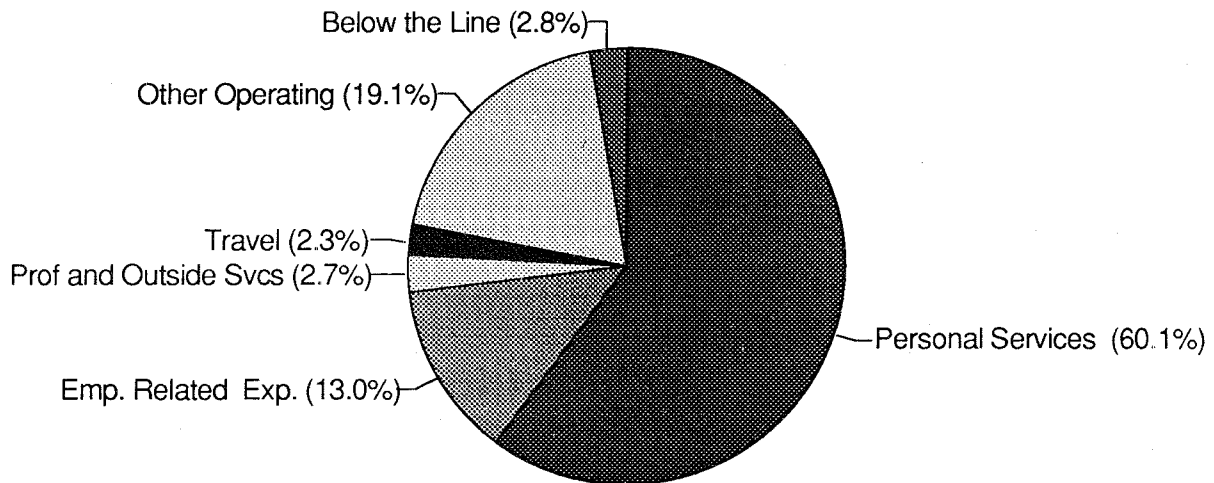
Professional and Outside Services	\$77,100
Travel	4,300
Other Operating Expenses	1,500
Other	<u>1,100</u>
Total	\$84,000

**ARIZONA DEPARTMENT OF WATER RESOURCES
FINANCIAL INFORMATION
1990 - 1991**

**GENERAL FUND EXPENDITURES
by Expense Classification**

	<u>AMOUNT</u>
Personal Services	\$ 6,898,500
Employee Related Expense	1,487,100
Professional and Outside Services	308,800
Travel	261,500
Other Operating Expenses	2,190,100
Below the Line	<u>323,900</u>
Total Expenditures	\$11,469,900

GENERAL FUND EXPENDITURES

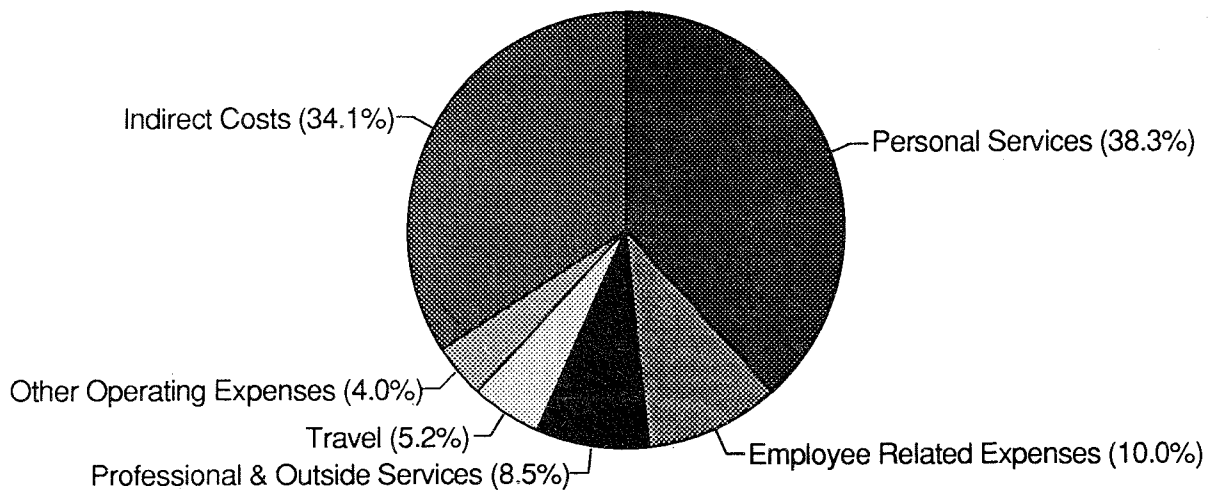


**ARIZONA DEPARTMENT OF WATER RESOURCES
FINANCIAL INFORMATION
1990 - 1991**

**FEDERAL FUNDS EXPENDITURES
By Expense Classification**

	<u>AMOUNT</u>
Personal Services	\$ 85,300
Employee Related Expenses	22,300
Professional and Outside Services	18,900
Travel	11,500
Other Operating Expenses	9,000
Indirect Costs	<u>76,000</u>
Total Expenditures	\$223,000

FEDERAL FUND EXPENDITURES



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