

# **GOVERNOR'S WATER MANAGEMENT COMMISSION**

**FINAL REPORT**

December 2001



## GOVERNOR'S WATER MANAGEMENT COMMISSION

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December 3, 2001

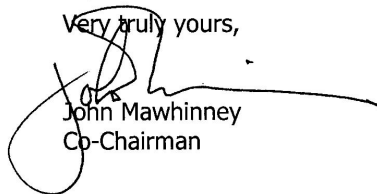
To the Honorable Jane Dee Hull:

On behalf of the members of the Governor's Water Management Commission (Commission), it is our pleasure to present the Final Report of the Commission. In its transmission to Governor Babbitt in June of 1980, the Arizona Groundwater Study Commission submitted Senate Bill 1001, the Groundwater Management Act. At that time, the Groundwater Management Act was acclaimed as "a giant step forward in water management." However, the drafters of that legislation also recognized that the Act would "undoubtedly be in need for further refinement and review." Since that time groundwater use in three of the five Active Management Areas has declined. The use of renewable supplies and the provisions of the Groundwater Code have been instrumental in moving these AMAs towards the statutory management goals established in the Code. However, additional work is needed to ensure achievement of the management goals in each AMA. In June of 2000, there was wide recognition that there was a need for the review of the 20-year old Act and as such you appointed 49 representatives to the Governor's Water Management Commission to take on that task.

The Commission has completed its work and has found that the goals and legal framework contained in the Groundwater Code are sound and should continue to guide water management decisions and investments in the State's five AMAs. However, the Commission also has identified areas that could be improved to address changing water management needs in the AMAs as well as areas that the original Act did not address. This report contains a brief background on the status of the AMAs in the achievement of their management goals, a chronology of the Commission's activities, and the recommendations being forwarded to you for your consideration. Additionally, we are proceeding with the drafting of a bill or bills to introduce in the upcoming regular session of the Legislature.

Each of the recommendations transmitted in this report is supported by a majority of the Commission members. The Commission recognizes that although these actions alone may not result in the AMAs achieving their statutory management goals, they will assist in further reducing groundwater mining and will maintain the stability necessary to sustain water management investments vital to Arizona's future.

Very truly yours,

  
John Mawhinney  
Co-Chairman

  
Jack Pfister  
Co-Chairman

  
Herb Dishlip  
Co-Chairman

## **Governor's Water Management Commission Members**

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George Britton

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City of Phoenix, Deputy City Manager

Salt River Project, President of the Board

Stevens Corporate Relations, Inc., President

Ross Products Division, Plant Manager

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## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

### **EXECUTIVE SUMMARY**

The December 2001 *Final Report* of the Governor's Water Management Commission (Commission) completes a two and a half-year examination of the Groundwater Code (Code) and water quantity management in Arizona's Active Management Areas (AMA). The Commission concludes that the goals and legal framework of the Code are sound and as such should continue to guide water management decisions and investments in the AMAs. Further, the Commission endorses the statutory management goal of each individual AMA, recognizing as appropriate their differing hydrologic and political characteristics.

The *Final Report* briefly describes the issue identification efforts of the Commission's Technical Advisory Committee (TAC) and the five individual AMA Task Forces that preceded the appointment of the Commission. It also details the Governor's charge to the Commission, the activities of the Commission, and the approximately 50 individual recommendations the Commission is forwarding to the Governor.

\* \* \* \*

Governor Jane Dee Hull appointed the 49-member Commission in June 2000 to review the 21-year-old Groundwater Management Act and recommend changes -- if necessary -- to ensure that the five Active Management Areas within the State continue to maintain a reliable, sustainable water supply to meet current and future needs. Specifically, the Governor charged the Commission to:

1. "Evaluate progress toward meeting the goals of the 1980 Groundwater Management Act and the management goals of each of the five Active Management Areas to assure that the goals are appropriate and achievable."
2. "Evaluate mechanisms to reduce the use of mined groundwater, increase the utilization of renewable water supplies and most efficiently meet the water needs in the Active Management Areas."
3. "Evaluate whether changes are needed in statutes, rules, or policies to improve the effectiveness of water management in the Active Management Areas at the state and local levels of government."

The Commission held 18 public meetings and two weekend retreats, also open to the public. Additionally, 300 meetings with extensive public involvement were held by Commission subcommittees and work groups and by the TAC and AMA Task Forces. The issues for Commission consideration were presented in a series of seven issue papers developed by the individual AMA Task Forces and the 33-member TAC. The initial issues included: continued groundwater pumping by existing right holders as well as new industrial users and the impact of this pumping on achieving the management goals; how to address sub-area or critical area conditions; proliferation and concentration of small capacity exempt wells; utilization of renewable supplies; concerns about the Central Arizona Groundwater Replenishment District (CAGR); and long-term water supply reliability.

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The Commission, after extensive debate, achieved consensus on approximately 50 recommendations for public review. A series of public Open Houses were held in each AMA the first week of October 2001 to solicit public comments. These comments were used to further refine the recommendations and in late October 2001, the Commission adopted their conclusions and the final package of recommendations for the Governor to consider.

The Commission recognizes that although groundwater mining has not been eliminated, water users, in response to the goals and requirements set forth in the Code, have significantly reduced groundwater mining in three of the five AMAs since the 1980s. However, current data indicate the Phoenix, Prescott and Tucson AMAs may not reach their goal of safe-yield by 2025. The actions recommended by the Commission, which include a number of statutory changes, are focused on fine-tuning aspects of the Code and other activities. These actions will assist in further reducing groundwater mining and will maintain the stability and certainty necessary for investments in water supplies, delivery infrastructure and efficiency improvements which are vital to Arizona's future.

The Commission recommendations will: increase the utilization of renewable supplies to help ensure sustainability; address allowable pumping to reduce groundwater mining; protect ecologically significant habitats; and enhance water resources planning and technical assistance. The major recommendations are summarized below in the seven categories established by the Commission. The full set of recommendations is covered in detail in Section V of the Commission's ***Final Report***.

**A. Renewable Supplies** – Utilization of renewable supplies has increased over the past 20 years, facilitated by the construction of surface water treatment plants and the completion of the Central Arizona Project (CAP) allowing the use of Colorado River water either directly or indirectly through artificial recharge and recovery projects. The Commission addressed issues related to the utilization of renewable supplies in all AMAs. These issues included: 1) how to maximize the use of available renewable supplies until currently unused CAP water is fully utilized by municipal, industrial and Indian entities; 2) how to ensure that regulatory programs and institutions promote efficient storage and use of renewable supplies; 3) how to facilitate cooperative efforts to finance infrastructure; 4) how to define the long-term role of the Central Arizona Groundwater Replenishment District (CAGRDR); and 5) how to ensure the long-term adequacy of renewable supplies to achieve a sustainable water supply.

Recommendations include authorizing enabling legislation for a multi-jurisdictional infrastructure financing authority to issue revenue bonds or use other financing alternatives intended for financing multi-jurisdictional water infrastructure projects that benefit a specified geographic area.

The Commission is also recommending changes to the authority and responsibilities of the CAGRDR. The CAGRDR is an entity that currently uses excess CAP water to replenish mined groundwater on behalf of certain subdivisions or water providers in the Phoenix, Pinal and Tucson AMAs for assured water supply purposes. Two of the most significant changes recommended are a requirement for the CAGRDR to establish a replenishment reserve to help secure water supplies for CAGRDR members and an enrollment fee for new subdivisions.

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This "reserve" would take advantage of currently available CAP supplies to store sufficient water to meet 20 years of demand for CAGR members.

The Commission also made a number of general recommendations in the category of Renewable Supplies that do not specify statutory or rules changes, but which are intended to encourage actions outside of the Commission process.

**B. Allowable Groundwater Pumping** - While a number of major water users within the AMAs have become less reliant on groundwater, other existing right holders and even new users continue to rely on groundwater. Issues addressed by the Commission include: 1) the continued pumping of groundwater pursuant to legitimate withdrawal authorities allowed under the Code, described as "holes in the bucket", which are projected to negatively effect the ability to achieve AMA management goals; and 2) the localized impacts that may be created by groundwater withdrawals. Recommendations developed to address these issues include: 1) new well permitting and impact requirements; 2) a "mined groundwater tax" for existing municipal and industrial groundwater users; 3) an obligation for new municipal and industrial groundwater users to utilize renewable supplies or replenish their mined groundwater with renewable supplies; and 4) changes to the exempt well statutes.

The Commission considered and then proposed a recommendation that would limit certain new wells from being drilled within "designated riparian area protection zones" located within the AMAs. These zones are proposed to be legislatively delineated on a map and are based on a 1/2 mile buffer adjacent to specified stream segments or cienegas within an AMA. The limitations apply not only to non-exempt wells, but exempt wells (a well with a pump capacity of 35 gallons per minute or less). Aside from this recommendation being limited to new wells in an AMA, several other exclusions apply including: 1) replacement wells; 2) stock watering wells; and 3) exempt wells used for domestic purposes and proposed to pump less than two acre-feet per year. There are also provisions that allow certain categories of users to get waivers if a demonstration of hardship or non-impact on the designated riparian area can be made.

The Commission is also recommending changes that would eliminate or reduce groundwater mining by certain municipal and industrial water users within the AMAs. (Designated water providers and members of the CAGR are not included in this recommendation, as they are subject to the Assured Water Supply Rules.) First, the recommendation requires certain existing municipal and industrial water users (who currently have no obligation to use renewable supplies) to pay a phased-in "Mined Groundwater Tax." This tax would be used to replace a portion of the mined groundwater or to fund water-planning activities aimed at finding a mechanism to reduce reliance on mined groundwater. Second, certain new municipal and industrial water users would be required to make use of renewable supplies or replenish all of their mined groundwater over a period of time. This would also result in a statutory expansion of the CAGR's current authority and allow the CAGR to enroll industrial customers as well as municipal customers who predate or are not required to comply with the Assured Water Supply Rules. Finally, the recommendation eliminates issuance of certain new groundwater permits or rights without a full replenishment obligation after 2025 (2040 in Pinal AMA). This last proposal applies in all AMAs; however, provisions for Pinal, Prescott and Santa Cruz recognize the unique conditions within these areas. Additionally, certain users are exempted from this



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recommendation including agricultural users, metal mining operations and untreated water providers.

The Commission is also recommending changes to the exempt well statutes. These changes only apply within the AMAs. The first proposal would require that new exempt wells be limited to a pump capacity of 20 gallons per minute (a reduction from the current 35 gallons per minute); however, up to 35 gallons per minute could be requested based on a demonstrated need for a higher flow rate. A second set of proposals relates to exempt wells that are within the service area of (or affected by) a water provider or other groundwater withdrawal authority. Within a municipal provider service area, new exempt wells would not be permitted without a denial of service from the provider. Another provision would limit the ability of existing exempt well owners to prevent the drilling of new non-exempt wells (using more than 35 gallons per minute) and would eliminate the ability for a new exempt well owner to protest impacts from a subsequent new non-exempt well.

**C. Environment & Economic** - The Commission recognized that environmental concerns were not addressed in the 1980 Groundwater Code. A number of proposals to protect the environment were presented and discussed. The following recommendations address some of the water needs of environmental habitats within the State. First, the Commission recommends the establishment of zones around specified and legislatively adopted riparian areas for protection from new groundwater withdrawals, within the AMAs. This recommendation is directly linked to the discussion above under the Allowable Groundwater Pumping category.

The Commission is also recommending several statutory changes to increase funding and responsibilities of the Arizona Water Protection Fund.

**D. Conservation** – ADWR establishes “conservation requirements” for agricultural, industrial, and municipal water users within the AMAs. Issues raised included the role and effectiveness of conservation efforts in achieving the goals of each AMA and potential improvements for the current programs.

The recommendation in this category is for the Governor to initiate creation of a non-profit cooperative association to serve Arizona’s need for effective water conservation, education and research throughout the State.

**E. Management Goals** – The Commission concluded that the management goals were appropriate in each of the AMAs; however, the Commission also recognized the unique needs of the Pinal, Prescott, and Santa Cruz AMAs. As such, the Commission recommends local water users and the Department of Water Resources continue to work together to develop new programs to achieve the management goals in these AMAs.

**F. Water Resources Planning** - The Commission recognizes the need for better data and long range planning in the AMAs and throughout Arizona. Specifically the Commission recommends: 1) continued support for funding the current Rural Watershed Initiative; 2) initiation of discussions between stakeholders from throughout Arizona to develop and fund a planning process for addressing the state’s future water demands; and 3) preparation of a

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periodic report on hydrologic conditions and progress towards meeting the goals of each AMA, and a separate biennial summary report of conditions in the AMAs to the Legislature.

**G. Costs Of Water Management Programs** - The Commission recognizes that some of the 50 recommendations they are forwarding to the Governor will create additional work for the Arizona Department of Water Resources and water users throughout the state. The Commission recommends the Governor and the legislature consider mechanisms to ensure the Department of Water Resources has sufficient resources to carry out programs recommended by the Commission, to maintain current programs and to provide timely and quality technical assistance and water management planning for the State of Arizona.

Arizonans, by working together on water resources, have already achieved enormous gains in our effort to manage this vital resource effectively. The Commission is confident that implementing the package of recommendations we are forwarding to the Governor will maintain and enhance Arizona's water management efforts.

## **ACKNOWLEDGMENTS**

The Commission greatly appreciates the multiple contributions of many individuals and organizations to our efforts. Although it is impossible to list each contributor, the Commission would like to specifically identify and express its gratitude to the local AMA Task Forces, the members of the Technical Advisory Committee, and the Commission staff for their valuable input, hard work in developing and prioritizing the issues, and their continued participation throughout the process. The Commission would particularly like to express its appreciation to Joseph C. Smith, Director of the Arizona Department of Water Resources, for the extensive support he and his staff have provided to the Commission. Without the dedication of these individuals the Commission would have been hard pressed to develop its recommendations in a timely manner.

### **TECHNICAL ADVISORY COMMITTEE**

A Technical Advisory Committee comprised of 33 representatives of each AMA, ADWR and other water-related interests was appointed by the Director of ADWR to synthesize the input from each of the AMA's and prepare issue papers for Commission consideration. TAC members are identified in Attachment 2.

### **ACTIVE MANAGEMENT AREA TASK FORCES**

Local AMA task forces began meeting over a year before the creation of the Commission. These AMA task forces identified the priority water management issues for their AMA and discussed proposals to address the issues. The five individual AMA task forces together with their subcommittees and public participation in their meetings involved over 300 individuals. AMA Task Force and subcommittee members are identified in Attachment 3.

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...and to the ADWR Website Development Section

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**MAJOR CONTRIBUTORS**

Numerous other individuals and organizations contributed to the Commission's effort including interested public, regulated water users, other state and local agencies, legislative staff and various consultants and water lawyers. The Commission particularly wishes to recognize the organizations that assisted the Commission process by underwriting lunches at the monthly 5-hour meetings, or snacks, meals and facilities for our two retreats.

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## **Section I. INTRODUCTION**

Governor Jane Dee Hull appointed a Commission in June of 2000 to review the 21-year old Groundwater Management Act and recommend changes if necessary to assure that the five Active Management Areas (AMA) within the State of Arizona continue to maintain a reliable and sustainable water supply to meet current and future needs. This report summarizes the activities of, issues reviewed by, and recommendations of the Governor's Water Management Commission. The Commission process included an extensive public process beginning at the local level within the AMAs, moving to an all-AMA Technical Advisory Committee and ultimately culminating in issue review and recommendation development by the Commission. In June of 2001, the Commission submitted an Interim Report describing the process and progress of the Commission's activities. The recommendations contained in this Final Report are focused on improving the water management programs within the AMAs of this State and represent a consensus of the Commission members.

The Commission concludes that the goals and legal framework of the Code are sound and as such should continue to guide water management decisions and investments in the AMAs. Further, the Commission endorses the management goal of safe-yield for the Phoenix, Prescott, Santa Cruz and Tucson AMAs as well as the unique goals of the Pinal AMA to maintain the agricultural economy while preserving water supplies for future municipal and industrial uses, and of the Santa Cruz AMA to maintain local water tables. Modifications recommended by the Commission as a result of their deliberations will enhance the ability of the AMAs to achieve these goals and will maintain the stability and certainty for investments in water supplies, delivery infrastructure and efficiency improvements which are vital to Arizona's future.



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## **Section II.** **BACKGROUND**

It has been 21 years since the passage of the 1980 Groundwater Management Act. In that time, substantial progress has been made in ensuring Arizona's water future, particularly within the five Active Management Areas (AMAs), illustrated in Figure 1. However, in assessing progress towards the water management goals of the AMAs during the development of the Third Management Plan, the Arizona Department of Water Resources (ADWR) and many of Arizona's water users agreed that additional work is needed to achieve the goals in the statutory timeframe contained in the Groundwater Code (Code). Analysis has shown that achievement of the water management goals has varied between each of the AMAs and that even within individual AMAs hydrologic conditions vary, which could impact the availability and sustainability of water supplies.

### **Achievement of the AMA Management Goals**

Although the management goals of the Phoenix, Prescott, and Tucson AMAs are based on attainment of safe-yield by the year 2025, the water-related issues in these three AMAs are not identical. The Santa Cruz AMA has a goal to maintain safe-yield plus a requirement to manage water levels, and has unique concerns, particularly international water management issues, due to its location on the U.S. and Mexico border. The statutory management goals in the Pinal AMA differ substantially from the four other AMAs. The management goal of the Pinal AMA is to preserve the agricultural economy for as long as feasible, while preserving supplies for future municipal and industrial use. Interpreting the impacts of the Pinal AMA's dual goal on municipal and industrial water users was considered an issue for discussion.

An analysis of the progress towards achieving the management goals, described in the Management Framework Issue paper developed by the Technical Advisory Committee (contained in its entirety in the Supplemental Appendices or in Summary in Attachment 4), found that the rate of groundwater pumping still exceeds the rate of aquifer replenishment in the Phoenix, Pinal and Tucson AMAs and currently exceeds the rate of aquifer replenishment in the Prescott AMA. Despite expanded use of renewable supplies from the Central Arizona Project (CAP) and effluent, this situation could continue past the statutory safe-yield goal date of 2025<sup>1</sup>. Additionally, hydrologic conditions vary widely in the AMAs, ranging from areas experiencing waterlogged conditions to areas with significant groundwater decline. Some portions of AMAs are prone to subsidence or water quality problems, while others are not. Protection of riparian areas is also a high priority in some portions of the AMAs. Renewable supplies are not universally available, and infrastructure to transport such supplies to locations where they are needed can be prohibitively expensive. Water budgets developed for the Commission's review for each of the five AMAs, including historic, current and projected overdraft can be found in the Supplemental Appendices to this Report.

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<sup>1</sup> Safe-yield by the year 2025 is the goal for the Phoenix, Prescott and Tucson AMAs. Safe-yield means a long-term balance between groundwater withdrawals and replenishment on an AMA-wide basis.

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### Phoenix, Prescott & Tucson AMAs

In the Phoenix and Tucson AMAs, water budgets based on current supply availability projections, indicate that achieving safe-yield may not be as difficult as maintaining that condition. The Assured Water Supply (AWS) Rules require that municipal growth utilize renewable supplies or replenish groundwater use in the AMAs. However, the expected population growth beyond 2025, particularly in the major metropolitan areas, may ultimately exceed the availability of renewable supplies and result in increasing costs for providing renewable water supplies and again put pressure on groundwater availability. This situation may occur earlier in the Prescott AMA, where renewable supplies are not as abundant or readily available. Although these possibilities exist, the Commission believes that the safe-yield goal remains appropriate for the Phoenix, Prescott and Tucson AMAs.

### Santa Cruz AMA

The Santa Cruz AMA goal of preventing long-term declines in local water table levels provides the means to deal with "sub-area" issues and physical water supply conditions, which does not exist in the other AMAs. Local water table levels fluctuate seasonally in the younger alluvium along the Santa Cruz River, in response to surface water flows. Because most of the water demand in the AMA is concentrated along the river, and water use for the municipal sector is expected to rise over time, local water level declines are likely if there are no regulatory or management changes. Management of the water levels is an important objective due to the desire to protect the surface water flows and riparian habitat along the river while maximizing available supplies. Because of its later formation in 1994, and its unique statutory authorities, the Santa Cruz AMA is still in the process of defining and implementing its management program. For these reasons, it is difficult to assess the goal and management programs in the Santa Cruz AMA. The physical realities of water flows in the Santa Cruz AMA are complex, and the management options being considered will need to be designed to meet the unique needs of the area. To increase understanding of the effectiveness of potential management options, groundwater and surface water hydrologic models are being developed for the Santa Cruz AMA.

### Pinal AMA

In the past the water management goal of the Pinal AMA was referred to as "planned depletion." However, this characterization has recently been identified as encompassing only one aspect of the management goal. Preserving future water supplies for non-irrigation users is also an important part of the Pinal AMA management goal. Because agriculture can use mined groundwater supplies in the Pinal AMA until they are no longer affordable, and sufficient groundwater appears to be available based on projected needs, the goal of preserving the agricultural economies for as long as feasible is achievable well beyond 2025. With regard to achieving the goal for non-irrigation uses and accommodating projected population increases, strategies must be identified and implemented to lower overall water use, specifically the non-residential component, and/or secure additional renewable supplies.

### **Assured Water Supply Rules**

To achieve the statutory management goals of all the AMAs, it is also important to briefly describe other aspects of the Groundwater Code that are instrumental in the AMAs. To begin with, the adoption of the AWS Rules has caused the greatest movement towards

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the use of renewable supplies and has contributed to the achievement of the management goals. The Assured Water Supply program was actually initiated in 1973 when the legislature enacted a statewide water adequacy statute to address the problem of marketing subdivision lots to buyers who were unaware that the developer had not secured water supplies for the subdivision. Under this law, a developer was required to disclose to the buyer that the water supply was "inadequate" if the State had made such a determination for that subdivision. The 1973 water adequacy law continues to apply to lands outside of the AMAs.

With the passage of the 1980 Groundwater Code, the provisions of the water adequacy law were bolstered by: prohibiting the sale or lease of subdivided land within an AMA without demonstrating that there was sufficient water of adequate quality available for at least 100 years; that the proposed use of water was consistent with the management plan and goal for the AMA; and the finances were available to construct the delivery system and related features. In 1995, pursuant to statute, ADWR adopted the AWS Rules. Under the AWS Rules, an applicant for a Certificate or a designation<sup>2</sup> of Assured Water Supply must meet five statutory criteria as further defined in the AWS Rules. These criteria and the associated rule citations are as follows:

1. Physical, legal and continuous availability of the water supplies for 100 years (R12-15-703).
2. Sufficient quality of the water supplies (R12-15-704).
3. Water use must be consistent with the management goal of the AMA (R12-15-705).
4. Water use must be consistent with the management plan of the AMA (R12-15-706).
5. Financial capability to construct any necessary water storage, treatment, and delivery systems (R12-15-707).

While these basic criteria have been in effect since 1980, the 1995 AWS Rules significantly strengthened the consistency with management goal component. Prior to 1995 the implementation of the Assured Water Supply statute allowed for continued groundwater pumping. To meet this criterion, an applicant must now demonstrate the use of renewable water supplies, rather than groundwater, in amounts sufficient to meet the majority of the demand of the development for 100 years. Renewable supplies include surface water, CAP water, and effluent. The 1995 AWS Rules also established standards for the use of renewable supplies, raised the physical availability depth-to-waters standard from 1,200 to 1,000<sup>3</sup> feet below land surface, and simplified the financial capability standards.

### **Central Arizona Groundwater Replenishment District**

In 1993, the legislature adopted an additional mechanism to help meet the consistency with management goal criterion in the Phoenix, Pinal and Tucson AMAs. The Central Arizona Groundwater Replenishment District (CAGR) was created to provide landowners, developers and water providers -- who have insufficient or no direct access to CAP water

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<sup>2</sup> New subdivisions are required to have a Certificate of AWS unless the applicant obtains a written commitment of service from a water provider that has been designated. A designation means that the water provider has a sufficient water supply to serve their current, committed and future demand for 100 years and have met all the other AWS criteria.

<sup>3</sup> In the Phoenix, Prescott, Tucson, and Santa Cruz AMAs the criteria is 1,000 feet below land surface. In the Pinal AMA the criteria is 1,100 feet below land surface

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effluent or other renewable supplies -- with an alternative mechanism to help demonstrate a 100 year assured water supply as required under the AWS Rules. Membership in the CAGRDR does not waive the requirement under the AWS Rules that an applicant must demonstrate the physical and legal availability of groundwater. Water providers or subdivisions which rely on the CAGRDR to meet the consistency with management goal criteria requirement of the AWS Rules must still meet the depth to groundwater criteria established in the AWS Rules and must have the legal right to withdraw groundwater from the point of withdrawal. The CAGRDR must replenish in each AMA that amount of groundwater delivered to its members, which exceeds the limitations imposed by the AWS Rules. This category of water is referred to as "excess groundwater." Replenishment may be accomplished via artificial recharge into the aquifer through the operation of underground storage facilities or groundwater savings facilities. Water used for replenishment may be CAP water or water from any other lawfully available source, except groundwater withdrawn from within an AMA. For the foreseeable future, the water that the CAGRDR will use for replenishment will be excess CAP water.

### **Other**

Other significant components of the Groundwater Code include well spacing and drilling requirements, a system of groundwater rights and withdrawal permits, management plan provisions that limit the withdrawal of groundwater through conservation requirements, provisions that limit the transportation of Groundwater into the AMAs from non-AMA groundwater basins, and provisions for artificial underground storage.

## **Section III.**

# **GOVERNOR'S WATER MANAGEMENT COMMISSION**

### **Purpose & Charge of the Commission**

In June of 2000, Governor Jane Dee Hull announced the formation of the Water Management Commission (Commission). The Commission was made up of 49 members representing the legislature, industry, cities, agriculture, the general public and other state agencies concerned with water management. The Commission was Co-Chaired by John Mawhinney (former Senate Majority Leader), Jack Pfister (Vice-President for Institutional Advancement at Arizona State University), and Herb Dishlip (Assistant Director for Statewide Water Resources Planning in the Arizona Department of Water Resources who took the place of former ADWR Director Rita Pearson Maguire). The full list of Commission members and their affiliations are contained in the Preface beginning on page ii.

In her speech given at the conference "Celebrating the 20<sup>th</sup> Anniversary of the Groundwater Management Act" in June of 2000, Governor Jane Dee Hull announced the formation of the Commission, with the task to update the Arizona Groundwater Code and assure a sustainable water supply for future generations, stating:

*"Water is Arizona's most critical resource. Our Groundwater Code has been nationally recognized as a model of water policy for the West. But Arizona has grown explosively over the last 20 years and it is appropriate to see if changes are needed to prepare us for the future".*

The Governor charged the Commission to consider future water needs in Arizona's Active Management Areas (AMA) and evaluate water management statutes, rules, and policies within the AMAs to assure that water management programs are consistent with an effective state plan of water management. By Executive Order 2000-7, the Governor gave the Commission three specific tasks:

1. Evaluate progress towards meeting the goals of the 1980 Groundwater Management Act and the management goals of each of the five AMAs to assure that the goals are appropriate and achievable.
2. Evaluate mechanisms to reduce the use of mined groundwater, increase the utilization of renewable water supplies and most efficiently meet the water needs in the AMAs.
3. Evaluate whether changes are needed in statutes, rules or policies to improve the effectiveness of water management in the AMAs at the state and local levels of government.

The Governor also identified the need for the Commission to have access to information from a broad-based constituency directing the formation of a Technical Advisory Committee, appointed by the Director of the Arizona Department of Water Resources (ADWR), to provide technical assistance to the Commission. The Technical Advisory Committee was tasked with evaluating the recommendations developed by local AMA Task Forces and

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making recommendations to the Commission regarding changes to laws, rules or policies at the state and local levels of government.

### **Commission Principles**

In December of 2000, the Commission adopted the following principles to guide the discussions and development of recommendations:

1. The discussion and recommendations of the Commission should:
  - Consider economic and non-economic costs and benefits
  - Consider environmental values
  - Consider ways to encourage efficient use of all sources of water
  - Consider ways to encourage integrated management of all available supplies
  - Be responsive to different AMAs and sub-AMA critical areas.
2. Water supplies should be sustainable and reliable for current and future generations.
3. The water management goals of the AMAs should be clearly defined and measurable. Water management programs should be designed to achieve the goals.
4. Water management programs to achieve the AMA goals should look beyond current efforts and evaluate alternative approaches (*e.g.* water markets and water pricing, infrastructure financing, state fiscal or tax policies and conservation programs based on best management practices).
5. Water management programs should maintain or enhance the stability and certainty of the legal framework for water management, and consideration of security for investments in water supplies, delivery infrastructure and efficiency improvements.
6. Water management programs should maintain or enhance the quality of life including ecologically significant habitats.

## **Section IV.**

# **WATER MANAGEMENT COMMISSION PROCESS**

### **Organization**

The Governor's Water Management Commission process included extensive public involvement including local Active Management Area (AMA) Task Forces together with several Task Force Subcommittees, a Technical Advisory Committee (TAC) to the Commission, and the Commission itself plus Subcommittees made up of TAC and Commission members, and Work Groups. Between the Task Forces, the TAC and the Commission, over three hundred meetings were held, all of which were open for public participation. The organizational structure of the Commission is illustrated in Figure 2.

### **AMA Task Forces**

The process was initiated at the local level, with the water users in the five AMAs creating AMA Task Forces to help identify issues and recommendations for potential solutions. Although the process used to identify issues was different in each AMA, all of the meetings were open to the public and active participation was encouraged. AMA Task Forces, working closely with Arizona Department of Water Resources (ADWR) staff, developed the data and produced written products and issue papers summarizing their findings. The AMA Task Forces were instrumental in identifying the issues that the Commission would ultimately address developing issue papers and information that was passed to the TAC.

### **Technical Advisory Committee**

The Technical Advisory Committee (TAC), a group of water experts from all sectors representing the five AMAs (including the AMA Directors), was established in April of 2000. Members of the TAC (listed in Attachment 2) were appointed by the Director of ADWR and given the following assignments:

- To review issues forwarded from the local task forces and synthesize a group of recommendations for the Commission to consider;
- To assist in the preparation of reports and materials for the Commission's consideration on current and future water management issues and to develop alternative approaches to address those issues; and
- To articulate water issues as they relate and differ across water use sectors and regions.

Based on the issues provided by the local AMA Task Forces as well as discussions held at these meetings, the TAC produced seven issue/background papers (contained in the Supplemental Appendices). These papers identified the following general categories of issues that were prioritized by the TAC and then sent to the Commission for discussion.

- Allowable Pumping Issues included issues raised concerning the ability to continue pumping groundwater pursuant to current withdrawal authorities allowed under the Code, described as "holes in the bucket," which were considered to limit the ability to achieve AMA management goals.



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- Renewable Supply Issues included three broad categories of issues related to the use of renewable supplies (described in two separate issue papers). Those categories were: how to guarantee long-term adequacy of renewable supplies to ensure a sustainable water supply picture; how to use renewable supplies to the greatest benefit in the 20 to 30-year transition period until currently available supplies are fully utilized by municipal, industrial and Indian entities; and how to ensure that regulatory programs and institutions promote efficient storage and use of renewable supplies.
- Assured Water Supply & CAGR Issues included the drawdown of groundwater levels allowed by the AWS Rules, the use and availability of renewable supplies to meet the AWS requirements, and the lack of AWS Rules consistency between treated and untreated water providers and designated water providers and Certificates of AWS. Concerns were also raised with the volume of allowable groundwater pumping by designated water providers, the size of the groundwater allowance in the Pinal AMA, and the volume of the extinguishment credit calculation. Other issues specific to the CAGR included the location of groundwater replenishment activities versus the location of groundwater withdrawal and the impact of the Central Arizona Groundwater Replenishment District (CAGR) on achievement of AMA management goals.
- Conservation Issues included concerns about the role and extent of conservation efforts in achieving the goals of each AMA and what improvements can be made in current programs. The paper also includes concerns raised in the individual AMAs as to the effectiveness of and the ability to achieve the requirements of the conservation programs contained in the Management Plans, the cost-effectiveness of conservation measures, the adequacy of incentives for the use of renewable supplies, and the effectiveness of ADWR's compliance and enforcement program.
- Environmental and Economic Issues included issues that related to the protection of riparian areas, including incentives to enhance the environment in the current water management programs, and addressing sub areas of an AMA experiencing conditions that are inconsistent with the AMA management goal.
- Management Goal Issues included a description of the current status of each AMA and the ability to achieve the statutory management goal. From this discussion, the Prescott, Pinal, and Santa Cruz AMAs were the focus of the Commission discussions due to their unique water supply and management requirements.

### The Commission

The Commission, which first met in June of 2000, was made up of 49 individuals appointed by the Governor for their leadership capability and knowledge of issues critical to water management. Membership included representatives from the legislature, industry, cities, agriculture, and the general public. The Governor also extended an invitation to representatives of the Arizona Indian Tribes to participate in an advisory capacity to the Commission on issues involving or affecting water use on the Reservations. Prior to receiving the issue papers from the TAC, the Commission spent the first several months reviewing specific background information relevant to the Groundwater Code and each of

## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

the AMAs, reviewing information developed by each of the water using sectors, and participating in briefings on water management issues. As the Commission began receiving the issue papers from the TAC, subcommittees were formed to provide a forum for public discussion and development of alternatives to address the issues brought forward by the TAC.

### **Commission Subcommittees**

In January of 2001, the Co-Chairs appointed five subcommittees to develop alternatives for consideration by the full Commission. Commission and TAC members were assigned to one of the five subcommittees and public meetings were held weekly through April of 2001. The subcommittees were organized around the following groups of related high priority issues:

- Allowable Groundwater Pumping
- Renewable Supplies
- The Assured Water Supply Rules and the Central Arizona Groundwater Replenishment District
- Conservation
- Environment and Economics.

The majority of the subcommittees began their process with consideration of the priority issues identified by the TAC. There was initially no TAC issue paper prepared on Environmental and Economic issues, although an issue paper on Critical Areas was used as background for this subcommittee. Draft recommendations from each of the subcommittees were presented to the full Commission at a two-day retreat in April 2001. At this retreat the Commission spent time discussing all the proposed recommendations and ultimately identified those issues and recommendations that they felt could be addressed through the Commission process. Some of the recommendations were set aside for future consideration or for discussion outside of the Commission process. Economic and environmental impacts were discussed as background for deliberations on many of the recommendations, however, no extensive analyses of these impacts was conducted.

### **Commission Work Groups**

Recommendations identified at the April 2001 retreat were discussed and categorized based on the level of consensus support and the amount of additional work or clarification required. The issues and recommendations from that process were then reorganized and assigned to seven Work Groups to draft language for consideration and approval by the full Commission. Public meetings of the Work Groups to develop and submit recommendations were held between May and October of 2001. The Commission publicly debated these recommendations at their July, August, September and October 2001 meetings, and reached consensus on the recommendations described in Section V.

### **Operating Procedures**

The Commission adopted operating procedures to provide guidance on their processes. The focus of the Commission procedures was to reach consensus where possible. Consensus is defined as "a balancing of interests and issues... provid(ing) for differing levels of support ...in constructing a viable set of agreements." The Operating Procedures also outlined the obligations and responsibilities of the members as well as procedures for

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acknowledging alternative views and resolving differences. In cases where there was an inability to achieve consensus, majority and minority reports were allowed.

### **Public Open Houses**

In early October 2001, a series of Public Open Houses were held to provide an opportunity to disseminate the Commission's recommendations and receive from the public comments for consideration by the Commission. Open Houses were held in each AMA where members of the public and the water using community were encouraged to review the Commission recommendations and meet with Commission members and staff to express their views and ask questions. Written comments were requested and several were received. The Commission reviewed these comments at their October 2001 meeting and based on these comments finalized their recommendations for consideration by the Governor.

## **Section V.**

### **ISSUES & RECOMMENDATIONS OF THE COMMISSION**

The following section presents the final recommendations of the Governor's Water Management Commission (Commission). Some of these recommendations may require legislative changes or specific changes to Arizona Department of Water Resources (ADWR) policies or rules, while others affirm existing statutes, policies or rules. Some recommendations advocate action outside of the Commission process. Recommendations that were discussed but not adopted by the Commission are summarized in Attachment 5. The recommendations being forwarded by the Commission have been grouped into six sub-categories: Renewable Supplies, Allowable Groundwater Pumping, Environment and Economics, Conservation, Active Management Area Management Goals and Water Resources Planning. These groupings reflect the categorization of the issues that were brought forward to the Commission from the local Active Management Area (AMA) Task Forces and the Technical Advisory Committee (TAC).

The Commission generally operated through consensus in developing its recommendations. Where a small minority of Commission members had significant concerns about a recommendation they were invited to file minority reports. Where minority reports have been submitted they are attached and are noted as such under the appropriate recommendation in this section. It should be noted that these minority reports have not been edited or reviewed for accuracy by the Commission or the Commission staff.

#### **A. RENEWABLE SUPPLIES**

Since the 1940s, the majority of water demand in what are now the AMAs was met by groundwater pumping. The Groundwater Code of 1980 charted a course for water users in AMAs to move away from the use of groundwater towards renewable water supplies. The majority of the focus on the use of renewable supplies was for the municipal sector; based on the expectation that municipal and industrial demand would continue to grow while the demand for water for agricultural uses would diminish over time.

Within the Phoenix, Pinal and Tucson AMAs significant amounts of groundwater use have been replaced with renewable supplies over the 20 years since the passage of the Groundwater Code. The completion of the Central Arizona Project (CAP) and the use of Colorado River water facilitated this transition. (Figures 3a and 3b illustrate the volume in acre-feet of water use by source, within each AMA for the years 1985, 1990, and 1998). It is important to note that although individual entitlements are not now fully utilized, projections indicate that CAP Supplies<sup>4</sup> will be fully utilized shortly after 2030. Additionally, although there are current surpluses of effluent in all of the AMAs, some municipal and industrial water users in these AMAs have made substantial investments in reusing effluent and others are expected in the near future to more fully utilize available effluent.

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<sup>4</sup> Colorado River water delivered by the Central Arizona Project canal.

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An important consideration in the use of renewable supplies is cost. Renewable supplies can be more costly than groundwater. Costs for acquisition, transmission, and the necessary treatment of these supplies for potable uses drive the price higher than the costs of pumping groundwater. Additionally, environmental costs (impacts on riparian habitat and wildlife needs) have to be weighed when considering the use of renewable supplies. The willingness to pay for these supplies will grow as the competition for the supplies increases. The principal factors increasing the demand for these supplies include: growth; a greater recognition of the need to provide stable water supplies for the future; the lack of physically available groundwater in some locations; regulatory constraints on groundwater use and price incentives for CAP water and effluent use.

A key regulatory motivation for municipal providers to invest in the infrastructure to use renewable supplies is the Assured Water Supply (AWS) Program. Prior to platting any new subdivision within an AMA, the AWS Program requires a demonstration of sufficient supplies to serve the proposed development for 100 years. Although the statutory criteria for an AWS are contained in the 1980 Groundwater Code, the requirement that the 100 year supply be primarily renewable only went into effect in 1995 with the adoption of the AWS Rules. The AWS Rules demonstrate clearly that Arizona is committed to ensuring a secure long-term future water supply for its citizens, and is willing to make the investments required for infrastructure, treatment and storage facilities. (See the Introduction to Allowable Groundwater Pumping on page 25 for more detail on the AWS Rules).

In 1993, in response to the pending adoption of the AWS Rules, the legislature created the Central Arizona Groundwater Replenishment District (CAGRDR)<sup>5</sup>. The CAGRDR was established to provide landowners, developers and water providers with a mechanism to help demonstrate an assured water supply. The CAGRDR is required to replenish in perpetuity all groundwater that is pumped by its members that is in excess of the groundwater allowed under the AWS Rules. This replenishment must occur within the same AMA from which the excess groundwater is pumped.

Use of CAP water in Arizona is in a transition period between the use of short-term "excess" supplies and the use of long-term permanent allocations. While those who hold CAP allocations are not currently fully utilizing their individual entitlements, Arizona has been able to use nearly all of its full CAP entitlement (approximately 1.5 million acre-feet) in recent years. This is due to: 1) the activities of the Arizona Water Banking Authority (AWBA) established in 1996 to store excess CAP water supplies; 2) pricing programs implemented by the Central Arizona Water Conservation District (CAWCD) to encourage the use of excess CAP water instead of groundwater by agricultural users; and 3) a form of recharge known as in-lieu recharge.

The transition to full utilization of renewable water supplies is not yet complete, but enormous progress has been made (See Figure 4). Interim uses for CAP water have been identified, and there is a clear path toward increased use by municipal providers and Indian communities within the AMAs. The following recommendations primarily relate to: near-

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<sup>5</sup> While CAGRDR is not a separate legal district, but a function of the Central Arizona Water Conservation District, the term CAGRDR will be used in this Summary to represent that function of the Central Arizona Water Conservation District.

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term use of renewable supplies; cost and financing for putting renewable supplies to use; concerns regarding underground storage and recovery programs; concerns regarding the CAGR; and efforts to ensure the adequacy of renewable supplies to accomplish the management goals in each AMA.

### **A.1. INFRASTRUCTURE FINANCING**

**Problem Statement:** The lack of delivery, treatment and storage infrastructure is a major impediment to utilization of renewable supplies by some jurisdictions and water providers. These parties are seeking additional options for financing a renewable water supply infrastructure that can serve multiple jurisdictions and private entities.

#### **RECOMMENDATION:**

#### **A.1: The Commission requests the Governor support the development of enabling legislation for an Active Management Area infrastructure financing authority for multiple jurisdictions.**

In order to assist some water providers in cooperatively financing the infrastructure necessary for utilizing renewable water supplies, the Commission supports the development of enabling legislation for an AMA Infrastructure Financing authority. The purpose of this new authority would be to assist in the financing of specific water projects involving multiple jurisdictions. The statute would authorize the multiple jurisdictions to issue revenue bonds or use other financing alternatives. The multiple jurisdictions should have the ability to receive assistance from the Arizona Water Infrastructure Financing Authority (WIFA). Such authority would be intended for financing multi-jurisdictional water infrastructure projects that benefit a specified geographic area and would not serve as a water management entity. The Commission encourages all interested parties to work cooperatively in drafting statutory language.

### **A.2. PROPOSED CHANGES TO THE CENTRAL ARIZONA GROUNDWATER REPLENISHMENT DISTRICT**

The Central Arizona Groundwater Replenishment District (CAGR) was created in 1993 by the Arizona legislature to provide landowners, developers and water providers, who have insufficient or no direct access to CAP water, effluent or other renewable supplies, with an alternative mechanism to help demonstrate a 100 year assured water supply required under the AWS Rules. If a water provider or developer can prove to the ADWR that it has access to sufficient groundwater and desires to rely on that groundwater to demonstrate its assured water supply, it may do so, provided it joins the CAGR. As a member of the CAGR<sup>6</sup>, the landowner or water provider must pay the CAGR to replenish any groundwater used by the member that exceeds the groundwater limitations imposed by the AWS Rules. The limitation on the use of groundwater varies for each AMA, allows only a portion of the water supply to consist of groundwater, and is calculated differently for service areas that are "designated" and subdivisions that are based on a "Certificate." The balance of the 100 year water supply for new subdivisions must consist of renewable supplies: *e.g.*, CAP water, effluent or other surface water. The AWS Rules allow

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<sup>6</sup> "Member" is used to collectively describe member lands, platted parcels within a subdivision that have obtained a Certificate of AWS in part through CAGR membership, and member service areas, a city, town or private water company that has obtained a designation of AWS in part through CAGR membership.

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development based, in part, on membership in the CAGRDR and the accompanying commitment to pay for replenishment of any groundwater used in excess of the volume allowed under the AWS Rules. However, with certain statutory exceptions, those who cannot demonstrate access to 100 years of physical groundwater availability do not qualify for membership in the CAGRDR.

Although the CAGRDR is to replenish in the same AMA from which the groundwater was pumped, the CAGRDR is not required to replenish in the same area from where its members pump groundwater. Concerns have been raised that, notwithstanding ADWR's initial determination of physical availability of groundwater, such availability of groundwater for CAGRDR members may become a problem beyond the 100 year AWS period. Additionally, the CAGRDR is not required to identify the water supplies it intends to use in meeting its long-term obligations beyond its 20-year plan for operation; nor is there a statutory requirement for the CAGRDR to actually have secure water supplies to meet its obligations. In the short-term, unused CAP entitlements (subcontracted water that is not currently ordered and used), un-contracted CAP supplies and surplus Colorado River supplies can be given by contract to other users on an annual basis. This is the supply upon which the CAGRDR currently relies. These unused entitlements are a temporary resource because as the CAP allocations become more heavily utilized less excess CAP water will be annually available. Concerns have been raised that a permanent demand has been created on temporary supplies. Limited long-term CAP supplies may be available through future Indian leases but probably at a higher cost. Beyond 2025, the CAGRDR may also be able to purchase mainstream Colorado River allocations or effluent supplies from other entities with rights to those supplies.

The Commission recognizes that the CAGRDR's intended role is to maximize use of short-term water supplies that could not otherwise be used to satisfy the 100 year requirements of the State's AWS Rules. If the CAGRDR were required to secure large volumes of long-term water rights in advance, it would have to compete for those long-term supplies with municipal water providers that are legally unable to use shorter-term supplies to demonstrate an assured water supply.

Issues raised regarding the CAGRDR have focused primarily on: the availability of renewable supplies to meet the CAGRDR's long-term replenishment obligations; the future cost of these water supplies; and the limited operational planning horizon required by statute. The Commission recommends the following changes to the statutes related to the CAGRDR and requests the Governor to:

### **A.2.a: Request legislation to modify the statutes to require the Central Arizona Groundwater Replenishment District (CAGRDR) to establish a "Replenishment Reserve" of up to 20% of the CAGRDR's 100-year replenishment obligation.**

**Problem Statement:** Enrollment in the CAGRDR has exceeded nearly all expectations since the CAGRDR's initial Plan for Operation was approved in 1995. A consequence of enrollment is a permanent obligation of the CAGRDR to purchase renewable supplies to replenish groundwater pumped to serve member lands or member service areas.

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Because the CAGR is not required to secure long-term rights to water, there is concern that the CAGR may not be able to meet its replenishment obligations at a reasonable cost. However, if the CAGR were required to secure large volumes of long-term water rights in advance, it might no longer make use of short-term supplies and could end up competing with water providers for the limited long-term supplies. Therefore, the challenge is to provide a means of ensuring that the CAGR can meet its long-term obligations, at a reasonable price, and still maintain the operational and legal flexibility to maximize the use of short-term supplies as they become available.

### **RECOMMENDATION:**

The Commission recommends that the Legislature modify the statutes to require the CAGR to accumulate a "replenishment reserve" of long-term storage credits with a recommended target volume of 20% of that portion of CAGR's 100 year replenishment obligation not otherwise covered by firm water supplies<sup>7</sup>. The CAGR should be given 25 years to build the reserve. As new members enroll in the CAGR, the CAGR should meet the additional reserve obligation over a 25 year period. This new authority would replace CAGR's existing authority for performing advance replenishment.<sup>8</sup>

Additionally, the Commission recommends that the CAGR be authorized to fund the replenishment reserve through three mechanisms: (1) assessment rates; (2) enrollment fees; and (3) funds advanced by CAWCD. All funds collected for the replenishment reserve component shall be used to purchase and store water to accumulate credits in CAGR's replenishment reserve account or to repay CAWCD for funds advanced for this purpose.

- Assessment Rates - Authorize the CAGR to add a replenishment reserve component to its regular assessment rate for each AMA. This reserve component would be collected based on the annual volume of excess groundwater use in the AMA reported to CAGR. Each year, the CAGR must determine the rate required to achieve the target reserve volume of 20% within 25 years from the year in which the last member was enrolled.
- Enrollment Fees - Authorize the CAGR to collect enrollment fees for: 1) new member lands upon issuance of the public report equal to the cost to purchase and replenish two times the member land's projected annual replenishment obligation at build-out, as determined by ADWR; and 2) new member service areas and existing member service areas equal to the cost to purchase and replenish two times the maximum annual volume that the CAGR will be responsible for replenishing for all lands within the member service area that are platted at the time of enrollment or within future expansions of the member service areas. In lieu of paying any enrollment fee, a member or applicant may transfer an equivalent amount of suitable long-term storage credits to CAGR's replenishment reserve account.
- Funds Advanced by CAWCD - Authorize the CAWCD to provide advance funding totaling no more than \$2 million for establishing the replenishment reserve. Any monies advanced by CAWCD must be repaid within 10 years including interest, at a rate approved by the CAWCD Board.

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<sup>7</sup> For example, if the CAGR's total annual replenishment obligation were 100,000 AF/year, and the CAGR held rights to 20,000 AF of firm water supplies, then the target reserve volume would be 1,600,000 AF (20% of 80,000 AF x 100 years).

<sup>8</sup> Except advance replenishment performed for a specific member pursuant to a contract to replenish groundwater.



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After 2030, the CAGR D may use reserve credits to meet its current replenishment obligations. The CAGR D shall include in its regular replenishment assessment the cost of replacing any reserve credits used to meet current obligations. Funds collected in this manner, together with any interest accrued thereon, shall be used to replace reserve credits when water is available, with a target of maintaining a replenishment reserve of 20 percent. The Director of ADWR must approve any proposed use of replenishment reserve credits that would cause the reserve balance to fall below five percent of the CAGR D's 100 year replenishment obligation.

A special provision has been included for a golf course that enrolls after the enactment of the legislation. These facilities may choose to enroll as regular member land (either individually or as part of a larger development) or as special status member land. This choice must be made upon enrollment and is not subject to change thereafter. Golf courses that are already member lands would be given 180 days to decide whether they wish to reclassify as special status member lands. Special status member lands pay neither the replenishment reserve enrollment fee nor the replenishment reserve component of the annual assessment rate. No replenishment reserve credits may be used for the benefit of special status member lands. The CAGR D will establish a separate assessment rate for special status member lands that reflects the actual cost of replenishment for those lands. Only golf courses that are not served by designated water providers are eligible for special status membership. Enrollment as special status member land does not affect the replenishment obligation for those lands.

The replenishment reserve program will not apply to water availability status agreements between member service areas and the CAGR D. Water Availability Status agreements will not require an enrollment fee or annual assessment component for the replenishment reserve. Reserve credits may not be used to meet replenishment obligations under Water Availability Status agreements. The CAGR D will establish a separate replenishment assessment for each Water Availability Status member that takes into account any unique costs incurred in meeting that member's replenishment obligation.

The proposal would allow the CAGR D (and the State) to take advantage of the significant quantities of unused CAP entitlements assumed to be available until at least 2030 by implementing a plan to store the water, improve reliability of CAGR D water supplies, and increase the CAGR D's ability to maintain stable assessment rates in the future. Costs to member lands and member service areas are constrained by: 1) allowing a full 23 to 25 years to build the reserve; 2) limiting collection of the reserve charge to no more than 25 years; and 3) capping the size of the reserve at 20 percent. Additionally, building the replenishment reserve over a 25 year period, rather than a shorter period, reduces the potential impact on the Arizona Water Bank's ability to meet its goals. Finally, the proposal provides the CAGR D more flexibility in meeting its replenishment obligations and allows use of less reliable water supplies, including excess CAP water available in future surplus years and reduces the CAGR D's need to compete for CAP system capacity during peak periods.

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### **A.2.b: Request legislation to modify the statutes to clarify the priorities for the use of excess Colorado River water for the CAGRD's Replenishment Reserve and the Arizona Water Banking Authority's municipal and industrial firming supplies.**

The Commission recognizes that the proposed replenishment reserve program will likely result in increased demands for excess CAP water. The Commission understands that the Arizona Water Banking Authority (AWBA) has been tasked with using excess CAP water to firm existing CAP M&I subcontracts. Because the statutes clearly state that the AWBA shall not store Colorado River water that would otherwise have been used within the state (ARS 45-2427.B.), concerns have arisen that a requirement for the CAGRD to establish a replenishment reserve could supersede the AWBA's use of excess CAP water for M&I firming purposes. This was not the Commission's intent. Therefore, the Commission specifically makes the following additional recommendations:

- 1) The CAWCD and the AWBA should jointly develop an annual plan that projects the AWBA's and CAGRD's available funding, needs for excess CAP water, and needs for recharge capacity over the subsequent ten year period; and
- 2) The CAWCD, which maintains exclusive rights to market excess CAP water by virtue of its CAP repayment contract with the United States, should adopt a policy stating that it will establish categories and availability of excess CAP water in accordance with the ten year plan; and
- 3) The ADWR should adopt a policy stating that it will only recommend approval of Section 5 contracts under the Boulder Canyon Project Act in excess of the apportionments within the CAP master repayment contract and other existing entitlements that clearly state that the contract entitlement is junior in priority to all CAP uses, including use by the AWBA and CAGRD, but not including use for Interstate Banking; and
- 4) Language to the following effect should be included in the statutes requiring the CAGRD to establish and maintain a replenishment reserve:

FOR PURPOSES OF ESTABLISHING AND MAINTAINING THE REPLENISHMENT RESERVE, THE DISTRICT SHALL HAVE ACCESS TO EXCESS CENTRAL ARIZONA PROJECT WATER EQUIVALENT BUT NOT GREATER THAN THE ACCESS THE ARIZONA WATER BANKING AUTHORITY HAS FOR THE PURPOSES SPECIFIED IN § 45-2401(H)(2); and

- 5) Language to the following effect should be included to authorize the Arizona Water Banking Authority to use Colorado River water as follows:

#### 45-2427. Limitation on powers

B. The authority shall not store Colorado river water that would otherwise have been used in this state PURSUANT TO 1) A CONTRACT ENTERED INTO PURSUANT TO A.R.S. SECTION 48-3703 (2) OR 2) A SECTION 5 CONTRACT UNDER THE BOULDER CANYON PROJECT ACT ENTERED INTO BEFORE THE EFFECTIVE DATE OF THIS ACT. THE AUTHORITY SHALL NOT STORE FOR INTERSTATE WATER BANKING PURPOSES COLORADO RIVER WATER THAT WOULD OTHERWISE HAVE BEEN USED IN THIS STATE.

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### **A.2.c: Request legislation to modify the statutes to require the Central Arizona Groundwater Replenishment District's Plan for Operation be extended to a 100-year planning horizon and to provide criteria for ADWR review and approval of the plan.**

**Problem Statement:** By statute, the CAGRD Plan for Operation has a 20 year planning horizon, with a requirement to identify firm water supplies for the subsequent five years. This plan is updated every 10 years and reviewed by ADWR<sup>9</sup>. Concern has been voiced in the Commission process that the current requirements allow CAGRD members to meet the AWS Rules requirement for demonstrating consistency with management goal without sufficient long-term planning requirements.

#### **RECOMMENDATION:**

The Commission recommends that the statutes for submittal and review of the CAGRD's Plan for Operation be modified to require the CAGRD to identify water resources and facilities that are available for the 20 years following submittal of the Plan as well as a description of water resources and facilities that are reasonably expected to be available for the 100 years following submittal of the Plan. Additionally, provisions should be included that allow ADWR to request a revised plan in the period between the statutory submittal (every 10 years) if certain conditions change that impede the ability of the CAGRD to meet its obligations.

### **A.2.d: Request legislation to modify the statutes to allow Member Service Areas to De-Enroll from the Central Arizona Groundwater Replenishment District if the member demonstrates it has sufficient alternative water supplies to maintain its designation of Assured Water Supply.**

**Problem Statement:** Under current legislation, there is no mechanism for member lands and member service areas to de-enroll from the CAGRD. Thus, even if a member is no longer using groundwater in excess of the allowable limit and no longer needs CAGRD membership to comply with the AWS Rules, it cannot de-enroll. Indeed, remaining in the CAGRD may be problematic for a number of reasons, including: 1) annual reports must still be filed on behalf of each member; 2) the CAGRD must "carry" these members on its books for purposes of long-term projections and water resource planning; and 3) for parcels within member lands, there is a "cloud" on the title as a result of the enrollment in the CAGRD that may be undesirable if the CAGRD will no longer be needed for the member land's assured water supply.

#### **RECOMMENDATION:**

Modify the statutes and AWS Rules to allow CAGRD member service areas to de-enroll if the service area:

- 1) Can demonstrate that it has an alternative water supply to replace its reliance on the CAGRD for purposes of complying with the AWS Rules;
- 2) Has paid all amounts owed by the member service area to the CAGRD; and,
- 3) Can demonstrate that any capital costs incurred by the CAGRD on behalf of the member service area have been repaid or arrangements have been made for repayment.

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<sup>9</sup> The CAP Board has approved a 100-year planning horizon and a twenty-year identification of water supplies.

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ADWR must approve the change in the water provider's designation of AWS that replaces reliance on the CAGR D with an alternative water supply. Upon obtaining this approval in writing, the Member Service Area Agreement between the CAGR D and the municipal provider would be terminated. The member service area may not apply to re-enroll in the CAGR D for at least 10 years. However, if the water provider falls out of compliance with its designation, ADWR may require re-enrollment. In any case, a condition of re-enrollment would include payment of all costs that the member would have otherwise paid had it remained in the CAGR D.

Because of the complexities related to individual parcel ownership within member lands, the Commission is not recommending that member lands be allowed to de-enroll. In addition, statutes are already in place that eliminate the need for annual reporting by member lands that have subsequently become part of a designated service area.

### **A.2.e: Request legislation to modify the statutes to authorize municipal and industrial groundwater users in the Phoenix, Pinal and Tucson AMAs, required to replenish under Recommendations B.3.c and B.3.d., to enroll in the Central Arizona Groundwater Replenishment District.**

(See Sub-Section B, Allowable Groundwater Pumping – Reductions in Municipal and Industrial Groundwater Mining beginning on page 28.)

### **A.2.f: Encourage the Central Arizona Water Conservation District Board to address the additional issues raised in the Commission process relevant to the Central Arizona Groundwater Replenishment District (CAGR D) through an appropriate public process. These issues include the location of replenishment activities, the need to obtain secure water supplies, and the long-term role of the CAGR D.**

The Commission has identified additional issues that still need to be addressed regarding the CAGR D. These issues include the location of replenishment activities, the need to obtain secure water supplies, and the long-term role of the CAGR D. These issues require detailed analysis and discussion that cannot be completed during the life of the Commission. The CAWCD/CAGR D Board of Directors has expressed a need and a commitment to resolve these issues. Therefore, the Commission recommends that these CAGR D issues continue to be addressed by the CAWCD Board of Directors through an appropriate public process.

### **A.2.g: Request legislation to repeal the unused authorization for an Active Management Area Water District pursuant to Title 48, Chapter 28.**

The Commission also recommends that the relevant state statutes be modified to eliminate the AMA Water District (A.R.S. Title 48, Chapter 28 and all related references in Titles 45 and 48). After reviewing the plan for operation requirements, the Commission concluded that all references to "AMA Water Districts" are no longer necessary because this entity is no longer operational.

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### **A.3. TRANSFER OF LONG-TERM STORAGE CREDITS FROM THE AWBA TO THE CAWCD**

**Problem Statement:** CAWCD is the entity responsible for delivering CAP water to its subcontractors. The AWBA develops long-term storage credits for the benefit of municipal and industrial (M&I) CAP subcontractors and others, using a 4-cent ad-valorem tax collected in Maricopa, Pinal, and Pima counties. These credits are to be "distributed" to CAWCD to meet the demands of CAP M&I subcontractors during times of Colorado River shortages or CAP system outage. Some M&I CAP sub-contractors believe that it is important that the storage credits earned from these funds be transferred to CAWCD on an annual basis to ensure that the credits will be available when needed for their intended purposes. Others believe that the language currently in statute ensures that this will occur, however, they are willing to clarify the statute.

#### **RECOMMENDATION:**

**A.3: Request legislation to modify the statutes to clarify that the Central Arizona Water Conservation District (CAWCD) Board determines the amount of long-term storage credits, earned via the 4-cent ad-valorem tax, that need to be transferred to CAWCD by the Arizona Water Banking Authority.**

The Commission recommends that the statutes be revised to clarify that the CAWCD, after consultation with the Director of ADWR, determines the amount of long-term storage credits stored using the 4-cent ad-valorem tax that shall be distributed to the CAWCD by the AWBA. This proposal would not require the AWBA to distribute long-term storage credits to CAWCD in an amount greater than 20 percent of the total municipal and industrial water subcontracts in any one year.

### **A.4. GENERAL RECOMMENDATIONS OF THE COMMISSION**

The following section describes the general recommendations of the Commission related to the use of Renewable Water Supplies. The following recommendations do not result in statutory, rule or policy changes, but may encourage action outside of the Commission process. Specifically, the Commission requests the Governor:

#### **A.4.a: Support options to encourage the development of additional recharge capacity.**

Many entities are actively operating recharge and recovery projects to increase the use of renewable supplies to meet current and future water demands. The Commission encourages the development of additional recharge sites with emphasis on long-term hydrologic feasibility.

#### **A.4.b: Encourage the Arizona Department of Water Resources (ADWR) to continue discussions on improvements to ADWR's recharge permitting process through the Recharge Stakeholder Group.**

The Commission discussed the need for improvements to ADWR's recharge permitting process, including providing more clarity regarding application requirements and increasing the efficiency of the review process. A Recharge Stakeholder Group that is providing input to the ADWR is discussing these issues. The Commission concluded that the group is addressing the permitting concerns. The Commission recommends that the Recharge

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Stakeholder Group conclude their work in an expeditious manner and that ADWR continue its commitment to this facilitated focus group process, including enhanced public participation.

### **A.4.c: Encourage the Arizona Department of Water Resources to develop guidelines to facilitate permitting of multi-purpose recharge projects through the Recharge Stakeholder Group.**

The Commission recommends that the Recharge Stakeholder Group and ADWR give priority to developing specific guidelines, with input from interested parties, to facilitate the permitting of multiple benefit recharge projects consistent with current artificial lake restrictions.

### **A.4.d: Support the Commission's recommendation that no additional regulation of effluent is needed, at this time.**

The Commission acknowledges that the reuse of effluent is an essential element of water management in Arizona and recognizes that optimal use of effluent requires flexibility in the regulatory system. From a water quality perspective, effluent reuse is already regulated by the Department of Environmental Quality. The Commission recommends no changes to the current administrative requirements on effluent use, at this time.

### **A.4.e: Support the current incentives for use of remediated water resulting from the Comprehensive Environmental Response and Compensation Liability Act and the Water Quality Assurance Revolving Fund (federal and state superfund pumping).**

The Environmental Protection Agency administers a federal program that prioritizes, manages and funds the cleanup of contaminated groundwater. The State Water Quality Assurance Revolving Fund provides a similar program for sites identified by the Arizona Department of Environmental Quality. There are incentives in place through the AWS Rules and AMA Management Plan conservation programs to encourage remediation of contaminated water. The Commission recommends that no changes be made to the existing incentives included in the AWS Rules and AMA Management Plan conservation programs for use of water resulting from Comprehensive Environmental Response and Compensation Liability Act (CERCLA) and Water Quality Assurance Revolving Fund (WQARF) pumping.

### **A.4.f: Support the Commission's recommendation that the Arizona State Land Department (ASLD), the Arizona Department of Water Resource, the Central Arizona Water Conservation District, and other stakeholders to have discussions on a process for distribution of the ASLD's Central Arizona Project allocation outside the Commission process.**

The Arizona State Land Department (ASLD) holds a CAP subcontract associated with certain land holdings within the AMAs. Concerns were raised about failures to transfer CAP allocations with the associated land obtained by individual entities. The Commission is recommending that informal discussions be held between the ASLD, the ADWR, CAWCD and other stakeholders regarding the use of the ASLD's CAP allocations.

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### **A.4.g: Support the existing Central Arizona Water Conservation District rate setting procedures for excess Central Arizona Project water.**

The CAWCD establishes prices for excess CAP water available for use by municipal and industrial customers, non-Indian agricultural customers, the CAGR, and the Arizona Water Banking Authority. In setting its prices, the CAWCD Board considers a number of factors, including maximizing the use of CAP water in place of mined groundwater. The CAWCD Board has adopted policies that balance recovery of costs with incentives to encourage use of the available Colorado River supplies. These policies have been successful in significantly increasing the use of Colorado River water in central Arizona. The Commission supports the CAWCD's existing rate setting procedures for excess CAP water, at this time.

### **A.4.h: The Commission recommends that a letter be sent, from the Commission, to the Arizona Corporation Commission (ACC):**

- Recognizing recent ACC decisions supporting the use of and affirming the benefits of CAP water and other renewable supplies.
- Encouraging the continuation of the ACC's Water Task Force (Docket No. W-00000C-98-153) Water Supply Subcommittee that is exploring private water company planning for CAP water use and related cost recovery.
- Encouraging the ACC to continue to exercise its ratemaking jurisdiction and discretion in a manner which further allows private water companies to plan for and acquire long-term renewable supplies and to recover reasonable costs associated with using and holding contracts for renewable supplies for future use.
- Supporting a continuing dialogue among the interested parties on water issues important to Arizona.

## **B. ALLOWABLE GROUNDWATER PUMPING**

Within the AMAs, the Groundwater Code authorizes water users and water providers to use groundwater in accordance with a system of water rights that recognize historic groundwater uses and a system of rights, permits and withdrawal authorities for certain new municipal and industrial users. A separate authority is required for water users and water providers to drill a well to exercise the right or permit. A Notice of Intention to Drill (NOI) is required to be filed with ADWR for all proposed exempt wells (a well with a pump capacity of 35 gallons per minute or less) inside an AMA. An application for a Drilling Permit is required for proposed non-exempt wells (a non-exempt well is a well within an AMA with a pump capacity over 35 gallons per minute). Under current law, ADWR is required to review all applications for new non-exempt wells in AMAs to ensure that the withdrawals of groundwater from the well or wells will "not cause unreasonably increasing damage to surrounding land or water users from the concentration of wells."

The primary mechanism for reducing dependence on mined groundwater is the Assured Water Supply (AWS) Rules, adopted in 1995. An assured water supply determination by the ADWR is required within AMAs to gain approval of a subdivision plat by local governments, and to obtain authorization to sell subdivided lots by the Arizona Department of Real Estate. To obtain an assured water supply determination, the statute requires a demonstration of: 1) physical, legal and continuous water availability for 100 years; 2) ability to meet water quality standards; 3) financial capability to construct the water delivery system and related features; 4) consistency with the AMA's management plan; and 5) consistency with the AMA's management goal. Developers seeking a Certificate of AWS must demonstrate that sufficient qualifying water supplies are available to meet the subdivision demands for at least 100 years. Water providers seeking a designation of AWS must demonstrate that sufficient qualifying supplies are available to meet current demand, committed demand (i.e. that which is associated with recorded, undeveloped lots) and at least two years of projected growth for a 100 year period.

The Commission is recommending the following actions to reduce the amount of allowable groundwater pumping or the impacts of that pumping in the AMAs: new well permitting and impact requirements; a mined groundwater tax for certain existing municipal and industrial groundwater users; a renewable supply or replenishment obligation for certain new municipal and industrial groundwater users; and changes to the exempt well statutes.

### **B.1. NEW WELL PERMITTING, WELL IMPACTS, AND SUBMITTAL OF A HYDROLOGIC REPORT**

**Problem Statement:** In 1983, the Director of ADWR adopted temporary rules to govern well spacing and well impacts. The rules apply only to applications for new wells and replacement wells in new locations. Currently, the statutes exclude certain wells from the well impact requirements including exempt wells, replacement wells in the same location, and wells associated with certain withdrawal authorities. The current rules allow the Director to approve applications for the location of new wells and replacement wells in new locations only if the Director determines that the well will "not cause unreasonably increasing damage to surrounding land or water users from the concentration of wells."



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The statute does not currently authorize the Director to recognize potential or existing problems in riparian areas<sup>10</sup> when determining whether to issue a well-drilling permit.<sup>11</sup>

### **RECOMMENDATION:**

The Commission is recommending that the statutes be revised to limit the ability to drill new wells to withdraw groundwater within a riparian area protection zone specifically designated by the legislature within an AMA<sup>12</sup>. This proposal exempts wells used for stock watering, any existing wells, and replacement wells in the same location. It also protects property owners by providing that new exempt wells, irrigation wells, and wells using Type One rights can be drilled if the owner does not have an affordable alternative water supply. Additionally, an applicant can drill a new well if the applicant establishes that their pumping will not harm the riparian area protection zone or, if the well is for domestic purposes, the applicant agrees to limit withdrawals to two (2) acre-feet per year. This proposal applies only within the AMAs and does not extend to wells used for diversion of surface water or for recovering credits from a recovery well located within the area of hydrologic impact.

The proposal, to protect a limited number of legislatively designated riparian area protection zones from impacts caused by new wells, was one of the most frequent subjects of public comments to the Commission. Comments ranged from advocating stronger riparian and surface water protections to opposition and claims that this proposal would restrict land use or otherwise take away an individual's property right to groundwater. Regarding this issue of ownership and rights to groundwater, the Groundwater Code and subsequent Court cases have clearly established that there can be no ownership of groundwaters until "they are reduced to actual possession and control by the person claiming them because of their migratory character...."<sup>13</sup> Although individuals may receive a right or permit to use groundwater, they do not own or have any property right to the groundwater beneath their lands and furthermore "may not assert a wrongful taking of their property...."<sup>14</sup> In this proposed recommendation the concerns expressed by property owners have been dealt with in the provisions stated above.

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<sup>10</sup> A riparian area is defined in 45-101.7. as "a geographically delineated area with distinct resource values, that is characterized by deep-rooted plant species that depend on having roots in the water table or its capillary zone and that occurs within or adjacent to a natural perennial or intermittent stream channel or within or adjacent to a lake, pond or marsh bed maintained primarily by natural water sources. Riparian area does not include areas in or adjacent to ephemeral stream channels, artificially created stockponds, man-made storage reservoirs constructed primarily for conservation or regulatory storage, municipal and industrial ponds or man-made water transportation, distribution, off-stream storage and collection systems."

<sup>11</sup> For a more detailed overview of the current well impact requirements, please see Briefing Notebook, Part Three, Chapter II, Section B (contained in the Supplemental Appendices).

<sup>12</sup> The mechanism for designating these areas will be legislative adoption of a map. The initial maps will be based on a 1/2 mile buffer (protection zone) adjacent to each stream segment to be protected.

<sup>13</sup> *Town of Chino Valley v. City of Prescott*, 131 Ariz. 78, 638 P2.d 1324 (1982)

<sup>14</sup> *Cherry v. Steiner*, 543 F. Supp. 1270 (D.C.Ariz., 1982),

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Specifically, the Commission recommends the Governor:

### **B.1.a: Request legislation to modify the statutes to restrict certain new exempt and non-exempt wells that may adversely impact legislatively designated riparian areas located within an Active Management Area<sup>15</sup>.**

Exemptions from this provision include applicants for new wells that can demonstrate through a hydrologic analysis that the proposed well will not impact a riparian area. Furthermore, a drill card for an exempt well for domestic purposes within the riparian zone may be issued under the following conditions:

- 1) Water service is not available from a municipal provider at a connection and water cost equivalent to charges for other customers of the municipal provider;
- 2) The well is for domestic purposes as defined in § 45-454(I)(1);
- 3) The maximum pump capacity is 20 gallons per minute;
- 4) The well is metered<sup>16</sup>; and,
- 5) Annual withdrawals shall not exceed two acre-feet per year.

Additional exemptions are provided for wells used to withdraw groundwater for stock watering purposes and Irrigation Grandfathered Rights and existing Type One Grandfathered Rights proposing to drill where the applicant can demonstrate that the cost of securing water from another source is more than two times the cost of drilling and installing the proposed well. Existing wells, replacement wells drilled within 660 feet of an existing well, recovery wells withdrawing stored credits from within the area of hydrologic impact and wells used for the diversion of surface water are also exempted from the proposal. A minority report opposing the riparian area protection is attached to this Report as Attachment 6.

### **B.1.b: Modify the statutes to require the Director of the Arizona Department of Water Resources to adopt rules that establish criteria for determining whether a proposed exempt or non-exempt well in a designated riparian area protection zone adversely impacts the riparian area.**

## **B.2. GENERAL WELL IMPACT MODIFICATIONS**

In addition to the proposed limitations within the designated riparian area protection zones, the proposal would provide ADWR with the ability to analyze well impacts for multiple wells, call for the formation of advisory groups to assist in well impact rule-making processes, and recommend the formation of a task force to analyze the impacts of subsidence.

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<sup>15</sup> Currently 45-598 requires that the well spacing and impact rules prevent "...unreasonably increasing damage to surrounding land or other water users from the concentration of wells..." This provision would remain in statute. The riparian areas to be one-half mile buffers on certain reaches of the listed streams and cienegas would initially be designated and periodically reviewed by the legislature (See related recommendation under C.1, pages 37 and 38).

<sup>16</sup> The owner of the well shall submit a short form annual report showing total water withdrawn. The owner may have the annual reporting requirement waived by entering into an agreement to allow annual water level measurements by ADWR. Withdrawals from the domestic well shall not be subject to any withdrawal fees.

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Specifically, the Commission recommends the Governor:

**B.2.a: Request legislation to modify the statutes to authorize the Director of the Arizona Department of Water Resources to assess the cumulative impacts of multiple wells drilled by an applicant in approximately the same location.**

The Commission recommends that the Director be authorized to consider the cumulative impacts of the proposed wells recently issued, or currently pending, to the same applicant and within the area of impact of the wells. Prior to the implementation of this recommendation, the Commission also recommends that the Director develop clear guidance through a rule-making process, in cooperation with interested parties, on the standards and timeframe to be used in evaluating the cumulative impact of multiple wells.

**B.2.b: Support the Commission's recommendation that the Director of the Arizona Department of Water Resources form a task force to research the cause and effects of land subsidence and appropriate limitations on the drilling of new and replacement wells to limit damage that may be associated with land subsidence.**

**B.2.c: Request legislation to modify the statutes to direct the Arizona Department of Water Resources to form advisory groups to the Director to study available data and develop proposed review standards for criteria affecting the Well Impact Rules.**

### **B.3. REDUCTIONS IN MUNICIPAL AND INDUSTRIAL GROUNDWATER MINING**

**Problem Statement:** Under current law, certain portions of the municipal sector, most current and new industrial users, and current agricultural users have no requirement to use renewable supplies to contribute to safe-yield or other AMA management goals. However, after 1995, cities, towns, and private water companies who expect or wish to continue to grow are required to demonstrate that new residential demands will be met with renewable supplies. This creates equity problems, since some water users are making more significant contributions to achievement with the safe-yield AMA management goals than others.

#### **RECOMMENDATION:**

The initial Commission recommendation supported at its April Retreat was to require a replenishment obligation for all municipal and industrial water users not covered by the current AWS Rules. However, during the course of the discussions some user groups were omitted from the proposal and existing groundwater users were made subject to a limited tax on a portion of their mined groundwater use in order to reach a consensus. The recommendation being forwarded by the Commission would require certain existing groundwater users to pay an annual mined groundwater tax. Additionally, certain new groundwater users would either be required to utilize renewable supplies or incur a replenishment obligation for their annual mined groundwater pumping. Groundwater users specifically exempted from this proposal include untreated water providers, metal mining operations, agricultural water users, certain CERCLA and WQARF (contaminated groundwater clean up efforts) pumping, and withdrawal permits other than new Mineral Extraction Permits and General Industrial Use Permits. Since they are covered by the

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current AWS Rules, designated water providers and CAGR members are also not included in this proposal. Additionally, this recommendation applies to the Pinal, Prescott and Santa Cruz AMAs only under certain conditions identified below in the description of the specific recommendation.

For the purposes of this recommendation, "mined groundwater" includes all groundwater withdrawals less an incidental recharge factor, except groundwater withdrawn pursuant to: groundwater allowances under the AWS Rules; groundwater withdrawn from Irrigation Grandfathered Rights; extinguishment credits used pursuant to the AWS Rules; metal mining and metallurgical recovery permits (or Type Two Rights and Type One Rights used solely for metal mining and metallurgical purposes); dewatering permits; drainage water withdrawal permits; hydrologic testing permits; certain WQARF and CERCLA pumping; and poor quality groundwater withdrawal permits. In the Santa Cruz AMA, this recommendation would only be imposed if the ADWR has determined: 1) that groundwater mining is preventing the AMA from attaining or maintaining its management goals; 2) there are inadequate management tools to maintain the management goals; and 3) there are inadequate funding mechanisms to attain or maintain the management goals.

The recommendation of the Commission is to modify the statutes, rules and management plans, where appropriate. Specifically, the Commission recommends the Governor:

**B.3.a: Request legislation to modify the statutes to require certain existing municipal and industrial (M&I) groundwater users in the Phoenix, Prescott and Tucson AMAs (and under certain conditions in the Pinal and Santa Cruz AMAs) to pay a "Mined Groundwater Tax" of \$20 per acre-foot, phased-in over a 10 year period, on a percentage (50% for Municipal and 25% for Industrial) of their mined groundwater.**

Existing municipal groundwater users include groundwater users in the Phoenix, Prescott, and Tucson AMAs (and under certain conditions in the Santa Cruz AMA) that are withdrawing groundwater pursuant to a Service Area Right or other Non-Irrigation Rights or permits established prior to the date of enactment of the statute for this recommendation. This also includes future customers located within the area defined by the Certificate of Convenience and Necessity (CC&N) of a private water company or within the corporate boundaries of a city or town as they existed on the date of enactment of the statute. This does not apply to Large Untreated Water Providers delivering untreated groundwater for non-potable uses, municipal providers who have obtained a designation of AWS, and deliveries from an undesignated municipal provider to customers who have obtained a Certificate of AWS or are member lands subject to a replenishment obligation.

Existing industrial groundwater users include groundwater users in the Phoenix, Prescott, and Tucson AMAs (and under certain conditions in the Pinal and Santa Cruz AMAs) that withdraw groundwater pursuant to Type One and Type Two Non-Irrigation Grandfathered Rights and General Industrial Use Permits established prior to the date of enactment of the statute for this recommendation. For the Pinal AMA, existing industrial groundwater users include withdrawal authorities issued only for concentrated animal industries - dairies and feedlots - prior to the effective date of this recommendation

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pursuant to Type One and Type Two Non-Irrigation Grandfathered Rights and General Industrial Use Permits.

For existing groundwater users identified above that also use renewable supplies, the amount of taxable mined groundwater shall be determined by the following formula:

**Taxable Mined Groundwater =**

**((Total Water Used x [(50% for undesignated providers) or (25% for industrial users)]) – Total Renewable Water Supplies Used to Serve the Uses Otherwise Subject to this Tax)**

**B.3.b: Request legislation to modify the statutes to establish a mechanism for the Mined Groundwater Tax, collected pursuant to Recommendation B.3.a. (and B.3.c. in the Prescott AMA), to be used in the AMA in which it is collected for groundwater recharge or for water resource planning and technical investigations.**

Two options have been identified for the use of the mined groundwater tax: 1) replace a portion of the existing mined groundwater in each AMA with non-recoverable groundwater recharge; and/or 2) focus on AMA-Wide comprehensive water planning and technical investigations. ADWR would collect the mined groundwater tax from the water providers, right holders, or permit holders through the existing annual report and withdrawal fee process. Once the fees are collected, the Groundwater Users Advisory Council (GUAC) in each AMA would identify the priorities for non-recoverable groundwater recharge, water resources planning or both and then would recommend to the Director of ADWR what portion of the fees collected should be used for these functions<sup>17</sup>.

**Groundwater Recharge** - The portion of the funds that the Director determines will go to non-recoverable groundwater recharge will then be annually transferred to the Arizona Water Banking Authority (AWBA) on behalf of the Phoenix, Pinal and Tucson AMAs. For the Prescott and Santa Cruz AMAs, who currently cannot use the services of the AWBA, the funds will be annually transferred to an agency specifically authorized by legislation to conduct groundwater recharge or replenishment in those AMAs. The AWBA (or new entity in the Prescott or Santa Cruz AMAs) would be required to recharge water, without recovery, in locations that maximize the benefit of the recharge to those groundwater users that pay the tax, and specifically in the AMA from which the funds are transferred.

**AMA-Wide/Subbasin Planning and Technical Investigations** - The portion of the funds that the Director determines will go to water resources planning would be directed by ADWR, with recommendations from the GUAC, to facilitate AMA-wide water planning functions. The taxes would be used in each of the AMAs where the tax is collected. In addition to AMA-wide planning, subbasin or critical area planning could also be addressed. Included in this umbrella planning proposal, could be long term water supply and infrastructure planning, regional recharge and recovery planning, subsidence management planning, drought/climate change planning, and technical investigations.

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<sup>17</sup> In the Prescott and Santa Cruz AMAs the tax would be used for water resources planning until an entity is created that is authorized to conduct recharge or replenishment.

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**B.3.c: Request legislation to modify the statutes to require certain new municipal and industrial groundwater users in the Phoenix, Prescott and Tucson AMAs (and under certain conditions in the Pinal and Santa Cruz AMAs) to either use renewable supplies or have a phased-in 100% replenishment obligation by 2025 (2040 in the Pinal AMA). The modification would also need to require certain new municipal and industrial groundwater users in the Prescott AMA to pay a "Mined Groundwater Tax", 1.5 times the rate required under B.3.a, for 100% of the mined groundwater until a renewable or alternative water supply is available for replenishment.**

New municipal groundwater users in the Phoenix, Prescott and Tucson AMAs (and under certain conditions in the Santa Cruz AMA) would include all new deliveries of groundwater to a customer not covered by a Certificate of AWS by an undesignated water provider pursuant to a Service Area Right or other Non-Irrigation Rights or permits. This would only apply in those portions of the service area that have expanded beyond the CC&N boundary of a municipal provider regulated by the Arizona Corporation Commission or the corporate boundaries of the city or town supplying water for non-irrigation uses, as they existed on the date of enactment of the statute. For a municipal provider that does not fall into either of these categories, this would only apply to those portions of the service area that have expanded beyond the boundary of the service area as it existed on the date of enactment of the statute. The undesignated water provider would be responsible for meeting this requirement and for reporting and replenishing any mined groundwater use by such new municipal groundwater users.

New industrial water users would include groundwater users in the Phoenix, Pinal, Prescott and Tucson AMAs (and under certain conditions in the Santa Cruz AMA) that withdraw groundwater pursuant to Type One or Type Two Non-Irrigation Grandfathered Rights and General Industrial Use and Mineral Extraction Permits. Although subject to this provision, alternatives have been developed for dairies and feedlots in all AMAs and for the Prescott AMA. A new dairy or feedlot utilizing a Type One Non-Irrigation Grandfathered Right that has been converted from an Irrigation Grandfathered Right shall be treated as an existing industrial user. Instead of being required to replenish, the rightholder will be required to pay the Mined Groundwater Tax of \$20 per acre-foot on 25 percent of the mined groundwater used pursuant to that Right.

In the Prescott AMA the renewable supply or replenishment requirement for new municipal and industrial groundwater users will be delayed until a determination is made by the Director of the ADWR that sufficient imported or renewable supplies are available to meet the replenishment obligations being imposed by this provision. During the period of the delay, new municipal and industrial water users must pay a mined groundwater tax that is 1.5 times the fee paid by existing municipal and industrial groundwater users in B.3.a. The Director of the ADWR shall review the status of the availability of imported and renewable supplies in the fifth calendar year after the effective date of the legislation and, unless the Director of ADWR has made such a determination, every other year thereafter to determine if the AMA has available supplies to replenish the groundwater mined by new municipal and industrial users.

For the purposes of this recommendation, after the date of enactment of the statute, uses of Type Two Non-Irrigation Grandfathered Rights at new locations for different

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purposes are considered new industrial uses. Additionally, a General Industrial Use Permit issued after the date of enactment of the statute would be considered a new industrial use unless it is a renewal of the GIU for a dairy or feedlot for the same use in the same location.

**B.3.d: Request legislation to modify the statutes to eliminate issuance of all new General Industrial Use (GIUs) Permits or Mineral Extraction and Metallurgical Processing (MEPs) Permits and establish a new permit, with a 100% replenishment obligation, for limited non-irrigation uses without direct access to renewable supplies in the Phoenix, Pinal, Prescott, and Tucson AMAs (and under certain conditions in the Santa Cruz AMA) after 2025 or 2040 in the Pinal AMA,**

**B.3.e: Request legislation to modify the statutes to authorize municipal and industrial groundwater users in the Phoenix, Pinal and Tucson AMAs, required to replenish under Recommendations B.3.c and B.3.d, to enroll in the Central Arizona Groundwater Replenishment District.**

ADWR staff and CAGRDR staff should continue to work together to develop the details of implementing this recommendation for inclusion in the statutory language. Detailed language also needs to be developed to clarify that the CAGRDR is not responsible for making the initial identification of these new members and, for example, clarifying that undesignated water providers would be responsible for meeting this requirement for their customers and for reporting and replenishing any mined groundwater use by such new municipal groundwater users.

### **B.4. CHANGES TO THE EXEMPT WELL STATUTES**

**Problem Statement:** Groundwater withdrawals by exempt wells are not monitored because they are exempt from most of the regulatory provisions in the Code. They are limited to pumping no more than 35 gallons per minute, which can amount to as much as 56 acre-feet of groundwater use in a year, or 10 acre-feet per year for non-domestic exempt wells. Even though the total volume of groundwater withdrawn from exempt wells is not known, it appears that the overall impact on the water budget in most AMAs is relatively small. However, in the Prescott AMA, over 7,000 exempt wells are estimated to be in use, accounting for approximately 10 percent of municipal water use. With the ongoing practice of parcel splits not subject to the State's subdivision laws, exempt wells are expected to increase. In the Santa Cruz AMA, there is concern that the proliferation of exempt wells could result in: declines in local water table levels; increased susceptibility to drought; and inefficient, non-conserving uses of water. Dry lot developments (where each lot owner drills their own well due to lack of centralized water service) may increase in both the Santa Cruz and Prescott AMAs. In the Phoenix and Tucson AMAs, the issue of exempt wells is primarily a concern in areas where there are high densities of exempt wells in sensitive areas, particularly near riparian habitat. Parcel/lot-splitting is also an issue in the Tucson AMA. Exempt well users do not currently participate in efforts to achieve the AMA management goals, since they have no replenishment obligation, no conservation requirements, no requirement to pay withdrawal fees, and no requirements to measure and report withdrawals.

In some cases, existing exempt wells pose problems for municipal water providers proposing to drill new service area wells. When drilling a new non-exempt well, an impact

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analysis is generally required<sup>18</sup> and all well owners in the impacted area must be identified. Often a municipal water provider has purchased a site for a future well only to find when the site is to be developed that exempt wells have been drilled in the area. If an impact is projected (a projected water level decline due to the new well of greater than 10 feet in five years), the applicant for the new non-exempt well must reduce pumping sufficiently to keep the drawdown to less than 10 feet or they must obtain a waiver of the impacts from all well owners in the impact area, including exempt well owners. This is sometimes very difficult, as the exempt well owner may be difficult to locate or unwilling to provide a waiver. If it cannot be done, then the municipal water provider must find a new well site to benefit its customers, which may be difficult to locate and at additional cost to customers.

### **RECOMMENDATION:**

The Commission recommends amendments to the current statutes relating to exempt wells. Specifically, the Commission recommends the Governor:

**B.4.a: Request legislation to modify the statutes to reduce the maximum pump capacity of new exempt wells that file a Notice of Intention to Drill a well after the effective date of the legislation, to 20 gallons per minute unless the Director of the Arizona Department of Water Resources (ADWR) determines that a higher rate is needed for a particular use. In such cases, the statute would also need to be modified to authorize ADWR to request the installation of a meter and the submittal of an annual report to the ADWR.**

**B.4.b: Request legislation to modify the statutes to increase the processing time frame for exempt well permits from the current 15 day limit to a longer time frame only for those applicants who request a higher pump capacity (under B.4.a) or for those wells affected by the new well permitting requirements for protection of riparian areas (under B.1.a).**

**B.4.c: Request legislation to modify the statutes to prohibit new exempt wells that file a Notice of Intention to Drill a well after the effective date of this legislation from being drilled within a municipal water provider's service area (city, town, private water or irrigation district delivering water for potable uses) unless the municipal water provider denies service.**

This would prohibit new exempt wells from being permitted in an AMA after the effective date of the legislation within a municipal water provider's service area, unless the water provider denies service. The service area is the physical extent of the potable water distribution system for a city, town, private water company or irrigation district and does not always correspond with the political boundary of a municipality or the area covered by the Certificate of Convenience and Necessity of a private water company.

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<sup>18</sup> A non-exempt well is a well with a pump capacity in excess of 35 gallons per minute. The exceptions from the impact analysis include wells drilled outside of an AMA, wells drilled in an INA, exempt wells, pre-code wells, replacement wells in the same location and Article 7 withdrawal permits other than GIUs.



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### **B.4.d: Request legislation to modify the statutes to require existing exempt well owners to file an objection within 30 days to an application for a new non-exempt well filed after the effective date of this legislation and require the Director of the Arizona Department of Water Resources to disregard the impacts of the proposed non-exempt well if the non-exempt well applicant offers to the existing exempt well owner a no-cost connection to a municipal provider's water service area.**

Under the temporary well spacing rules, the Director must give notice to owners of exempt wells of record, delivered to the last address on file with ADWR, who may be adversely impacted by the drilling of the proposed non-exempt well or wells. For the purposes of this proposal, an existing exempt well is a well drilled or NOI issued within in an AMA before the effective date of this legislation. The Commission's recommendation would require that owners of existing exempt wells have a set period of time (30 days) to object to the permitting of a new non-exempt well. If no objection is filed within the timeframe, the owner of the exempt well has no other recourse. If the owner of the exempt well objects and if the applicant for the proposed non-exempt well or wells offers to connect the exempt well owner to a municipal system at no connection cost, then the Director shall not consider the potential hydrologic impact of the new non-exempt well on the exempt well when determining whether to issue the permit.

### **B.4.e: Request legislation to modify the statutes to authorize existing exempt well owners whose well has gone dry, contrary to the conclusions of the well impact analysis for a non-exempt well permitted after the effective date of this legislation, to seek recourse, through a civil action in Superior Court, against the non-exempt well owner.**

If the hydrologic analysis of the applicant for the proposed well incorrectly characterizes the impact on an existing exempt well as less than 10 feet of drawdown in 5 years and the exempt well later goes dry due to the applicant's well, the applicant must arrange to provide an alternative supply whether it be through connection of the exempt well owner to a municipal provider at no cost to the exempt well owner or other mechanism. A process to establish criteria should also be identified to limit this clause from being open-ended and unmanageable. Statutory criteria should address: time limitations for claiming damage; an upper limitation on the cost of the extension; and a possible requirement to abandon wells after the extension has been completed. Furthermore, the statute should clearly state that the burden of proof should fall on the exempt well owner making the claim and as such should be a civil action dealt with through Superior Court.

### **B.4.f: Request legislation to modify the statutes to require the Director of the Arizona Department of Water Resources to disregard the impact of a new non-exempt well that files an Application for a Drilling Permit after the effective date of this legislation on any new exempt well that was drilled or filed a Notice of Intention to drill a well after the effective date of this legislation.**

Exempt wells drilled or issued an NOI after the effective date of this statute would not be required to be notified if an impact from a new non-exempt well was identified and would not have any right to protection from any impacts by other wells.

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### **B.5. INCENTIVES FOR DEVELOPMENT ON AGRICULTURAL LAND**

**Problem Statement:** Agricultural water use and land utilization has declined since the passage of the Groundwater Code in 1980<sup>19</sup>. However, water use projections indicate that agriculture will continue to contribute to overdraft in the AMAs for the foreseeable future. One of the basic assumptions in the development of the 1980 Groundwater Code was that the reduction in agricultural lands would coincide with increased urbanization. Urbanization in the AMAs has occurred but not to the extent anticipated on agricultural land. Concern was raised by some water users, including agricultural interests, that urbanization was occurring more frequently on land with no historic water use, such as native desert, creating additional water demands rather than substituting one use for another.

#### **RECOMMENDATION:**

**B.5: The Commission recommends the Governor support continued discussions to find appropriate incentives to encourage development on agricultural lands and reduce groundwater mining.**

The Commission supports the concept, from a water management perspective, that it is desirable to have new urban water uses displace existing agricultural water use. Several proposals were presented in Memoranda (included in the Supplemental Appendices). The Commission considered several water resource and financial alternatives to encourage development on agricultural lands. Because of the complexity of this topic there were issues that could not be resolved within the life of this Commission. The Commission will not be forwarding a recommendation for any financial or tax incentives on this issue. However, the Commission does recommend that this issue be pursued.

### **B.6. EXTINGUISHMENT CREDITS FOR TYPE ONES, TYPE TWOS AND IRRIGATION GRANDFATHERED RIGHTS FOR ASSURED WATER SUPPLY**

**Problem Statement:** The AWS Rules establish an incentive to extinguish grandfathered rights to groundwater by providing a credit for mined groundwater use that can be included in a demonstration of an assured water supply. The amount of the credit is calculated using an AMA-specific formula that includes the size of the right times a specified time period.

Currently, credits are calculated in the Phoenix and Tucson AMAs by multiplying the number of acres associated with the Right times an extinguishment factor of 1.5 multiplied by the difference in the year of extinguishment and the year 2025<sup>20</sup>. For example, if a Type One Right was extinguished in the current year (2001), the credits would be calculated based on 24 years:

$$\frac{((100 \text{ acres} \times 1.5) \times (2025 - 2001))}{100 \text{ Years}} = 36 \text{ Acre-Feet Per Year of Extinguishment Credits Over a 100 Year Period}$$

<sup>19</sup> For example, since 1984 when the Phoenix AMA certified the existence of approximately 389,000 irrigation acres, approximately 60,000 acres have gone out of production due to conversion of those acres to non-irrigation uses, a reduction of approximately 17 percent. [Phoenix AMA Third Management Plan, page 3-7].

<sup>20</sup> Extinguishment credits are calculated differently in the Pinal and Prescott AMAs. See TAC Issue Paper Part Four, Chapter III – AWS Issues, page 7).

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The timeframe is reduced each year closer to 2025. Thus, every year closer to the year 2025, the volume of groundwater credited towards an AWS Certificate or designation is reduced. For example, if the extinguishment of the same right used in the example above occurred in 2010, the credits would be calculated for 15 years (2025 minus 2010) resulting in fewer extinguishment credits being issued (2,250 AF total or approximately 22.5 acre-feet per year over a 100 year period).

### **RECOMMENDATION:**

**B.6: The Commission recommends the Arizona Department of Water Resources maintain the existing calculation of extinguishment credits for Type One Grandfathered Rights, Type Two Grandfathered Rights and Irrigation Grandfathered Rights contained in the Rules for Assured Water Supply in the Phoenix and Tucson AMAs.**

## **C. ENVIRONMENT AND ECONOMICS**

Although it was included as a principle for the Groundwater Management Study Commission (established in 1977), environmental concerns were not a principle component of the 1980 Groundwater Code. In 1994, the legislature created the Water Protection Fund administered by a 15-member Commission, appointed by the Governor, the President of the Senate and the Speaker of the House. The Fund is earmarked for supporting projects that enhance riparian areas. The authorizing legislation calls for "a coordinated effort for the restoration and conservation of the water resources of this state. This policy is designed to allow the people of this state to prosper while protecting and restoring this state's rivers and streams and associated riparian habitats, including fish and wildlife resources that are dependent on these important habitats."

In the discussions of the Commission, the values of protecting the environment were presented and considered. In terms of impacts of the Groundwater Code on the environment, Commission members representing the environment made the following points: 1) the adoption of the Code turned around disaster; 2) there are no incentives to allocate groundwater to environmental uses; and 3) there is no set protection for rivers. Commissioners also identified the following three basic objectives for the environmental community in regard to the Commission's activities. First, to strongly support the principle of safe-yield (with a question of whether it will be enough to preserve the environment). Second, to maintain the overall quality of life and economic vitality of Arizona. Finally, to address specific measures to protect instream flows and riparian habitats within and outside of the AMAs. The following recommendations have been developed to move towards addressing the water needs of the environmental habitat within the State.

### **C.1. IDENTIFICATION OF DESIGNATED RIPARIAN AREAS FOR PROTECTION UNDER WELL DRILLING/IMPACT PROPOSAL**

**Problem Statement:** There are currently no statutory mechanisms to protect riparian areas from the effects of groundwater pumping. The majority of the historic riparian areas within AMAs have been destroyed by a combination of diversion of surface flows, channelization of streambeds and overdraft of the groundwater table. In many cases, groundwater overdraft has severed the connection between the groundwater table and the root zone of riparian plants<sup>21</sup>.

#### **RECOMMENDATION:**

**C.1: The Commission recommends the Governor request legislation to modify the statutes to adopt maps delineating protection zones for the streams and cienegas included on the List of Designated Riparian Areas in Figure 5a and authorize the Water Protection Fund to review the list and protection zones and to recommend modifications, through a public process, to the legislature.**

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<sup>21</sup> Tellman, B.; Yarde, R.; and M.G. Wallace. 1997. *Arizona's Changing Rivers: How People Have Affected the Rivers*. Issue Paper #19, Water Resources Research Center, Tucson, Arizona.

Statewide Comprehensive Outdoor Recreation Plan (SCORP). *Arizona Rivers, Streams & Wetlands Study*. 1989. Arizona State Parks Board. Phoenix, AZ. 244pp.

The Arizona Nature Conservancy. 1987. *Streams of Life*. Tucson, AZ.

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The Commission has concluded that limiting the impacts of new wells on riparian areas through the new well permitting proposal should be implemented by designating riparian area protection zones in specific cienegas or stream reaches<sup>22</sup>. The Commission recommends that the legislature adopt the mapped riparian areas identified on the list in Figure 5a. These designated riparian area protection zones are based on a ½ mile buffer for specific streams or cienegas. This would provide maximum certainty about where the proposed new well regulations would be in effect. Maps of the riparian area protection zones (Figures 5b through 5e) would be adopted in statute and could be modified through legislation, based on recommendations from the Arizona Water Protection Fund Commission after a public process.

Additional riparian areas were identified to the Commission for the Tucson and Prescott AMAs that may be consistent with the criteria used to identify the designated riparian areas. However, due to limitations of time, staffing, data and required public input, the Commission chose not to include all these additional areas at this time. The Commission further recognizes that this proposal would include a statutorily authorized mechanism for modifying the list, subsequent to additional data gathering, scientific review, and public input.

### **C.2. CHANGES TO THE WATER PROTECTION FUND**

**Problem Statement:** The Water Protection Fund annual appropriation of \$5,000,000 has not been fully funded by the State legislature in recent years. Inadequate funding has limited the effectiveness of the Fund in protecting important habitat throughout the state. Session law passed this year also diverts an additional funding source from the Water Protection Fund, the in-lieu fees paid by out-of-state participants in Arizona's Water Banking program. In addition, the Water Protection Fund Commission is concerned about having control over revenues generated by its interest account. Finally, the Water Protection Fund is currently constrained from granting money for the purchase of water rights and conservation easements.

#### **RECOMMENDATION:**

The Commission recommends the following revisions to statute and session law, developed cooperatively between the Water Protection Fund Commission and ADWR. Specifically, the Commission recommends the Governor:

**C.2.a: Request legislation to modify the statutes to repeal the session law diverting the in-lieu fees paid by out of state Water Bank participants.**

**C.2.b: Support the Commission's recommendation for the legislature to provide full funding of the annual general fund appropriation of \$5 million dollars for the Water Protection Fund.**

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<sup>22</sup> Described in Allowable Pumping, New Well Permitting, Well Impacts, and Submittal of a Hydrologic Report, described on pages 26 and 27.

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**C.2.c: Request legislation to modify the statutes to authorize the Water Protection Fund to control part of the revenues in its interest account and to define a process in which the Water Protection Fund Commission and the Arizona Department of Water Resources cooperatively develop an annual administrative budget.**

Through this statutory change and budget process, the Water Protection Fund Commission as well as ADWR would be authorized to use the administrative account to pay for state sanctioned Commission travel expenses, information transfer, conference costs, and outside advisors, consultants, aides or legislative liaison costs.

**C.2.d: Request legislation to modify the statutes to authorize the Water Protection Fund to grant money for purchase of water rights and conservation easements.**

## **D. CONSERVATION**

ADWR is required by statute to develop and implement conservation requirements within AMAs for the agricultural, municipal and industrial water use sectors. The conservation requirements change in each subsequent Management Plan, generally requiring a greater degree of conservation among water users. The Management Plans for the five AMAs contain the specific water allocation formulas and conservation requirements for each sector.

Many issues were raised concerning conservation programs. Questions were raised concerning whether conservation programs should be used only to ensure sufficient water supplies, or only when it is cheaper to reduce demand than to deliver additional supplies, or simply because using water as efficiently as possible is the right thing to do. Additional attention was paid to improvements that could be made in the current programs and the effectiveness of and the ability to achieve the requirements of the conservation programs contained in the AMAs' Management Plans. The following recommendation related to water conservation has emerged from the Commission process:

### **D.1. STATEWIDE WATER CONSERVATION OUTREACH**

**Problem Statement:** Currently, there is no comprehensive and coordinated statewide program to develop and provide information on water conservation, assist water users in becoming more efficient, or in planning for the acquisition of future supplies. Considerable coordinated conservation activity occurs within the AMAs, while outside of AMAs conservation activity is limited.

#### **RECOMMENDATION:**

**D.1: The Commission recommends the Governor initiate a process to develop a non-profit cooperative association to serve Arizona's need for effective water conservation throughout the State.**

Several proposals to increase awareness of conservation throughout the State were considered by the Commission including: creation of an Arizona Water Conservation Commission; creation of an Office of Water Conservation to be housed within the Statewide Planning Division of ADWR (a non-regulatory branch); and a non-profit entity. The Commission recommends that the Governor initiate a process to convene representatives of the major interests in the State to initiate a coordinated effort to promote water conservation throughout the State. Representatives would include the business community, industry, academia, water providers, state agencies (such as ADWR, ACC, and possibly ADEQ and Commerce), and a broad array of water users, as well as other potential partners. The proposed outcome is a Statewide Water Conservation Association, a non-profit cooperative association to serve Arizona's need for effective water conservation through public education, program assistance, research, technology transfer, and incentives in a statewide, cooperative framework. The purpose of the Statewide Water Conservation Association would be to:

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- a. Organize public outreach and education efforts;
- b. Develop, evaluate and help implement programs, practices and projects;
- c. Provide technical assistance, research and incentive programs; and
- d. Encourage cooperative conservation efforts.

The recommended funding sources for the Statewide Water Conservation Association include, but are not limited to: membership dues; support from the business community; academic, government and private foundation grants; private funding and gifts; and the U.S. Bureau of Reclamation.



**E. AMA MANAGEMENT GOALS**

The Groundwater Code contains water management goals for each of the AMAs. In summary the management goal for the Phoenix, Prescott and Tucson AMAs is safe-yield. The Pinal AMA management goal is to preserve the agricultural economy for as long as feasible while preserving future water supplies for non-agricultural uses and the Santa Cruz AMA management goal is to maintain a safe-yield condition and to prevent long-term declines of local water tables. In the Governor's charge to the Commission, members were asked to review the management goals for each of the AMAs and determine if they are appropriate and achievable. The Commission recognizes that although groundwater mining has not been eliminated, through the requirements and programs set forth in the Groundwater Code water users have reduced groundwater mining in the AMAs. The Commission affirms the goals of the Code to preserve water supplies for future uses and specifically endorses the goal of safe-yield for the Phoenix, Prescott and Tucson AMAs. However, the Commission finds that specific issues remain in the Pinal, Prescott, and Santa Cruz AMAs and, as such, the Commission recommends the following approaches for these AMAs. Specifically, the Commission recommends the Governor:

**RECOMMENDATION:**

**E.1: Support the Pinal AMA interests and the Director of the Arizona Department of Water Resources to cooperatively conduct a comprehensive planning and program development effort in order to ensure a reliable and sustainable supply of water for municipal and industrial uses and to develop necessary statutory, rule and policy changes by no later than October 1, 2004.**

The Commission has given consideration to the unique dual goals of the Pinal AMA, to "preserve existing agricultural economies in the AMA for as long as feasible, consistent with the necessity to preserve future water supplies for non-irrigation uses." Water management efforts in the Pinal AMA have historically focused on the efforts to preserve agricultural economies. With agricultural representing over 97 percent of the AMA water use this focus was appropriate. However, municipal and industrial uses are rapidly increasing within the Pinal AMA and this trend will continue into the future. The Commission finds there is now a critical need to develop programs to "preserve future water supplies for non-irrigation uses." The Commission agrees with Pinal AMA interests in calling for a comprehensive planning and program development effort in order to ensure a reliable and sustainable supply of water for municipal and industrial uses. Furthermore, the Commission recommends the Director work in cooperation with the Pinal AMA interests to develop the necessary statutory, rule and policy changes by no later than October 1, 2004. Changes to be considered should include: modification of the existing AWS Rules; additional industrial water use limitations; a regional recharge and recovery program; a drought protection program; a well protection program; and the continuation of the AMA's aquifer monitoring program. The attached recommendation from the Pinal AMA Task Force provides additional background on the perspective of Pinal AMA interests (Attachment 7).

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### **RECOMMENDATION:**

#### **E.2: Support the Commission's recommendation to encourage the Arizona Department of Water Resources and the State to continue to work with the Prescott AMA interests and other involved parties to secure additional long-term water supplies for the AMA, including supplies from the Colorado River.**

The Commission recognizes and acknowledges the commitment to the safe-yield goal made by the communities of the Prescott AMA. The Commission agrees with the communities' recognition that the long-term sustainability of the region's water resources will rely upon their aggressive compliance with the goals and concepts discussed by the Commission.

The Commission also recognizes the commitment and strong support of the Prescott AMA of the recommendation being considered for a multi-jurisdictional financing tool to assist in the construction of importation and recharge infrastructure needed in the area if it is to meet the safe yield goal by the year 2025.

The Commission further recognizes the need for the availability of a long-term renewable water supply for the Prescott AMA. Several times during the life of the Commission the issue of access to a long-term renewable supply was raised, an advantage that Central Arizona enjoys which sustains economic vitality to the majority of the State. The Prescott AMA is in need of long-term, renewable water supplies. The Commission is aware of regional dialogue on a variety of options that may be exercised to accomplish this end.

The Commission encourages the ADWR and the State to continue to work with the Prescott AMA interests and other involved parties to secure additional long-term water supplies for the AMA, including supplies from the Colorado River.

### **RECOMMENDATION:**

#### **E.3: Support the Commission's recommendation that the Santa Cruz AMA Groundwater Users Advisory Council, the Arizona Department of Water Resources, and the Santa Cruz AMA community to continue working together in identifying the Santa Cruz AMA's needs and developing responsive programs and procedures. It is anticipated that such programs may ultimately require the future enactment of legislation, including the creation of a water management authority and implementation of a settlement agreement.**

The Santa Cruz AMA has several attributes, which warrant individualized treatment at this point in time. First, its water resources are a combination of surface water, Mexican and domestic-origin effluent and groundwater; and it predominantly is a surface water system. Second, its dual statutory goals distinguish it from the other AMAs. These goals are maintenance of "safe yield;" and to prevent local water tables from experiencing long-term declines. Third, the legislation creating the Santa Cruz AMA recognizes its unique water resource management needs and contemplates coordinated management without modifying or amending in any way the fundamental laws and rights to surface water and groundwater pursuant to the laws of this state. Finally, for several years local interests and the ADWR have been actively working with the local Groundwater Users Advisory Council to develop strategies to resolve the challenges that are unique to the Santa Cruz AMA. An

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essential part of this effort is a water rights settlement process in the context of the Gila River general stream adjudication that has been underway for several years, involving a wide range of interests. These efforts are expected to result in the establishment of a comprehensive water resource management scheme in the AMA.

Against this background, the Commission concludes that no changes are necessary in the Santa Cruz AMA management goals at this time and that it would be premature to develop legislation to implement programs specific to the Santa Cruz AMA. Rather, the Commission believes that Santa Cruz AMA Groundwater Users Advisory Council, the ADWR, and the Santa Cruz AMA community should continue to work together in identifying Santa Cruz AMA's needs and developing responsive programs and procedures. It is anticipated that such programs may ultimately require the future enactment of legislation, including the creation of a water management authority and implementation of a settlement agreement.

## **F. WATER RESOURCES PLANNING**

In 1999, the Legislature authorized general fund monies to be used by ADWR to help several rural watersheds to address water resources issues facing their communities. Rural and urban interests believe a water planning function, in which stakeholders throughout Arizona participate, is necessary to continue to assure a secure water supply for the State's residents.

The following recommendations are being proposed by the Commission to address concerns of coordinated planning between areas inside and outside of the AMAs, to enhance the ability of the State to address concerns within the AMAs about providing the most up to date information on the ability to achieve the management goals mandated in the 1980 Groundwater Code, and to develop coordinated planning for the recovery of water stored underground.

### **F.1 REQUIRE THE DEVELOPMENT AND SUBMITTAL OF A STATE OF THE AMA REPORT FROM ADWR AND A BIENNIAL WATER MANAGEMENT REPORT TO THE LEGISLATURE.**

**Problem Statement:** Currently, AMA water budgets are used as an indicator for assessing progress towards the management goals. Water budgets have historically been prepared for each Management Plan based on regulatory requirements within the AMAs. Results of the Management Plan water budgets have indicated current and projected overdraft conditions in most of the AMAs. However, changes in population and variable climatic conditions may have impacts on water budget analyses and hydrologic conditions. Annual variations can impact water use patterns that should be monitored and reported to policy makers so they can make informed decisions and take corrective action if necessary.

#### **RECOMMENDATION:**

#### **F.1.a: The Commission recommends that the Governor request legislation to modify the statutes to require the Arizona Department of Water Resources to submit a State of the AMA Report every five years.**

The Commission recommends that the State statute be modified to require the Director to submit a report every five years to the Governor, developed in consultation with the Groundwater Users Advisory Council of each AMA and describing the progress being made toward reaching each AMA's management goals. The report should contain the annual water budgets for each AMA, maps illustrating the results of aquifer monitoring (water level elevations and depth to groundwater), and any results from hydrologic modeling performed by the ADWR.

#### **F.1.b: The Commission recommends that the Governor request legislation to modify the statutes to require the Arizona Department of Water Resources to submit a Biennial Water Management Report to the Governor and the Legislature summarizing the latest State of the AMA Report and the progress in achieving the AMA management goals.**

The Commission recommends to the Governor and the Director of ADWR that the Director prepare for the Legislature a Biennial Water Management Report. Every two years, prior to the initial session of each new legislature and after soliciting input from each AMA's

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Groundwater Users Advisory Council, the Director should prepare and submit to the Governor and each member of the Legislature a report describing the progress being made toward reaching the management goals within each AMA. This Biennial Water Management Report shall summarize the latest State of the AMA Report and any new information available since that Report was last issued including quantitative measurements, tracking progress on achieving both the management goals and the assumptions made in preparing water budget projections for the ten year management plans.

### **F.2. FACILITATE WATER RESOURCES PLANNING THROUGHOUT THE STATE**

**Problem Statement:** Water resource managers of cities, towns, and private water purveyors throughout Arizona are keenly interested in understanding more about their options for future water supplies to serve the population growth expected to occur in their communities. To date, water resource planning has not been a coordinated effort. The focus of planning within the State has been on those water providers who are located in AMAs, particularly those who are required to plan for and demonstrate an assured water supply for future growth. Although growth is expected to continue throughout the State, water providers outside of AMAs are generally left to their own resources for future planning. In recent years, through the Rural Watershed Initiative, the State Legislature has provided funds to many rural watershed groups to be used to address water resource issues affecting their communities. Rural communities and other stakeholders have also provided direct financial and in-kind support to the Initiative, which is administered by the ADWR. While the Initiative has been effective in inviting rural communities and other stakeholders to come together to begin to address their water resource challenges, there is a great deal of concern regarding future funding and coordinating water resource planning.

The current planning process (which focuses on the AMAs) does not formally recognize that the water resources of communities throughout the State are interrelated and may impact future growth. Growing Smarter Legislation requires that many rural communities add water elements to their general plans. It is anticipated that this requirement will intensify the need for water resource planning and management outside of the AMAs. More advanced planning is needed to inform state and local policy makers and citizens about various water supply and demand alternatives and existing drought mitigation options available to serve their customers.

#### **RECOMMENDATION:**

##### **F.2.a: The Commission requests the Governor's support for increased financial support for the Rural Watershed Initiative**

Through the Rural Watershed Initiative, the Governor and the State Legislature have provided funds to many rural watershed groups to identify and address water resource issues. The Commission finds that additional resources and coordinated water resource planning are necessary to ensure reliable water supplies throughout the state. The Commission recommends that the Governor and Legislature increase their financial support for the Rural Watershed Initiative.

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### **F.2.b: The Commission recommends the Governor and the Director of the Arizona Department of Water Resources facilitate a forum to develop a statewide planning process within one year.**

The Commission has identified the need for a more comprehensive water planning function throughout the State. The Commission recognizes the need for the state's water stakeholder groups to initiate discussions to develop and fund a planning process for addressing the state's future water demands, identifying alternatives for developing and financing additional water supplies, and addressing drought preparedness on a statewide basis. The Commission recommends that within one year the ADWR bring together stakeholders from throughout Arizona to develop a statewide planning process. Such a process should consider how to best involve local and regional stakeholders in identifying alternatives for developing and financing additional water supplies.

### **F.3. GENERAL RECOMMENDATION OF THE COMMISSION**

The following section describes the general recommendation of the Commission related to Water Resources Planning. The following recommendation does not result in statutory, rule or policy changes, but may encourage action outside of the Commission process. Specifically, the Commission recommends the Governor:

#### **F.3.a: Support the Commission's recommendation to encourage the Central Arizona Water Conservation District, in cooperation with Central Arizona Project (CAP) subcontractors, the Arizona Water Banking Authority (AWBA), the Arizona Department of Water Resources, irrigation districts and others to conduct a planning process to prepare for future use of water stored by the AWBA on behalf of the CAP subcontractors.**

The Commission recognizes the importance of planning for future recovery of long-term storage credits. Further, the Commission understands that regional storage by the Arizona Water Banking Authority and the CAWCD should occur in locations that will facilitate recovery.

The Commission recommends that the CAWCD, in cooperation with CAP subcontractors, the Arizona Water Banking Authority, the ADWR, irrigation districts and others conduct a planning process to prepare for the future use of water stored by the Arizona Water Banking Authority on behalf of CAP subcontractors.

**G. COSTS OF WATER MANAGEMENT PROGRAMS**

The Commission is recommending a number of statute and rule changes and new programs to improve water management in Arizona. Some of these recommendations can be accomplished without additional resources, but others, particularly those calling for increased water resources monitoring and analysis and technical assistance, will create additional work for the ADWR.

**RECOMMENDATION:**

The Commission recommends that the Governor and Legislature consider the significant responsibilities of the ADWR and determine, in this time of fiscal restraint, how to ensure the ADWR has the capacity to effectively implement the various Commission recommendations, to maintain current programs and to provide timely and quality technical assistance and water management planning for the State of Arizona. The Commission is particularly concerned that the ADWR have the ability to attract and retain staff with the technical and managerial skills necessary to meet Arizona's water management challenges well into the future.

Specifically the Commission recommends the Governor:

**G.1: Initiate a review of all permit and program application fees by the Director of the Arizona Department of Water Resources and recommend a revision of the fee rules as necessary to ensure that they closely reflect the cost of processing applications.**

**G.2: Consider mechanisms to authorize the Arizona Department of Water Resources to retain permit and program application fees to support those programs and to free up limited general fund revenues to carry out the programs recommended by the Commission and adopted by the legislature.**

## **H. SUMMARY OF COMMISSION RECOMMENDATIONS**

The Governor's Water Management Commission respectfully submits this Report to the Governor, completing the tasks and charge given by the Governor. The Commission concludes that the goals and legal framework of the Groundwater Code are sound and as such should continue to guide water management decisions and investments in the Active Management Areas. Further, the Commission endorses the statutory management goal of each individual Active Management Area recognizes as appropriate their differing hydrologic and potential characteristics and recommends the 50 recommendations listed below for the Governor's consideration. These recommendations resulting from Commission deliberations will enhance the ability of the Active Management Areas to achieve their goals and will maintain the stability and certainty for investments in water supplies, delivery infrastructure and efficiency improvements that are vital to Arizona's future.

The Governor's Water Management Commission respectfully recommends the Governor:

A.1: Support the development of enabling legislation for an Active Management Area infrastructure financing authority for multiple jurisdictions.

A.2.a: Request legislation to modify the statutes to require the Central Arizona Groundwater Replenishment District to establish a "Replenishment Reserve" of up to 20% of the CAGR's 100 year replenishment obligation.

A.2.b: Request legislation to modify the statutes to clarify the priorities for the use of excess Colorado River water for the Central Arizona Groundwater Replenishment District's Replenishment Reserve and the Arizona Water Banking Authority's municipal and industrial firming supplies.

A.2.c: Request legislation to modify the statutes to require the Central Arizona Groundwater Replenishment District's Plan for Operation be extended to a 100 year planning horizon and to provide criteria for the Arizona Department of Water Resources' review and approval of the plan.

A.2.d: Request legislation to modify the statutes to allow Member Service Areas to De-Enroll from the Central Arizona Groundwater Replenishment District if the service area demonstrates that it has sufficient supplies to maintain its designation of Assured Water Supply.

A.2.e: Request legislation to modify the statutes to authorize municipal and industrial groundwater users in the Phoenix, Pinal and Tucson AMAs, required to replenish under recommendation B.3.c and B.3.d., to enroll in the Central Arizona Groundwater Replenishment District.

A.2.f: Encourage the Central Arizona Water Conservation District Board to address the additional issues raised in the Commission process relevant to the Central Arizona Groundwater Replenishment District (CAGR) through an appropriate public process. These issues include the location of replenishment activities, the need to obtain secure water supplies, and the long-term role of the CAGR.



## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

A.2.g: Repeal the unused authorization for an Active Management Area Water District pursuant to Title 48, Chapter 28.

A.3: Request legislation to modify the statutes to clarify that the Central Arizona Water Conservation District (CAWCD) Board determines the amount of long-term storage credits, earned via the 4-cent ad-valorem tax, that need to be transferred to CAWCD by the Arizona Water Banking Authority.

A.4.a: Support options to encourage the development of additional recharge capacity.

A.4.b: Encourage the Arizona Department of Water Resources (ADWR) to continue discussions on improvements to ADWR's recharge permitting process through the Recharge Stakeholder Group.

A.4.c: Encourage the Arizona Department of Water Resources to develop guidelines to facilitate permitting of multi-purpose recharge projects through the Recharge Stakeholder Group.

A.4.d: Support the Commission's recommendation that no additional regulation of effluent is needed, at this time.

A.4.e: Support the current incentives for use of remediated water resulting from Comprehensive Environmental Response and Compensation Liability Act and Water Quality Assurance Revolving Fund (federal and state superfund pumping).

A.4.f: Support the Commission's recommendation for the Arizona State Land Department (ASLD), the Arizona Department of Water Resource, the Central Arizona Water Conservation District, and other stakeholders to have discussions on a process for distribution of the ASLD's Central Arizona Project allocation outside the Commission process.

A.4.g: Support the existing Central Arizona Water Conservation District rate setting procedures for excess Central Arizona Project water.

A.4.h: The Commission recommends that a letter be sent, from the Commission, to the Arizona Corporation Commission (ACC) to recognize the ACC's support of the use of renewable supplies through its Task Force, rate-making policies, and continued dialogue with the community.

B.1.a: Request legislation to modify the statutes to restrict certain new exempt and non-exempt wells that may adversely impact legislatively designated riparian areas located within an Active Management Area.

B.1.b: Request legislation to modify the statutes to require the Director of the Arizona Department of Water Resources to adopt rules that establish criteria for determining whether proposed exempt or non-exempt wells in a designated riparian area protection zone adversely impact the riparian area.

## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

**B.2.a:** Request legislation to modify the statutes to authorize the Director of the Arizona Department of Water Resources to assess the cumulative impacts of multiple wells drilled by an applicant in approximately the same location.

**B.2.b:** Support the Commission's recommendation that the Director of the Arizona Department of Water Resources form a task force to research the cause and effects of land subsidence and appropriate limitations on the drilling of new and replacement wells to limit damage that may be associated with land subsidence.

**B.2.c:** Request legislation to modify the statutes to direct the Arizona Department of Water Resources to form advisory groups to the Director to study available data and develop proposed review standards for criteria affecting the Well Impact Rules.

**B.3.a:** Request legislation to modify the statutes to require certain existing municipal and industrial (M&I) groundwater users in the Phoenix, Prescott and Tucson AMAs (and under certain conditions in the Pinal and Santa Cruz AMAs) to pay a "Mined Groundwater Tax" of \$20 per acre-foot, phased-in over a ten year period, on a percentage (50% for municipal and 25% for industrial) of their mined groundwater.

**B.3.b:** Request legislation to modify the statutes to establish a mechanism for the Mined Groundwater Tax, collected pursuant to B.3.a (and B.3.c. in the Prescott AMA), to be used in the AMA in which it is collected for groundwater recharge or water resource planning and technical investigations.

**B.3.c:** Request legislation to modify the statutes to require certain new municipal and industrial groundwater users in the Phoenix, Prescott and Tucson AMAs (and under certain conditions in the Pinal and Santa Cruz AMAs) to either use renewable supplies or have a phased-in 100% replenishment obligation by 2025 (2040 in the Pinal AMA). The modification would also need to require certain new municipal and industrial groundwater users in the Prescott AMA to pay a "Mined Groundwater Tax", 1.5 times the rate required under B.3.a, for 100% of the mined groundwater until a renewable or alternative water supply is available for replenishment.

**B.3.d:** Request legislation to modify the statutes to eliminate issuance of all new General Industrial Use (GIUs) Permits or Mineral Extraction and Metallurgical Processing (MEPs) Permits and establish a new permit, with a 100% replenishment obligation, for limited non-irrigation uses without direct access to renewable supplies in the Phoenix, Pinal, Prescott, and Tucson AMAs (and under certain conditions in the Santa Cruz AMA) after 2025 or 2040 in the Pinal AMA.

**B.3.e:** Request legislation to modify the statutes to authorize municipal and industrial groundwater users in the Phoenix, Pinal and Tucson AMAs, required to replenish under recommendation B.3.c and B.3.d., to enroll in the Central Arizona Groundwater Replenishment District. (Same as A.2.e)

## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

**B.4.a:** Request legislation to modify the statutes to reduce the maximum pump capacity of new exempt wells that file a Notice of Intention to drill a well after the effective date of the legislation, to 20 gallons per minute unless the Director of the Arizona Department of Water Resources (ADWR) determines that a higher rate is needed for a particular use. In such cases, the statute would also need to be modified to authorize ADWR to request the installation of a meter and the submittal of an annual report to the ADWR.

**B.4.b:** Request legislation to modify the statutes to increase the processing time frame for exempt well permits from the current 15 day limit to a longer time frame only for those applicants who request a higher pump capacity (under B.4.a) or for those wells affected by the new well permitting requirements for protection of riparian areas (under B.1.a).

**B.4.c:** Request legislation to modify the statutes to prohibit new exempt wells that file a Notice of Intention to Drill after the effective date of the legislation from being drilled within a municipal water provider's service area (city, town, private water company or irrigation district delivering water for potable uses) unless the municipal water provider denies service.

**B.4.d:** Request legislation to modify the statutes to require existing exempt well owners to file an objection within 30 days to an application for a new non-exempt well, filed after the effective date of this legislation, and require the Director of the Arizona Department of Water Resources to disregard the impact of the proposed non-exempt well if the applicant offers to the existing exempt well owner a no-cost service connection to a municipal provider's water service area.

**B.4.e:** Request legislation to modify the statutes to authorize existing exempt well owners whose well has gone dry, contrary to the conclusions of the well impact analysis for a non-exempt well permitted after the effective date of this legislation, to seek recourse, through a civil action in Superior Court, against the non-exempt well owner.

**B.4.f:** Request legislation to modify the statutes to require the Director of the Arizona Department of Water Resources to disregard the impact of a new non-exempt that files an Application for Drilling Permit after the effective date of this legislation, on a new exempt well that was drilled or had filed an Notice of Intention to drill a well after the effective date of the legislation.

**B.5:** Support continued discussions to find appropriate incentives to encourage development on agricultural lands and to reduce groundwater mining.

**B.6:** Maintain the existing calculation of extinguishment credits for Type One Grandfathered Rights, Type Two Grandfathered Rights and Irrigation Grandfathered Rights contained in Rules for Assured Water Supply in the Phoenix and Tucson AMAs.

**C.1:** Request legislation to modify the statutes to adopt maps delineating protection zones for the streams and cienegas included on the List of Designated Riparian Areas in Figure 5a and authorize the Water Protection Fund to review the list and protection zones and to recommend modifications, through a public process, to the legislature.

## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

C.2.a: Request legislation to modify the statutes to repeal the session law diverting the in-lieu fees paid by out of state Water Bank participants.

C.2.b: Support the Commission's recommendation for the legislature to provide full funding of the annual general fund appropriation of \$5 million dollars for the Water Protection Fund.

C.2.c: Request legislation to modify the statutes to authorize the Water Protection Fund to control part of the revenues in its interest account and to define a process in which the Water Protection Fund Commission and the Arizona Department of Water Resources cooperatively develop an annual administrative budget.

C.2.d: Request legislation to modify the statutes to authorize the Water Protection Fund to grant money for purchase of water rights and conservation easements .

D.1: Initiate a process to develop a non-profit cooperative association to serve Arizona's need for effective water conservation throughout the State.

E.1: Support the Pinal AMA interests and the Arizona Department of Water Resources to cooperatively conduct a comprehensive planning and program development effort in order to ensure a reliable and sustainable supply of water for municipal and industrial uses and to develop necessary statutory, rule and policy changes by no later than October 1, 2004.

E.2: Support the Commission's recommendation to encourage the Arizona Department of Water Resources and the State to continue to work with the Prescott AMA interests and other involved parties to secure additional long-term water supplies for the AMA, including supplies from the Colorado River.

E.3: Support the Commission's recommendation to encourage the Santa Cruz AMA Groundwater Users Advisory Council, the Arizona Department of Water Resources, and the Santa Cruz AMA community to continue working together in identifying the Santa Cruz AMA's needs and developing responsive programs and procedures. It is anticipated that such programs may ultimately require the future enactment of legislation, including the creation of a water management authority and implementation of a settlement agreement.

F.1.a: Request legislation to modify the statutes to require the Arizona Department of Water Resources to submit a State of the AMA Report every five years.

F.1.b: Request legislation to modify the statutes to require the Arizona Department of Water Resources to submit a Biennial Water Management Report to the Governor and the Legislature summarizing the latest State of the AMA Report and the progress in achieving the AMA management goals.

F.2.a: Support the Commission's recommendation for increased financial support for the Rural Watershed Initiative.

F.2.b: Facilitate, in conjunction with the Director of the Arizona Department of Water Resources, a forum to develop a statewide planning process within one year.

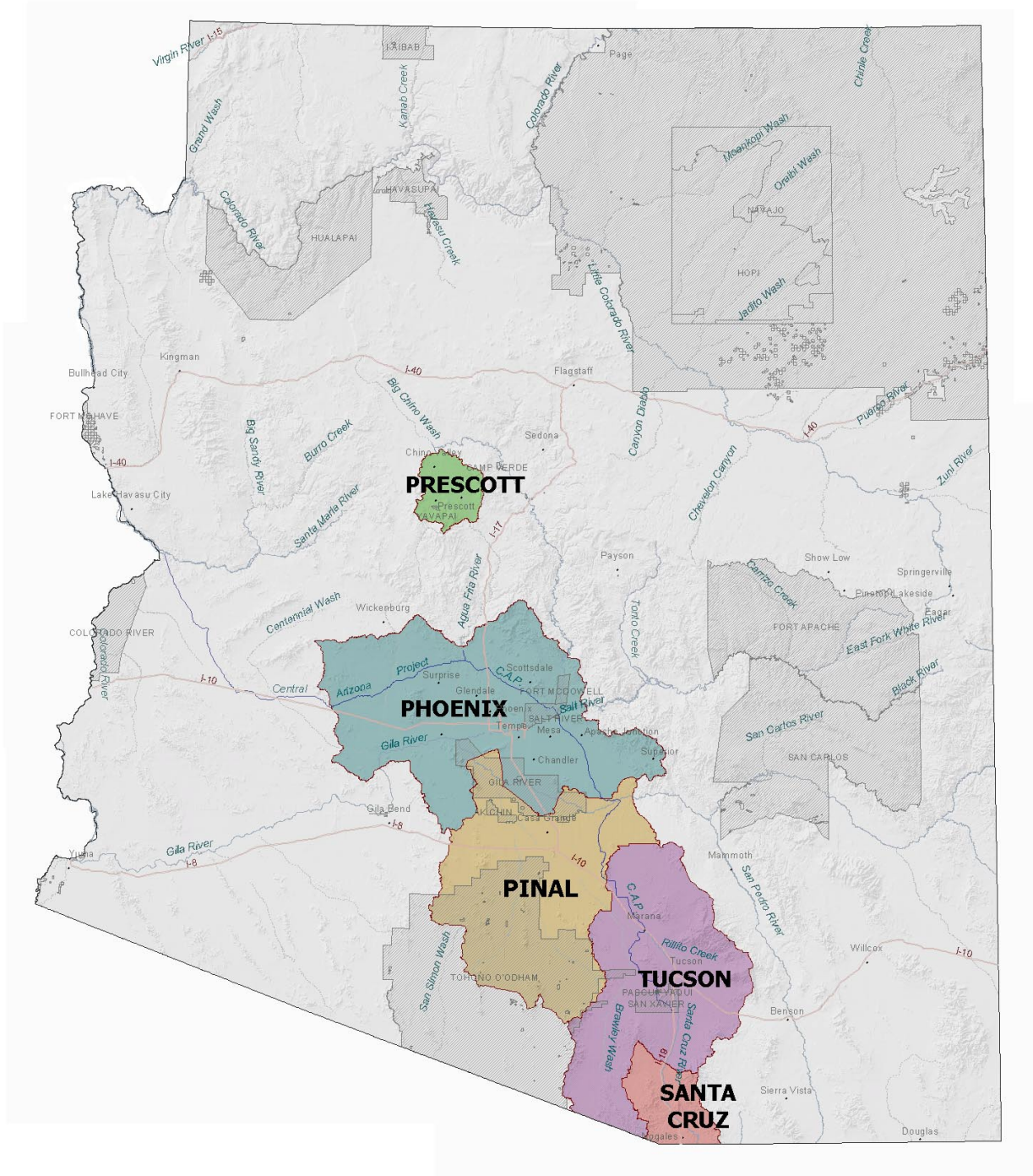
**GOVERNOR'S WATER MANAGEMENT COMMISSION**

F.3.a: Support the Commission's recommendation to encourage the Central Arizona Water Conservation District, in cooperation with Central Arizona Project (CAP) subcontractors, the Arizona Water Banking Authority (AWBA), the Arizona Department of Water Resources, irrigation districts and others to conduct a planning process to prepare for future use of water stored by the AWBA on behalf of the CAP subcontractors.

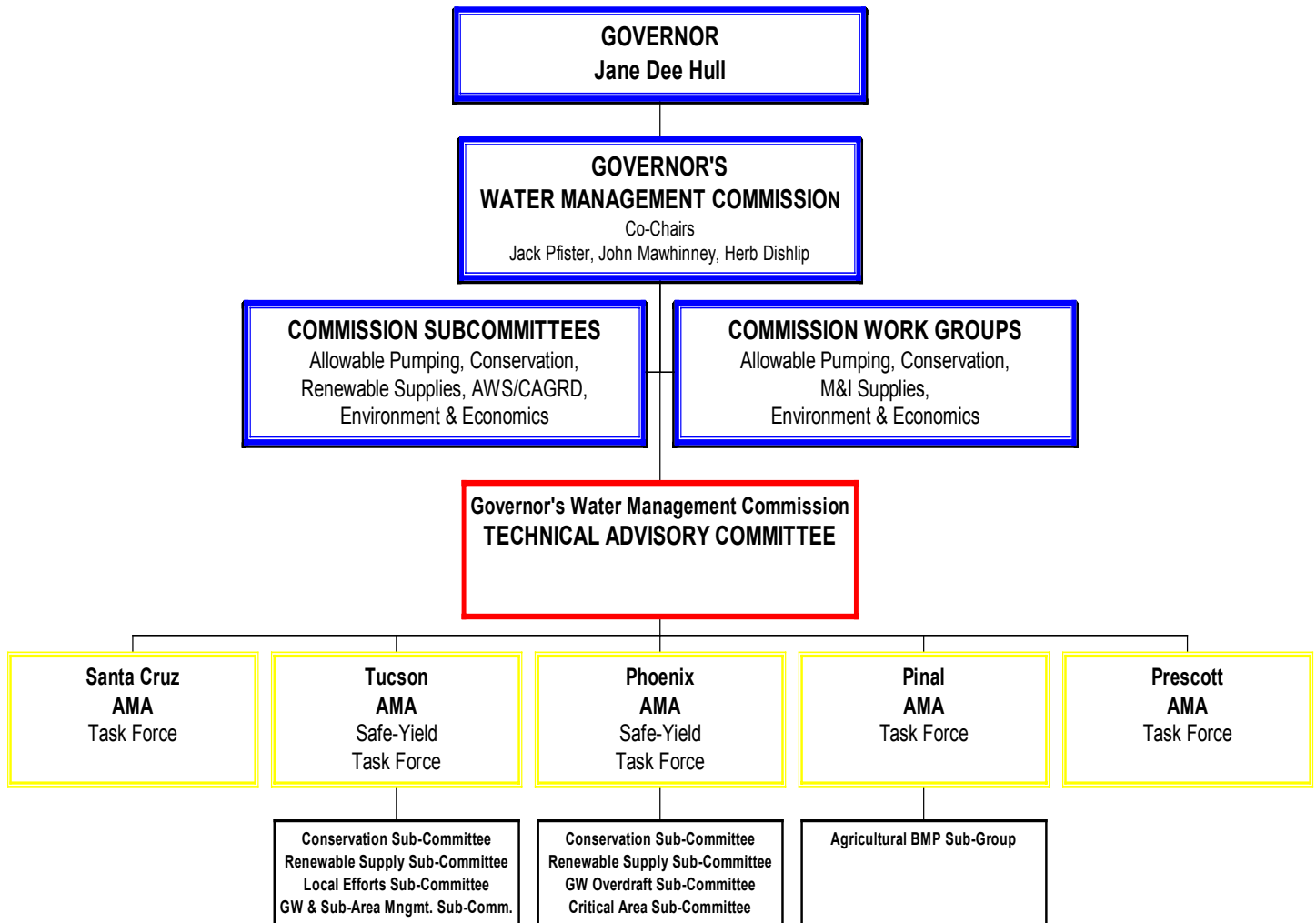
G.1: Initiate a review of all permit and program application fees by the Director of the Arizona Department of Water Resources and recommend a revision of the fee rules as necessary to ensure that they closely reflect the cost of processing applications.

G.2: Consider mechanisms to authorize the Arizona Department of Water Resources to retain permit and program application fees to support those programs and to free up limited general fund revenues to carry out the programs recommended by the Commission and adopted by the Legislature.

**~ FIGURE 1 ~**  
**Active Management Areas**



**~ Figure 2 ~  
Structure of the  
Governor's Water Management Commission  
Process**



**~ FIGURE 3a ~  
Time Series - Utilization of Water Supplies  
Volume by AMA**

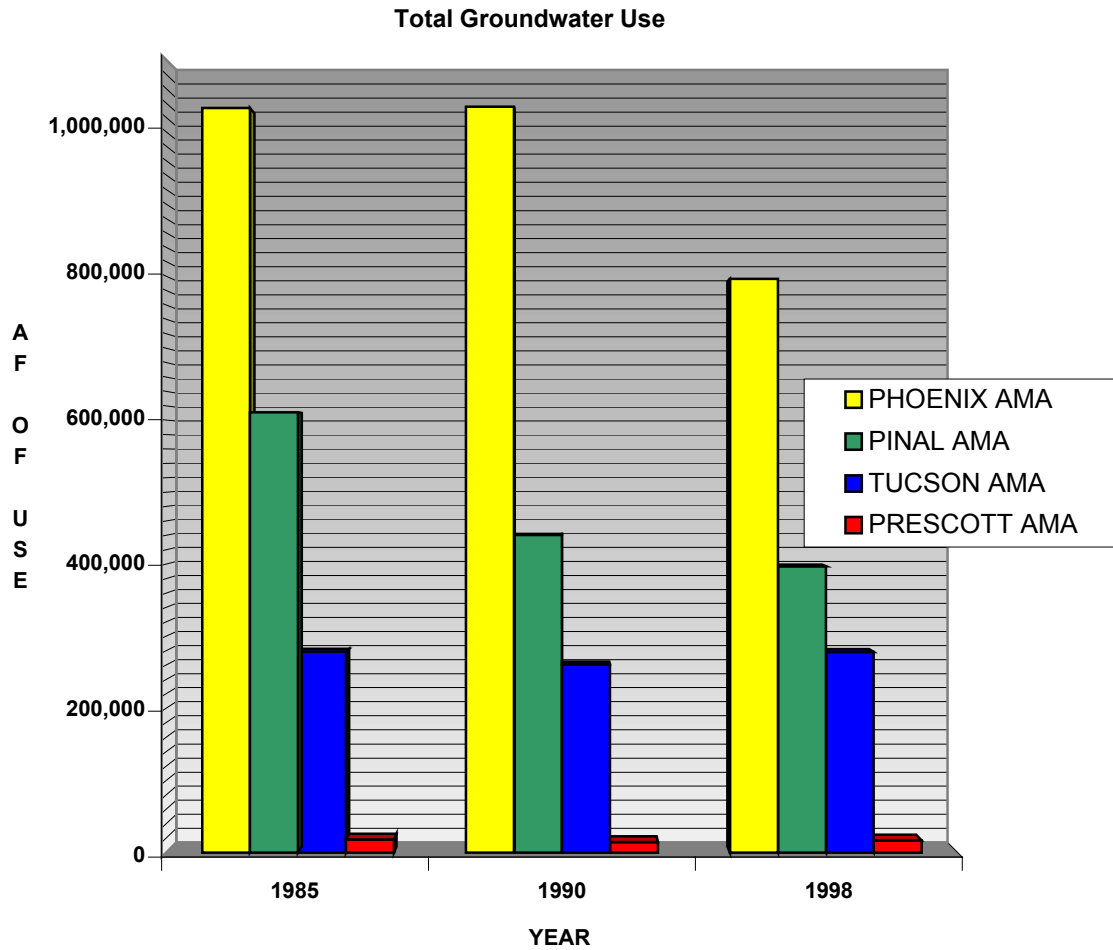
**Time Series  
Water Use by Source (Acre-Feet)**

	<b>GW</b>	<b>SW/CAP</b>	<b>EFFLUENT</b>	<b>TOTAL</b>
<b>PHOENIX</b>				
1985	1,032,800	1,035,600	41,225	2,109,625
1990	1,034,650	687,700	89,800	2,107,635
1998	796,300	1,088,700	152,600	4,215,262
<b>PINAL</b>				
1985	610,800	163,750	3,000	777,550
1990	440,500	337,800	4,500	782,800
1998	397,100	460,100	5,800	863,000
<b>PRESCOTT</b>				
1985	18,100	2,100	0	20,200
1990	14,800	900	350	16,050
1998	16,900	2,300	1,050	20,250
<b>TUCSON</b>				
1985	278,450	0	6,900	285,350
1990	260,600	0	11,000	271,600
1998	278,000	23,150	11,200	312,350
<b>SANTA CRUZ</b>				
1985				40,500
1990				45,200
1998				45,600

- Does not include water use by Indian Communities located within the AMAs
- Santa Cruz shown as total water, due to groundwater/surface water relationship

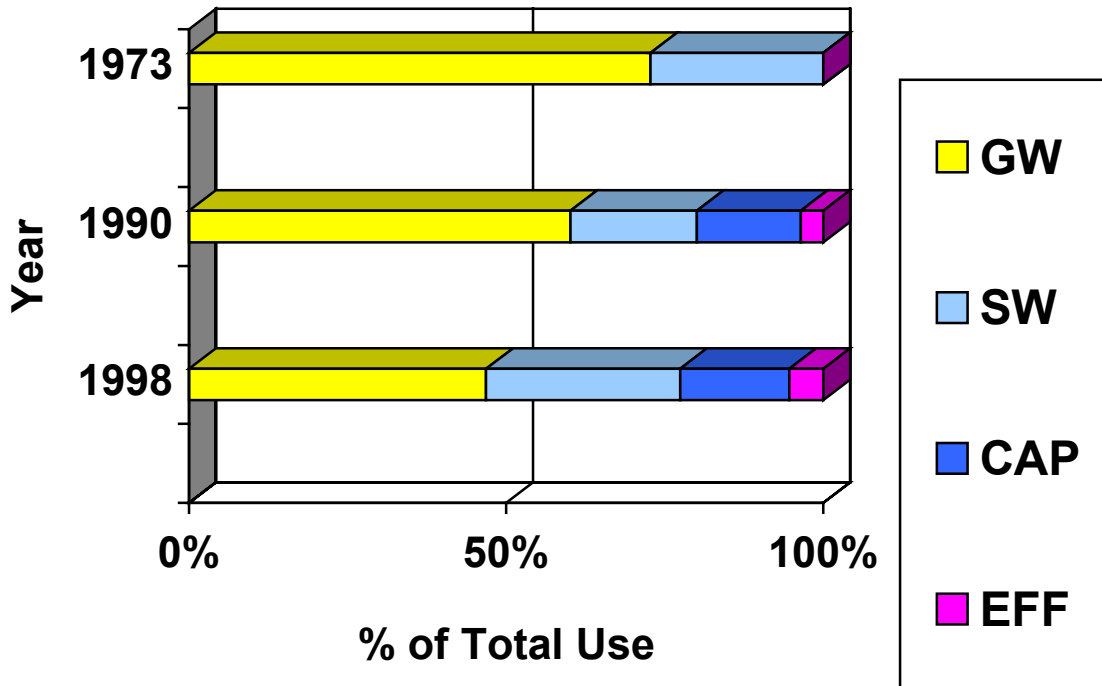


**~ FIGURE 3b ~**  
**Time Series - Utilization of Groundwater**  
**Volume by AMA**  
(Acre-Feet)



- Does Not Include Santa Cruz AMA due to issues with determining Groundwater and Surface Water.
- Does Not Include Groundwater Use by Indian Communities within AMAs as they are not subject to the provisions of the Groundwater Code.

**~ FIGURE 4 ~**  
**Time Series - Utilization of Water Supplies**  
**Within Current AMA Boundaries**



- Does Not Include Santa Cruz AMA due to issues with determining Groundwater and Surface Water.
- Does Not Include Groundwater Use by Indian Communities within AMAs, as they are not subject to the provisions of the Groundwater Code.

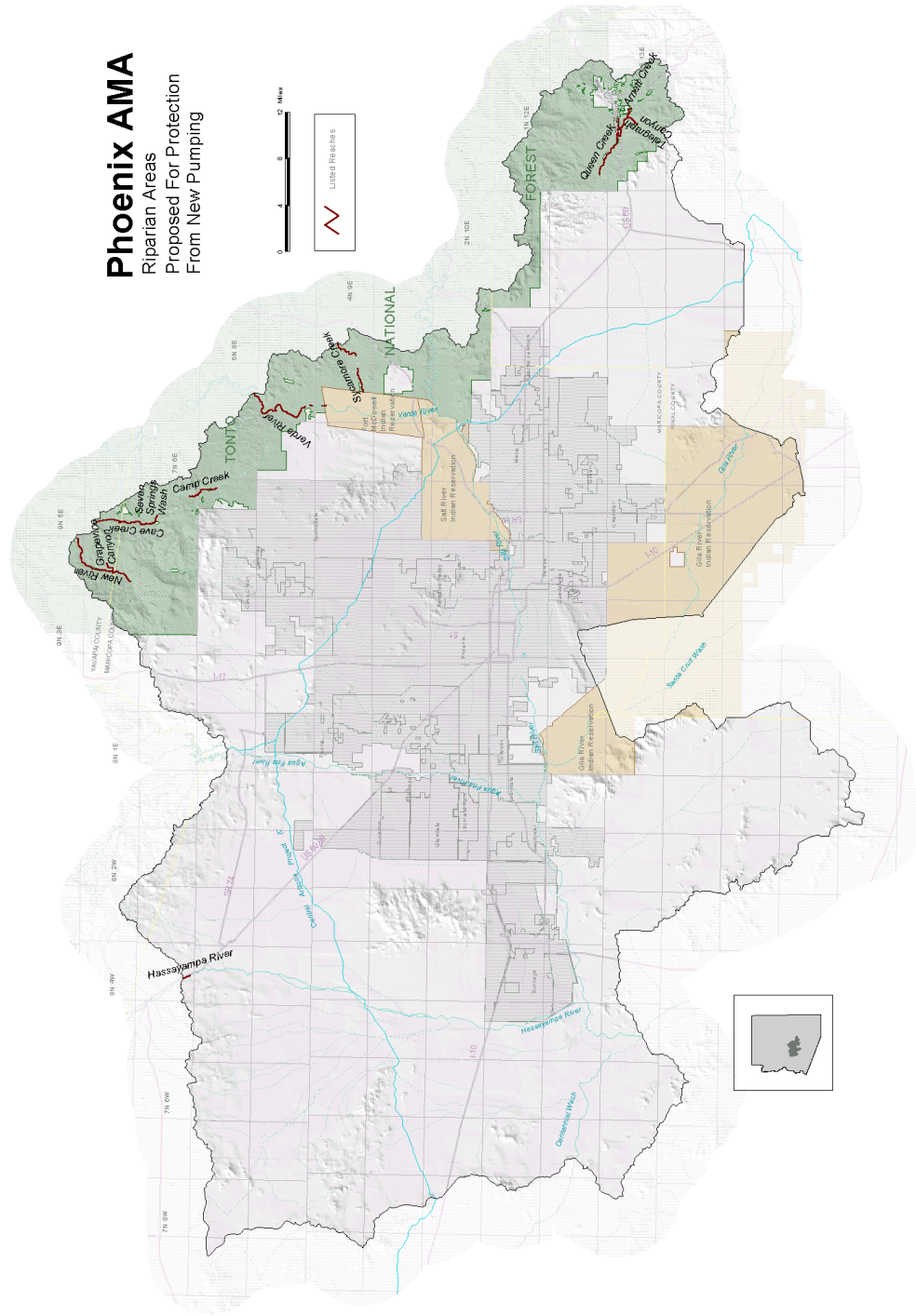
**~ FIGURE 5a ~**  
**LIST OF DESIGNATED RIPARIAN AREA PROTECTION ZONES**

Note: only SELECTED PORTIONS of the named streams, creeks and washes are included.  
 See associated maps for further detail.

<b>AMA</b>	<b>Riparian Area</b>
Santa Cruz	Santa Cruz River from international border to Nogales Wash Sonoita Creek below Patagonia Lake Potrero Creek from wetlands to confluence of the Nogales Wash Agua Fria from Pena Blanca Lake to I-19
Prescott	Granite Creek north to SR 89 Lynx Creek upstream of Lynx Lake Agua Fria – from ~2 miles south of SR 169 to AMA boundary Marsh associated with Del Rio Springs Upper Granite Creek
Pinal	{none}
Tucson	Marsh associated with Agua Caliente Spring Agua Caliente Wash Agua Verde Creek Arivaca Creek Canada del Oro Cienega Creek Davidson Canyon Honey Bee Canyon Marsh associated with La Cebadilla Spring Molino Canyon Posta Quemada Rincon Creek Sabino Creek Sutherland Wash Tanque Verde Creek Ventana Canyon Wild Burro Canyon
Phoenix	Seven Springs Wash Camp Creek Cave Creek Wash north of Seven Springs Verde above FMIC Queen Creek between Superior and Whitlow Dam* Hassayampa (7N, 4W, S33, 6N, 4W, S3 and part of 6N, 4W, S10) Sycamore Creek Grapevine Canyon in 8N, 4E Telegraph Canyon Arnett Creek New River at 8N, 4E

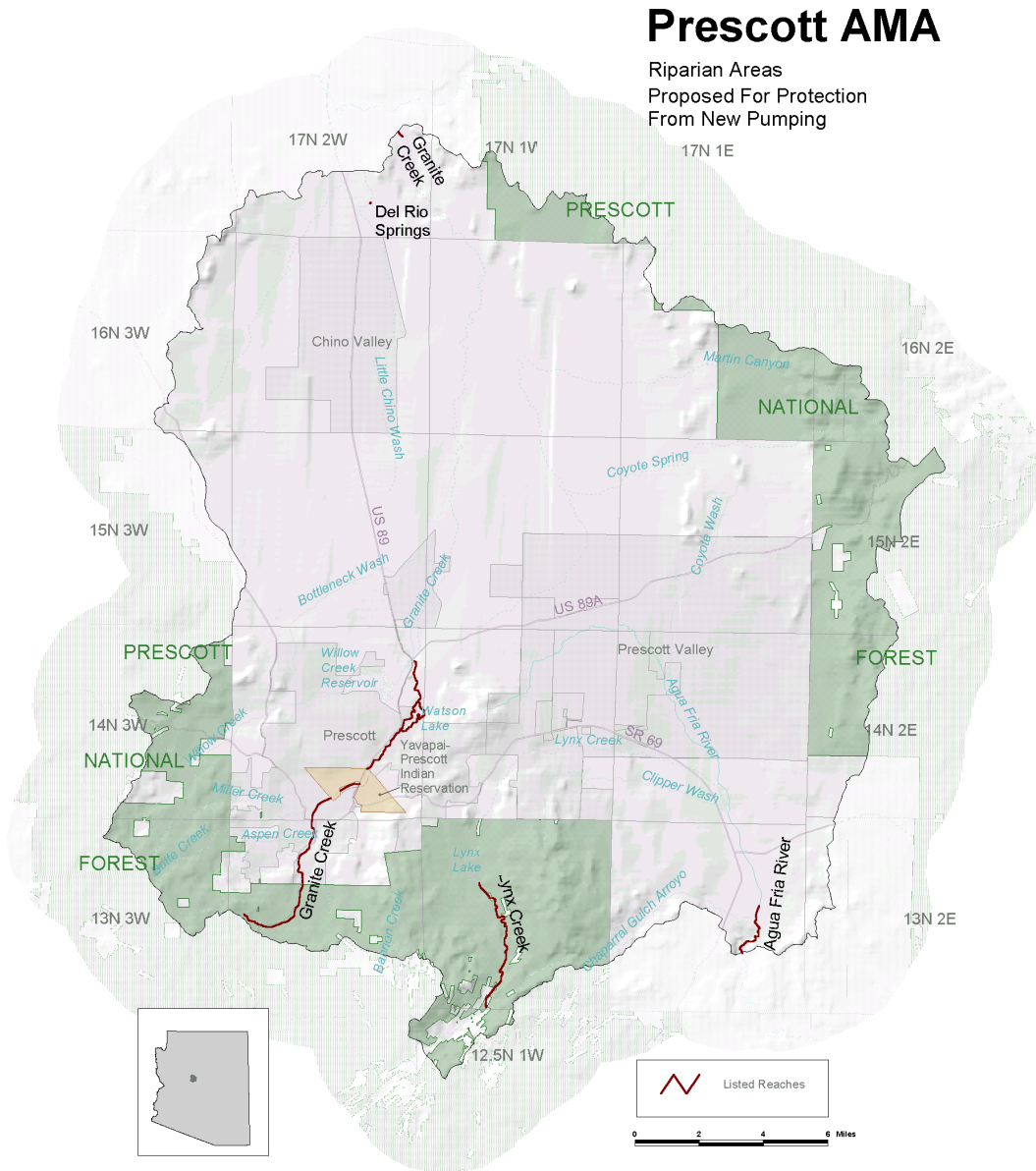
\* being evaluated regarding influence of effluent

**~ FIGURE 5b ~**  
**Phoenix AMA**  
**Designated Riparian Area Protection Zones**

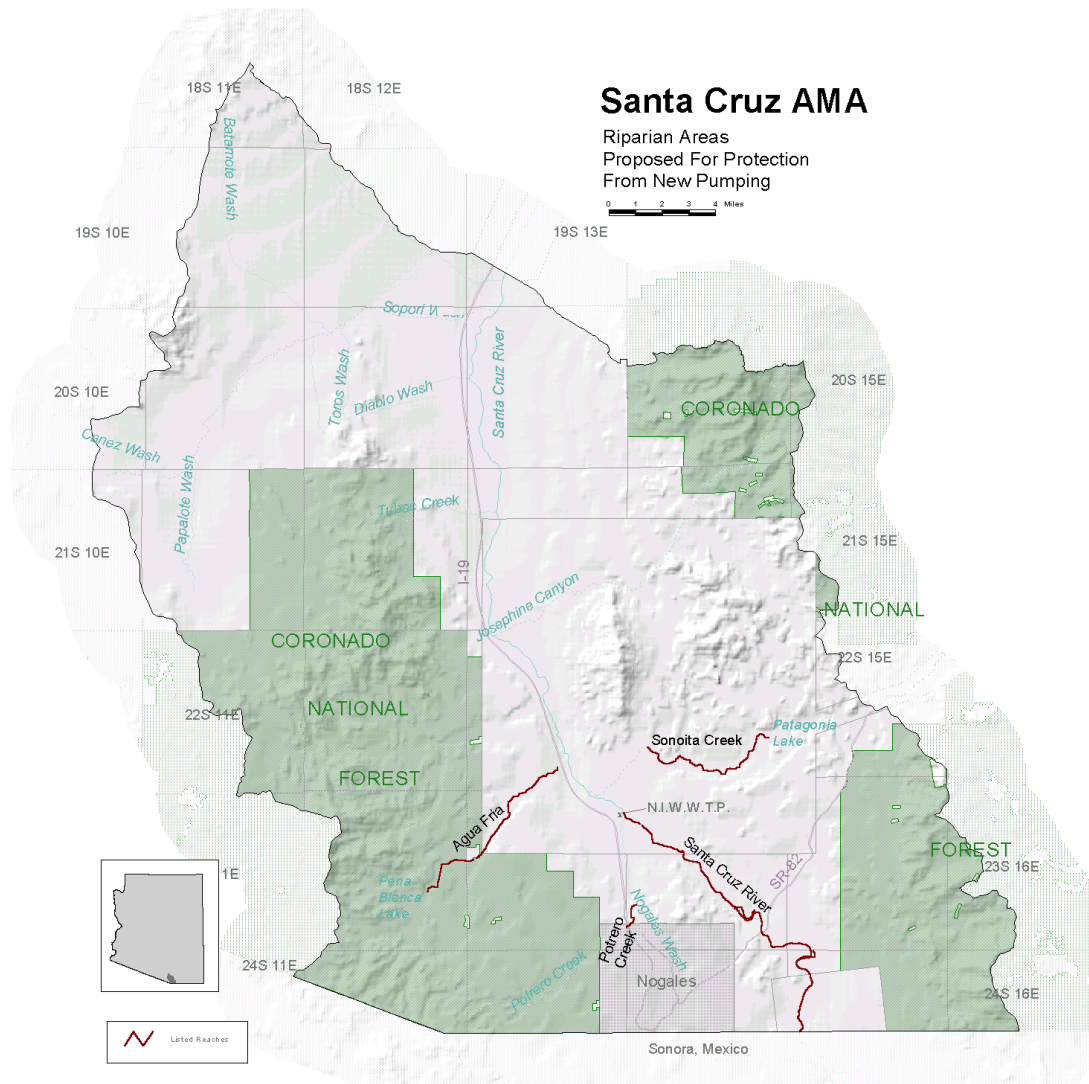


**Phoenix AMA**  
Riparian Areas  
Proposed For Protection  
From New Pumping

**~ FIGURE 5c ~  
Prescott AMA  
Designated Riparian Area Protection Zones**

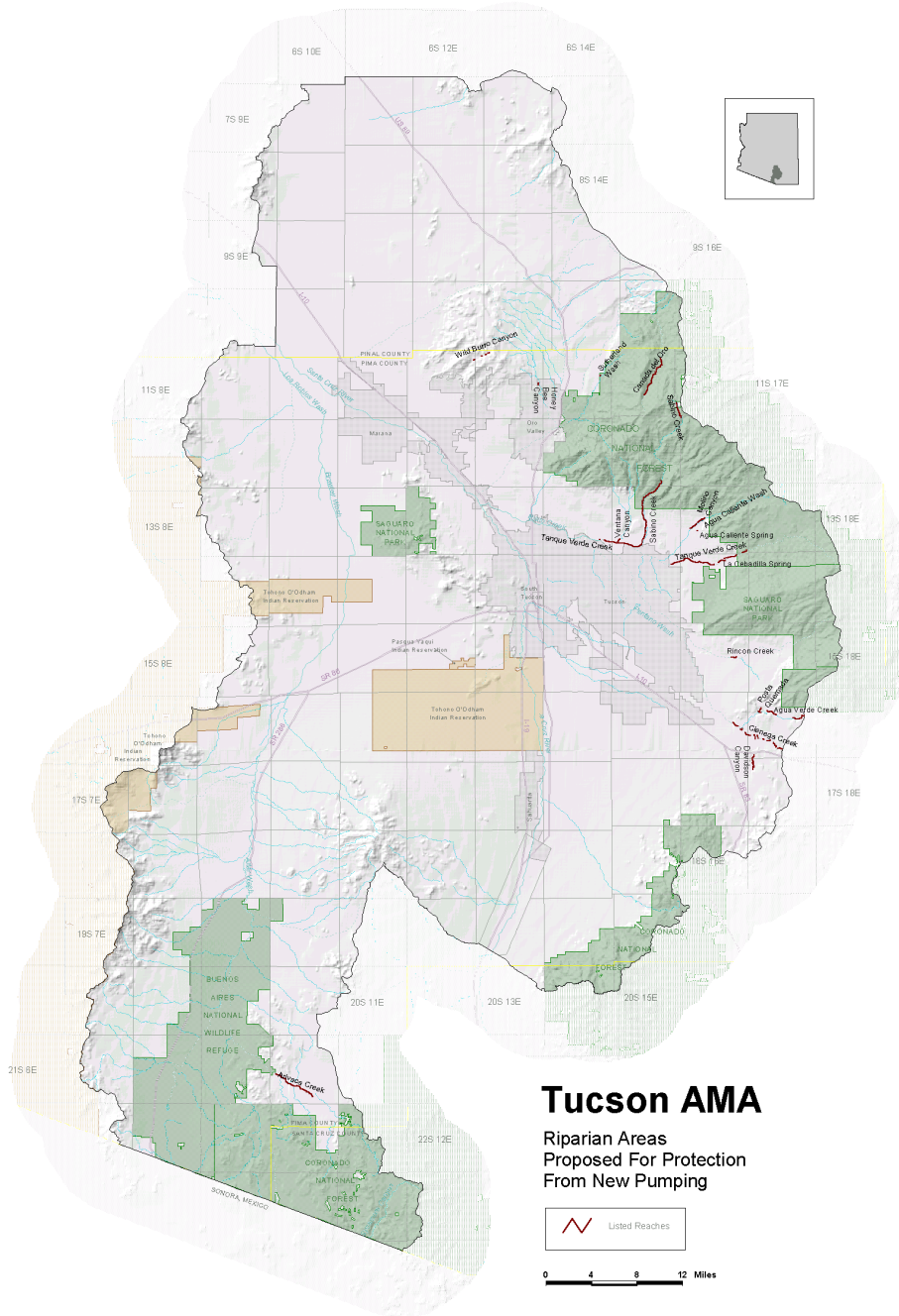


**~ FIGURE 5d ~  
Santa Cruz AMA  
Designated Riparian Area Protection Zones**





**~ FIGURE 5e ~  
Tucson AMA  
Designated Riparian Area Protection Zones**



## **ATTACHMENT 1**

### **ACRONYMS AND ABBREVIATIONS**

Active Management Area	AMA
Arizona Corporation Commission	ACC
Arizona Department of Environmental Quality	ADEQ
Arizona Department of Water Resources	ADWR
Arizona State Land Department	ASLD
Arizona Water Banking Authority	AWBA
Assured Water Supply	AWS
Best Management Practices	BMP
Central Arizona Groundwater Replenishment District	CAGRD
Central Arizona Project	CAP
Central Arizona Water Conservation District	CAWCD
Comprehensive Environmental Response Compensation and Liability Act	CERCLA
Environmental Protection Agency	EPA
General Industrial Use Permits	GIU Permits
Governor's Water Management Commission	Commission
Groundwater Users Advisory Council	GUAC
Irrigation Non-Expansion Area	INA
Mineral Extraction Permit	MEP
Water Infrastructure Financing Authority	WIFA
Water Quality Assurance Revolving Fund	WQARF



**ATTACHMENT 2**  
**TECHNICAL ADVISORY COMMITTEE MEMBERS**

**Chairman**

Jim Holway ADWR Assistant Director - Groundwater Management

**AMA Voting Representatives**

Brian Betcher Assistant General Manager, Maricopa-Stanfield IDD  
William Beyer Attorney, William G. Beyer Esq.  
Bill Chase Water Advisor, City of Phoenix  
Marvin Cohen Attorney, Sacks-Tierney, P.A. Lawyers  
Bonnie G. Colby Professor, U of A Dept of Agricultural & Resource Economics  
Herb Dishlip ADWR Assistant Director for Statewide Water Planning  
Kathy Ferris Attorney  
Alan Forrest President & GM, Community Water Company of Green Valley  
John Geib City Manager, Town of Florence  
Jack Gracie Property Engineer, ASARCO  
Dava Hoffman Consultant, Dava & Associates, Inc.  
Hugh Holub Attorney  
Laura Hubbard Nature Conservancy  
Ray Jones Vice President & General Manager, Citizens' Utilities  
Mark Larkin Tubac Farms  
Cliff Neal Manager, Central AZ. Groundwater Replenishment District  
Scott Riggins Farmer and Board Member, Florence Coolidge NRCD  
Dave Roberts Water Rights, Contracts & Research Archives Mgr., Salt River Project  
Priscilla Robinson Consultant  
Dennis Rule Administrator, Tucson Water  
Jami Schulman Corporate Counsel, Pulte Homes  
Jim Sweeney General Manager, Maricopa Water District  
Larry Tarkowski Public Works Director, Town of Prescott Valley

**Ex-Officio/Non-Voting Representatives:**

Alejandro Barcenas Area Director, ADWR Santa Cruz Active Management Area  
Tom Belshe Executive Director, Greater AZ Development Authority  
Bill Dowdle Natural Resources Div. Director, Arizona State Land Department  
Mark Frank Area Director, ADWR Phoenix Active Management Area  
Jim Holt Area Director, ADWR Prescott Active Management Area  
Chuck Graf Deputy Director, Water Quality Division, ADEQ  
Linda Stitzer Area Director, ADWR Tucson Active Management Area  
Sheldon Jones Director, Arizona Department of Agriculture  
Dennis Kimberlin Area Director, ADWR Pinal Active Management Area  
Steve Olea Assistant Director, Arizona Corporation Commission Utilities Division

**Former Members**

Jack Haenichen Arizona Department of Commerce (retired)  
Kathy Jacobs Area Director, ADWR Tucson Active Management Area  
Karl Polen Senior Vice President & Chief Financial Officer, Robson Communities  
Larry Robertson Attorney, Munger-Chadwick  
Deborah Scott Director, Arizona Corporation Commission Utilities Division  
John Sullivan Associate General Manager, Salt River Project  
David Snider Library Director, City of Casa Grande

**ATTACHMENT 3**  
**AMA TASK FORCE MEMBERS**

**PHOENIX AMA SAFE-YIELD TASK FORCE COMMITTEE STRUCTURE & MEMBERSHIP**

<b>NAME</b>	<b>Subcommittee Membership</b>
Bill Allen	Critical Area
Joseph Acuna	Conservation
Kathy Aleman	Conservation
Bill Baker	Critical Area, Conservation, Renewable Supplies, GW Overdraft
Steven Bales	Critical Area, Conservation, GW Overdraft
Robert Barcello	Critical Area
William Beyer*	SYTF Chair
Teresa Brady	Renewable Supply
Karen Bowden	Conservation
Bill Chase*	SYTF, Renewable Supplies, Water Budget
Steve Cleveland*	SYTF
Val Danos	Renewable Supplies, GW Overdraft, Water Budget
Dave Dennison	Critical Area, Conservation, Renewable Supplies, GW Overdraft
Andy Dougherty	Critical Area, Conservation, Renewable Supplies, GW Overdraft
Marilyn DeRosa*	SYTF, Critical Area
Leonard Dueker	Renewable Supplies
Arnott Duncan*	SYTF, Conservation
Shawn Emerson	Conservation
Sandra Fabritz	Critical Area, Conservation, Renewable Supplies, GW Overdraft, Water Budget
Erik Filsinger*	SYTF, Critical Area, Conservation, Renewable Supplies, GW Overdraft, Water Budget
Jeannette Fish	Conservation, GW Overdraft
Mark Frank*	SYTF, Critical Area, Conservation, Renewable Supplies, GW Overdraft, Water Budget
Paul Gardner*	SYTF, Critical Area
Bill Garfield	Critical Area, Conservation, Renewable Supplies, GW Overdraft, Water Budget
Marvin Glotfelty	Critical Area
Jay George	Critical Area
Harold Goodman	Conservation, Renewable Supplies
Bob Griffith	Conservation
Tamara Havelaar	Critical Area, Conservation, Renewable Supplies, GW Overdraft
Bruce Heiden	Conservation, GW Overdraft
Lisa Helm	Conservation
John Hetrick	Critical Area, Conservation, Renewable Supplies, GW Overdraft, Water Budget
Brad Hill	Critical Area, Renewable Supplies, Water Budget
Yvonne Hunter*	SYTF, Renewable Supplies

\* Safe-Yield Task Force Members

**PINAL AMA TASK FORCE MEMBERSHIP**

Cheryl Banta	Don England	Dennis Kimberlin
Bruce Bartlett	Bill Garfield	Scott Riggins
Bret Benedict	John Geib	Trappeur Rahn
Brian Betcher	Walter Holland	David Snider
Randy Edmond	Tom Isom	

## **GOVERNOR'S WATER MANAGEMENT COMMISSION**

### **PRESCOTT AMA TASK FORCE MEMBERSHIP**

Brad Huza                      Jon Olson                      Carl Tenney  
Marvin Larson                Larry Tarkowski

### **TUCSON AMA SAFE-YIELD TASK FORCE MEMBERSHIP**

Tom Arnold	Chris Avery	Larry Beckelman
Paul Bennett	John Bicking	Mike Bradley
Fred Brinker	MaryBeth Carlile	Bill Carnes
Cyndi Collins	Robert Condit	Dave Crockett
Hector Conde	Joe Crowson	Bob Decker
Brad DeSpain	Julia Fonseca	Alan Forrest
Jay Fumusa	Jack Gracie	Laura Grignano
Jeanmarie Haney	Tanya Heikkila	Greg Hess
Eric Holler	Chuck Hollingsworth	David Hook
Kathy Jacobs	Dan Johnson	John Kai
Lois Kulakowski	Val Little	Gerald Matlock
Sharon Megdal	Barbara Morehouse	Elaine Nathanson
Cliff Neal	Andy Newcomb	Carl Ortiz
Glen Peterson	Jim Peterson	Job Prak
An Phillips	Prakash Rao	Dave Roberts
Priscilla Robinson	Dennis Rule	Vicente Sanchez
Pete Schlegel	Kenneth Seasholes	Kathy Shearin
Cindy Shimokusu	Bob Smith	Lisa Spahr
Linda Stitzer	Mark Stratton	Warren Tenney
Craig Tinney	Constance Torres	Bayer Vella
Keith Walden	Ralph Ware	Patsy Waterfall
Matt Weber	Mike Weber	Denise Wieland

### **Subcommittees**

#### Groundwater Pumping and Sub-Area Management Subcommittee

Residual Pumping Work Group - Robert Condit and Dennis Rule, Co-Chairs  
Sub-Area Management Work Group - Mike Bradley, Chair

#### Renewable Supply Subcommittee

Infrastructure Work Group - Jack Gracie, Chair  
Recharge Issues Work Group - Mark Stratton, Chair  
Use of Renewable Supplies Work Group - Lisa Spahr, Chair

#### Conservation Subcommittee

Cyndi Collins, Val Little, Elaine Nathanson – Co-Chairs

#### Local/Community Safe-Yield Efforts

Chris Avery and Fred Brinker, Co-Chairs

### **SANTA CRUZ AMA TASK FORCE MEMBERSHIP**

Simon Escalada	Mark Larkin	Sherry Sass
Duke Petty	Larry Robertson	
Ron Fish, Chair	Roy Ross, Vice-Chair	

## **ATTACHMENT 4**

### **PRINCIPAL SUPPORTING DOCUMENTS AND PAPERS**

All of the documents identified in this section are available in the Supplemental Appendices to the Final Report. Numerous other documents produced as part of the Commission process are also included in the Supplemental Appendix and listed in the Appendix Table of Contents.

### **TAC ISSUE PAPERS**

#### **1. Groundwater Issues #1: Allowable Groundwater Pumping. TAC, 11-28-00.**

This issue summary identifies existing groundwater withdrawal authorities, charts groundwater withdrawals by agricultural, industrial and municipal sectors within the five Active Management Areas (AMAs) and identifies issues related to allowable groundwater pumping. The majority of the issues described in this paper focus on the impacts from "allowable" groundwater pumping authorities for agricultural, industrial and municipal uses and the potential impacts these continued authorities may have on the ability to achieve the statutory management goals in the AMAs. Specific issues include: the accumulation of flexibility account credits on the ability of the Tucson AMA to reach their management goal of safe-yield by 2025; the economic impact of conservation requirements on agricultural users in the Pinal AMA; and the potential impacts of currently unused Grandfathered Rights in the Santa Cruz AMA. Additionally, the paper describes concerns raised regarding the proliferation and concentration of exempt wells, especially in the Prescott and Santa Cruz AMAs, and the Arizona Department of Water Resource's current temporary Well Spacing and Well Impact Rules. Finally, this paper identifies the need to address the tools and assumptions used to assess the progress in achieving the management goals of the AMAs.

#### **2. Groundwater Issues #2: Conservation Programs. TAC, 01-31-01.**

This paper briefly describes the agricultural, municipal and industrial conservation programs set forth in the Management Plans for each AMA, as well as water use trends and conservation practices. The paper then describes the conservation program issues by assessing the purpose of water conservation, potential improvements to the current programs, and new water conservation approaches. For the agricultural sector, this includes re-evaluating the agricultural base program's calculation of irrigation water duties and the possibility of an agricultural Best Management Practices (BMP) program, as well as agriculture's ability to compete in today's economy in response to the Conservation requirements. For the municipal sector, issues include the ability of private water companies to pass through renewable supply costs, assumptions used to develop current conservation requirements, uncertainty about anticipated water savings from certain conservation measures, and the limitations of municipal providers to regulate the amount of water used by their customers.

#### **3. Meeting the Challenge: The Transition to Renewable Water Supplies. TAC, 11-20-00.**

This paper serves as the introduction to the two Renewable Supplies Issues papers by describing the history of renewable supply use, renewable supplies available in Arizona, the role of renewable supplies in Arizona's water portfolio, and current incentives for renewable supply use. Additionally, the paper identifies the entities and programs that have led to

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increased utilization of renewable supplies for current uses as well as future uses -- including the Arizona Water Banking Authority (AWBA), the Central Arizona Groundwater Replenishment District (CAGR), and the recharge and recovery activities within the AMAs. The paper also identifies the pending Indian settlements as a variable in Arizona's water supply picture. The primary focus of this paper is the transition that is occurring at various levels in each AMA towards the full utilization of renewable supplies, including surface water supplies, CAP entitlements, and effluent.

### **4. Renewable Supplies Issues #1: Availability, Reliability & Utilization of Renewable Supplies. TAC, 11-19-00.**

This paper briefly outlines renewable supply resources available in Arizona, recent efforts to increase renewable supply utilization, and data reflecting renewable supply utilization in the five AMAs. Issues raised in this paper relate to economic, legal and regulatory/institutional constraints on the transition from groundwater to renewable supplies in the AMAs. Issues outlined include infrastructure and storage costs, the cost of groundwater versus renewable supplies, the legal distinction of groundwater vs. surface water in the Santa Cruz AMA and the lack of additional renewable supplies, including CAP supplies, in the Prescott and Santa Cruz AMAs.

### **5. Renewable Supplies Issues #2: Storage & Recovery. TAC, 11-24-00.**

This issue paper gives background on recharge and recovery programs, recharge methods and recharge permits/data. Issues are described relating to the Central Arizona Groundwater Replenishment District (CAGR), which uses recharge to replenish water on behalf of its customers. Concerns have been raised about the CAGR's ability to meet its long-term replenishment obligations and the lack of a requirement that the CAGR recharge water where its members are withdrawing groundwater. Other issues raised in this paper include concerns with the lack of appropriate sites for recharge and recovery, the location of recharge projects relative to recovery wells and areas that need the water supplies, and the need for regional coordination of storage and recovery efforts. Additionally, the paper describes regulatory constraint issues in relation to multi-purpose benefit recharge projects, the current recharge permitting process, the current cost of recharge, the inability to earn long-term storage credits for appropriable surface water supplies, and inadequate evaluation of the hydrologic feasibility of Groundwater Savings Facilities.

### **6. Assured Water Supply Issue Paper. TAC, 12-22-00.**

In its background, this paper describes the Assured Water Supply (AWS) Rules' role in increasing the use of renewable supplies in the municipal sector. Given the importance of the AWS Rules in decreasing the municipal sector's dependence on groundwater, the paper highlights discrepancies in the AWS Rules, including municipal water providers or certain customers of municipal providers not subject to the AWS Rules. These discrepancies are highlighted in the differences between designated and undesignated providers, between Certificates and Designations, and between municipal and private water company providers. Other issues include groundwater uses allowed under the AWS Rules and the lack of a requirement that the CAGR secure a 100 year water supply for their replenishment obligations. The application of the AWS Rules in specific AMAs is also addressed in the paper, including the interpretation of the unique management goal in the Pinal AMA and the absence of the CAGR in the Prescott and Santa Cruz AMA.

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### **7. Management Framework Issues: Review of AMA Goals. TAC, 03-12-01.**

The paper first outlines the AMAs' management goals and weighs the benefits and costs of the different goals. The paper then goes on to describe management goal issues in each of the AMAs, all of which were developed by the AMA Task Forces.

In the Phoenix AMA, interest has been raised in assessing the progress towards achievement of the safe-yield goal, while the main variable in meeting the management goal is continued agricultural and industrial groundwater pumping.

In the Tucson AMA, meeting the safe-yield goal may depend on building mechanisms and infrastructure to more fully utilize their CAP allocation and on whether Indian supplies become available in the future.

For the Prescott AMA, major concerns revolve around the fact that the only renewable supply options are imported groundwater, which has not occurred to date, and effluent; however, it is unlikely that the Prescott AMA will reach safe-yield without imported groundwater.

For the Pinal AMA, whose goal relates to preserving existing agricultural economies while allowing development of non-irrigation uses, the management goal and its relation to the M&I portion of the goal is currently under re-evaluation.

For the Santa Cruz AMA, with interrelated surface water and groundwater supplies, challenges include implementing well spacing and well impact programs, interpreting the AWS Rules, recharge issues, international issues with Mexico related to a shared wastewater treatment plant, management of surface water rights, and institutional options for regional water management.

### **8. Critical/Sub-Area Management Issue Paper. TAC, 04-02-01.**

This issue paper, developed by a work group of the TAC, provides possible examples of current or future critical areas, describes the need for a sub-area management approach and provides alternative management approaches and tools for critical area management.

## **SUBCOMMITTEE REPORTS**

### **1. Recommendations from the Allowable Pumping Subcommittee**

The Allowable Pumping Subcommittee developed recommendations to address both the prevention of problems created by current and new groundwater pumping (*i.e.* – “plugging the holes in the bucket”) and options for replenishing the aquifer (*i.e.* – “refilling the bucket”). Prevention measures include additional well impact and permitting requirements for new non-exempt wells, limits on new exempt wells, and a prohibition on certain groundwater withdrawal authorities after 2025. Replenishment options include a “mined groundwater tax” for certain municipal and industrial groundwater users that can be applied to renewable water supply infrastructure and replenishment activities and a recommendation for a full replenishment requirement for all municipal and industrial groundwater users not subject to the Assured Water Supply Rules. Additionally, the subcommittee report proposes ways to encourage development on agricultural land.

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### **2. Recommendations from the AWS & CAGRD Subcommittee**

The AWS & CAGRD Subcommittee developed recommendations for both Assured Water Supply (AWS) issues and Central Arizona Groundwater Replenishment District (CAGRD) issues, since CAGRD membership allows members in the Phoenix, Pinal and Tucson AMAs a method of meeting the "consistency with management goal" AWS requirement. The Subcommittee's recommendations mainly focused on the CAGRD, including recommendations to form a CAGRD work group, require a replenishment reserve for the CAGRD, alter the timeline for the CAGRD Plan of Operation to 100 years, and encourage strategically located recharge activities by the CAGRD. The Subcommittee also made recommendations on groundwater allowances under the AWS Rules and a replenishment requirement on mined groundwater pumping by undesignated providers, untreated providers, industrial water right holders, and withdrawal permits. Finally, the report identifies issues recommended for further consideration by the Commission, including consistency with management goal for non-CAP AMAs and differences created by the AWS Rules.

### **3. Recommendations from the Conservation Subcommittee**

The Conservation Subcommittee's report includes a goal and principles supporting a shift from a primary focus on regulation to providing more education and assistance in a statewide, cooperative framework in order to achieve the maximum amount of conservation in Arizona. Recommendations in the report include a proposal for a Statewide Water Conservation Commission and support for the development of a Best Management Practices (BMP) agricultural conservation program by interested parties.

### **4. Recommendations from the Environment and Economics Subcommittee**

The Environment and Economics Subcommittee report focuses on the protection of critical areas and riparian areas/ecologically significant habitat. These recommendations include a critical area management program for current localized areas within AMAs experiencing water management problems and a safety net approach to prevent future critical areas. Additionally, the recommendations of this subcommittee include enhancements to the Water Protection Fund including full statutory funding, organized planning for climate and drought management, increased collection and availability of groundwater quality data, the protection of riparian areas through increased well restrictions, and proposals to protect ecologically significant habitat.

### **5. Recommendations from the Renewable Supplies Subcommittee**

The Renewable Supplies Subcommittee developed recommendations for the use of renewable supplies, including supporting the current incentives and regulation on the use of effluent and a proposal for a statewide water management planning function. Recommendations also focus on recharge and recovery, including support for development of additional recharge sites, development of a recharge and recovery planning process, and support for AWBA to annually transfer, to the CAWCD, credits stored by the AWBA using the \$.04 ad valorem tax. Pricing recommendations include support for the existing rate setting procedures for excess CAP water, development of variable in-lieu water rates by the AWBA, a letter from the Commission to the ACC regarding incorporation of renewable supplies costs in private water company rates, and a special financing district for multiple jurisdiction water infrastructure projects.

## **ATTACHMENT 5**

### **ISSUES DISCUSSED WITH NO RECOMMENDATIONS**

The following issues and draft recommendations were extensively discussed by the Commission but were not adopted or were determined by the Commission to be unnecessary to address based on the information available at this time. In some cases, the Commission may have developed recommendations but were either unable to reach a consensus or due to the timeframe of the Commission were not able to develop enough information to adequately address or to thoroughly research the impacts of the recommendation. These are being included for information only.

#### **1. Sub-Area and Critical Area Management**

When the Commission process began, the development of a sub-area management program was a key concern of many. Commission members were unable to reach consensus on their concerns about the stigma of identifying "critical areas" and, with the exception of the riparian area designation proposal, the Commission developed no critical area programs. The need for local or critical area management was a major issue for several of the individual AMA Task Forces and the Technical Advisory Committee. Because the management goal of each AMA (except for Santa Cruz) is to be achieved on an AMA-wide basis, the concern was raised that the current programs developed to meet these goals do not provide adequate protection or sufficient management tools to prevent, mitigate, stabilize, and/or repair the localized sub-area problems that exist today or may arise in the future. Within AMAs, there are localized sub-areas experiencing problems ranging from waterlogged conditions and poor quality water to severe water level declines and loss of physical availability or land subsidence, and loss of water supplies for riparian habitat.

There were two different approaches developed to address critical area concerns. The first approach was to designate specific locations within an AMA as critical areas were considered by the Commission. The second approach was to add conditions to current AMA wide programs that seek to prevent or mitigate particular localized problems – referred to as the "safety net" approach. Under the first approach designated "critical areas" would be specifically identified and then programs developed and implemented to provide heightened levels of water management. For example, a potential new program might limit issuance of new withdrawal authorities within the boundaries of certain critical areas. Alternatively, under a safety net approach, current or future AMA wide programs might, through inclusion of specific criteria, address more localized concerns. Two current examples of the safety net approach were: 1) restrictions on recovering water stored outside the area of hydrologic impact of a recharge project if the regional water levels declines already exceed four feet per year; and 2) assured water supply physical availability requirements that sufficient groundwater must be available above a depth of 1,000 feet for 100 years to qualify for an assured water supply by joining the CAGR.

These two approaches to critical areas were discussed at the Commission's April 2001 Retreat. There was general agreement that managing sub-areas or critical areas was a significant issue but there were also substantial concerns with both



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approaches. A major concern focused on designating critical areas, the adverse impacts on the value of land, potential legal implications, and the stigma that could become attached to areas identified as critical.

Commission members opposing the critical area measures agreed to support revised well impact and permitting requirements that could address some of the critical area concerns. The proposal under consideration at that time included limiting the ability to drill a well in areas where there would be adverse impacts from the following:

- Pumping of groundwater in or near a municipal provider service area, such that physical availability previously demonstrated by a designated provider or by a holder of a Certificate of Assured Water Supply would no longer be available;
- Pumping of groundwater at rates that cause groundwater decline rates to exceed four feet per year, thus interfering with a municipal providers' ability to recover storage credits;
- Additional land subsidence;
- Migration of known plumes of groundwater contamination;
- Water in the younger alluvium utilized by surface water right holders; and
- Natural ecosystems, including streams, lakes and wetlands, dependent on surface or shallow groundwater.

The Commission decided that the issue of land subsidence should be broadly addressed by a Task Force (see B.2.b.). The Commission developed a recommendation for protecting designated riparian areas. The Commission also decided that the other "adverse impacts" concerns did not require action.

### **2. Agricultural Best Management Practice Program**

The agricultural community and the ADWR have long been debating the appropriate efficiency requirements for the current water duty-based agricultural conservation program. Ongoing discussions between the agricultural community and ADWR led to the development of a Best Management Practices (BMP) program proposal. These proposals were brought to the Commission that considered recommending an interim program ending after a trial period. However, ADWR and the agricultural community reached an agreement outside of the Commission process that resolved issues with the current water duty-based program and developed a proposal for an interim Best Management Practices program for the third management period.

## **ATTACHMENT 6**

### **MINORITY REPORT ON WELL IMPACTS WITHIN RIPARIAN AREAS**

AUGUST 28, 2001 (Revised, December 6, 2001)

Submitted by: Mike Anable – Commissioner Arizona State Land Department and  
Bill Feldmeier – Northern Arizona Office Director, Office of the Governor

#### **ALTERNATIVE TO DRAFT LEGISLATION PROPOSING NEW WELL PERMITTING RESTRICTIONS – RIPARIAN AREAS**

At the August 10, 2001 meeting of the Governor's Water Management Commission, the Allowable Pumping Work Group presented draft legislation which would expand the authority of the Arizona Department of Water Resources (ADWR) to prohibit well drilling within one-half mile on either side of certain named stream segments within the Active Management Areas (AMAs). The Work Group's proposal expressly presumes that pumping from a new well within the half-mile limit will have an adverse effect on the riparian area. If this legislation were enacted, the expensive burden of proving that a new well would not cause harm to the riparian habitat would be imposed on private land owners, or in the case of State Trust land, on the Arizona State Land Department. If the landowner were unable to prove there would be no impact, and thus would be prohibited from drilling a well, the value of the subject property might be negatively affected. So construed, this approach to safeguarding sensitive riparian habitats could easily be viewed as a regulatory taking of property rights. In the majority report, the Commission references Arizona Supreme Court cases as establishing the state's authority to limit water use to protect the public water supply. However, those cases did not address the issue at hand, which is whether the state should use its power to limit water use for the purpose of protecting privately-owned riparian habitat.

As an alternative to the Allowable Pumping Work Group's approach to riparian habitat conservation, the Commission should consider that there are a number of existing mechanisms by which riparian habitat may be protected or acquired for conservation purposes, while compensating affected land owners. For example, Heritage Fund grants administered by the Arizona Game and Fish Department may be used to acquire sensitive wildlife habitats, presumably including that which occurs along Arizona watercourses. The Water Protection Fund administered by ADWR may be used to support riparian protection and enhancement projects, and similarly, the Endangered Species Act Landowner Incentive Program, administered by the U.S. Fish and Wildlife Service, may also provide funding to private land owners for habitat protection. The Arizona Preserve Initiative (API) provides a means by which ecologically sensitive State Trust land, including protected species habitat, may be sold or leased for conservation purposes using state matching grants. Finally, in addition to these government and other programs, it is worth noting that some private organizations, such as the Nature Conservancy, have demonstrated a commitment to acquiring ecologically sensitive lands.

Considering the likely controversy and opposition which property rights issues have simulated during past Legislative sessions, it is recommended that the funding mechanisms outlined above, as well as many others which may be appropriate to protecting riparian habitats, be thoroughly explored by the Commission.

## **ATTACHMENT 7**

### **RECOMMENDATIONS FOR PINAL AMA MUNICIPAL & INDUSTRIAL SECTOR DISCUSSION**

While agricultural water demand currently accounts for most of the Pinal AMA's water use, it is anticipated that future water demand will shift more toward municipal and industrial uses. In addition, all water use sectors in the Pinal AMA acknowledge that their long-term economic viability and sustainability of the AMA's water resources are interconnected. Accordingly, the Pinal AMA water users are in the process of evaluating the statutory water management goal. These discussions have taken place through the Pinal AMA Water Management Task Force. The Pinal AMA water users call for the Commission's support, with the assistance and input of ADWR and the Pinal AMA GUAC, in developing a comprehensive water management program by January 1, 2005, through an open public process. The following issues will be considered in the development of the program.

#### **Water Management Goal for Municipal and Industrial Sectors**

- Interpret "preserve future water supplies for non-irrigation uses" under A.R.S. 45-562.B as calling for a long-term, reliable supply of water for municipal and industrial uses. This interpretation would allow for the appropriate use of groundwater supplies by municipal and industrial users.

#### **Assured Water Supply Program**

- Evaluate water supplies as they relate to the Assured Water Supply Rules for the Pinal AMA to ensure that there is a long-term, reliable water supply available to meet municipal demand (taking into account conversion rights as agricultural uses move to municipal uses). Also call for local interests to work together and with ADWR to work out program specifics, including a transition period.

#### **Industrial Water Use Limitations**

- Call for a limit on groundwater mining by industrial users to an annual amount that is determined to be consistent with the AMA's management goal. Any industrial use of water in excess of this amount would need to be met with renewable supplies or replenished if met with groundwater.

#### **Drought Protection**

- Allow municipal use of groundwater supplies during drought and support protection of groundwater supplies so they are, in fact, available in drought periods

#### **Well Protection Program**

- Support creation of a well protection program that would protect wells from drawdown, beyond some critical limit depending on the area, by ongoing groundwater withdrawals (credit recovery, groundwater withdrawals for export, agricultural use, etc.)

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### **Recharge and Recovery Program**

- Support calls for a regional recharge and recovery program, for ensuring recharge occurs in areas of demand (when beneficial for water management), for mitigating subsidence or other potential groundwater problems.

### **Technical Studies, Data Collection and Long-Range Planning**

- Support calls for additional resources to monitor aquifer conditions, improving hydrologic models and using them for long-range planning by local and regional interests.

### **Water Management Strategies for Cooperative Efforts**

- Support calls for coordination of efforts among water use groups, explore ways for municipal water providers to jointly develop and use water facilities, and examine how cooperative management may enhance water conservation and resource planning.

### **Water Conservation Programs**

- Support water conservation programs for all sectors. Each sector must have available effective water conservation programs to implement. These conservation programs will be routinely evaluated to ensure consistency with the AMA's management goal.

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