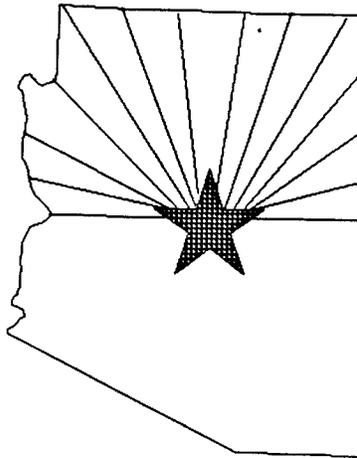


To Reed

**Arizona House of Representatives
GROUNDWATER CODE STUDY COMMITTEE**



**FINAL REPORT
December 14, 1993**

MEMBERS

Representative Jerry Overton, Chairman

Representative Bob Chastain

Representative Dan Schottel

Prepared by House Majority Research Staff

Arizona House of Representatives
- Groundwater Code Study Committee -

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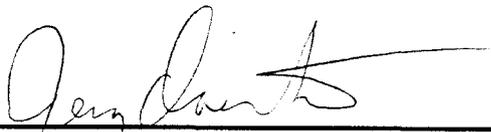
Representative Bob Chastain
Representative Dan Schottel

GROUNDWATER CODE STUDY COMMITTEE
FINDINGS AND FINAL RECOMMENDATIONS

DATE: December 14, 1993

TO: Speaker Mark Killian, Arizona House of Representatives

Pursuant to your request, the Groundwater Code Study Committee has conducted hearings pertaining to the Groundwater Code and has compiled an overview of the findings. The following members of the Committee endorse the recommendations included in this report:



Representative Jerry Overton, Chair



Representative Bob Chastain



Representative Dan Schottel

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I. SUMMARY

AUTHORITY AND SCOPE OF DUTIES

Water is one of Arizona's most valuable natural resources, and with its value much controversy has arisen over proper management techniques.

For this reason, Speaker Mark Killian appointed the Groundwater Code Study Committee to identify major issues regarding the management of groundwater and the proposal of potential solutions.

The Committee was directed to examine the definition of "safe yield" and its relation to groundwater mining and recharge, review hydrological information relating to sub-basins within Active Management Areas, review the conservation requirements under the Gallons Per Capita Per Day (GPCPD) program and the Alternative Conservation Project (Non-GPCPD), identify areas in which the Department of Water Resources (DWR), Arizona Department of Environmental Quality (ADEQ) and the Arizona Corporation Commission (ACC) can streamline application processes through cooperative agreements, and review regulation and administration requirements for small water rights.

Section II of this report provides a brief historical summary of the first and second Groundwater Management Plans. Section III highlights the activities of the Committee and Section IV evaluates the Committee's findings and provides recommendations.

EXPLANATION OF FINDINGS

Representative Overton established the theme of the Committee by saying, "if it ain't broke, don't break it." There were four general areas of concern identified in the hearings:

1. Some cities have difficulty meeting the conservation requirements under the guidelines for GPCPD, not because of lack of conservation programs but because the formula doesn't have the flexibility to evaluate communities on an individual basis.

2. The Non-Gallons Per Capita Per Day (Non-GPCPD) alternative conservation plan was established to provide another option for communities to meet water conservation requirements. This program is still in the drafting stages at DWR and thus far cities have been unable to utilize it.

3. Under the current Management Plan, Active Management Areas are treated as one large pot of water without recognizing the individual basins or sub-basins. Further, water mined in one sub-basin can be recharged in a different sub-basin.

4. Small water rights holders, in particular Irrigation Grandfathered Rights (IGFRs), comprise 54% of the total IGFRs yet consume only 3% of the total agricultural water used.

II. HISTORY

GROUNDWATER MANAGEMENT PLAN

In 1980 Arizona addressed the long-term conservation and management of groundwater through passage of the Groundwater Management Code (GWMC). The GWMC set forth provisions by which the State's groundwater resources could be allocated to effectively meet evolving needs. The primary focus was on controlling the severe overdraft of groundwater taking place in many parts of the State.

The GWMC contains provisions to regulate groundwater pumping and to reduce groundwater use through conservation or use of renewable sources. Four active management areas (AMA) were established where overdraft was most severe: the Phoenix, Tucson, Pinal and Prescott AMAs. For three of the AMAs, Prescott, Tucson and Phoenix, the management goal is "safe-yield". Safe-yield is defined as the long-term balance between the annual amount of groundwater withdrawn and the annual amount of natural and artificial recharge. In the Pinal AMA, where a predominately agricultural economy exists, the goal is to allow the development of non-agricultural water uses, extend the life of the agricultural economy as long as feasible, and preserve water supplies for non-agricultural purposes.

To reach the management goals established for each AMA, water conservation and management requirements are established in five management periods. We are currently acting under the provisions of the Second Management Period and will begin work on the provisions of the Third Management Period within the next two years. The five management periods are:

First Management Period:	1980-1990
Second Management Period:	1990-2000
Third Management Period:	2000-2010
Fourth Management Period:	2010-2020
Fifth Management Period:	2020-2025

III. COMMITTEE ACTIVITY

September 30, 1993

The Committee received a summary of:

1) hydrological studies conducted on the Phoenix Active Management Area (AMA). Arguments for and against the splitting of the Phoenix AMA were presented. Safe yield is measured according to the total recharge and withdrawal in the AMAs.

2) recharge requirements under the Clean Water Act was provided to the Committee. The Act requires that the nation's waters meet fishable and swimmable standards. Because of this, water facilities have had to implement programs that test and purify effluent for toxicity as it relates to fish before the water can be released into the dry river beds. This concern is causing many water facilities to look at the options of zero discharge of effluent. In addition, a coalition is proposing an amendment that asks that criteria for the arid West be developed.

3) the Aquifer Protection Permit program administered through the Arizona Department of Environmental Quality (ADEQ).

October 12, 1993

The Committee received information regarding:

1) Arizona Corporation Commission's (ACC) requirements as they relate to expansion and extension of water service territory. ACC requires that a water user acquire a Certificate of Convenience and Necessity (CC&N) unless the utility has established run-along rights and is expanding in a geographically contiguous area that is not currently being served by any other utility. In order to expand through run-along rights, a utility is required to file a Main Extension with the ACC which analyzes the run-along rights similar to the analysis performed in granting a new CC&N or an extension to an existing CC&N. The courts have interpreted run-along rights equivalent to a CC&N.

ACCs definition of service area is different from DWRs definition of service area. Under the current system, DWRs definition of service area doesn't affect the definition of service area by ACC. When a water utility wants their service area expanded through ACC, the utility must provide documentation demonstrating that there is at least a 100-year assured water supply available. This documentation is provided to the utility by DWR.

Arizona Department of Environmental Quality (ADEQ) requires that plans and specifications be submitted for review in accordance with their criteria for storage, construction, avoidance of cross-contamination problems, maintaining pressure within the service area and other problems that may arise concerning water quality. ADEQ reviews the information and, if they see fit, issue an approval to construct. The utility has the ultimate responsibility to go to the ACC and ADEQ separately for approval for line extensions. The utility is required to provide copies of ADEQs construction permits with the application for expansion of a CC&N.

2) Central Arizona Water Conservation District (CAWCD) recharge projects since 1982 and the difference between direct recharge and indirect recharge and the tax credits associated with the programs.

3) DWR provided an overview of the conservation measures such as the Gallons Per Capita Per Day (GPCPD) program and the Non-GPCPD alternative conservation plan. Some of the problems associated with the GPCPD program are:

- * increased growth in an industrial-commercial sector without a corresponding immediate growth in their population. Therefore, small water provider areas can have an increased GPCPD rate despite their conservation programs.
- * DWR requires compliance with the GPCPD requirements regardless of the costs. Private water companies have to justify their rate increases to cover the cost of implementing conservation projects to the Arizona Corporation Commission.
- * GPCPD rates do not consider institutions such as college campuses, prisons, hospitals with long-term residents or large resort hotels.

DWR is presently in the process of modifying the Second Management Plan to design and adopt the new Non-GPCPD program.

November 16, 1993

The Committee received information regarding:

- 1) DWRs proposal to deregulate small water rights holders.
- 2) Arizona Corporation Commission's programs for small water users who require a rate review. The short-form application is shorter than the general form and companies are not required to attend a hearing before the ACC which eliminates attorney fees or hire accountants for compilation and presentation of information. Small water users include those companies that generate less than \$250,000 in gross annual revenue.
- 3) DWRs explanation of the Gallons Per Capita Per Day (GPCPD) conservation program and the Non-GPCPD program recently established in 1992. The Non-GPCPD program is currently in the implementation stage and will allow municipal providers who opt for the program to implement the best available conservation programs. The program is being designed so that it addresses increases in industrial development, changes in population characteristics, weather variations and assumptions regarding the effectiveness of conservation efforts.
- 4) DWRs explanation of development of the Third Management Plan and the areas that need to be addressed in this plan. The plan needs to identify supplies that are available and economically viable to the providers today, supplies that are available but not adequately used, recognize the existence of the GRD and review the assured water supply program. Other items that might need to be addressed in the Third Management Plan are: a more localized definition of safe yield; customizing requirements to local situations; clarification of the role of private water users; more regionalized planning and limiting regulation.
- 5) Agri-Business Council explained that the agriculture community had some concerns regarding the conservation program for agriculture. The agriculture community and DWR are working together to develop alternatives to their conservation requirements. Some of the possible alternatives are: water duties or conservation requirements on irrigation districts, water duty for groundwater-only agriculture use and phasing out accrued flex account credits in exchange for a water duty based on current cropping patterns and economic conditions, as well as the ability to obtain agricultural financing.

IV. FINDINGS AND RECOMMENDATIONS

FINDING 1: A large amount of time on the part of DWR and the small water users is dedicated to completing and processing annual reports and conveyance forms and fees, when this group of water users consume only 1% of the groundwater annually.

Within Active Management Areas (AMAs), small rights are those irrigation grandfathered rights (IGFRs) ten acres or less in size and not part of a larger farming operation and all large municipal water providers who use 250 acre feet or less annually.

Within Irrigation Non-Expansion Areas (INAs), small rights are those Notices of Irrigation Authority ten acres or less in size and not part of a larger farming operations.

Currently, thousands of small water right holders in AMAs and INAs are responsible for complying with the same requirements as the very large water right holders. Small right holders must measure groundwater withdrawals, report annually on their water use, pay groundwater withdrawal fees, notify DWR if ownership changes, and meet specific conservation requirements, generally expressed in the form of a water duty or a gallons per capita per day requirement. This creates an administrative and regulatory burden on both the small right holder and DWR that is disproportionate to the anticipated water savings. Fifty-four percent of the IGFRs are small water users and they use approximately one percent of the groundwater and three percent of the total water annually.

RECOMMENDATION

Deregulate small right holders in IGFRs and INAs so that it eliminates the inconvenience and worry for small rightholders associated with annual report and conveyance forms and fees.

Key Elements of Proposal Within AMAs

Irrigation Grandfathered Rights

Eliminate existing water duties and replace with a reasonable conservation measure that would require that irrigation water be contained on the property associated with the right, unless the water is beneficially used on other lands.

Eliminate the requirement for small rights to measure and report their annual water use, or pay withdrawal fees unless a small right delivers water to an IGFR larger than ten acres.

Eliminate all conveyance requirements for small rights, unless the small right delivers water to an IGFR larger than ten acres.

Delete all existing flex account debits and credits associated with small rights.

Agricultural water users who do not meet the definition of small water user will be held harmless if the conservation formula changes in the third and subsequent management plans as a direct result of the small agricultural users being exempted.

Municipal Water Providers

Reclassify large municipal providers using 250 acre feet or less annually as small municipal providers and regulate them according to the small provider requirements of the SMP.

Transition small providers, who at some subsequent date begin using more than 250 acre feet annually, into the larger provider program.

Key Elements of Proposal Within INAs

Small rights would no longer be required to measure and report their annual pumpage, unless a small right delivers water to a Notice of Irrigation Authority larger than ten acres.

FINDING 2: Some cities have difficulty meeting the conservation requirements stipulated in the Gallons Per Capita Per Day program (GPCPD), not because the community has neglected to utilize conservation techniques but because the GPCPD formula doesn't have the flexibility to evaluate communities on an individual basis.

The Non-GPCPD alternative conservation plan was established to provide another option for communities to meet water conservation requirements. This program is still in the drafting stages at DWR and thus far cities have been unable to utilize it.

RECOMMENDATIONS

In addition to municipal water companies, allow private water companies to apply for Non-GPCPD alternative conservation plan.

Replace language in §45-565.01 Section C, Paragraph 3 specifying annual groundwater reduction requirements with language that requires the director of DWR to establish criteria that is flexible and allows for administrative discretion when evaluating municipal or private water companies' alternative conservation programs. The alternative conservation programs shall be considered adequate as long as the water user maintains safe yield in the sub-basin.

Cities or private water companies that choose to use the Non-GPCPD alternative conservation plan must demonstrate that they will have the ability to access Central Arizona Project (CAP) water in case conditions require the use of CAP water to maintain safe yield in the sub-basin.

FINDING 3: Within the Phoenix AMA there are two sub-basins that have a distinct geologic mass separating the AMA.

RECOMMENDATION

Recognize the existence of sub-basins in AMAs. The definition of "Safe Yield" must be clarified so that it is based on a recognition of local groundwater sub-basins. Management of safe yield should be tied to whether or not the groundwater table in a given area is actually falling due to the groundwater pumping in that area. If not, then the stability of the local groundwater table should be taken as evidence that safe yield has been attained, and the existing groundwater pumping should be allowed to continue until there is long-term evidence of a drop in the local groundwater levels.

Require that DWR conduct a study in three areas: West Salt River Valley Sub-basin focusing in on the Agua Fria area, and the Pima county and Santa Cruz county areas within the Tucson Active Management Area.

The study should address:

- 1) inventory of surface and groundwater sources presently available and in use;
- 2) develop a plan for implementing CAP water into their water management system in order to achieve safe yield;
- 3) forecast a range of probable scenarios for future water demand;
- 4) identify areas of water over-supply;
- 5) set goals for groundwater table recovery in distinct sub-basins;
- 6) identify the cost to create man-made riparian habitats;
- 7) identify the presently-planned recharge projects and their effect on the surrounding water supply and water quality;
- 8) uses of effluent as it relates to indirect and direct recharge projects, and its long term effect on the adjacent ground water supplies.

FINDING 4: There have been some incidences where utilities construct lines before the proper authorization has been granted. Some utilities have constructed lines based on run-along rights. The Arizona Corporation Commission (ACC) has the capacity to take disciplinary action against the utility and can revoke certificates and impose fines. According to testimony, one of the problems the ACC has is having sufficient time and resources to go out and find those who are violating the rules.

RECOMMENDATION

In an effort to encourage intergovernmental agreement and cooperation the Committee recommends:

- 1) DWR automatically forward to the ACC, certificates of assured water supply and approved expansions of service areas by DWR and other information related to water supply availability issued to water utilities.
- 2) ADEQ automatically forward to the ACC approved construction permits and copies of plans and specifications for storage, construction, avoidance of cross-contamination problems, maintaining pressure within the service area and other problems that may arise concerning water quality.

The Committee further recommends that the ACC utilize this documentation to assure that the existing rate payers will not suffer in terms of water cost or quality by DWR, ADEQ or ACC granting these permits. ACC will also utilize this documentation to determine if water utilities have and/or are following proper procedures for obtaining extensions of CC&Ns or Main Extensions for run-along rights.

FINDING 5: Water is a complex issue that is one of Arizona's most valuable natural resources. The Committee has heard testimony on various important subjects that time has not permitted to be developed further. These include:

- 1) increased technical (not regulatory) management of basins and sub-basins, mechanisms to allow the establishment of regional water and wastewater treatment facilities, regional management of groundwater, surface water, CAP water and effluent;
- 2) establishing the role of CAWCD as it applies to the delivery of CAP water (treated or untreated);
- 3) studying irrigation water duties and alternative agricultural conservation for those who hold Irrigation Grandfathered Rights and make recommendations for potential legislation that focuses on alternatives;
- 4) establishing a Third Groundwater Management Plan that recognizes water management areas defined by geologic structures, and manages the recharge and discharge in that area according to safe yield;
- 5) oversight of DWR's implementation of the Non-GPCPD alternative conservation plan;
- 6) establishing a statewide policy regarding effluent; ownership, effect on groundwater and environmental concerns;
- 7) establishing an active plan for encouraging the access and use of CAP water;
- 8) examining the definition of water providers in the Groundwater Code; particularly with regard to special districts.

RECOMMENDATION

The Committee recommends that a continuing committee be established and charged with researching these water issues, taking testimony regarding topical issues, and recommending and reviewing legislation.

APPENDIX A

Meeting Notices and Minutes

ARIZONA HOUSE OF REPRESENTATIVES
INTERIM MEETING NOTICE

Open to the Public

GROUNDWATER CODE STUDY COMMITTEE

DATE: Thursday, September 30, 1993

TIME: 9:00 a.m.

PLACE: House Hearing Room 1

SUBJECT: Initial Hearing

1. Phoenix AMA Hydrology Report
 - A. Summary of hydrological studies (ADWR)
 - B. Why Phoenix AMA should be split (WESTMARC)
 - C. Why the Phoenix AMA should not be split (TO BE ANNOUNCED)
 - D. Public testimony
2. Are existing recharge statutes working?
 - A. Summary of recharge statutes and permits required (ADWR)
 - B. How recent federal legislation affects Arizona recharge projects (TO BE ANNOUNCED)
 - C. Recharge and withdrawals from outside the area of hydrological impact (ADWR, AMWUA)
 - D. Explanation of Aquifer Protection Permit (ADEQ)
 - E. Public testimony

Jerry Overton
Chairman

MEMBERS:
Representative Schottel
Representative Chastain

9/21/93
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ARIZONA HOUSE OF REPRESENTATIVES
Forty-first Legislature - First Regular Session
Interim Committee Meeting

GROUNDWATER CODE STUDY COMMITTEE

Minutes of Meeting
Thursday, September 30, 1993
House Hearing Room 1 - 9:00 a.m.

(Tape 1, Side A)

The meeting was called to order at 9:02 a.m. by Chairman Overton and attendance was noted.

Members Present

Mr. Chastain

Mr. Schottel

Mr. Overton, Chairman

Members Absent

None

Speakers Present

Herb Dishlip, Deputy Director, Arizona Department of Water Resources (ADWR)
John Vickery, representing Water Committee, Western Maricopa Coalition (WESTMARC)
Bill Chase, Water Advisor, City of Phoenix
John Keane, Executive Water Policy Analyst, Salt River Project
James R. Mattison, Director, Sun City Homeowners Association
Perry Hubbard, Mayor, Litchfield Park
Kathy Chavez, Manager, Office of Capital Development, Pima County Wastewater Management
Paul Kinshella, Wastewater Planning Engineering Supervisor, City of Phoenix
Bob McCain, Program Manager, Arizona Municipal Water Users Association (AMWUA)
Bill Chase, Water Advisor, City of Phoenix
David Iwanski, Executive Vice President, Agri-Business Council of Arizona
Matt Ortega, Legislative Liaison, Arizona Department of Environmental Quality (ADEQ)
Brian Munson, Assistant Director, Office of Water Quality, Department of Environmental Quality (ADEQ)
Les Meredith, Chairman, Water Watch of Sun City
Anthony Abril, Jr., representing Neighborhood Spirit Association

Guest List (Attachment 1)

Chairman Overton welcomed everyone to the meeting and introduced the Members and Staff.

GROUNDWATER CODE
STUDY COMMITTEE
SEPTEMBER 30, 1993

He explained that this Committee is meeting as a result of agreement with House Leadership last Session that the Groundwater Code and the Groundwater Management Act of 1980 are important, large, convoluted pieces of legislation and have almost become a cottage industry; so this issue has been assigned to a study committee for further review. He said he expects three meetings to be held, and at the last meeting, a report will be prepared for possible legislation regarding any changes in the Groundwater Code for next Session.

He noted that his theme for this Committee is "If it ain't broke, don't break it"; rather than add more complexity to the system, he would like to streamline it and remove any unwarranted regulations.

Chairman Overton clarified that the Members of this Committee are Freshmen Legislators who are interested in water but are not considered experts on the subject; testimony is for informational purposes.

Herb Dishlip, Deputy Director, Arizona Department of Water Resources (ADWR), noted that Rita Pearson, Director, ADWR, is in Washington, D.C. on Central Arizona Project (CAP) matters but she will attempt to attend future meetings.

He gave a slide presentation of an overview of physical and hydrological characteristics in the Phoenix Active Management Area (AMA) and the administrative effects of division of the AMA (Attachment 1). He noted that the handout was prepared for a 1991 Joint Legislative Committee which reviewed the issue of the Phoenix AMA hydrology and whether or not it should be split, and it has been updated to 1993 conditions but there aren't too many changes.

He referred to the last two pages of the handout (Attachment 1) noting that they depict two water budgets. The first page shows the Department's estimate of what water use was within the East and West Salt River Valley (SRV) Subbasins in 1985; the last page shows an estimate as if CAP water use was implemented. He noted that 1985 was the first-year delivery of CAP water use which is the reason for the comparison. He referred to the difference in estimates of total groundwater overdraft on these two pages, noting that the goal of CAP water use was to reduce groundwater overdraft but this effort did not succeed as anticipated. He contended that CAP water is a very critical component in both the East and West SRV in moving toward a safe yield goal and reducing groundwater overdraft.

Mr. Dishlip concluded by stating that this data was developed by taking thousands of measurements of wells throughout the basin over a number of years to study in-depth how the aquifer responds to pumping in different areas. They have prepared a computer model which can project how changes in water level, direction of flow, drawdown, etc., will occur if different assumptions with regard to groundwater pumping are imposed. He said this model shows what has occurred in the past as well as if groundwater pumping were to change one way or another, what is likely to happen to the water table. He said it has been very useful in developing information about the hydrology of the groundwater in the Phoenix AMA.

Mr. Chastain asked about waterlogging in Buckeye and rising water levels in the Casa Grande area.

Mr. Dishlip responded that the Buckeye area has experienced a great deal of recharge particularly as a result of flood events beginning in 1978, as well as an increase in flow level in the river itself as a result of discharges from the 91st Avenue Wastewater Treatment Plant. They have a unique situation and have to pump water for drainage.

He clarified that Casa Grande has experienced years of groundwater level declines, especially in the Stanfield and Eloy areas, causing a lot of farmlands to cease production because they ran out of water or it became too expensive. Because of the decrease in production (temporarily), a lot of wells have been turned off so the stresses on the aquifer tend to equalize resulting in a rebound in the water table. Also, he added, in the 1980's (particularly in the Maricopa and Stanfield areas) CAP water was introduced which also had another major effect in turning off wells. He observed that it has also been wet; there have been floods through the Santa Cruz Valley Basin and the Gila River Basin. He indicated that CAP water was to be a permanent solution for Pinal County but that hasn't worked out for economic reasons.

Mr. Dishlip answered questions of Chairman Overton concerning the water budgets and groundwater replenishment. He noted that there is an increase in natural recharge as a result of river flow; actually there is more benefit to the East portion of the Phoenix AMA because it absorbs more water than the West portion. He added that there has also been an effect on the West SRV because CAP water has been introduced and the Cities of Phoenix and Glendale and the SRP have converted to CAP water extensively, turning off a lot of wells. So there have been a lot of changes in recent years throughout the West SRV by augmentation of the supply with surface water.

Chairman Overton asked about a new hydrological study. Mr. Dishlip clarified that the model which the Department has developed has been verified so that it is usable as a tool to study different changes. He said this model will be used in conjunction with a study done by the Bureau of Reclamation in association with CAP use on the West SRV. He said the results of this study should be completed in the spring of next year.

Mr. Dishlip explained to Mr. Overton that the impact of looking at the AMA as a whole is the achievement of safe yield (balance between withdrawals and natural and artificial recharge) which does not have to be achieved on every square foot but needs to balance out over the total AMA; if the AMA is split, they would have to look at safe yield in each portion and would be managing for it differently. This would have an effect on where recharge occurs; there is recharge in both portions of the AMA but probably more in the East SRV where there is more surface water available and there is a natural recharge from the flowing Salt River. He added that there is also the waterlogging problem which is an area of surplus in the West SRV, so they're both unique. He noted that most of the other programs, though, are pretty much measured uniformly in the Groundwater Code,

such as how to drill a well, water conservation requirements and limitations, requirements for an assured water supply, etc.; they are not AMA specific.

John Vickery, representing Water Committee, Western Maricopa Coalition (WESTMARC), submitted his testimony on why the Phoenix AMA should not be considered as a single entity in water management. He submitted that the overall approach is the need to deal with reality and not politics; the reality is that the Phoenix Valley is made up of separate hydrological groundwater subbasins and the administration of safe yield must be tied to these. This is not an issue of splitting up the AMA but how to administer the Phoenix AMA, taking into consideration the issue of separate basins.

He gave a slide presentation (Attachment 3) showing a comparison of the East and West SRV addressing significant geologic features in the West SRV.

(Tape 1, Side B)

Mr. Vickery contended that each subbasin should be treated separately as far as inflow and outflow so that the diverse geologic features can be taken into account.

Bill Chase, Water Advisor, City of Phoenix, noted that he agrees with a lot of Mr. Vickery's testimony, particularly the portions about the complexity of the groundwater system. He contended that ADWR needs additional funding for collection of data and studies that are needed. He noted that the City of Phoenix, SRP, and several other entities are working with ADWR to provide limited funding for assistance in groundwater efforts in the area of water quality.

He gave a slide presentation showing how the East and West SRV affect the City of Phoenix service area.

Mr. Chastain inquired about construction on the Salt River Indian Reservation Community. Mr. Chase replied that to his knowledge they have no projects in this area.

He referred to the last page of the handout provided by ADWR (Attachment 2) explaining the data associated with groundwater use and achieving a balance of inflow and outflow.

He submitted that the law as it is currently regulated does look at site specific items for many, many parts of the regulation. He said the City of Phoenix, as a political subdivision, is being regulated on many items besides safe yield, such as water conservation, and if the AMA were divided, it would be very complex for the kinds of regulatory processes they have outside of the safe yield equation. He added that the City, as a political subdivision, is moving very well in the direction of safe yield, they are doing a good job of reducing their groundwater pumping, and are fortunate that CAP has been implemented.

Mr. Chase answered questions of Mr. Overton concerning the achievement of safe yield and groundwater recharge systems. He explained that groundwater recharge,

in some cases, could be used as a substitute for water treatment by taking a source of surface water, running it through a water filter plant, letting it soak and filter through the ground, and pumping it out as part of the groundwater supply. He said recharge could also be used as a "bank account" because a problem with excess water is where to store it; surface water storage dams and reservoirs are very expensive and difficult to build (environmentally) but groundwater storage is a good tool for a banking reserve. He said under the Groundwater Management Act, mining groundwater (taking out more than you put back in) will have to cease. To satisfy that requirement, parties can join with owners of a groundwater recharge site, have the water recharged and gain credits to take the water out in the area where the water is physically located which changes the groundwater mining activity to a groundwater give-and-take activity. The ability to manage on a large basis may be helpful to a small entity.

John Keane, Executive Water Policy Analyst, Salt River Project, in response to Mr. Chastain's previous question, noted that there are two major construction projects on the Salt River Indian Reservation; one is a new landfill under construction. He said up near Granite Reef Dam, the federal government is repairing one of the siphons in which the pipes are corroded.

He stated that there are clearly separate East and West SRV Basins and some smaller Subbasins with peculiar problems of their own. He said their system runs across the two big basins and their concern is multiplication of bureaucratic burdens by dealing with two different AMA staffs and sets of rules when moving water simultaneously back and forth across these two boundaries.

He submitted that the two basins, by and large, are similar in a lot of ways:

1. Both have had overdrafts over the last six or seven decades.
2. Both have had a groundwater level rise in the last ten years, due to wet weather.
3. Both have large areas with surface water rights as well as large areas without surface water rights.
4. Both have large areas of nitrate contamination and Superfund sites.

He concluded by stating that since the problems the two basins have are relatively similar, treating them in a regulatory fashion in the same way right now makes sense, with ADWR changing some regulations as needed for certain locations. He opined that it is important that the Department study and obtain more information, and urged the Committee to consider additional funding for this purpose.

Perry Hubbard, Mayor, Litchfield Park, expressed his appreciation of the Committee's courage in opening "Pandora's box." He noted that his basic interest in Litchfield Park is the quality of the water. He added that if any

changes are made they should be reasonable, logical and based on the reality of the situation, to avoid problems later. He submitted that cones of depression should be recharged. He added that they have plenty of water in Litchfield Park and do not need a recharge project in their area.

James R. Mattison, Director, Sun City Homeowners Association, contended that the Groundwater Act of 1980 is flawed and many of the items arising out of it are unconstitutional. He submitted that there are two separate hydrologic basins and they should be administered separately.

THE MEETING RECESSED AT 10:55 A.M.

THE MEETING RECONVENED AT 11:02 A.M.

Mr. Dishlip gave a slide presentation showing an overview of the Arizona recharge program (Attachments 4, 5 and 6).

(Tape 2, Side A)

Kathy Chavez, Manager, Office of Capital Development, Pima County Wastewater Management, Tucson, addressed how recent federal legislation affects Arizona recharge projects. She noted that when disposing of effluent, there are basically four options:

1. Discharging to surface water some of which recharges into the regional groundwater aquifer (incidental recharge). This is an option they are presently using (discharging into the Santa Cruz River). They have to comply with state water quality standards and federal permits issued by the Environmental Protection Agency (EPA). These standards have become consistently more stringent; recently EPA has focused their concerns on toxicity particularly as it relates to aquatic and wildlife in the rivers.
2. Discharging to the groundwater which is by virtue of the fact that they are discharging to the surface water and as effluent runs down the river, some of it recharges to groundwater. Their facilities must comply with state aquifer water quality limits which is done through a state Aquifer Protection Permit (APP) issued by ADEQ.
3. Reuse which requires compliance with the state's reuse standards and is the most cost-effective treatment for them in terms of treatment standards, taking into consideration that federal permits are getting more stringent.
4. Evaporation which isn't very practical for any of the flows in the major Metropolitan areas.

She submitted that basically their problem is the Clean Water Act of which the major goal is to restore the nation's waters to fishable, swimmable standards. She pointed out that the Santa Cruz River is a dry river most of the year except when there is a major storm, so the issue here is discharge to streams which are mostly dry.

She noted that the concern of the EPA is with toxins relating to aquatic wildlife. Their most recent permit issued in 1992 includes limits on the amount of chlorine because it is toxic to fish; this is a real impact requiring them to build dechlorination facilities which incurs additional expense for operation. She said the permits also require testing for the toxicity for effluent as it relates to fish; areas of concern here are concentrations of ammonia in wastewater. This concern may require major modifications to their treatment facilities to remove ammonia as well as dehydrification facilities to make sure the nitrates in the water do not affect the groundwater as well.

She explained that industries which discharge into their municipal sewage have to obtain permits from them and they control what kinds of toxins they can put into the sewer system. As federal standards get more stringent, the kinds of businesses locating in the community will probably be affected. She said pollutants also come from households, expressing a concern about limiting the amount of zinc although the water agency is actually putting zinc or the phosphate into the water supply because of the corrosive characteristics of the CAP water.

She said these concerns are leading them to look at options such as zero discharge and taking effluent out of the river and reusing it. She said the impact resulting from zero discharge is that they can use effluent to replace groundwater pumping, possibly for agriculture. She noted that the major force in consideration of reuse options is to keep the rates as low as they can to the public.

She stated that the downside of zero discharge is that because of continuous discharges over the years, a riparian habitat has been established along the Santa Cruz River (downstream), and if zero discharge is used, that habitat would be eliminated. Also, they would probably be eliminating some of the incidental discharge.

She said they are working with some agencies in California, Nevada and New Mexico, and Arizona through an organization called Western Coalition of Arid States. It consists of 50 water and wastewater agencies whose goal is to make sure that water quality regulations and legislation and policy are developed to promote protection of the arid West. She noted that the problem is that EPA hasn't conducted the research necessary to determine what kind of water quality standards are applicable to the arid regions.

She related the fact that members of the Coalition are presently in Washington, D.C. working on proposed amendments asking for research to develop appropriate criteria for the arid West. They are also interested in acquiring appropriate

standards for canals and would like to see the state's maintain that responsibility. They would like to see the federal government recognize that effluent is a valuable resource that should be used.

In summary, she said the federal water quality programs are basically what is driving zero discharge; they need to keep their cost as low as possible by looking at other options other than discharging options, such as reuse. At the present it looks like it makes sense to push the water quality criteria for our arid region. They would also like to see optimum use of effluent, not only reuse, but a combination of uses, perhaps if they had appropriate water quality standards, they could continue to discharge and maintain some sort of riparian habitat and also increase reuse of effluent. She would like to see some of the state rules and legislation support more reuse and would also like to work with the state in streamlining the APP rules. She contended that effluent does provide some incidental recharge to the groundwater, and it is a major part of the water quality management equation.

Mr. Schottel thanked Ms. Chavez for coming to the meeting from Baja, Arizona and agreed that the local areas should be allowed to determine what is best for the community. Ms. Chavez clarified for Mr. Overton that the majority of their water is discharged to the river; they do not get credit for this water but the City of Tucson has applied to ADWR for a passive recharge credit and that issue is under negotiation.

Paul Kinshella, Wastewater Planning Engineering Supervisor, City of Phoenix, noted that the City operates two wastewater treatment plants, one at 23rd Avenue by the Durango corner, and one at 91st Avenue and the Salt River (multi-city plant). These plants are required to discharge and meet regulations imposed by permits issued by EPA which are renewed on a five-year basis. The Clean Water Act also requires that ADEQ develop water quality standards every three years.

He noted that, historically, the trend for these permits has been for them to become more prohibitive on what can be discharged and to regulate more parameters. At present, the rules have required a decrease in the amounts of pollutants present in order to protect for fish consumption and for aquatic and wildlife in effluent-dominated streams; this water is too good to throw away.

He said presently they are reusing water directly by an agreement with the Arizona Nuclear Power Plant (ANPP) at Palo Verde, and in agreement with the Buckeye Irrigation District from the 91st Avenue Plant which amounts to about 75,000 acre-feet of water per year.

He noted that at the 23rd Avenue Plant they are about to initiate an exchange project with the Roosevelt Irrigation District and SRP for an exchange of up to 30,000 acre-feet which will come back to them as potable water from the SRP system.

He said at the 91st Avenue Plant when they started looking at the impact of the proposed water quality standards before they were adopted they determined that they should look at reuse rather than treatment (at a cost of \$370,000,000) if

the standards were adopted at the proposed rate. Fortunately, before the standards were adopted, they were revised, practical quantitation limits were applied to that, and so they could, by an expenditure of about \$45,000,000, hope to achieve compliance on discharge to the river.

He said if they had to discontinue discharge, as an alternative to spending the \$370,000,000, they looked at direct reuses. They found at the 91st Avenue Plant that there were not sufficient direct reuses year round to use all of their water; they needed a storage component. They found that surface storage would be very expensive and a potential for degradation in quality, but underground storage & recovery would enhance and be protective of the quality of the water. He said they have searched for sites and they have about two more years of research before they can reach a decision on whether this project is feasible; the potential cost would be approximately \$200,000 if the water quality standards are set at the same level at which they were originally proposed.

Mr. Kinshella answered several questions of Mr. Overton concerning their plants and federal standards for discharge to rivers.

Bob McCain, Program Manager, Arizona Municipal Water Users Association, addressed recharge and withdrawals from outside the area of hydrological impact. He said it allows a community which may not have an adequate recharge site within its service area to put a recharge project in one area and withdraw credits from that project within its service area without having to build a treatment plant or pipelines. He added that the ability to recharge in one area and recover in another area is fundamental to the efficient, economical, and successful operation of the Central Arizona Groundwater Replenishment District.

Bill Chase, Water Advisor, City of Phoenix, concurred with Mr. McCain's comments.

David Iwanski, Executive Vice President, Agri-Business Council of Arizona, referred to a handout (Attachment 7) noting that Campbell's Soup was interested in relocating in Arizona in 1991. Due to this map which estimates that by the year 2000 Arizona will have a water availability problem, they decided not to pursue this state for all future citing. He said it is unfortunate that for all the work the Legislature does in terms of promoting a pro-business climate and facilitating economic development, there are sophisticated national companies with the perception that Arizona has a water problem. He contended that Arizona, in fact, has an abundance of water and power and that is a story which needs to be told.

He addressed recharge, noting that agricultural entities support all forms as a water management tool, with cautions. He pointed out the need in these programs to make sure that the water is not denigrated in the existing aquifer. He opined that there will be increasing federal mandates, and from Arizona's perspective, control at the state level should be stressed as well as an acknowledgement that effluent-dominant streams should be governed differently.

He said there is a need to make sure that the potential to store water is cost-effective. He cautioned that when using recharge in riverbeds, there is a potential to create riparian areas which generates future obligations to maintain or sustain that habitat as opposed to stopping the recharge for some other necessary future resource response.

He related to Mr. Overton that he firmly believes there is an opportunity for the use of effluent in agriculture. He noted that at one time a feasibility study was conducted to develop cost estimates for taking the effluent generated from the 91st Avenue Wastewater Treatment Plant not under contract, and piping it through the Gila River Indian Reservation for utilization, then further down into Pinal County into some of the larger irrigation districts for utilization. He noted that it is expensive and a final determination as to whether it is cost prohibitive will be made later.

Mr. Overton encouraged Mr. Iwanski to inform him of any proposals that his organization has for possible legislation.

Matt Ortega, Legislative Liaison, Arizona Department of Environmental Quality (ADEQ), noted that Brian Munson will provide an overview of the Aquifer Protection Permit (APP) program.

Brian Munson, Assistant Director, Office of Water Quality, Arizona Department of Environmental Quality (ADEQ), explained that the APP program is designed to protect the groundwaters in Arizona at drinking water consumption levels by using federally promulgated drinking water standards to identify what those levels are. He said ADEQ provides permits to permanent facilities which have the potential to supply drinking water after making sure they are able to meet the standards. He added that there is also a backup provision called Best Available Demonstrated Control Technology (BADCT) which means that besides demonstrating that aquifer water quality standards can be met, additional technological control must be applied at the site of treatment which would further prevent any discharge to groundwater, e.g. for a landfill, a liner with leachate protection.

He noted that the permits are presently issued for the life of a facility, adding that the Department has a substantial backlog of permits. He clarified for Mr. Overton that in the event of a geologic event which would jeopardize a project, they would have the authority to shut down a facility but it would have to be a very extreme case.

Mr. Munson answered questions of Mr. Overton concerning water quality standards. He contended that they are realizing some improvements in their ability to issue permits. Mr. Overton suggested raising the cost of the permit so they could speed up the process.

(Tape 2, Side B)

Mr. Chastain asked about a small plant which makes Similac for babies and a copper company in his district, both of which have been frustrated with the time

it is taking them to obtain a permit. Mr. Munson replied that he is aware of both issues; in the case of the Similac plant, there is a question of biological contamination. He said they have allowed them to continue using their existing new use permits until they have better defined the appropriate way to handle the situation.

Mr. Overton also extended the offer to Mr. Munson for input for future legislation.

Les Meredith, Chairman, Water Watch of Sun City, indicated that the Groundwater Replenishment District is supposed to be voluntary but he was told at the last meeting with ADWR that it is voluntary for the Sun City Water Company to join but the people of Sun City who pay the bills have no input; so it is not voluntary as far as Sun City is concerned.

Anthony Abril, Jr., representing Neighborhood Spirit Association, voiced his opinion that South Phoenix water rates have been abused for the benefit of large corporate entities.

Chairman Overton announced that the next meeting will be held on October 12 at 9:00 a.m. to discuss conservation measures and how they are applied by ADWR, as well as other topics.

Without objection, the meeting adjourned at 12:50 p.m.

Linda Taylor, Committee Secretary

(Attachments and tapes are on file in the Office of the Chief Clerk).

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10/5/93

ARIZONA HOUSE OF REPRESENTATIVES
INTERIM MEETING NOTICE

Open to the Public

GROUNDWATER CODE STUDY COMMITTEE

DATE: Tuesday, October 12, 1993

TIME: 9:00 a.m.

PLACE: House Hearing Room 1

AGENDA:

1. Agency Service Area Rules in Regards to Expansion

Expansion Requirements and Procedures

- Gary Yaquinto, Director of the Utilities Division, Arizona Corporation Commission
- Steve Olson, Special Assistant to the Director, Department of Water Resources
- Arizona Department of Environmental Quality

2. Groundwater Storage, Recovery, and Recharge

Description of current and planned underground storage and recovery projects and indirect recharge projects

- Grant Ward, Assistant General Manager for Planning and Environment, Central Arizona Water Conservation District

3. Municipal Conservation Requirements

Historical Background, Requirements, Formula, and Sanctions

- Tom Carr, Assistant to the Deputy Director, Department of Water Resources
- Bob O'Leary, Executive Director, Water Utility Association of Arizona
- Michael Tubbs, Water Director, City of Tucson
- George Fletcher, Water Resources Manager, City of Tempe
- Robert Musselwhite, City Manager, City of Litchfield Park

4. Public Testimony

Jerry Overton
Chairman

MEMBERS:

Representative Schottel
Representative Chastain

10/7/93

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ARIZONA HOUSE OF REPRESENTATIVES
Forty-first Legislature - First Regular Session
Interim Committee Meeting

GROUNDWATER CODE STUDY COMMITTEE

Minutes of Meeting
Tuesday, October 12, 1993
House Hearing Room 1 - 9:00 a.m.

(Tape 3, Side A)

The meeting was called to order by Chairman Overton at 9:05 a.m. and attendance was noted.

Members Present

Mr. Chastain

Mr. Schottel

Mr. Overton, Chairman

Members Absent

None

Speakers Present

Gary Yaquinto, Director of the Utilities Division, Arizona Corporation Commission (ACC)

Steve Olson, Special Assistant to the Director, Arizona Department of Water Resources (ADWR)

Brian Munson, Assistant Director, Office of Water Quality, Arizona Department of Environmental Quality (ADEQ)

Grant Ward, Assistant General Manager, Central Arizona Water Conservation District (CAWCD)

Tom Carr, Assistant to Deputy Director for Water Management, Arizona Department of Water Resources (ADWR)

Norm James, Counsel, Water Utility Association of Arizona (WUAA)

Dennis Rule, Planning Program Coordinator, City of Tucson

George Fletcher, Water Resources Manager, City of Tempe

Robert Musselwhite, City Manager, City of Litchfield Park

Gene Jensen, representing Sun City Homeowners Association

Arve H. Dahl, representing Property Owners and Residents Association of Sun City West

James Mattison, representing Sun City Homeowners Association

Guest List (Attachment 1)

Chairman Overton announced that the original plan was to meet in approximately two weeks but the next meeting will be held November 16 (probably at 9:00 a.m.). He noted that the Committee subjects to date have been those brought to his

GROUNDWATER CODE STUDY COMMITTEE
OCTOBER 12, 1993

attention for possible changes. He said a month will be allowed for other organizations to address subjects they believe require legislation; they can be given to him or Teri Grier, House Research Analyst, for the agenda on November 16. He requested that a week to ten days be allowed before the next meeting for the needed research. He reiterated his theme for the Committee: "If it ain't broke, don't break it." He said this next meeting will be the last for testimony, and shortly after Thanksgiving, the Committee will meet to adopt recommendations.

Chairman Overton explained that the first item on the agenda, Expansion Requirements and Procedures, addresses procedures for water companies expanding into new areas, noting that there has been some criticism of these procedures because they involve three agencies (Arizona Corporation Commission, Arizona Department of Water Resources {ADWR} and the Department of Environmental Quality {ADEQ}); sometimes this involves quite a bit of time and sometimes they aren't perceived as being fair.

Gary Yaquinto, Director of the Utilities Division, Arizona Corporation Commission (ACC), introduced several other ACC staff members in attendance: Pat Williams, Supervisor, Consumer Services Section; Steve Olea, Chief Engineer, Utilities Division; and Mary Martin, Legislative Liaison. He said they all work in the area of regulating water companies and are available to answer questions.

He explained that expansion and extension of the water service territory at the Corporation Commission involves obtaining a Certificate of Convenience and Necessity (CC&N) which is basically a compact between the utility and the public it serves. It states that in exchange for the utility's guarantee to invest in facilities, serve its customers and provide adequate safe service to its customers, the Corporation Commission grants that utility an exclusive franchise to do so. Under the State Constitution, the ACC is also required by law to set rates to enable the utility to recover its costs for providing service and an opportunity to earn a reasonable return on the utility's investment in its facilities.

He pointed out one exception to the CC&N process which involves a utility desiring to serve a geographically contiguous area that is not currently being served by any other utility; known as run-along rights. A utility that extends service into an area that is contiguous to its service territory may do so using its run-along rights. He added that the analysis done for these situations is very similar to the analysis performed in granting a new CC&N or an extension to an existing CC&N.

He also specified that the courts have interpreted the extension of service into contiguous areas as the equivalent of the Commission granting a CC&N; in essence, those extended services become part of the utility's area to provide service.

He noted that the primary consideration by the ACC when evaluating an application by a utility for a new CC&N or an extension to an existing CC&N is whether or not it is in the public interest. To gain a CC&N, he named several items required by a utility:

1. Proof that there is a need for service in the area where they desire to provide the service.
2. Proof of technical and financial ability to provide the service.
3. Proof that the proposed extension will not have an adverse effect upon the existing customers.
4. Proof that it is a fit and proper entity to acquire a CC&N.

He conveyed the filing requirements by the ACC for applicants for a new CC&N or an extension of a CC&N:

1. Filing of a financial statement demonstrating their financial ability to provide the service.
2. Filing of copies of all requirements that must be fulfilled for other state and local government agencies, e.g., approval to construct facilities which is issued by ADEQ and the certificate of an assured water supply issued by ADWR.
3. Filing of a legal description of the area it intends to serve.

He conveyed the steps at the ACC for evaluation and recommendation once the application is made:

1. The utility is required to provide notice of the application to property owners in the area to which the service is being extended, as well as to its existing customers.
2. The ACC staff reviews the application and prepares a staff report evaluating all the information that the utility has provided in support of the application and makes recommendation for consideration by the hearing officer appointed to the case, and the Commission itself.
3. A hearing is scheduled and held, presided over by a hearing officer of the Commission.
4. After the hearing is held, the hearing officer considers all the evidence, including the staff report, and prepares a recommended order which goes to the Commission for their consideration at one of their regularly scheduled meetings.

He concluded by stating that typically this process takes between 90 to 180 days from the date the application is filed to the date the Commission issues a decision for approval of the new CC&N.

Mr. Yaquinto agreed to provide details of this process in writing to Mr. Chastain. In answer to Chairman Overton, he observed that the concept of the CC&N probably dates back to the origin of the Corporation Commission and the regulations of public service corporations which goes back to statehood. He agreed with Chairman Overton that the charge of the ACC is found in the Arizona Constitution. He ventured that the Commission's authority in this process is contained in both the State Constitution and the enabling statutes of the Commission.

Chairman Overton addressed the concept of "run-along rights" noting that there have been charges in the past that water utilities may go out on their own and construct lines, then when they are "caught" without having a CC&N, they may claim that run-along rights is the basis for their action.

Mr. Yaquinto agreed that, unfortunately, it does happen that way. What a utility is supposed to do when they desire to serve a contiguous area is file a Main Extension with the ACC for review and approval. He conceded that if this is done and the ACC does not approve it, they would either cut off the service or find another provider more capable of providing the service. He added that the ACC has the capability of issuing revocations of certificates in the most disastrous situations; they also have the ability through statutes to impose fines when a utility is not conducting its business according to state statutes, the State Constitution and rules and regulations promulgated by the Commission.

Chairman Overton asked if there is a need for more stringent legislation to address this. Mr. Yaquinto replied that he believes the Commission's rules and regulations are very clear, and when they find instances of violations they attempt to go out and undertake enforcement action. He said he doesn't believe additional statutes would assist that action; the problem is one of having sufficient time and resources to go out and find those who are violating the rules. He said he cannot recall a case in which a utility has been fined for abusing run-along rights but that doesn't mean that it hasn't happened.

Steve Olson, Special Assistant to the Director, Arizona Department of Water Resources (ADWR), addressed service area concepts used at ADWR. He noted that this is probably one of the most difficult concepts to follow because there are over 20 references (Attachment 2) to service area in the Groundwater Code.

Mr. Olson emphasized three major points:

1. The service area is the area actually being served by the water company and is specified through an annual map which must be provided to ADWR by March 31.
2. To expand the service area, the provider must build the delivery system and bring the system to operational status.

3. To serve to this expanded service area, the provider must be designated as having an assured water supply by ADWR, or the development that would be served could apply for a certificate of assured water supply which means it has its stand-alone water supply.

He pointed out that the Groundwater Replenishment District (GRD) formed by the passage of S.B. 1425, Groundwater Replenishment District; Central Arizona, does provide a mechanism for some of the providers who meet assured water supply requirements as they start to phasedown groundwater use. This provision will provide some of the smaller water providers that don't have the wherewithal the ability to develop a whole delivery system from the CAP (through recharge provisions which were discussed at the last meeting).

Mr. Olson related a court case (known as the Peppertree case) in which the City of Tucson in the 1980's wanted to provide water service outside of their existing distribution system. A water users association challenged this stating that the City of Tucson shouldn't be able to expand that rapidly. The court basically determined that before a water provider could expand and include new houses in a service area, that the water provider had to build the distribution system and bring it to operational status.

He conveyed that ADWR's role when receiving CC&N applications is to make sure that the provider has a 100-year assured water supply; the next step is to work with the ACC and ADWR to insure that there is water and that it would be included within their CC&N boundaries. Insuring that there is a water supply of an adequate quality and quantity is part of the Department's assured water supply provisions.

Chairman Overton asked if a developer in the desert can obtain an assured water supply by stating that he will use CAP water in the future. Mr. Olson replied that a city or town could do that if they had a contract for an allocation through the Secretary of the Interior, and would have to be taking some steps in taking that water. For a private water company, they actually have to be capable of taking the CAP water before it would be included. There is some vagueness in terms of taking steps to take the water. Some areas have agreements with a city or town to obtain water through an existing treatment plant; there are other operating agreements in the East Valley where private water companies have made agreements with cities and towns, such as Scottsdale.

Chairman Overton questioned when the new assured water supply rules will be implemented. Mr. Olson noted that the Department has a deadline of 1995; they hope to be taking the rules through the Governor's Regulatory Review Committee process in November or December of this year. They are currently in the process of obtaining as much public review and comment as possible before actually submitting the draft rules.

Mr. Olson reiterated for Chairman Overton that all the Department has to submit to the ACC for an extension is clarification of a 100-year assured water supply, and perform some informal coordination.

Mr. Schottel asked how a 100-year assured water supply is determined with consumption versus recharge. Mr. Olson explained that ADWR looks at the actual hydrology water in place; they only look to a certain depth (1200 feet) to determine if the impact of the groundwater pumpage for the projected use from the area will lower the groundwater table in that area below that 1200 feet or the depth that groundwater is known to be occurring. For CAP water, where contracts are for a 50-year period, they consider that as something that would be rolled over to meet the 100-year requirement.

Chairman Overton asked the definition of "safe yield." Mr. Olson said it is a goal, the practical application of which is that no more groundwater will be pumped out of the ground than is actually going back into the ground from natural and artificial means (natural, incidental and artificial recharge). This is done on an accounting system within a groundwater basin which is equivalent to an Active Management Area (AMA).

Brian Munson, Assistant Director, Office of Water Quality, Arizona Department of Environmental Quality (ADEQ), noted that his Department's role in the CC&N process is to require that plans and specifications be submitted for review in accordance with their criteria for storage, construction, avoidance of cross-contamination problems, maintaining pressure within the service area and other problems that may arise concerning water quality. Ultimately, they issue an approval to construct which is needed for legal operation. He clarified for Chairman Overton that the entity doing the line extension has the responsibility to go to the ACC and ADEQ separately.

In relation to water quality, Mr. Munson said that is related to the source; in most cases they would have a good idea of what that source is providing. As the number of hookups is increased, there may be increasing requirements for quality but they still require that the source be characterized. He said their concerns with a distribution system would probably be related to proper chlorination within the system and the bacteriological problems that would arise, as well as any instances where cross-connection with a sewer line, for example, might be a problem.

Chairman Overton asked about situations where utilities may have jumped the gun and constructed a system. Mr. Yaquinto noted that unless a utility makes application to the Commission, they would not know about a permit to construct that has been issued although they talk with ADEQ on a formal basis all the time.

Chairman Overton asked if in these cases where the system has been constructed, they would have to obtain a permit from ADEQ for the construction. Mr. Yaquinto stated that he would assume that ADEQ has already issued the permit; if they have not, the utility is in violation of state law. They will only issue a CC&N with the construction permit in hand.

In answer to a question from Mr. Overton, Mr. Munson said the construction permits generally take too long for issuance from most people's perspective, but their regulations require turn-around approval in 30 days. Most of the time

this is done in 30 days, but due to the fact that they can't adjust their staff, there are times when they are pushing 40 days. There is no charge for this permit.

Chairman Overton explained that Item 2 on the agenda, Groundwater Storage, Recovery and Recharge, was discussed at the last meeting but there was testimony that was not available at that time which is the reason it is on today's agenda.

Grant Ward, Assistant General Manager, Central Arizona Water Conservation District (CAWCD), referred to a map showing CAWCD indirect recharge projects since 1982 (Attachment 3). He said two projects in the Tucson area have been added since this map was produced.

(Tape 3, Side B)

He said the second page of the handout identifies the amount of water they have recharged since January, 1992. The following two charts identify the projects and where the credits were made (the figures for August and September are estimated).

He explained that for the most part, the projects have been done in conjunction with Irrigation Districts; Pinal and Maricopa Counties have been the two major participants throughout these two years. In essence, they have to show ADWR, in return for getting these credits, that they identified someone who otherwise would have used groundwater to supply their usage for that year. To the extent that they identify those acres of groundwater, they receive credits if they then bring in other waters (in this case CAP water) to replace that. He contended that it is a good program and has some value for future use.

He added that under the compact of the Colorado River, at the end of any given year if Arizona does not use that water, it is gone. Also, if someone were to use their groundwater pump and pump that acre-foot of water in the State of Arizona, that acre-foot is now gone. So recharge allows them to bring in the Colorado River water that they otherwise would not have been able to use, use it in place of the groundwater, and leave the groundwater in place for use sometime in the future.

He noted that in 1991 the Legislature passed a tax of four-cents per \$100 assessed valuation in Pima and Maricopa Counties for the purpose of building direct recharge projects for demonstration and eventual use. He referred to the last sheet of the handout which identifies these projects, giving an overview of each one.

In addition to these, he said they are also looking at the Santa Cruz River in conjunction with the Tohono O'odham Indian Tribe in roughly the same area as the Pima Mine Road site to be able to put water in for recharge purposes. They recently received one additional request in the Tucson area from a new water district (Metropolitan Water Community) to look at a state demonstration project for the purpose of recharging.

He opined that direct recharge will become prevalent in the future with the passage of GRD legislation by assisting small water companies and municipalities in meeting their assured water supply and safe yield rules.

He said they have identified other sites on a preliminary basis but they have tried to choose those which are more economically adept at this point; and as the need arises, they will go beyond that to do other recharge.

Mr. Ward clarified for Chairman Overton that the process used in these projects is building of retention basins, spreading the water out and filtering it through; they are not precluded from using injection wells but they have not proposed that at this point.

Chairman Overton asked about the quality of the CAP water and whether or not this is affecting the quality of the water in the aquifer. Mr. Ward responded that they have only done infiltration studies to date which determine the rate of infiltration. They have not built any direct recharge projects, therefore, they have nothing to test and monitor to see how that impacts it. The indirect recharge projects are just using water like on a farmer's field; therefore, there is nothing going directly into the ground.

Chairman Overton, referring to the second page of the handout, asked about the credits received by the Town of Goodyear (92 credits). Mr. Ward referred to the first page of the handout. He explained that the Town of Goodyear requested purchase of credits from the Tonopah Irrigation District (indicated in yellow) and those credits are transferrable. He clarified that it is cheaper for the Town of Goodyear to use these credits and this water than to build a treatment plant at this point in their growth; these credits can count as actual water supply which will allow them to use their pumps but instead of being penalized for using their groundwater, this is actually CAP water that they are being given credits for.

Mr. Chastain asked about the City of Avondale's \$1 million total, referring to the last page of the handout. Mr. Ward explained that this is part of the total cost that the City of Avondale has to spend to build their treatment system; their estimate is between \$7 million and \$8 million, and they have asked CAWCD to participate with over \$2 million. To the extent that they participate, they receive a percentage (about 28 percent) of that facility to put recharge water into the ground. Based on that and projecting into the future the credits CAWCD would be putting into that system is how they arrive at the cost; the cost on the handout is the actual cost related to the facility, they still must pay the cost of the CAP water to apply to that system.

Mr. Ward pointed out that one of the reasons that direct recharge is so slow to get off the ground is that indirect recharge is much cheaper because facilities do not need to be built which have to then be spread back over the cost of that water; until they've been able to get most of the pumps idle, there is a great push to try and use indirect recharge credits first.

He clarified for Chairman Overton that the four-cent tax has been collected since 1991 and ends in the summer of 1995. He referred to the last page showing

monies projected to be collected at the end of the year noting that they have not spent those monies to date. They have been working with ADWR to design the program and get parties involved in development; they believe by the end of 1994 that a considerable amount of those monies will be utilized but to date there is a surplus. He mentioned that CAWCD is just the operating agent for the state demonstration project; the funds are monitored by ADWR for CAWCD's use, and they approve all expenditures. He clarified that under state law regarding the state demonstration funds, once they build a site, they cannot charge a customer back for those costs; they can charge from that day forward for operating and maintenance costs but the site is built with tax dollars so there are no charges that go back to the local communities or anybody using that facility for their water.

Tom Carr, Assistant to Deputy Director for Water Management, Arizona Department of Water Resources (ADWR), noted that the Department oversees conservation requirements for water companies and other water users in the Phoenix AMA. He noted that they are required by statute to develop a water conservation program for all users and publish those requirements in a series of groundwater management plans published for each AMA. For municipal users, they are required to establish reasonable conservation requirements which result in reductions in gallons per capita per use within service areas for cities, towns, and private water companies, and they are also required to come up with other conservation measures for individual users (Page 4, Attachment 4).

Their management plans are in effect for a ten-year period; the first ten-year period was 1980 to 1990 and is known as the First Management Period; within that plan there were per capita water use restrictions for the municipal water users. In 1988, he said, they published the Second Management Plan through the year 2000, and there will be a Third, Fourth and Fifth Management Plan through the year 2025 when, in the Phoenix and Tucson AMA, they have to achieve safe yield.

He said they developed the municipal water conservation program in the 1980's by pooling together information on each one of the cities, towns and private water companies. They reviewed their population, housing mix, land use patterns, projected population, water use, landscape design, price of water, and their existing conservation programs. In addition, they reviewed the effect weather would have on the use of water within a service area.

This was followed by an inventory of conservation measures that could be utilized in Arizona compiled through an extensive literature search by consultants and in-house staff. Then they compared the potential water conservation programs against what could be done for each individual service area and performed a complete analysis with that information for each service area. After discussion in public forums and with the affected water users to make sure their analyses were as accurate as possible, they established a numerical requirement in Gallons Per Capita Per Day (GPCPD) for the individual water users. He said this is figured by taking all the water that is withdrawn within a given service area and dividing it by the population of the service area; they subtract out any water that is effluent that is being reused in the service area so one of the ways a water provider can reduce its GPCPD is to reuse effluent which is another conservation measure.

He said as they were developing this program they realized potential problems which could crop up using this GPCPD measurement:

1. Especially in smaller water provider areas, if there is any increased growth in an industrial-commercial sector and there is not a corresponding immediate growth in their population, their GPCPD rate can skyrocket despite their conservation programs.
2. Weather has a significant effect on a year-to-year basis on GPCPD; when it is hotter and drier (summer) people tend to use more water; when it is more humid (monsoon season) there is a reduction in water use.
3. ADWR requires a GPCPD measure of compliance; they don't require programs, and private water companies in particular, have to go before the Corporation Commission and defend their choice of investments to be made.

On the positive side, he said they found that investments in water conservation tend to be less expensive and very cost effective than going out and finding new water supplies to substitute for groundwater use or to increase the total water supply for a service area.

He brought up more problems with the GPCPD measurement:

4. It is not appropriate for institutions, such as prisons or hospitals with long-term residents/patients.
5. A lot of water companies and municipalities are investing in the use of CAP water and alternative supplies of water and there have been indications that the GPCPD requirement is onerous to them as they're spending their money developing alternative supplies for augmentation purposes and to reduce their total dependency on groundwater.

He said they tried to modify the Second Management Plan to address some of these problems:

1. In cases where weather has an effect on the GPCPD causing fluctuations, they instituted a flexibility account in which credits can be gained; in one year if all water up to GPCPD is not used, then those years in which they go over those credits can be used to offset future pumpage and GPCPD overages.
2. They established an institutional category for specific conservation requirements that are not GPCPD-based for prisons and long-term care facilities.

3. For those extenuating circumstances when the GPCPD is affected by increased growth in the nonresidential portion of the water-using sector, they wrote in a special program called the Alternative Conservation Program (ACP).

He addressed requirements for program participation in the ACP (Page 2, Attachment 4). He said to date they have very few people who have chosen to use this program; those who opted for it were unable to meet their total GPCPD requirement that the Code envisioned.

He noted that given some of the problems they've had with implementation of the GPCPD program coupled with the need to reduce groundwater pumpage and make sure there is an assured water supply in the future for the cities, towns and water companies, there became a need to develop the GRD; along with that was a provision in the Code which requires the Department to modify the Second Management Plan to establish a program which is not GPCPD-based but based on actually putting conservations programs on the ground within the service areas.

He addressed the requirements to participate in the Non Gallons Per Capita Program (NPCP) (Page 2, Attachment 4). They are presently in the process of modifying the Second Management Plan to design and adopt this new program. Last week they mailed out a concept paper to affected water users for their comment.

He concluded by stating that development of management plan requirements is a very intense and time-consuming process and they try to involve as many members of the affected public as possible; they have established a very open process for a good dialogue with the folks who will be affected. He said adoption of the modifications must be done by December, 1994.

He referred to a matrix comparing the three programs (GPCPD, ACP and NPCP) (Attachment 4).

Mr. Carr clarified for Mr. Chastain that the process the Department uses to enforce the conservation requirements is an administrative hearing process; they have the authority to levy fines against those who don't meet their conservation requirements. They normally negotiate with those who are out of compliance and set up a Stipulation and Consent Order which basically states that the entity is out of compliance and both parties consent to getting back into compliance on a certain schedule. Within that Consent Order, there are fines which are either waived to a minimal amount or completely waived to allow the water providers to get back into compliance with the Code. Most of their compliance actions have been through those Stipulation and Consent Orders. He said there are a couple of areas where water providers have experienced extraordinarily large industrial growth and they have written Stipulation and Consent Orders to change their requirements so they are more reasonable; they can modify conservation requirements in extraordinary circumstances.

Chairman Overton asked if there is a provision in the Code allowing a water company to dispute ADWR's figures through arbitration or court. Mr. Carr

responded that individuals who believe they are adversely affected can request an administrative hearing with ADWR on their particular situation or they can request a variance from the particular requirement with up to five years in order to get into compliance with that requirement. If there is a disagreement with the Director's order, it can be reviewed by the court.

Mr. Schottel asked the difference between water use of a Phoenix and a Tucson individual family. He brought up a "Beat the Peak" program implemented in Tucson several years ago; they met their goal and reduced their water consumption, so the water company needed more money and had to raise the water rates. Since Tucson already has a program and is asked to reduce further back or they will be penalized, he asked how far back their water use can be reduced.

Mr. Carr replied that there is a difference in the base water use between Phoenix and Tucson, probably about 100 gallons per capita difference. This was taken into consideration when the conservation requirements were set for both cities; Tucson was not expected to reduce as much in total as Phoenix. Since then the Phoenix area cities have instituted very comprehensive water conservation programs to meet GPCPD and reduce their average total use over time.

Mr. Schottel noted that he receives complaints from people that when they reduce their use, a lot of times it results in higher water rates.

Chairman Overton asked how accurate the Department's projections of the 1980's were. Mr. Carr responded that, in general, the projections were across-the-board for all water users; where they have had differences between what was projected and what actually occurred, probably the most different was in the agricultural sector where they reduced their total water use just by not using water. In the municipal and industrial sector, they have seen considerable amounts of savings but also had to enter into a lot of Stipulation and Consent Orders around 1988. From 1980 to 1990, he said there was a decline in use in water in many service areas; in just a few, they saw an increase.

Mr. Carr addressed loss of water for Chairman Overton. This pertains to the loss between where the water is withdrawn to the point of delivery. They require that every year this be reported to ADWR who requires that they keep it at 10 percent or less (most exceed that); for small water systems (500 people or 100 acre-feet of withdrawal per year) they require 15 percent or less. They have had very few instances where losses were a significant part of their total use.

Mr. Carr stated that their numbers in conservation average around 6 to 9 percent depending on the area.

Chairman Overton asked if the ACP applies across-the-board to all municipalities and water supply companies. Mr. Carr replied that in order to qualify for the ACP program, there has to be another water supply or the supplier must be a member of a Groundwater Replenishment District; every member of a GRD automatically qualifies for a non-GPCPD program. This means they could continue

to use their groundwater and the Replenishment District would be responsible for replenishing the water withdrawn.

Chairman Overton asked about a conservation surcharge added to the customer's water bill in Sun City. Mr. Carr said he is not aware of their pricing policy.

Mary Martin, Legislative Liaison, Arizona Corporation Commission, explained that in Sun City there is a utility with a surcharge on its bill to pay for conservation measures. They applied for that with the Commission and demonstrated that it was a fair and reasonable request. The money is used for whatever programs the utility brought to the Commission to achieve their conservation goals. She said the Commission worked in conjunction with ADWR and the company to come up with this solution.

Norm James, Counsel, Water Utility Association of Arizona, noted that he is speaking at the request of Bob O'Leary, Executive Director, and these are his own personal comments.

(Tape 4, Side A)

He stated that water conservation is a complex topic. Private water companies in this particular area are subject to conflicting regulatory requirements. He commented that the GPCPD rate poses problems from the standpoint that under this type of regulation there are no specific conservation requirements per se imposed on individual water users, instead the company is required to meet these requirements. If the customers demand and use too much water, they won't meet the target but the company is in a difficult position because unlike municipalities private water companies simply don't have the same type of powers that a municipality does to force conservation. They can adopt regulations but they must go through the ACC to do so.

Another problem is that one good way to force conservation is to raise the cost of water; again private water companies must go through the ACC for rate increases. From a conservation perspective, the water company can't raise its rates to a level that would produce an unreasonable return; in other words, the regulation imposed on the water company by the ACC requires that the company earn a certain amount of profit.

He said there are two negative impacts to water conservation:

1. When these requirements are imposed, water sales go down which means the company's revenues decrease requiring a rate increase and the water companies have to again go through the ACC for that.
2. Water conservation programs cost money; there are expenses associated with implementing most conservation programs.

Mr. James related a situation regarding the Paradise Valley Water Company. They negotiated a settlement agreement with ADWR because they exceeded the GPCPD rate

since it was first imposed. He referred to a summary of the conservation programs contained in the settlement (Attachment 5). He noted that the company estimates that it will cost about \$65,000 over a several-year period for implementation of those programs.

At the same time the settlement agreement was being finalized, Paradise Valley Water Company also filed an application for rate increases with the ACC. He referred to a handout showing the chronological events relating to that filing (Attachment 6) pointing out the length of time involved and the complexity of having to go through a rate case for the approval of these sorts of programs. The company spent in excess of \$100,000 going through the rate case.

He noted that what is pertinent to the meeting today is that included in the Company's program were two different conservation charges; the Alternative Rate Program which is something ADWR specifically wanted the Company to implement, but because it is a rate or charge for service, the ACC has to approve it. The second charge is a water conservation surcharge (25 cents per customer bill) to generate the funds to finance the conservation program.

He said the Commission ultimately denied the Alternative Rate Program essentially finding that it wasn't appropriate. The ACC also denied the water conservation surcharge on the basis that water conservation expenses are "nonrecurring"; the cost of implementation won't continue indefinitely in the future.

His final point, he said, involves discussion at the ACC open meeting held on September 28. During the course of the open meeting, Commissioner Jennings asked the Commission staff if they had discussed these conservation programs with ADWR and they said they hadn't. He contended that there continues to be a problem with coordination between ADWR and the ACC. There should be some way to get these two companies together so that the entities can implement these programs, have reasonable assurance they can recover the expenses of doing so and fulfill the mandates of the Groundwater Code, while allowing the ACC to do its job of setting rates and charges for a utility service.

Mr. Chastain brought up the fact that it cost the Company in excess of \$100,000 to process this rate case and it took over a year to do it, submitting that the customers who use the water in Paradise Valley will pay for that. He agreed that there should be better coordination between the two agencies.

Mr. James specified that some of those costs for conducting the rate hearing will be passed on to the customers; some of them will not. In this particular case, the Commission allowed only \$40,000 to be passed on. He said he was not trying to make an issue out of the expense per se except that it is a lengthy and time-consuming process; one of the reasons it took a year and was so expensive was that there were a lot of other issues involved. In fact, the conservation issues, frankly, were largely ignored.

When asked by Mr. Chastain about possible ideas for legislation, Mr. James said he is not prepared today to provide specifics but Association members would be glad to discuss this with him. He suggested deregulation of some of the

extremely small water providers; the amount of water they withdraw is minuscule compared to other segments of the economy.

Chairman Overton asked Mr. James his opinion of completely doing away with the conservation rules. Mr. James indicated that he is not familiar with the agricultural side of the issue, but on the municipal side there are ways to modify what is being done that would eliminate some of the problems, e.g. instead of using the GPCPD rate, ADWR could come up with some general standards for smaller companies; something which is a lot more manageable.

Chairman Overton asked the cost of water for a normal cotton farmer.

David Iwanski, Executive Vice President, Agri-Business Council of Arizona, noted that the cost of water to a farmer is his lowest cost in the overall line item for a farm budget even though that per acre-foot water cost varies from \$9 to \$10 an acre-foot within the Salt River Project (SRP) service area to \$65 plus per acre-foot for a CAP Irrigation District.

Dennis Rule, Planning Program Coordinator, City of Tucson, noted that most of his points have already been made. He stated that Tucson's story with GPCPD goes back to 1974. The City had difficulty with peak demands and couldn't insure fire flow or domestic supply in many cases; their average per capita demand at that time was approximately 205 GPCPD. Because of that situation, they implemented several different programs such as "Beat the Peak" which was mentioned earlier. This program had definite incidental benefits for water conservation.

He said they had some very definite infrastructure requirements through the City Council which governs them, and in order to meet these infrastructure demands, the Council in 1975 implemented some very severe water rate increases. As a result of that, three members of the Council were recalled; within 30 days, the new members also voted to implement those same water rate increases.

He stated that because of the "Beat the Peak" and other programs they implemented, they reduced their average per capita demand to 150 GPCPD by 1980, but it has since gone up for reasons of which they are not even certain.

In 1990, he continued, the City entered into a Stipulation and Consent Order with ADWR because they determined that they had exceeded their GPCPD goal for 1987 and 1988. In addition, they were also cited for withdrawing 508 acre-feet of groundwater from a couple of nonexempt wells and not using them for irrigation for which the wells were permitted.

He gave an overview of the requirements of their Stipulation and Consent Order (Attachment 7) and referred to handouts showing the methodology required by the Order (Attachment 8), their conservation programs (Attachments 9 and 10), and a letter from the previous Director of ADWR, Betsy Rieke, stating that they have met the requirements of the Order (Attachment 11). Unfortunately, an article in the newspaper in June, 1993 (Attachment 12) informed them that the local office of ADWR had determined that they had exceeded their GPCPD requirement significantly for 1991 which was the year they finished complying with the

Order. They have also learned through the newspaper that this year they might be in violation because of the flushing program that they have implemented to deal with discolored water from the CAP.

He concluded by stating that the City is committed to water conservation; however, their fundamental belief is that the GPCPD program is not the best way to measure municipal conservation. There are great uncertainties in the calculation of per capita, as well as the calculation of pumpage. He opined that because of these uncertainties, there is no way to determine by a discreet number whether or not they are in or out of compliance with a certain goal.

Mr. Schottel related the fact that his neighbor installed low-flow toilets and cut down on the amount of water coming out of his showerhead. The plumber told him to be sure and flush twice but he didn't do that because he wanted to conserve water. A couple of months later, he had to rebuild his sewer pipes because the low-flow toilets, combined with the angle of the pipes, weren't using enough water to flush solids through the sewer pipes. This is not considered when trying to conserve. He said, in many cases, these rules and laws are just not practical; most of the time they increase costs or cause fines or penalties.

Chairman Overton asked Mr. Rule the total cost to the City to comply with the requirements of the Stipulation and Consent Order. Mr. Rule estimated that it cost several million dollars.

George Fletcher, Water Resources Manager, City of Tempe, noted that the City of Tempe is a landlock community which means they are not going to annex any new land, and this creates a particular problem for them when dealing with GPCPD issues.

He explained that almost all of the water used in Tempe is surface water provided from the Salt River Project (SRP), and in order to maximize use of that water, they built two surface water treatment plants and secured a CAP project subcontract for lands within the City which are not eligible for SRP water. This is a very small amount but in order to use that water, they also participated in the construction of the facility to connect the CAP to the SRP water supply for access to that water. They are also a participant in the Granite Reef Underground Storage Project, in order to bank water in case there is a surface water shortage and they have to depend on groundwater to make up their supply.

He said from 1985 to 1990 their primary goal was to get completely off the pump and as of 1990, they are using zero groundwater on an annual basis. However, because of a canal outage in 1989, they did pump 14 acre-feet of groundwater to supply water to a golf course. Prior to that, the maximum water they used in a three-year period where GPCPD was calculated was 200 acre-feet of groundwater; this is a service area using on an average approximately 40,000 acre-feet of water during this period of time. Because of the GPCPD issue, they were found to be in noncompliance with ADWR.

He said they had some other issues associated with regulation in the Groundwater Management Act which were also incorporated into the noncompliance. They spent untold hours with ADWR and legal representation negotiating a Stipulation and Consent agreement. He noted that in all fairness, ADWR did the best they could within the confines of the statutes to try to prepare something reasonable for them to comply with.

He admitted that from 1985 to 1990 the City put all of their available resources into the development of service water supplies in order to get off the pump; they did not put enough emphasis into the interpretation of the GPCPD measurement which led to misunderstandings regarding that and some other requirements of the Groundwater Management Act which led to the alleged violation.

He brought up a problem with the GPCPD measurement, which is the total amount of water used divided by the population base. Most of their City is built out; most of the land not yet built out is zoned or planned for nonresidential use, and because of this, looking at the long-term GPCPD goals, he opined that they will never make compliance.

He pointed out that the Arizona State University campus is considered nonresidential use, noting that when the summer water use goes up, they actually have a drop in water consumption which coincides with release of the students at the campus.

As a result of all this, in deliberations with the ADWR and working through the Arizona Municipal Waters Users Association (AMWUA), they were able to work the non-GPCPD through the Legislature last year. He opined that this begins to address the essence of the Groundwater Management Act; the achievement of safe yield. It will allow them to implement programs which they believe are effective for water conservation within their service area and reduce groundwater pumping as the objective to accomplish that. It will also recognize that some groundwater pumping, as long as it is within safe yield, is allowable.

Robert Musselwhite, City Manager, City of Litchfield Park, introduced Jerry Ellsworth and Jerry West of Litchfield Park Service Company, the private water company which supplies water to the City and the surrounding area. He said they are available for questions.

He referred to a chart (Attachment 13) pointing out the acre-feet utilized for various users in Litchfield Park for 1992 and preceding years. At the top of the page, by multiplying their population by the GPCPD they are allocated, the number of acre-feet they are allowed to use in Litchfield Park for a year is shown. He pointed out that in 1992 they are about one-third over their goal. As the years pass, these GPCPD consumption requirements become tighter and tighter so they will have to cut about half of what they are using under the present rules; and by the year 2025, which is a little more complicated than just pumped water because it involves CAP water also, they will have to reduce over their present use by about three-quarters. These are pretty tough goals and impossible to meet.

He opined that part of the problem is that these goals are based upon definitions which don't really reflect entire situations confronting them in Litchfield Park. He echoed the previous speaker's testimony concerning population and determining that population as being the problem. In Litchfield Park, they have a number of people which the Mayor refers to as "invisible people." This includes those stationed in the military and 300-plus rooms at the Wigwam Resort which are occupied year-round, which are not counted as part of the per capita equation. There are also winter residents, and a school system which involves three campuses and one community college (similar to the problem experienced by the City of Tempe with the ASU campus).

He contended that the definition of what per capita consumption is needs to be examined in light of these industries and uses that are being carried on in Litchfield Park; They are a very important part of their community, and apparently, are not counted in the water equation which hinders expansion.

He said their situation is also similar to the City of Tempe because they will not be able to expand because they have been strip-annexed completely around their community by other communities, so trying to meet water requirements in the future will be difficult and doubtful without a very severe change in the community.

He pointed out that their consumption level in the year 2000 will be about 1,000 acre-feet, and their residential consumption right now is about 1,000 acre-feet. Their City has, in the past, adopted conservation measures. Referring to the chart, he noted that residential and the City have trended downward in their water consumption; the Wigwam Resort has gone upward due to expansion. But the overall water consumption for the City has continued to drop.

Mr. Chastain asked the source of Litchfield Park's water supply. Mr. Musselwhite said it is from underground wells in the area. He added that information he has received from Litchfield Park Service Company shows that because of differences in the last ten years, the aquifer in their area is increasing in height. He opined that this is because the farming operation is less intense compared to when Goodyear Tire and Rubber was located in the area.

Chairman Overton inquired if by the year 2025 residents of Litchfield Park will be able to obtain water. Mr. Musselwhite replied that the figures on the handout are based on CAP or some other type of surface water being brought into the community. At the present time, they don't have access to that so something will have to give pretty drastically if they have to stick to these figures. The present water consumption would have to dip about three-quarters. He added that it will be very expensive to bring CAP water into the City.

(Tape 4, Side B)

Gene Jensen, representing Sun City Homeowners Association, noted that ADWR has made a 25 percent error on the amount of people served in their community; there are a lot of people living in Sun City who maintain their tax-paying residence elsewhere.

He observed that part of the wastewater from Sun City goes into cooling of the Palo Verde Nuclear Generating Station (PVNGS) and they should get some credit for use of that water; they have applied to ADWR a number of times but have not had any success.

He added that when the conservation program was negotiated between their private water company and ADWR, the Homeowners Association was told that this was a private communication between the two and they could have no part whatsoever in development of the plan.

He said there are other costs that go along with this. In order to meet this conservation requirement, they will have to dry up the one portion of urban park they have in Sun City. This will cost about \$4 million during a time in which their groundwater levels are remaining more or less constant.

Chairman Overton asked about the loss of a park. Mr. Jensen clarified that they have a system of urban parkways, very wide medians, which are mainly used for walking; less than one percent of the homes have very little grass. He said they also have a very large hospital which provides extended care in the community.

Arve H. Dahl, representing Property Owners and Residents Association of Sun City West, endorsed the comments of Mr. Jensen. He expressed a concern about water quality, specifically CAP water, and how it is used within the state. He said they do not have a water treatment plant and they do not need one; yet Mr. Ward mentioned plans for recharge of the underground aquifer in his area (in the Agua Fria River) which will deteriorate the quality of the water they now have. He said this is one issue of total management of water that needs to be reviewed.

He addressed the fact that today they are talking primarily about urban water (about 30 percent of the water used in the State of Arizona) not agricultural water. He noted that somehow, as the overall balance is taken into consideration, everyone should work together because if the groundwater level is used as a means to determine overcharge in the assured water supply rules, then agriculture is greatly involved in what is charged against the urban areas.

He also addressed the population issue. He stated that in their community Del Webb should be taken into consideration because they use part of the water for construction and development of the community. The whole question of how much water is used and who uses it is a subject that needs some attention.

James Matteson, Member, Sun City Homeowners Association, questioned the constitutionality of what the Legislature has been doing since 1980. He claimed that ADWR is taking water without just compensation. He noted that when he moved from Wisconsin, where he was an attorney and had quite a bit of experience in water matters, he investigated water matters before moving to Sun City. He found out there is a large aquifer under Sun City which contains the best water in the Valley, and with the cessation of agricultural use, he realized that the aquifer would probably be rising or remaining steady and there would be an adequate supply of water. Now ADWR wants to take that water without compensation.

Chairman Overton reiterated his earlier statement that the next meeting is November 16 which will be the last meeting for testimony. He said he and his staff are available for discussion of items which anyone would like to address at that meeting.

Without objection, the meeting adjourned at 12:14 p.m.

Linda Taylor, Committee Secretary

(Attachments are on file in the Office of the Chief Clerk.)

ARIZONA HOUSE OF REPRESENTATIVES
INTERIM MEETING NOTICE

Open to the Public

INTERIM GROUNDWATER CODE STUDY COMMITTEE

DATE: Tuesday, November 16, 1993

TIME: 9:00 a.m.

PLACE: House Hearing Room 1

AGENDA:

- 1) Steve Olson, Special Assistant to the Director, explaining the Arizona Department of Water Resources proposal to eliminate the administration and regulation of small water rights.
- 2) Randy Sable, Chief of Accounting and Rates, Arizona Corporation Commission, explaining the Small Water Company Short-form Rate Application.
- 3) Steven Olson, Special Assistant to the Director, Arizona Department of Water Resources, outlining suggested changes in the non-per capita conservation program in the second management period as it applies to nonagricultural uses.
- 4) David Iwanski, Executive Vice President, Agri-Business Council of Arizona, discussing possible changes to the conservation program as it relates to agricultural uses.
- 5) Public testimony.

Jerry Overton
Chairman

MEMBERS:

Representative Schottel
Representative Chastain

11/10/93

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ARIZONA HOUSE OF REPRESENTATIVES
Forty-first Legislature - First Regular Session
Interim Committee Meeting

GROUNDWATER CODE STUDY COMMITTEE

Minutes of Meeting
Tuesday, November 16, 1993
House Hearing Room 1 - 9:00 a.m.

(Tape 5, Side A)

The meeting was called to order at 9:02 a.m. by Chairman Overton and attendance was noted.

Members Present

Mr. Chastain

Mr. Overton, Chairman

Members Absent

Mr. Schottel (excused)

Speakers Present

Mark Frank, Director of Phoenix Active Management Area, Arizona Department of Water Resources (ADWR)

Randy Sable, Chief of Accounting and Rates, Arizona Corporation Commission (ACC)

Steve Olson, Special Assistant to the Director, Arizona Department of Water Resources (ADWR)

David Iwanski, Executive Vice President, Agri-Business Council of Arizona

Guest List (Attachment 1)

Mr. Overton noted that a proposal surfaced a few weeks ago to eliminate regulations by ADWR on small water rights.

Mark Frank, Director of Phoenix Active Management Area, Arizona Department of Water Resources (ADWR), stated that it is somewhat unusual for a regulatory agency to recommend deregulation but he believes there is compelling evidence which suggests that small water rights holders should not be treated the same as large water rights holders in the Phoenix Active Management Area (AMA) (Attachment 2).

Mr. Chastain inquired if anyone is opposed to this idea.

Mr. Frank replied that there has been discussion in two areas that could be perceived as opposition:

GROUNDWATER CODE STUDY COMMITTEE
NOVEMBER 16, 1993

1. Some agricultural interests believe that elimination of credits that have been accrued by small rights holders would be removing a right or something of value that they currently have. There is no opposition to eliminating the debit portion but they believe that the credit portion should be sold to someone else in a larger category who may need them.

He contended that most large farms in a debit situation (which is normally by a couple hundred acre-feet), would not spend the time and money (\$100 for every credit transaction performed by ADWR) going to several small farms to purchase credits; they would rather go to a larger farm for one credit transaction.

2. In the Third Management Plan for AMA's, the requirement for farms is to take the current water duty for all irrigation grandfathered rights (IGFRs), review the top 25 percent (the highest water duties within irrigation districts) and reduce that top 25 percent by up to 10 percent. If the small water rights are taken out of the equation and are no longer subject to this provision, more large water holders would be subject to that top 25 percent and may suffer a 10 percent reduction in their water duty which they otherwise would not have had.

He noted that the Arizona Municipal Water Users Association (AMWUA) has suggested that as a condition of deregulating the small water providers, they must join the Groundwater Replenishment District (GRD). He said ADWR does not support that suggestion.

Mr. Chastain asked how ADWR can tell if a small water user expands his acreage after being deregulated.

Mr. Frank said they probably would not be aware of it. He said they have a similar situation now where the definition of IGFRs requires regulation of two acres or above; there are thousands and thousands of parcels at 1.9 and it is conceivable that people could buy the lot next door making that more than two acres and irrigating without a certificate. He said in the few instances where this might occur, they question whether or not it is worth it to do something about it.

Mr. Overton referred to the second reason for opposition noting that from the chart included with the handout and from what he has heard in the past, no one is even close to using their allotments so he doesn't understand that concern.

Mr. Frank agreed that over the past four to five years farmers haven't come close to using their total allotments on an AMA basis but he opined that it is a matter of looking forward to the day when the economy is better and they will need their total allotment; any initiative that would cause an erosion of that allotment is of concern to farmers.

Mr. Overton asked how the availability and cost of Central Arizona Project (CAP) water fits into this equation.

Mr. Frank said CAP water has heavily contributed to the fact that there are many farms not at their maximum farm allotment because they cannot afford CAP water nor can they afford to pump groundwater so the low use rate, in part, is attributable to CAP.

Mr. Overton asked if the proposal to make CAP water available at the cost of \$17 per acre-foot for farmers would alleviate some concerns.

Mr. Frank surmised that it would because that would cause CAP water to be used and more water in total to be used (but not to exceed the allotment) where it was not used in the past few years. He mentioned that when a farmer doesn't use his total farm allotment, he is registered a credit to his account expressed in acre-feet, and in the Phoenix AMA, there is close to 4.5 to 5 million acre-feet worth of agricultural flex account credits which is enough to carry every farmer, from a credit standpoint, perhaps for decades. He stated that underutilization of the water allotment as a whole is primarily due to the economy.

Mr. Overton asked the rationale of AMWUA's suggestion that the small water rights be required to join a Groundwater Replenishment District.

Mr. Frank stated that most, if not all, of the water providers that would be deregulated under this proposal are groundwater users only, and even though they use a small fraction of groundwater, AMWUA believes that if some regulation is eliminated that the water user in question should compensate by joining a replenishment district whereby they would be in the habit of replenishing groundwater that they have used. He said this is his best estimate; he cannot speak for them.

He clarified for Mr. Overton that the groundwater replenishment district referred to would be a voluntary one and the small water users would have to pay a replenishment fee for every acre-foot of groundwater that they pumped that was associated with overdraft, whatever it is set at, once they are in the district. This would probably be four or five times what they are paying to deliver water within those small systems. He noted that most of the small water rights are investor-owned water companies which are operating on a shoestring and ADWR believes that it certainly wouldn't hurt to cut them loose and may even place them in better economical stead. He opined that there is no way they could afford, on a per acre-foot basis, to join a replenishment district at this time.

Mr. Overton asked how many people a small water company using 250 acre-feet would serve annually.

Mr. Frank replied that it would serve about 2,000 people. He clarified that municipal water providers include private water companies.

Mr. Overton noted that in a previous meeting testimony and discussion focused on the relationship of ADWR, the Arizona Department of Environmental Quality

(ADEQ), the Arizona Corporation Commission (ACC), and how they do and do not interface and some existing problems. He noted that one of the problems is that the private water companies have problems surviving, economically, and it is very difficult for them to appear and obtain the necessary rate adjustments by the Corporation Commission; it can sometimes cost as much as \$100,000 for a rate case. He said he met with Marcia Weeks, Chairman, ACC, who told him about a program which he believes should be related to the Committee and the audience so they are aware that it is available to the small water companies.

Randy Sable, Chief of Accounting and Rates, Arizona Corporation Commission (ACC), stated that he has been with the Commission four years and is not aware of how new this program is but there are a number of utilities that can take advantage of it and incur nowhere near \$100,000 in attorney fees, etc. He said the Commission's definition of a small water company is one generating less than \$250,000 in gross annual revenue which is somewhat different from ADWR's definition.

He referred to handouts consisting of the Arizona Administrative Code which contains rate case filing rules for all utilities in the state when requesting rate relief (Attachment 3), a rate application for the small water companies (Attachment 4), and a glossary which defines the terminology used and the information the Commission is seeking (Attachment 5).

He said these cases do not require a hearing before the Commission which eliminates a lot of expense in attorney fees and hiring of accountants for compilation and presentation of information. He explained that the Commission staff analyzes the information submitted, they perform a regulatory audit of the company to determine reasonable and prudent expenses to be recovered from ratepayers, then prepare a staff report which is submitted to the Hearing Division of the Commission who then prepare a proposed order for the Commission's consideration at an open meeting. He added that the Commission receives approximately 40 rate applications annually in addition to numerous other requests; from the time the docketed request is filed, on the average it takes less than three months for processing.

He stated that the applications require a significant amount of information and utilities can file whenever they want. He said it takes only a few hours to fill out the form noting that the ACC will provide assistance if necessary. They have a Small Water Company Advisory Team implemented several years ago to assist small water companies in filing for rate cases, etc. They have presented workshops in Phoenix and the group has travelled around the state for various workshops and discussions with water companies. He said they are currently in the process of putting that team together again to send them around the state to insure that all the small utilities and water companies can take advantage of this process offered by the ACC.

Mr. Sable clarified for Mr. Chastain that they review the application form every year for purposes of eliminating or refining the information requested. He noted that they do, however, need to insure that enough information is provided so that an owner is not improperly justifying a rate increase.

Mr. Overton asked how use of the short form can be encouraged.

Mr. Sable replied that he doesn't really know why this form isn't used more. He noted that when they recognize, from customer complaints, that a utility is having financial difficulties they encourage them to take the steps necessary to process a rate increase. He reiterated for Mr. Overton the fact that the Small Water Company Advisory Team travels around the state. He said they particularly focus on those companies that have not asked for rate relief in the last 10 or 20 years and probably aren't recovering costs. He added that they distribute a quarterly newsletter to every water company throughout the state.

Mr. Overton stated that at the last meeting, conservation rules were discussed, particularly the Gallons Per Capita Per Day (GPCPD)-based measure, and how it isn't very effective and why some of the non-GPCPD programs aren't being pursued. He noted that ADWR has been reviewing possible changes in those rules.

Steve Olson, Special Assistant to the Director, Arizona Department of Water Resources (ADWR), noted that the conservation goal for the First Management Plan was 140 GPCPD by the year 2025 when safe yield would be achieved. He clarified that that figure is a remnant of the First Management Plan and is no longer a viable goal. He noted that three programs are currently in place; the GPCPD, the Alternative Conservation Plan (ACP) and the Non Gallons Per Capita Program (NPCP).

(Tape 5, Side B)

He pointed out that NPCP really hasn't taken effect yet; there has to be an amendment to the Management Plan to do that. They are currently working with the water user community to develop that program. They are also working with conservation specialists around the AMA to identify good conservation programs to be implemented and the various components of those programs. He said current problems can be addressed either through the Third Management Plan or through alternatives brought forth by the Committee.

He related that the Third Management Plan is presently being initiated. He recognized that this plan must be more resource-based. He pointed out that at the end of the Third Management Plan (2010) there will only be 15 years left to achieve safe yield so they need to have programs in place by that point to obtain that goal.

As they develop these proposals, they need to insure they have enough information in place. He said these items need to be recognized:

1. Supplies that are available and economically viable to the providers today.
2. Supplies that are available but not adequately used.
3. Existence of the GRD.
4. Assured water supply program.

He said additional items might need to be addressed in the future:

1. A better definition of safe yield, possibly a more localized concept.
2. Customizing requirements to local situations.
3. Clarification of the role of private water companies.
4. The need for more regionalized planning.
5. Finding a way to hold down the amount of regulation; intrusion into the way a provider operates.

He said they are beginning to address some of these items as they address the Third Management Plan.

Mr. Overton expressed his appreciation of the change of direction that ADWR has taken. He noted that there is still a question as to whether or not to wait for the Third Management Plan or to take some legislative action to correct the problems. He pointed out an item that has not been addressed: the fact that in the last few years it has been recognized that Arizona has an ungodly amount of water and the water companies have been conserving based on the false assumption that there is little water here and that if CAP water is not used it is lost. He suggested that maybe something should be done, at least on a temporary basis, before the Third Management Plan is in place.

Mr. Olson clarified that the Third Management Plan will be in place in the year 2000 and the actual order of adoption should be signed two years before that.

Discussion followed between Mr. Olson and Mr. Overton concerning conservation of groundwater in relation to CAP water.

Mr. Overton brought up the concept of treating effluent noting that it is not being considered in the conservation measures. He said he would like to see treated effluent used for irrigation of medians in the cities. He stated that in Sun City, Litchfield Park, and Cave Creek golf courses and medians are being irrigated with groundwater. If they switched to using treated effluent, groundwater could really be conserved.

Mr. Olson said that in the Management Plans they have some incentives to encourage the use of effluent on golf courses and medians. There are also incentives in terms of lakes legislation which require that lakes go to nongroundwater sources as they are developed in the future. He said there have been court proceedings that identify ADWR's role in terms of regulation of effluent; in essence, it is very minimal.

Mr. Olson addressed a concern about the amount of time and money spent contesting their regulations noting that their philosophy has been to meet with water users and work out an agreement; they generally do not go to court or fine

anyone but try to bring them into compliance. He said they met with the City of Tucson over the period of one year and worked out the agreements referred to in the last meeting adding that he believes they were reasonable, rational measures.

David Iwanski, Executive Vice President, Agri-Business Council of Arizona, stated that several years ago an Agricultural Technical Advisory Committee was formed as a result of the aftermath of groundwater transfer debates and the creation of the first Groundwater Replenishment District. This Committee was responsible for reviewing agricultural conservation for the Second Management Plan. He related some of the problems identified in the requirements:

1. The program was extremely difficult to administer and caused consternation and confusion for the water users as well as being an administrative nightmare for ADWR.
2. The program was not user-friendly in terms of insuring the water users' understanding of the requirements.
3. Original water duties were based on historic cropping patterns from 1975 through 1979. Those original water duties and cropping patterns never took into account changing economical circumstances (particularly in the agricultural economy), participation of farms in the various farm support programs, or urbanization of agricultural lands (particularly in the Metropolitan area).

He noted that in the Second Management Plan maximum conservation for agriculture was defined as 85 percent irrigation efficiency which ADWR believed, based on their data collection and data base, was achievable. A number of people in the agricultural community said it was not achievable/reasonable, or it was achievable if money was no object. There was subsequent enabling legislation which appropriated \$500,000 for a study of that 85 percent irrigation efficiency, its achievability and reasonableness.

ADWR approached the agricultural community and said there is a chance that the \$500,000 would be spent without resolving, to everyone's satisfaction, the economics of 85 percent being achievable, and suggested developing some alternatives. He publicly thanked the Department for their initiative in trying to be fiscally responsive and good water resource managers. The agricultural community agreed to do that and alternatives were reviewed which is where they are today. He related some possible alternatives:

1. Irrigation districtwide water duty or conservation requirement.
2. Groundwater-only water duty for agriculture.
3. Phasing out accrued flex account credits in exchange for a water duty based on current cropping patterns and

economic conditions, as well as the ability to obtain agricultural financing.

He opined that this is a positive approach, noting that they are looking at developing alternative programs to the existing programs, not displacing the current requirements. He said agriculture would like the opportunity to remain under existing programs or to review, through utilization of this funding (which may require additional authorizing language), alternatives for agriculture which take into account economics and efficient use of water for agriculture in the Second Management Plan.

He clarified for Mr. Overton that these alternate conservation plans are being seriously discussed and should be brought forth in the upcoming Session. He opined that all indications are that ADWR is working in good faith with the agricultural community in developing alternatives.

Mr. Overton stated that this will probably be the last meeting to accept public testimony. He intends to hold one more meeting sometime in December to discuss recommendations from this Committee for possible legislation.

He expressed his pleasure at the accomplishments of the Committee and thanked ADWR for their cooperation.

Without objection, the meeting adjourned at 10:34 a.m.

Linda Taylor, Committee Secretary

(Attachments and tapes are on file in the Office of the Chief Clerk.)