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Transcript Exhibit(s)

Docket #(s): W-01656A-98-0577

SW-02334A-98-0577

Exhibit #: R1,2, RUCO 1-2, S1,2,3. S1-2

BCTA 1,2,3,5. SCTA 1,2,3,4,5,6,7,8,9.

TF 1,2,3.

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN
JIM IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF THE JOINT
APPLICATION OF SUN CITY WATER
COMPANY AND SUN CITY WEST
UTILITIES COMPANY FOR APPROVAL
OF CENTRAL ARIZONA PROJECT
WATER UTILIZATION PLAN AND FOR
AN ACCOUNTING ORDER
AUTHORIZING A GROUNDWATER
SAVINGS FEE AND RECOVER OF
DEFERRED CENTRAL ARIZONA
PROJECT EXPENSES.

Docket No. W-01656A-98-0577
Docket No. SW-02334A-98-0577

NOTICE OF FILING

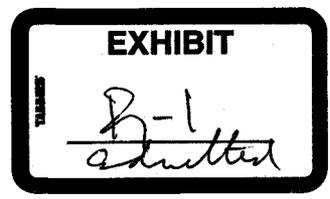
The Residential Utility Consumer Office ("RUCO") hereby provides notice of filing the
Direct Testimony of Marylee Diaz Cortez, in the above-referenced matter.

RESPECTFULLY SUBMITTED this 10th day of September, 1999.

Karen E. Nally
Karen E. Nally
Counsel

AN ORIGINAL AND TEN COPIES
of the foregoing filed this 10th day
of September, 1999 with:

Docket Control
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Cheryl Fraulob

SUN CITY WATER AND SUN CITY WEST
DOCKET NO. W-01656A-98-0577
DOCKET NO. SW-02334A-98-0577

DIRECT TESTIMONY
OF
MARYLEE DIAZ CORTEZ

ON BEHALF OF
THE
RESIDENTIAL UTILITY CONSUMER OFFICE

SEPTEMBER 10, 1999

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1 **INTRODUCTION**

2 Q. Please state your name, occupation, and business address.

3 A. My name is Marylee Diaz Cortez. I am a Certified Public Accountant. I am the
4 Utilities Audit Manager for the Residential Utility Consumer Office (RUCO)
5 located at 2828 North Central Avenue, Suite 1200, Phoenix, Arizona 85004.

6
7 Q. Please state your educational background and qualifications in the utility
8 regulation field.

9 A. Appendix I, which is attached to this testimony, describes my educational
10 background and includes a list of the rate case and regulatory matters in which I
11 have participated.

12
13 Q. Please state the purpose of your testimony.

14 A. The purpose of my testimony is to present recommendations resulting from my
15 analysis of Citizens' Sun City Water Company (Sun City) and Sun City West
16 Utilities Company's (Sun City West) (collectively the "Company") request for
17 approval of a Central Arizona Project (CAP) utilization plan and for an accounting
18 order authorizing a ground water savings fee and recovery of deferred CAP
19 costs.

1 **CAP BACKGROUND**

2 Q. Please provide some background information regarding Citizens Utilities CAP
3 allocation.

4 A. Sun City Water and Agua Fria (another division of Citizens) entered into CAP
5 subcontracts with the U.S. Bureau of Reclamation and the Central Arizona Water
6 Conservation District (CAWCD) in 1985 for 17,274 acre feet of water. Citizens
7 acquired an additional 380 acre foot allocation when it purchased the Youngtown
8 water system in 1995. In 1998 the Department of Water Resources (DWR) and
9 the CAP Board approved a reassignment of 9,654 of the original allocation from
10 Sun City to the Agua Fria Division of Citizens. Early in 1999 DWR and the CAP
11 Board approved the reassignment of 2,372 acre feet to Sun City West. Citizens
12 CAP allocation currently totals 17,654 and is allocated as follows:

13	Sun City Water	4,189
14	Sun City West	2,372
15	Agua Fria	11,093
16		

17 Q. Has Citizens ever taken delivery of any of its allocation?

18 A. No. To-date Citizens has not taken delivery of any of its allocation. However,
19 the terms of the subcontract require Citizens to make annual capital payments on
20 its allocation whether or not it uses the water. The Company has attempted
21 unsuccessfully in the context of several different rate proceedings to obtain rate
22 recognition of the CAP capital payments. The Commission has consistently
23 taken the position that the CAP water must be used and useful in order to receive
24 rate recognition. The Commission, however, granted the Company authority to

1 defer its CAP capital charges on its balance sheet for potential future recovery in
2 Decision No. 58750, dated August 31, 1994.

3
4 Q. What position did the Commission take in the Company's last rate case regarding
5 the CAP allocation?

6 A. The Commission ruled as follows in Decision No. 60172:

7 As pointed out by the Concerned Customers, SCTA, Staff,
8 and RUCO, the Company has held its CAP allocation for more
9 than eleven years, but has not delivered or put to beneficial use
10 any CAP water, and currently has no plan for its use. The ADWR,
11 CAWCD, Staff, and most of the parties recognize that the time for
12 Citizens to take action is now - not decades in the future when
13 costs will be higher and alternatives may be restricted or not
14 available. Because Citizens is not utilizing CAP water in the
15 provision of service to its customers, its CAP allocation by
16 definition is not "used" and "useful". Therefore, the costs of
17 Citizens' CAP capital charges should not be borne by ratepayers.
18 Furthermore, because Citizens has no definite plans to use the
19 CAP water, its proposal to use its CAP allocation is speculative
20 and the use of this water cannot be considered a known and
21 measurable event. Therefore, Citizens' request for M&I Capital
22 Charges should be denied.

23 We will, however, allow Citizens to defer CAP capital costs
24 for future recovery from ratepayers when the CAP allocation has
25 been put to beneficial use for Citizens' ratepayers. This order is
26 subject to a development of a plan and date of implementation by
27 December 31, 2000. If CAP water is not implemented by
28 December 31, 2000, then Citizens will lose its ability to defer future
29 costs. [Decision No. 60172 at page 10]

1 **CURRENT CAP PROPOSAL**

2 Q. What is the Company requesting in the instant case regarding its CAP
3 allocation?

4 A. The Company is requesting rate recovery of all CAP capital charges deferred
5 pursuant to Decision No. 58750 related to its Sun City and Sun City West
6 allocations. These prior costs total approximately \$1 million. The Company is
7 also requesting on-going recovery of all future Sun City and Sun City West CAP
8 allocation costs. The on-going costs, based on the year 2000, total
9 approximately \$700,000 annually. The Company has a plan in place to use its
10 Sun City and Sun City West CAP allocations and accordingly, pursuant to
11 Decision No. 60107, is requesting rate recovery of used and useful CAP water.

12
13 Q. How does the Company plan to use the CAP Water?

14 A. The Company's plan is twofold and involves both a long-term CAP usage plan
15 and an interim CAP usage plan. The Company intends to implement the interim
16 plan as soon as it receives approval to do so from the Commission. Under the
17 interim plan the Company would deliver its entire Sun City and Sun City West
18 CAP allocation to the already existing Maricopa Water District (MWD)
19 groundwater saving project. The CAP water will be delivered through an existing
20 distribution system to farms located in MWD's service area that have historically
21 used groundwater. For every acre foot of groundwater not pumped by MWD
22 farmers, Sun City and Sun City West will be legally entitled to recover that water
23 through wells to meet the existing demands in Sun City and Sun City West.

1 Q. Please discuss the proposed long-term CAP usage plan.

2 A. Under the long-term plan the entire Sun City and Sun City West CAP allocation
3 would be used to irrigate golf courses that have historically pumped groundwater
4 in the Sun City and Sun City West service territories. As a result, every gallon of
5 groundwater not pumped by the golf courses would be preserved for potable
6 water uses. The plan would require the construction of a transmission line,
7 delivery system, additional storage, and booster pumps. Citizens predicts the
8 necessary infrastructure for the long-term plan could be completed by 2003.

9

10 Q. How does the Company propose to recover the costs associated with CAP water
11 use?

12 A. The Company requests a special tariff to collect the deferred CAP capital
13 charges and also a special tariff to recover annual on-going CAP costs. For
14 both of these tariffs, the Company proposes a flat per meter charge for all
15 residential customers and commodity charge to be applied to all commercial
16 usage.

17

18 **IDENTIFICATION OF CAP ISSUES**

19 Q. Please identify the specific issues that arise out of the Company's CAP proposal.

20 A. RUCO has identified five basic issues that arise out of Citizens' CAP proposal.

21 They are:

- 1) Should the incremental cost of using CAP water in lieu of groundwater be recoverable through rates despite the fact it represents a higher cost than the current source of supply?
- 2) Should the interim CAP usage plan be approved?
- 3) Should the long-term CAP usage plan be approved?
- 4) If a CAP usage plan is approved, should the deferred capital charges be recoverable through rates?
- 5) If recovery of the deferrals and the on-going costs of CAP are allowed, what is the amount to be recovered, and from whom should it be recovered?

DISCUSSION OF CAP ISSUES

Issue #1

Q. Please discuss the first issue.

A. Very few of the regulated utilities that have CAP allocations are actually using CAP Water. Thus, until recently, with the Commission approval of a CAP usage plan for Paradise Valley Water Company, Decision No. 61831, there was no policy regarding recoverability of used and useful CAP water. This issue presents two conflicting aspects. First, it has historically been the goal of regulation to allow only necessary, prudent, and reasonable costs to be recovered through rates. As part of determining what is necessary, prudent, and reasonable one factor that is typically considered and examined is relative cost. For example, prudence of construction costs are often determined by examining

1 bids to ensure that the lowest bid was accepted. In other words, rate recovery
2 has been contingent on a finding that the utility selected the least-cost
3 alternative. Traditionally, RUCO has striven to ensure that the rates authorized
4 for utilities include least-cost alternatives. Both the proposed interim and long-
5 term CAP usage plans are more expensive than the Company's current cost to
6 pump groundwater. Thus, use of CAP water does not represent the least-cost
7 alternative.

8
9 Q. How does the least-cost standard create a conflict in the CAP water issue?

10 A. The State of Arizona has legislated and implemented certain water policies and
11 goals that require utilities to find alternatives to groundwater. Conversely, for
12 most water utilities in Arizona, use of groundwater currently represents the least-
13 cost alternative. In this respect, the traditional regulatory policy of using least-
14 cost alternatives conflicts with water policy goals and legislation. RUCO took the
15 position in the recent Paradise Valley case that prudent implementation of CAP
16 usage is justified to achieve state water policy goals even if such implementation
17 exceeds the current cost of using groundwater. RUCO further noted that this
18 does not mean that CAP water is justified at any cost. The individual
19 circumstances surrounding a given CAP usage plan, the relative cost, and the
20 impact on rates must be weighed for each utility.

1 Q. Have you weighed Citizens' Sun City and Sun City West CAP usage plan?

2 A. Yes. I have separately weighed the interim CAP usage plan and the long-term
3 CAP usage plan. These plans are discussed further under Issue #2 and Issue
4 #3, respectively.

5

6 **Issue #2**

7 Q. Please discuss the second issue regarding the Company's request for approval
8 of its interim CAP usage plan.

9 A. As discussed earlier, the interim plan involves the delivery of Citizens Sun Cities'
10 CAP allocation to the MWD. This plan was one of six CAP usage plans
11 analyzed by Brown and Caldwell, who were hired by Citizens to prepare a cost
12 analysis of CAP water usage options. The six options and their relative
13 incremental¹ operating and capital costs are as follows:

<u>Option</u>	<u>Capital Costs</u>	<u>Oper. Costs</u>
Lease capacity at Agua Fria Recharge Proj.	\$0	\$132,000
Citizens Recharge Project	11M	76,000
Exchange with MWD	0	(111,000)
Golf Course Usage	15M	187,000
CAP Water Treatment Plant	21M	679,000
Capacity at City of Glendale	10M	1,669,000

21

¹ The Brown and Caldwell cost estimates include only relative incremental costs. Relative incremental costs refer to all costs other than the annual M&I capital charges and the annual CAP delivery charges. Since these costs are the same for all options they are not included in the Brown and Caldwell estimates.

1 Q. Please continue your discussion of the Company's MWD CAP usage plan.

2 A. As shown on the above chart, the option of a CAP water exchange with MWD
3 has the lowest relative cost. In fact, this option will generate revenue. On June
4 14, 1999 the MWD agreed it will pay Citizens \$16 per acre foot for the CAP water
5 the Company delivers to MWD. No new infrastructure is necessary to implement
6 the MWD option, thus, there are no capital costs associated with this option.

7
8 Q. Should Citizens be granted regulatory approval to proceed with the MWD CAP
9 water exchange plan?

10 A. Yes. It appears the MWD exchange would allow Citizens to utilize its CAP
11 allocation at the lowest cost possible for CAP usage. This is because the only
12 on-going costs associated with the MWD exchange option are the annual CAP
13 payments, net of the \$16 per acre foot MWD will pay Citizens for the water.
14 There is no investment in infrastructure necessary. The MWD plan minimizes
15 the cost of using CAP water. Thus, in this case, RUCO believes Citizens should
16 receive regulatory approval of the MWD CAP water usage plan.

17
18 **Issue #3**

19 Q. Please discuss the third issue regarding the Company's request for approval of
20 its long-term CAP usage plan.

21 A. As discussed earlier, Citizens' long-term CAP usage plan would involve the use
22 of the Sun Cities' CAP allocation to irrigate golf courses in the Sun Cities' service
23 territory. This option would require the installation of, and investment in, a

1 substantial amount of new infrastructure. The Brown and Caldwell study
2 estimated the costs of the infrastructure at \$15 million. Brown and Caldwell
3 further noted that the estimate was preliminary, and in all probability,
4 conservative. As a result, the necessary investment likely could be much higher.
5 The annual operating costs were estimated at \$187,000. This option is much
6 higher in cost than the MWD exchange, Citizens recharge, or Agua Fria recharge
7 options.

8
9 Q. Would implementation of this option be in accordance with regulatory goals and
10 principles?

11 A. No. As discussed earlier, one of the principles of regulation is to ensure that
12 utility investment adhere to least-cost principles. Although RUCO believes in
13 general that the higher cost of CAP water vs. groundwater is outweighed by the
14 furtherance of state water policies and goals, we do not believe that CAP water
15 at any cost is necessary, justified, or prudent. Citizens has three other CAP
16 water usage options that will utilize the entire Sun Cities' CAP allocation at far
17 less cost than the golf course plan. Further, all three of these plans meet state
18 water policy goals. It is therefore, unnecessary, if not imprudent, to expend
19 millions of dollars in excess of what is necessary to achieve the water policy
20 goals.

1 Q. What impact would an additional investment of \$15 million, or more, have on Sun
2 City Water and Sun City West's rates?

3 A. At the time of Citizens' last rate case, Sun City and Sun City West had combined
4 net plant in service of approximately \$37 million. An additional investment of \$15
5 million would increase rate base by over 40%, which in turn would have a
6 significant impact on rates. In contrast, the Agua Fria recharge option and MWD
7 exchange option would have no impact on rate base.

8
9 Q. Do you recommend approval of Citizens' long-term CAP usage plan?

10 A. No. As just discussed, Citizens has several CAP usage options available at
11 substantially less cost. Further, I believe it is premature to commit Citizens to the
12 substantial investment necessary to implement this option. As yet Citizens has
13 not used CAP water in any capacity. I believe it would be more prudent for
14 Citizens to precede with the MWD exchange option, or the Agua Fria recharge
15 option, and see how those plans work before committing the substantial
16 investment necessary for the golf course option. Moreover, with each passing
17 year new CAP usage options are evolving. In fact, many of the options set forth
18 by Citizens in this application were not even available 5 or 10 years ago. It is
19 quite possible over the next several years additional, and more attractive, options
20 may become available. Last, Citizens has announced that it plans to sell its
21 regulated water, gas, and electric utilities. Therefore, it may not be in the
22 public's best interest to commit to an expensive course of action, when the
23 requesting party likely will not be around to see it through.

1 **Issue #4**

2 Q. Please discuss the fourth issue regarding the recoverability of the deferred CAP
3 capital charges.

4 A. The fourth issue relates to whether the deferred charges should be recoverable
5 from ratepayers. The Company's current deferral balance is \$2,801,715. That
6 balance represents the annual M&I cap charges paid to CAWCD for Citizens'
7 17,654 acre foot allocation from 1995 through the first half of 1999. It also
8 includes \$4,023 in late payment charges.

9
10 Q. Has the Company requested recovery of these deferrals in the instant case?

11 A. Yes. The Company has requested recovery of the pro rata portion of the
12 \$2,801,715 deferral that is related to the Sun Cities' acre foot allocation. Citizens
13 proposes to recover the deferred costs over a 42 month period through a
14 surcharge. In addition to the actual deferred capital charges the Company is
15 requesting recovery of a return on the outstanding deferral balance over the 42
16 month period.

17
18 Q. Should recovery of the deferrals be allowed?

19 A. Yes. In Decision No. 60172 the Commission granted the Company authority to
20 continue to defer its CAP capital charges, subject to a plan of use and
21 implementation by December 31, 2000. The interim MWD Cap usage plan will
22 meet this criteria. Further, regarding CAP capital charge deferrals, the
23 Commission in Decision No. 61831 found that the capital charges allowed the

1 retention of the CAP allocation, and the pending use of the CAP will benefit
2 customers. Accordingly, the Commission granted a five year amortization and
3 recovery of the deferred capital charges for Paradise Valley Water Company. I
4 am recommending similar treatment for Citizens.

5
6 **Issue #5**

7 Q. Please discuss the fifth issue.

8 A. This issue relates to the amount of the CAP costs to be recovered, and from
9 whom these costs should be recovered (rate design). As discussed earlier, the
10 Company is proposing two surcharges; one to recover the deferred charges, and
11 another to recover the on-going annual costs of the CAP water. In my testimony
12 on Issue #2 regarding the use of CAP water by the MWD, and Issue #4 regarding
13 the deferrals, I recommend recovery of the related costs. Accordingly, I agree
14 with the implementation of two separate surcharges to recover these costs.

15
16 Q. Do you agree with the Company's calculation of the deferral surcharge?

17 A. No. While RUCO recommends recovery of the CAP deferrals, I do not agree
18 with the Company's calculation of the amount to be recovered, nor do I agree
19 with the Company's proposed design of the surcharge.

20
21 Q. Please discuss the amount of the deferrals.

22 A. As just discussed, the Company is requesting recovery of \$4,023 in late payment
23 penalties as part of its deferral balance. Ratepayers should not be required to

1 pay for the Company's failure to pay its bills on time. Further, the Commission
2 denied recovery of CAP late fees for Paradise Valley Water in Decision No.
3 61831. Accordingly, I excluded the late fees from my calculation of
4 the surcharge.

5
6 Additionally, the Company is requesting a return on the deferral balance over the
7 proposed amortization period. Decision No. 61831 did not allow any returns on
8 the deferral balance for Paradise Valley. Likewise, I have excluded the return
9 component from my calculation of the surcharge. I am also recommending a five
10 year amortization of the deferral balance, as opposed to the 42 months proposed
11 by the Company. The Company-proposed 42 month amortization is based on
12 the planned implementation date of the long-term golf course plan. Since I am
13 recommending postponement of that plan, the 42 period is no longer necessary.
14 My recommended five-year recovery is based again on Decision No. 61831,
15 where the Commission found a five recovery period for the deferrals to be
16 appropriate.

17
18 Q. What is the amount of the Company's proposed surcharge to recover the
19 deferrals?

20 A. The Company is proposing a flat monthly fee for residential customers of \$0.41
21 for Sun City and \$0.45 for Sun City West. The surcharge for all commercial
22 customers would be \$0.0391 per 1,000 gallons for Sun City and \$0.0493 per

1 1,000 gallons for Sun City West. All commercial consumption would be subject
2 to the charge.

3
4 Q. Do you agree with the Company's proposed rate design?

5 A. No. I believe the Company's proposed rate design is inappropriate. The purpose
6 of the CAP surcharges is to recover the incremental cost of using CAP water.
7 That incremental cost should appropriately be assigned to the customers causing
8 those costs, not as a flat fee to all residential customers as proposed by the
9 Company. The purpose of using CAP water is to reduce the pumping of
10 groundwater. It is necessary for the Sun Cities to reduce groundwater pumping
11 because both water service territories continue to exceed the Gallons Per Capita
12 Day (GPCD) limits set forth by the Department of Water Resources (DWR).
13 Thus, those customers whose usage exceeds the GPCD limits should pay the
14 incremental cost of using CAP water. DWR calculates GPCD by dividing the
15 Company's total water production by the service area population. The
16 population figure used by DWR does not include commercial customers. Since
17 the commercial customers' water consumption is included in the numerator of the
18 calculation, but not in the denominator of the calculation, they are in large part
19 the reason for exceeding the GPCD limits. Certain residential customers are
20 also contributing to the Company exceeding its GPCD limits.

1 Q. How did you determine who these customers were?

2 A. The current GPCD limits for Sun City and Sun City West are 272 and 201
3 respectively. I multiplied the GPCD limits by the average household occupancy
4 of 1.8 persons to arrive at the GPCD per household limits. I then multiplied this
5 amount by 30 days to determine the monthly amount of household usage
6 allowable under the GPCD limits. For Sun City the allowable monthly usage is
7 15,000 gallons and for Sun City West 11,000 gallons.

8

9 Q. What is your proposed CAP deferral surcharge?

10 A. As shown on Schedule MDC-1, my proposed surcharge per 1,000 gallons of
11 consumption for Sun City is \$0.051 and for Sun City West \$0.089. This
12 surcharge is designed to recover the CAP costs from those customers that cause
13 the cost. Thus, the charge is applicable to all commercial consumption and to
14 Sun City residential consumption above 15,000 gallons and Sun City West
15 residential consumption above 11,000 gallons. As discussed previously, my
16 deferral surcharge does not allow recovery of the late fees, or a return on the
17 unrecovered balance outstanding.

18

19 Q. Has the Commission previously approved this type rate design for the recovery
20 of CAP costs?

21 A. Yes. The rate design approved for the CAP surcharge in Decision No. 61831
22 was identical to the design I am proposing here. In that case Paradise Valley's
23 CAP surcharge was authorized for all commercial usage and all residential usage

1 above the applicable monthly GPCD threshold. This type rate design
2 appropriately assigns the cost of the CAP water to the cost causers. It also has
3 the added advantage of sending a price message to excess users of water.
4

5 Q. Do you agree with the Company's calculation of its surcharge to recover the
6 annual on-going CAP costs?

7 A. No. Again, the Company has used a rate design that assigns a flat monthly fee
8 to residential use and a commodity charge for commercial use. This is
9 inappropriate for the same reasons discussed for the deferral surcharge.
10 Accordingly, I recommend the same rate design for the on-going surcharge as I
11 did for the deferral surcharge. My recommended commodity charge is applicable
12 to all commercial usage and all residential usage above the calculated thresholds
13 (15,000 gallons for Sun City and 11,000 gallons for Sun City West).
14

15 Q. Do you and the Company agree on the annual amount to be recovered from the
16 surcharge?

17 A. Yes. The Company has requested recovery of the annual M&I capital charge
18 and annual CAP delivery charge, net of the water payments it will receive from
19 the MWD. My calculations comport with those of the Company.
20

21 Q. What is your recommended surcharge for the on-going CAP costs?

22 A. As shown on Schedule MDC-2, I am recommending a surcharge per 1,000
23 gallons of consumption for Sun City of \$0.172 and for Sun City West of \$0.299.

1 The surcharge is applicable to all commercial consumption and all residential
2 consumption exceeding 15,000 and 11,000 gallons in Sun City and Sun City
3 West, respectively.

4

5 Q. Does this conclude your direct testimony?

6 A. Yes.

7

APPENDIX I

Qualifications of Marylee Diaz Cortez

EDUCATION: University of Michigan, Dearborn
B.S.A., Accounting 1989

CERTIFICATION: Certified Public Accountant - Michigan
Certified Public Accountant - Arizona

EXPERIENCE: Audit Manager
Residential Utility Consumer Office
Phoenix, Arizona 85004
July 1994 - Present

Responsibilities include the audit, review and analysis of public utility companies. Prepare written testimony, schedules, financial statements and spreadsheet models and analyses. Testify and stand cross-examination before Arizona Corporation Commission. Advise and work with outside consultants. Work with attorneys to achieve a coordination between technical issues and policy and legal concerns. Supervise, teach, provide guidance and review the work of subordinate accounting staff.

Senior Rate Analyst
Residential Utility Consumer Office
Phoenix, Arizona 85007
October 1992 - June 1994

Responsibilities included the audit, review and analysis of public utility companies. Prepare written testimony and exhibits. Testify and stand cross-examination before Arizona Corporation Commission. Extensive use of Lotus 123, spreadsheet modeling and financial statement analysis.

Auditor/Regulatory Analyst
Larkin & Associates - Certified Public Accountants
Livonia, Michigan
August 1989 - October 1992

Performed on-site audits and regulatory reviews of public utility companies including gas, electric, telephone, water and sewer throughout the continental United States. Prepared integrated

proforma financial statements and rate models for some of the largest public utilities in the United States. Rate models consisted of anywhere from twenty to one hundred fully integrated schedules. Analyzed financial statements, accounting detail, and identified and developed rate case issues based on this analysis. Prepared written testimony, reports, and briefs. Worked closely with outside legal counsel to achieve coordination of technical accounting issues with policy, procedural and legal concerns. Provided technical assistance to legal counsel at hearings and depositions. Served in a teaching and supervisory capacity to junior members of the firm.

RESUME OF RATE CASE AND REGULATORY PARTICIPATION

<u>Utility Company</u>	<u>Docket No.</u>	<u>Client</u>
Potomac Electric Power Co.	Formal Case No. 889	Peoples Counsel of District of Columbia
Puget Sound Power & Light Co.	Cause No. U-89-2688-T	U.S. Department of Defense - Navy
Northwestern Bell-Minnesota	P-421/EI-89-860	Minnesota Department of Public Service
Florida Power & Light Co.	890319-EI	Florida Office of Public Counsel
Gulf Power Company	890324-EI	Florida Office of Public Counsel
Consumers Power Company	Case No. U-9372	Michigan Coalition Against Unfair Utility Practices
Equitable Gas Company	R-911966	Pennsylvania Public Utilities Commission
Gulf Power Company	891345-EI	Florida Office of Public Counsel
Jersey Central Power & Light	ER881109RJ	New Jersey Department of Public Advocate Division of Rate Counsel

Green Mountain Power Corp.	5428	Vermont Department of Public Service
Systems Energy Resources	ER89-678-000 & EL90-16-000	Mississippi Public Service Commission
El Paso Electric Company	9165	City of El Paso
Long Island Lighting Co.	90-E-1185	New York Consumer Protection Board
Pennsylvania Gas & Water Co.	R-911966	Pennsylvania Office of Consumer Advocate
Southern States Utilities	900329-WS	Florida Office of Public Counsel
Central Vermont Public Service Co.	5491	Vermont Department of Public Service
Detroit Edison Company	Case No. U-9499	City of Novi
Systems Energy Resources	FA-89-28-000	Mississippi Public Service Commission
Green Mountain Power Corp.	5532	Vermont Department of Public Service
United Cities Gas Company	176-717-U	Kansas Corporation Commission
General Development Utilities	911030-WS & 911067-WS	Florida Office of Public Counsel
Hawaiian Electric Company	6998	U.S. Department of Defense - Navy
Indiana Gas Company	Cause No. 39353	Indiana Office of Consumer Counselor
Pennsylvania American Water Co.	R-00922428	Pennsylvania Office of Consumer Advocate

Wheeling Power Co.	Case No. 90-243-E-42T	West Virginia Public Service Commission Consumer Advocate Division
Jersey Central Power & Light Co.	EM89110888	New Jersey Department of Public Advocate Division of Rate Counsel
Golden Shores Water Co.	U-1815-92-200	Residential Utility Consumer Office
Consolidated Water Utilities	E-1009-92-135	Residential Utility Consumer Office
Sulphur Springs Valley Electric Cooperative	U-1575-92-220	Residential Utility Consumer Office
North Mohave Valley Corporation	U-2259-92-318	Residential Utility Consumer Office
Graham County Electric Cooperative	U-1749-92-298	Residential Utility Consumer Office
Graham County Utilities	U-2527-92-303	Residential Utility Consumer Office
Consolidated Water Utilities	E-1009-93-110	Residential Utility Consumer Office
Litchfield Park Service Co.	U-1427-93-156 U-1428-93-156	Residential Utility Consumer Office
Pima Utility Company	U-2199-93-221 U-2199-93-222	Residential Utility Consumer Office
Arizona Public Service Co.	U-1345-94-306	Residential Utility Consumer Office
Paradise Valley Water	U-1303-94-182	Residential Utility Consumer Office
Paradise Valley Water	U-1303-94-310 U-1303-94-401	Residential Utility Consumer Office

Pima Utility Company	U-2199-94-439	Residential Utility Consumer Office
SaddleBrooke Development Co.	U-2492-94-448	Residential Utility Consumer Office
Boulders Carefree Sewer Corp.	U-2361-95-007	Residential Utility Consumer Office
Rio Rico Utilities	U-2676-95-262	Residential Utility Consumer Office
Rancho Vistoso Water	U-2342-95-334	Residential Utility Consumer Office
Arizona Public Service Co.	U-1345-95-491	Residential Utility Consumer Office
Citizens Utilities Co.	E-1032-95-473	Residential Utility Consumer Office
Citizens Utilities Co.	E-1032-95-417 et al.	Residential Utility Consumer Office
Paradise Valley Water	U-1303-96-283 U-1303-95-493	Residential Utility Consumer Office
Far West Water	U-2073-96-531	Residential Utility Consumer Office
Southwest Gas Corporation	U-1551-96-596	Residential Utility Consumer Office
Arizona Telephone Company	T-2063A-97-329	Residential Utility Consumer Office
Far West Water Rehearing	W-0273A-96-0531	Residential Utility Consumer Office
SaddleBrooke Utility Company	W-02849A-97-0383	Residential Utility Consumer Office
Vail Water Company	W-01651A-97-0539 W-01651B-97-0676	Residential Utility Consumer Office

Black Mountain Gas Company	G-01970A-98-0017	Residential Utility
Northern States Power Company	G-03493A-98-0017	Consumer Office
Paradise Valley Water Company	W-01303A-98-0678	Residential Utility
Mummy Mountain Water Company	W-01342A-98-0678	Consumer Office
Bermuda Water Company	W-01812A-98-0390	Residential Utility
		Consumer Office
Bella Vista Water Company	W-02465A-98-0458	Residential Utility
Nicksville Water Company	W-01602A-98-0458	Consumer Office
Paradise Valley Water Company	W-01303A-98-0507	Residential Utility
		Consumer Office
Pima Utility Company	SW-02199A-98-0578	Residential Utility
		Consumer Office
Far West Water & Sewer Company	WS-03478A-99-0144	Residential Utility
Interim Rates		Consumer Office
Vail Water Company	W-01651B-99-0355	Residential Utility
Interim Rates		Consumer Office
Far West Water & Sewer Company	WS-03478A-99-0144	Residential Utility
		Consumer Office

SUN CITY WATER CO. & SUN CITY WEST UTILITIES CO.
 CALCULATION OF CAP DEFERRAL SURCHARGE

DOCKET NO. W-01656A-98-0577 ET. AL.
 SCHEDULE MDC-1
 PAGE 1 OF 2

LINE NO.	DESCRIPTION	TOTAL	SUN CITY		REFERENCE
			SUN CITY	WEST	
1	CAP DEFERRALS	\$2,797,692			DR #JB-4
2	CAP ALLOCATION - ACRE FEET	17,654	4,189	2,372	DR #JB-4
3	% ALLOCATION	37.16%	63.85%	36.15%	RATIOS - LINE 2
4	ALLOCATED CAP DEFERRALS	1,039,745	663,846	375,899	LINE 1 x LINE 3
5	GALLONS SUBJECT TO SURCHARGE	3,448,139	2,599,377	848,762	SCH. MDC-1, PG 2
6	ANNUAL AMORT. OF DEFERRALS - 5 YRS.	207,949	132,769	75,180	LINE 4/5 YRS.
7	SURCHARGE PER 1,000 GALLONS (A)		\$0.051	\$0.089	LINE 6/LINE 5

NOTE (A)
 APPLICABLE TO ALL COMMERCIAL CONSUMPTION AND ALL RESIDENTIAL
 CONSUMPTION OVER 11,000 GALS. FOR SUN CITY WEST AND OVER
 15,000 GALS FOR SUN CITY.

SUN CITY WATER CO. & SUN CITY WEST UTILITIES CO.
 CALCULATION OF CONSUMPTION SUBJECT TO SURCHARGE

DOCKET NO. W-01656A-98-0577 ET. AL.
 SCHEDULE MDC-1
 PAGE 2 OF 2

	(a) total gallons	(b) consump. under 15,000	(c) # of bills under 15,000	(d) total # of bills	(e) difference	(f) difference times 15	(g) total not subj. to surchrg	(h) total subj. to surchrg
sun city								
residential								
5/8	1,889,290	1,423,129	204,793	224,994	20,201	303,015	1,726,144	163,146
3/4	1,414	565	91	122	31	465	1,030	384
1	57,792	3,842	436	1,375	939	14,085	17,927	39,865
1.5	1,147,679	5,546	592	15,748	15,156	227,340	232,886	914,793
2	461,609	2,121	271	5,039	4,768	71,520	73,641	387,968
3	11,163	0	3	39	36	540	540	10,623
6	1,112	45	6	24	18	270	315	797
total res	3,570,059	1,435,248	206,192	247,341	41,149	617,235	2,052,483	1,517,576
commercial								
10	0							0
cl	720,836							720,836
ir	227,750							227,750
pa	133,215							133,215
totals com	1,081,801							1,081,801
total all	4,651,860	1,435,248	206,192	247,341	41,149	617,235	2,052,483	2,599,377

	total gallons	consump. under 11,000	# of bills under 11,000	total # of bills	difference	difference times 11	total not subj. to surchrg	total subj. to surchrg
sun city west								
residential								
5/8	1,224,364	836,852	149,390	172,021	22,631	248,941	1,085,793	138,571
3/4	343	0	0	12	12	132	132	211
1	28,743	5,085	965	1,552	587	6,457	11,542	17,201
1.5	346,664	1,750	242	5,547	5,305	58,355	60,105	286,559
2	93,824	661	124	1,619	1,495	16,445	17,106	76,718
total res	1,693,938	844,348	150,721	180,751	30,030	330,330	1,174,678	519,260
commercial								
10	74							74
cl	329,428							329,428
ir								0
pa								0
total com	329,502							329,502
total all	2,023,440	844,348	150,721	180,751	30,030	330,330	1,174,678	848,762

references

- column (a): ruco dr #2.1
- column (b): ruco dr #2.1
- column (c): ruco dr #2.1
- column (d): ruco dr #2.1
- column (e): column (d) - column (c)
- column (f): column (e) x gpcd threshold
- column (g): column (a) - (column (b) + column (f))
- column (h): column (a) - column (g)

SUN CITY WATER CO. & SUN CITY WEST UTILITIES CO.
 CALCULATION OF ANNUAL ON-GOING CAP SURCHARGE

DOCKET NO. W-01656A-98-0577 ET. AL.
 SCHEDULE MDC-2

LINE NO.	DESCRIPTION	SUN CITY		REFERENCE
		SUN CITY	WEST	
1	ANNUAL M&I CAP CHARGE	\$54	54	CO. EXH. CEL-3
2	ANNUAL CAP DELIVERY CHARGE	69	69	DR #SCTA 4.5
3	REVENUE FROM MWD	(16)	(16)	RUCO DR #2.8
4	COST OF CAP PER A/F	107	107	SUM LINES 1,2,& 3
5	ACRE FOOT ALLOCATION	4,189	2,372	CO. EXH. CEL-3
6	ANNUAL COST	448,223	253,804	LINE 4 x LINE 5
7	GALLONS SUBJECT TO SURCHARGE	2,599,377	848,762	SCH. MDC-1, PG.2
8	SURCHARGE PER 1,000 GALLONS (A)	\$0.172	\$0.299	LINE 6/LINE 7

NOTE (A)

APPLICABLE TO ALL COMMERCIAL CONSUMPTION AND ALL RESIDENTIAL CONSUMPTION OVER 11,000 GALS. FOR SUN CITY WEST AND OVER 15,000 GALS FOR SUN CITY.

RJ

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN
JIM IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF THE JOINT
APPLICATION OF SUN CITY WATER
COMPANY AND SUN CITY WEST
UTILITIES COMPANY FOR APPROVAL
OF CENTRAL ARIZONA PROJECT
WATER UTILIZATION PLAN AND FOR
AN ACCOUNTING ORDER
AUTHORIZING A GROUNDWATER
SAVINGS FEE AND RECOVER OF
DEFERRED CENTRAL ARIZONA
PROJECT EXPENSES.

Docket No. W-01656A-98-0577
Docket No. SW-02334A-98-0577

NOTICE OF FILING

The Residential Utility Consumer Office ("RUCO") hereby provides notice of filing the Surrebuttal Testimony of Marylee Diaz Cortez, in the above-referenced matter.

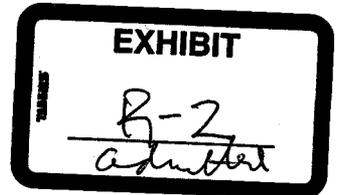
RESPECTFULLY SUBMITTED this 1st day of October, 1999.

Karen E. Nally

Karen E. Nally
Counsel

AN ORIGINAL AND TEN COPIES
of the foregoing filed this 1st day
of October, 1999 with:

Docket Control
Arizona Corporation Commission
1200 West Washington
Phoenix, Arizona 85007



1 COPIES of the foregoing hand delivered/
2 mailed this 1st day of October, 1999 to:

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SUN CITY WATER AND SUN CITY WEST
DOCKET NO. W-01656A-98-0577
DOCKET NO. SW-02334A-98-0577

SURREBUTTAL TESTIMONY
OF
MARYLEE DIAZ CORTEZ

ON BEHALF OF
THE
RESIDENTIAL UTILITY CONSUMER OFFICE

OCTOBER 1, 1999

1	INTRODUCTION.....	1
2	ISSUE #3 - GOLF COURSE PLAN.....	3
3	ISSUE #4 - DEFERRED CAP COSTS.....	5
4	ISSUE #5 - RATE DESIGN OF CAP SURCHARGE.....	7

1 **INTRODUCTION**

2 Q. Please state your name for the record.

3 A. My name is Marylee Diaz Cortez.

4

5 Q. Have you previously filed testimony in this docket?

6 A. Yes. I filed direct testimony in this docket on September 10, 1999.

7

8 Q. What is the purpose of your testimony?

9 A. In my surrebuttal I will rebut arguments set forth in the Company's rebuttal
10 testimony. I will show that certain arguments of the Company are incorrect
11 and/or misleading. I will also demonstrate inconsistencies in the Company's
12 arguments. My surrebuttal testimony will reaffirm RUCO's recommendations as
13 set forth in my direct testimony.

14

15 Q. Please summarize RUCO's position on the Company's CAP water plan.

16 A. RUCO's position is as follows:

17 1) Utilization of the Company's CAP allocation supports state water policy
18 goals and should be authorized despite the fact use of CAP water is not
19 the least-cost water supply option. However, this is not to say that use of
20 CAP water is justified no matter what the cost.

21 2) The Company's proposal to use CAP water through an exchange with the
22 Maricopa Water District meets state water policy goals and represents the

1 least-cost CAP water use option. Accordingly, the Company should
2 receive authorization to implement this plan.

3 3) The golf course usage plan is one of the highest cost CAP water usage
4 options considered by the Company. Implementation of this plan will
5 require the Company to commit substantial resources to a course of action
6 which may not be necessary and for which the Company may not be able
7 to see through to completion. Accordingly, the Company should not
8 receive current authorization for this project.

9 4) The deferred CAP charges should be recovered over a five year period
10 however, returns on the deferred charges should not be recovered from
11 ratepayers.

12 5) The deferred CAP costs (exclusive of late fees and returns) and the
13 annual CAP costs should be recovered through separate surcharge
14 mechanisms, based on customer usage.

15
16 Q. Has the Company agreed with some of your recommendations?

17 A. Yes. The Company appears to agree with RUCO's recommendation to allow
18 recovery of the CAP costs associated with the MWD water exchange. The
19 Company also has agreed that the deferred CAP late fees should not be
20 recoverable from ratepayers.

1 Q. Which recommendations does the Company disagree with?

2 A. The Company believes it should be granted authority at this time to proceed with
3 the golf course plan of CAP usage, believes it should be allowed to earn a return
4 on its deferred CAP charges, and believes the CAP surcharges should be based
5 on a flat fee as opposed to commodity rates as proposed by RUCO.

6

7 **ISSUE #3 - GOLF COURSE PLAN**

8 Q. What arguments does the Company set forth in support of proceeding with the
9 golf course usage plan at this time?

10 A. In support of current authorization to proceed with the golf course plan, the
11 Company argues that the Task Force "favored" this option.

12

13 Q. Is the Task Force's opinion of this plan the only criteria the Commission needs to
14 make its decision?

15 A. No. While public opinion is certainly a factor considered by the Commission in
16 making its decisions, it is not the controlling factor. The Commission must
17 consider all aspects of a given proposal in making its decision. Thus, the fact
18 that the golf course option does not adhere to least-cost principles, will result in
19 significant rate increases in the future, and may result in a commitment the
20 Company may well not be around to fulfill, are all factors the Commission will
21 need to consider in making its decision on this issue. The Company has not
22 rebutted these important issues.

23

1 Q. Is it RUCO's recommendation that the golf course plan should *never* receive
2 authorization?

3 A. No. My recommendation is merely that commitment to this course of action at
4 this time is premature and, as a result, imprudent. The Company needs to first
5 implement the use of CAP water through its current MWD plan, and see how that
6 plan works before committing the substantial investment necessary for the golf
7 course option. Further, Citizens has indicated in the next year or so it plans to
8 sell off its gas, water, electric, and wastewater companies in Arizona.
9 Accordingly, Citizens will not be able to see the proposed project through. Since
10 the CAP water will become used and useful through the MWD plan, it is not
11 necessary at this time to rush headlong into a long-term project with an estimated
12 cost of at least \$33 million. Nor is it prudent or necessary at this time to commit
13 ratepayers to the substantial rate increase this course of action will entail.

14
15 Q. Does the Company recognize that the Commission must consider factors other
16 than just public opinion?

17 A. Despite using the Task Force's favorable opinion of the golf course plan as the
18 Company's sole support of the plan, the Company does appear to realize that
19 opinion does not bind the Commission's decision. At page 10, of the rebuttal
20 testimony of Ray L. Jones, the Company states:

21

22 [T]here is no single correct plan for using CAP water in the
23 Sun Cities. The Commission is the only elected body with
24 the authority to make the needed decision. While the Task
25 Force's plan represents the consensus position of the

1 community, it is not binding. Given the significant costs and
2 long-term implications to the communities of the selected
3 CAP option, it is appropriate to have the CAP Task Force's
4 recommendation approved by the Commission.
5

6 Q. What other factors will the Commission need to consider?

7 A. The Commission will need to consider if it is appropriate to commit to a long-term
8 course of action with minimal information regarding the specific costs and
9 ramifications of that option. The Commission will also need to consider the fact
10 that ownership will likely change hands prior to implementation of the golf course
11 plan. Further, the Commission will need to consider the financial impact on the
12 community of authorizing a plan that will assuredly result in rate shock.
13

14 **ISSUE #4 - DEFERRED CAP COSTS**

15 Q. Please discuss the Company's objections to your recommendation that the CAP
16 deferrals not earn a return.

17 A. Company witness Carl Dabelstein argues that the Company should be allowed to
18 earn a return on its deferred CAP charges. The Company claims that because it
19 is allowed to accrue AFUDC (carrying charge during the time plant is under
20 construction) that it should likewise be allowed to accrue carrying charges on the
21 CAP deferrals.
22

23 Q. Do you agree with this argument?

24 A. No. The deferred CAP costs represent the expenses the Company incurred for a
25 non-used and useful item. Accordingly, there are strong arguments and

1 precedent for the disallowance of rate recovery of these expenses in their entirety.
2 The Commission typically does not allow retroactive recovery of expenses
3 associated with the period of time an item was non-used and useful. Thus,
4 RUCO's recommendation to allow rate recovery of the deferred CAP charges is
5 quite liberal. In making this recommendation, I have attempted to consider the
6 potential benefit to ratepayers of the Company having preserved the future right to
7 use CAP water, despite the fact that this recommendation requires ratepayers to
8 bear non-used and useful costs. Accordingly, I have attempted to balance my
9 recommendation that customers bear non-used and useful costs with a
10 recommendation that ratepayers not be required to pay a return on these
11 deferrals. Disallowance of the return recognizes that the CAP allocation remained
12 non-used and useful for many years as a result of management decision. My
13 recommendation, therefore, represents a partial sharing between ratepayers and
14 shareholders of the non-used and useful deferred CAP charges. Under my
15 proposal, the Company will receive full reimbursement of these non-used and
16 useful expenses however, the Company will be precluded from generating profits
17 on non-used and useful costs.

18
19 Q. In the recent Paradise Valley order authorizing the use of CAP water and recovery
20 of prior deferred CAP costs did the Commission allow recovery of returns on the
21 deferred balance?

22 A. No. Decision No. 61831, authorized the recovery of Paradise Valley's deferred
23 CAP charges with no return.

1 **ISSUE #5 - RATE DESIGN OF CAP SURCHARGE**

2 Q. Please discuss the Company's rebuttal comments regarding your proposed rate
3 design of the CAP surcharges.

4 A. The Company disagrees with my recommendation that the CAP surcharges be
5 based on a commodity rate that assigns the costs of using CAP water to Citizens'
6 customers based on usage. As discussed in my direct testimony, the purpose of
7 using CAP water is to reduce the pumping of groundwater. Thus, the incremental
8 cost of using CAP water should be assigned to those customers responsible for
9 the excess groundwater pumping (i.e. exceeding Groundwater Per Capita Day
10 (GPCD) limits).

11
12 Q. The testimony of Company witness Terri Sue Rossi gives several examples of
13 how DWR calculates GPCD overages. What bearing do these examples have on
14 your recommendation that ratepayers pay the incremental cost of CAP water
15 based on usage?

16 A. None. Both Sun City and Sun City West in each of the last four years have
17 exceeded their GPCD limits. The current GPCD limits for Sun City allow each
18 person to consume 272 gallons per day. Multiplying this allowance by the
19 average number of persons per household and multiplying that result by the
20 average number of days in a month results in the amount of usage allowed under
21 the GPCD limits per month, per household. For Sun City the monthly allowable
22 usage is approximately 15,000 gallons and for Sun City West the monthly
23 allowable usage is approximately 11,000 gallons. Quite simply, any customer

1 exceeding the monthly GPCD is directly responsible for the need to find other
2 sources of supply to lessen the groundwater pumpage. In other words, the
3 excess users of water are the cost causers of the incremental cost of having to
4 use CAP water.

5
6 Q. You have recommended that all commercial consumption be subject to the CAP
7 surcharge. What is the Company's response to your recommendation?

8 A. The Company appears to disagree with my recommendation although it does not
9 specifically state such. The Company takes exception to my testimony that
10 commercial customers are in large part responsible for exceeding GPCD limits.
11 The Company states that my testimony is untrue, and cites other reasons such as
12 weather, conservation requirements, etc. for exceeding GPCD limits. The
13 Company further concludes that my recommended rate design places the
14 incremental cost of CAP primarily on commercial customers.

15
16 Q. Are the Company's rebuttal comments an accurate portrayal of RUCO's position?

17 A. No. First, I have taken the position that commercial usage is in *part* responsible
18 for exceeding GPCD limits. I have not stated it is the exclusive reason, as alleged
19 by the Company. Certainly weather and poorly conceived conservation
20 requirements have an impact, as cited by the Company. However, from a
21 practical standpoint, rates cannot be designed to charge mother nature for a
22 portion of the CAP costs, nor could rates be designed to assign a portion to
23 Citizens or DWR for poor conservation requirements. Second, the Company's

1 statement that RUCO has assigned the incremental cost of the CAP water
2 primarily to commercial customers is untrue. Under my proposed rate design,
3 Sun City commercial customers would bear 42% of the CAP costs, and Sun City
4 West commercial ratepayers would bear 39% of the costs. The remaining
5 majority of the incremental CAP costs would be borne by residential customers
6 that exceed the 15,000 or 11,000 gallons thresholds.

7
8 Q. The Company appears to take the position that commercial users are not cost
9 causers of the CAP expenses. What is the Company's basis for this position?

10 A. The Company's rebuttal arguments are not clear on this. The Company provides
11 several examples of how commercial water usage is reflected in the GPCD
12 calculations. That testimony serves merely to demonstrate RUCO's point exactly
13 - that commercial usage plays a part in creating GPCD overages. Further, the
14 Company's own rate design assigns the CAP water surcharge to every gallon of
15 commercial usage. Thus, it is unclear why the Company is objecting to my
16 proposed rate design which does precisely the same thing.

17
18 Q. At page 24 of Company witness Terri Sue Rossi's testimony, the Company states
19 your analysis fails to consider the complexity of the components used by DWR to
20 set GPCD limits. Please comment.

21 A. The Company claims I have failed to consider each component DWR uses in
22 setting the individual GPCD limits. Ms. Rossi cites lost and unaccounted for
23 water, building codes, etc. as components that RUCO failed to consider.

1 Q. Are these details pertinent to your recommended rate design?

2 A. No. The individual considerations DWR used to quantify the GPCD limits are not
3 pertinent to my rate design. The relevant fact is the resultant GPCD limit.
4 Regardless whether one agrees with the DWR calculations, the prescribed GPCD
5 limit is the amount of groundwater withdrawal the Company can not exceed on a
6 per person daily basis. Thus, it is the controlling factor in determining which
7 customers are contributing to the overage. Any customer exceeding these limits
8 are cost-causers of the incremental need for CAP water.

9
10 Q. Are there other methods that could be used to assign CAP costs to the cost-
11 causers other than via the GPCD limits?

12 A. Yes. Conceptually, the same type of rate design could be implemented using
13 safe yield figures. All monthly usage that exceeded a customer's pro rata share of
14 safe yield would be subject to the surcharge. The specific figures used to derive
15 excess usage (i.e. GPCD, safe yield, or some other measure) is less important
16 than the objective of identifying the customers who are causing the need to use
17 CAP water.

18
19 Q. The Company claims all customers equally cause the need for CAP water, hence
20 the recommendation for a flat monthly fee. Do you agree?

21 A. No. It is counterintuitive, if not absurd, to assume that a customer with average
22 monthly consumption of 4,000 or 5,000 gallons is contributing to the need for CAP

1 water in the same proportion as a customer with average monthly consumption of
2 20,000 or 25,000 gallons.

3
4 Q. What other arguments does the Company set forth regarding your proposed rate
5 design?

6 A. Again, the Company argues that the Task Force favored a flat fee for the CAP
7 surcharge. As discussed earlier, public opinion certainly is one factor the
8 Commission may consider in making decisions. However, it is not necessarily the
9 controlling factor. With all due respect to the Task Force, its members are not
10 experts on the principles of rate design. The Commission needs to consider
11 proper rate design principles and objectives in determining the appropriate rate
12 design for the CAP costs.

13
14 Q. Are there other merits of your recommended rate design in addition to the fact that
15 it assigns costs based on cost causation?

16 A. My proposed rate design has the added attraction of promoting conservation.
17 While I have recommended this specific rate design based on the principle of cost
18 causation, it has the incidental effect of sending a price signal to excess users of
19 water. Since the Company continues to exceed its GPCD limits annually, it is
20 clear that its current conservation programs are not having sufficient impact. The
21 Company's proposed rate design of assigning a flat fee to customers provides no
22 incentive for conservation. Under a flat fee rate design, customers will pay the
23 same amount regardless of how much or how little water they use. My proposed

1 rate design, however, will send a price signal to excess users of water.
2 Accordingly, my recommended rate design has the added attraction of promoting
3 conservation.

4
5 Q. Has a CAP surcharge rate design such as you are recommending here previously
6 been adopted by the Commission?

7 A. Yes. Paradise Valley recently applied for authorization to put its CAP water to use
8 and recover the deferred and on-going CAP costs through a surcharge
9 mechanism. The plan was approved by the Commission in Decision No. 61831.
10 The rate design approved by the Commission was identical to what I have
11 recommended here. The Paradise Valley CAP surcharge authorized was based
12 on usage. The surcharge was applicable to all commercial consumption and
13 residential usage that exceeded Paradise Valley's GPCD limits. The Commission
14 specifically ruled:

15
16 [T]he Company will collect \$0.2124 per 1,000 gallons
17 surcharge from all residential usage in excess of 45,000
18 gallons per month and from all non-residential usage.
19 [Decision No. 61831 at page 5]
20

21 Q. Company witness Ms. Rossi further states in her rebuttal testimony that CAP
22 water usage should be rewarded, not punished. What does this mean?

23 A. I do not know. It appears the Company believes for some reason that RUCO's
24 recommendations are a punishment. RUCO is supporting the cost effective use
25 of CAP water and is supporting the recovery of the incremental (including prior

1 non-used and useful) costs of using CAP water. RUCO's recommendations
2 clearly do not represent a "punishment". The Company's characterization of
3 RUCO's position as such is misguided.
4

5 Q. In its rebuttal testimony, did the Company revise the amount of its requested CAP
6 surcharge?

7 A. Yes. The Company continues to recommend the same rate design it proposed in
8 its application however, it has updated its calculation of the surcharge applicable
9 to the deferrals. Due to the amount of time that has elapsed since the Company
10 filed its application, an additional payment was made to CAWCD for Citizens'
11 semi-annual CAP capital charges. Thus, the CAP deferral balance has increased.
12

13 Q. Have you updated your calculation of deferred CAP surcharge?

14 A. Yes. On Surrebuttal Schedule MDC-1, I have updated the calculation of my
15 recommended deferred CAP surcharge to include the additional capital payment
16 made to CAWCD in 1999. The inclusion of this additional payment is the only
17 change I have made in my recommended deferred CAP surcharge.
18

19 Q. What is your revised recommended deferred CAP surcharge?

20 A. As shown on Surrebuttal Schedule MDC-1, as a result of the additional CAWCD
21 payment the CAP surcharge per 1,000 gallons has increased to \$0.059 for Sun
22 City and to \$0.102 for Sun City West.
23

1 Q. Does this conclude your surrebuttal testimony?

2 A. Yes.

3

4

5

6

7

SUN CITY WATER CO. & SUN CITY WEST UTILITIES CO.
 CALCULATION OF CAP DEFERRAL SURCHARGE

DOCKET NO. W-01656A-98-0577 ET. AL.
 SURREBUTTAL SCHEDULE MDC-1
 PAGE 1

LINE NO.	DESCRIPTION	TOTAL	SUN CITY	SUN CITY WEST	REFERENCE
1	CAP DEFERRALS	\$3,221,388			DR #JB-4,CWD-1
2	CAP ALLOCATION - ACRE FEET	17,654	4,189	2,372	DR #JB-4,CWD-1
3	% ALLOCATION	37.16%	63.85%	36.15%	RATIOS - LINE 2
4	ALLOCATED CAP DEFERRALS	1,197,209	764,382	432,827	LINE 1 x LINE 3
5	GALLONS SUBJECT TO SURCHARGE	3,448,139	2,599,377	848,762	SCH. MDC-1, PG 2
6	ANNUAL AMORT. OF DEFERRALS - 5 YRS.	239,442	152,876	86,565	LINE 4/5 YRS.
7	SURCHARGE PER 1,000 GALLONS (A)		\$0.059	\$0.102	LINE 6/LINE 5

NOTE (A)
 APPLICABLE TO ALL COMMERCIAL CONSUMPTION AND ALL RESIDENTIAL
 CONSUMPTION OVER 11,000 GALS. FOR SUN CITY WEST AND OVER
 15,000 GALS FOR SUN CITY.



SUN CITY WATER COMPANY AND SUN CITY WEST UTILITIES COMPANY

DOCKET NO. W-01656A-98-0577
DOCKET NO. SW-02334A-98-0577

SUPPLEMENTAL SURREBUTTAL TESTIMONY

OF

MARYLEE DIAZ CORTEZ

ON BEHALF OF

THE

RESIDENTIAL UTILITY CONSUMER OFFICE

AUGUST 31, 2001

1 Q. Please state your name for the record.

2 A. My name is Marylee Diaz Cortez.

3

4 Q. Have you previously testified in this docket?

5 A. Yes. I filed direct testimony on September 10, 1999, surrebuttal testimony
6 on October 1, 1999, testified at a hearing on October 8, 1999, and filed
7 supplemental testimony on July 10, 2001.

8

9 Q. What is the purpose of your supplemental surrebuttal testimony?

10 A. The purpose of my supplemental surrebuttal is to address the issue of rate
11 shock as presented in the responsive testimony of Staff witness Claudio
12 M. Fernandez.

13

14 Q. Please summarize the Staff's position on rate shock.

15 A. The Staff states that implementation of the Ground Water Savings Plan
16 (GSP) will result in a total rate increase of approximately 50%. It attributes
17 25% of the required increase to current under earnings and 25% to the
18 GSP. The Staff next concludes that the necessary GSP rate increase
19 does not constitute rate shock.

20

21

22

23

1 Q. Does the Staff's estimation of the necessary rate increase agree with the
2 estimation you presented in your July 10, 2001 supplemental testimony?

3 A. Yes. I estimated that a rate increase of approximately 45% would be
4 required, of which 22% was attributable to current under earnings.
5

6 Q. Since both the Staff and RUCO have estimated approximately the same
7 required rate increase, why does the Staff conclude that the GSP will not
8 result in rate shock?

9 A. The Staff states that even in the absence of the GSP, the Company will
10 require a rate increase of approximately 25% due to current under
11 earnings. It then concludes that the *incremental* 25% increase for the
12 GSP does not *in and of itself* represent rate shock.
13

14 Q. Does this argument make sense?

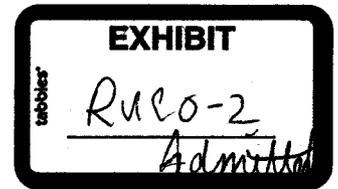
15 A. No. A 50% increase is rate shock, regardless whether the entire
16 magnitude of the increase is directly attributable to the GSP. In the
17 absence of the GSP, a 25% increase will not cause what I would term rate
18 shock. However, the 50% increase required if the GSP is implemented
19 does represent rate shock. Staff's attempt to apportion the required
20 increase between causing factors is a thinly disguised attempt to
21 recognize the needed 50% increase, but to deny that it represents rate
22 shock. Despite the Staff's attempt, the fact remains that only a 25%
23 increase will be required in the absence of the GSP, which does not

1 represent rate shock. If the GSP is implemented the required increase is
2 50%, which does represent rate shock.

3

4 Q. Does this conclude your supplemental surrebuttal testimony?

5 A. Yes.



SUN CITY WATER COMPANY AND SUN CITY WEST UTILITIES COMPANY

DOCKET NO. W-01656A-98-0577
DOCKET NO. SW-02334A-98-0577

SUPPLEMENTAL TESTIMONY
OF
MARYLEE DIAZ CORTEZ

ON BEHALF OF
THE
RESIDENTIAL UTILITY CONSUMER OFFICE

JULY 10, 2001

1	INTRODUCTION	1
2	RUCO's POSITION	2
3	PRELIMINARY ENGINEERING REPORT.....	3
4	CONCLUSIONS	4

5

6

1 **INTRODUCTION**

2 Q. Please state your name for the record.

3 A. My name is Marylee Diaz Cortez.

4

5 Q. Have you previously testified in this docket?

6 A. Yes. I filed direct testimony on September 10, 1999, surrebuttal testimony
7 on October 1, 1999, and testified at a hearing on October 18, 1999.

8

9 Q. Why are you filing supplemental testimony?

10 A. In Decision No. 62293, dated February 1, 2000, the Commission approved
11 the concept of the Groundwater Savings Project (GSP) as a means for
12 Sun City Water Company and Sun City West Utilities Company
13 (Companies) to utilize their CAP water allocations. That decision also
14 required the Companies to file a preliminary engineering report, a
15 feasibility study of a joint facility with the Agua Fria Division, and binding
16 agreements with the golf courses prior to the Commission considering
17 final approval of the GSP. On January 10, 2001 the Sun City Taxpayers
18 Association filed a request for a hearing to resolve issues that were set
19 forth in the preliminary engineering report and in the binding agreements.
20 At a Special Open Meeting on May 11, 2001, the Commission ordered the
21 Hearing Division to schedule a hearing to resolve issues concerning the
22 preliminary engineering report. A Procedural Order was issued on June 5,
23 2001 scheduling a hearing for August 15, 2001 and ordering the parties

1 that oppose the approval of the preliminary engineering report to file
2 comments/testimony no later than July 10, 2001. I am filing supplemental
3 testimony in opposition to the GSP, pursuant to that procedural order.
4

5 Q. What issues will you address in your supplemental testimony?

6 A. First, I will summarize the position RUCO took in the original hearing on
7 this matter. I will then address the preliminary engineering report with
8 respect to the estimated cost of the GSP. Finally, I will discuss how the
9 preliminary engineering report reaffirms that approval of this project should
10 be denied at this juncture.
11

12 **RUCO's POSITION**

13 Q. Please summarize RUCO's position in the first phase of this docket.

14 A. RUCO supported the Companies' plan to utilize their CAP allocation
15 through a groundwater savings project with the Maricopa Water District,
16 and recommended that the long term GSP for the golf courses not be
17 approved at this time.
18

19 Q. Why did RUCO oppose approval of the long term GSP?

20 A. RUCO opposed approval of the plan for several reasons:

21 1) High cost of the project in comparison to other CAP use
22 options;

23 2) Potential for rate shock as a result of the cost of the project;

- 1 3) Potential for lower cost options in the future due to changes
2 in state water statutes and evolving goals and policies; and
3 4) Another division of the Companies (Agua Fria) is utilizing its
4 CAP allocation through a recharge project, at much lower
5 cost than the GSP. RUCO questioned why the Sun City and
6 Sun City West ratepayers were to be condemned to rate
7 shock from the GSP while the Agua Fria customers would
8 benefit from the use of CAP water at a relatively low cost.

9
10 Q. Does RUCO's position remain the same?

11 A. Yes. RUCO opposes the approval of the golf course GSP for the same
12 reasons set forth in its prior testimony in this docket, as well for additional
13 reasons that are set forth in the Companies' recent preliminary
14 engineering report.

15
16 **PRELIMINARY ENGINEERING REPORT**

17 Q. Have you reviewed the preliminary engineering report filed by the
18 Companies on August 1, 2000?

19 A. Yes. The report examines five alternatives to implementing the GSP and
20 concludes that Alternative A via Lake Pleasant Road is the best
21 alternative. The preliminary engineering report also addresses the issue
22 of the joint project with Agua Fria, and concludes that the project should
23 not be pursued because of timing and cost issues.

1 Q. Does information contained in the preliminary engineering report support
2 RUCO's position that approval of the GPS should be denied at this time?

3 A. Yes. The preliminary engineering report identifies the total estimated
4 capital cost of the GSP at \$14,993,000. Information provided in Sun City
5 Water Company's and Sun City West Utilities Company's Response to
6 Comments, dated December 19, 2000, estimated that the net incremental
7 increase in expenses attributable to the GSP was \$133,034 annually.
8 From this information I was able to calculate the amount of rate increase
9 that would be necessary if the long term GSP was approved. For
10 comparison purposes, I also calculated the amount of rate increase to
11 which the Companies may be entitled even in the absence of the GSP.¹
12

13 CONCLUSIONS

14 Q. What were the results of your analysis?

15 A. As shown on Schedule MDC-1, page 1, the Companies would require a
16 rate increase of approximately 45% if the GSP were approved. However,
17 if the GSP were not approved it appears that the Companies may be
18 entitled to an increase of approximately 22%, based on year 2000
19 earnings and investment. These calculations are shown on Schedule
20 MDC-1, page 2. Thus, approval of the long term GSP will serve to
21 magnify the level of future rate shock. In a community that is comprised of

¹ Based on information in the Companies' 2000 annual report, both Sun City and Sun City West were under earning. Thus, even in the absence of the GSP the Companies may be entitled a rate increase.

1 primarily customers on fixed incomes, a 45% potential increase is
2 alarming at best.

3
4 Q. If the Commission did not approve the GSP, would the Companies be in
5 compliance with state water policies and goals?

6 A. Yes. The Companies are currently utilizing their CAP allocation through a
7 water exchange agreement with the Maricopa Water District (MWD). The
8 Companies deliver their CAP allocation through an already existing
9 distribution system to farms located in MWD's service area that have
10 historically used groundwater. Every acre foot not pumped by MWD
11 farmers is credited to the Companies. Thus, the Companies are already
12 in compliance with state groundwater conservation policies and goals,
13 without the need for rate shock.

14
15 Q. Should the GSP receive Commission approval?

16 A. No. Implementation of this plan will create rate shock, and for no good
17 reason since the Companies are already utilizing their CAP allocation and
18 contributing to the conservation of groundwater. The preliminary
19 engineering report merely confirms that the price tag on this project is
20 simply too high, given the fact that the current, least-cost CAP utilization
21 plan already is accomplishing groundwater savings.

1 Q. Does this conclude your supplemental testimony?

2 A. Yes.

3

SUN CITY WATER COMPANY & SUN CITY WEST UTILITIES COMPANY
 CALCULATION OF REQUIRED RATE INCREASE WITH APPROVAL
 OF THE GROUND WATER SAVINGS PLAN

DOCKET NOS. W-01656-98-0577 &
 SW-02334-98-0577
 SCHEDULE MDC-1
 PAGE 1 OF 2

LINE NO.	DESCRIPTION	SUN CITY	SUN CITY WEST	REFERENCE
	<u>YR. 2000 RATE BASE</u>			
1	PLANT IN SERVICE	\$37,647,764	29,128,878	2000 ANNUAL REPORT
2	ACCUMULATED DEPRECIATION	<u>(13,054,352)</u>	<u>(5,251,450)</u>	2000 ANNUAL REPORT
3	NET PLANT	24,593,412	23,877,428	LINE 1 + LINE 2
	ADD:			
4	MATERIALS & SUPPLIES	55,084	0	2000 ANNUAL REPORT
	LESS:			
5	ADVANCES	(2,195,311)	(15,130,774)	2000 ANNUAL REPORT
6	CIAC	(1,042,786)	(412,575)	2000 ANNUAL REPORT
7	ITC	(410,525)	(440,506)	2000 ANNUAL REPORT
8	ADIT	<u>(1,794,889)</u>	<u>(228,207)</u>	2000 ANNUAL REPORT
9	TOTAL RATE BASE	19,204,985	7,665,366	SUM LINES 3 TO 8
10	COMBINED RATE BASE	26,870,351		LINE 9 COL. (A) + COL (B)
11	NEW GSP PLANT	<u>14,993,000</u>		PRELIM. ENGINEERING REPORT
12	TOTAL PROFORMA RATE BASE	41,863,351		LINE 10 + LINE 11
13	RATE OF RETURN	<u>8.73%</u>		DECISION NO. 60172
14	REVENUE REQUIREMENT	3,654,671		LINE 12 x LINE 13
15	NET OPERATING INCOME	<u>791,772</u>		NOTE (A)
16	REVENUE DEFICIENCY	2,862,899		LINE 14 - LINE 15
17	REVENUE CONVERSION FACTOR	<u>1.69</u>		
18	REQUIRED INCREASE	4,838,299		LINE 16 x LINE 17
19	YEAR 2000 REVENUE	11,043,129		2000 ANNUAL REPORT
20	PERCENTAGE RATE INCREASE	43.81%		LINE 18/LINE19
	<u>NOTE (A)</u>			
	2000 NET INCOME	628,742	296,064	2000 ANNUAL REPORT
	GSP DEPREC. EXPENSE	(263,110)	(82,734)	DEC. 19, 2000,
	GSP O&M	(65,563)	(21,512)	COMPANY COMMENTS,
	CAP WATER FEES	(423,089)	(239,572)	EXHIBIT D
	INCOME TAXES - NET EFFECT	478,194	208,740	
	GSP REVENUE	<u>155,328</u>	<u>120,284</u>	
	TOTAL PROFORMA NET INCOME	510,502	281,270	
	COMBINED NET INCOME	791,772		

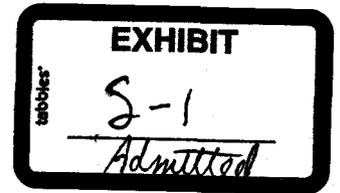
SUN CITY WATER COMPANY & SUN CITY WEST UTILITIES COMPANY
 CALCULATION OF REQUIRED RATE INCREASE
 NO GROUND WATER SAVINGS PLAN

DOCKET NOS. W-01656-98-0577 &
 SW-02334-98-0577
 SCHEDULE MDC-1
 PAGE 2 OF 2

LINE NO.	DESCRIPTION	SUN CITY	SUN CITY WEST	REFERENCE
	<u>YR. 2000 RATE BASE</u>			
1	PLANT IN SERVICE	\$37,647,764	29,128,878	2000 ANNUAL REPORT
2	ACCUMULATED DEPRECIATION	<u>(13,054,352)</u>	<u>(5,251,450)</u>	2000 ANNUAL REPORT
3	NET PLANT	24,593,412	23,877,428	LINE 1 + LINE 2
	ADD:			
4	MATERIALS & SUPPLIES	55,084	0	2000 ANNUAL REPORT
	LESS:			
5	ADVANCES	(2,195,311)	(15,130,774)	2000 ANNUAL REPORT
6	CIAC	(1,042,786)	(412,575)	2000 ANNUAL REPORT
7	ITC	(410,525)	(440,506)	2000 ANNUAL REPORT
8	ADIT	<u>(1,794,889)</u>	<u>(228,207)</u>	2000 ANNUAL REPORT
9	TOTAL RATE BASE	19,204,985	7,665,366	SUM LINES 3 TO 8
10	COMBINED RATE BASE	26,870,351		LINE 9 COL. (A) + COL (B)
11	RATE OF RETURN	<u>8.73%</u>		DECISION NO. 60172
12	REVENUE REQUIREMENT	2,345,782		LINE 10 x LINE 11
13	NET OPERATING INCOME	<u>924,800</u>		2000 ANNUAL REPORT
14	REVENUE DEFICIENCY	1,420,982		LINE 12 - LINE 13
15	REVENUE CONVERSION FACTOR	<u>1.69</u>		
16	REQUIRED INCREASE	2,401,459		LINE 14 x LINE 15
17	YEAR 2000 REVENUE	11,043,129		2000 ANNUAL REPORT
18	PERCENTAGE RATE INCREASE	<u>21.75%</u>		LINE 16/LINE17

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman
JIM IRVIN
Commissioner
MARC SPITZER
Commissioner



IN THE MATTER OF THE JOINT)
APPLICATION OF SUN CITY WATER)
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING)
A GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES)
_____)

DOCKET NOS. W-01656A-98-0577
WS-02334A-98-0577

RESPONSIVE TESTIMONY

OF

MARLIN SCOTT, JR.

UTILITIES ENGINEER

UTILITIES DIVISION

JULY 31, 2001

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Conclusions.....	7

ATTACHMENTS

Preliminary Engineering Report – Summary Tables.....	MSJ-1
• Summary of Construction Costs	
• Summary of Operation & Maintenance Costs	
• Summary of 50 Year Life Cycle Costs	

**EXECUTIVE SUMMARY
FOR
SUN CITY WATER COMPANY
DOCKET NO. W-01656A-98-0577
&
SUN CITY WEST UTILITIES COMPANY
DOCKET NO. WS-02334A-98-0577**

I, Marlin Scott, Jr., will appear on behalf of the Utilities Division Staff and will testify concerning Staff's position and recommendation regarding Sun City Water Company and Sun City West Utilities Company's cost estimates of the Groundwater Savings Project.

The conclusions of my findings are:

1. The Preliminary Engineering Report (PER) and its recommended plan for the Groundwater Savings Project (GSP) and the associated plant costs are reasonable.
2. The PER confirmed the updated cost estimate of the GSP.
3. The PER adequately addressed the feasibility of the joint facility with the Agua Fria Division.
4. The PER addressed the need for all major elements for the approved GSP concept.
5. The conclusions stated in the Supplemental Engineering Report are reasonable and should be accepted.

1 **INTRODUCTION**

2 Q. Please state your name, occupation, and business address.

3 A. My name is Marlin Scott, Jr. I am a Utilities Engineer employed by the Arizona
4 Corporation Commission ("Commission") in the Utilities Division ("Staff"). My business
5 address is 1200 West Washington Street, Phoenix, Arizona 85007.

6
7 Q. Have you previously testified in this docket?

8 A. Yes. I testified at the hearing on October 18, 1999, and filed comments to the Preliminary
9 Engineering Report ("PER") on November 1, 2000.

10
11 Q. Why is Staff submitting responsive testimony in this proceeding?

12 A. On June 5, 2001, the Commission ordered the Hearing Division to schedule an evidentiary
13 hearing to resolve issues concerning the PER and Supplemental Engineering Report
14 ("SER") and to determine whether the PER complied with Decision No. 62293.

15
16 Q. What is the purpose of your testimony in this proceeding?

17 A. I will address the construction costs of the Alternatives in the PER and the conclusions to
18 the SER for their reasonableness. I will also address the Sun City Taxpayers
19 Association's ("SCTA") comments regarding the PER and the SER.

20
21 **PRELIMINARY ENGINEERING REPORT**

22 Q. Have you reviewed the PER filed by Sun City Water Company and Sun City West
23 Utilities Company ("Companies")?

24 A. Yes. I filed comments to the PER on November 1, 2000, and stated that the PER and its
25 recommended plan for the Groundwater Savings Project ("GSP") and the associated plant
26 costs are reasonable.

27 ...

1 Q. Do your comments remain the same?

2 A. Yes. My comments remain the same. However, after further review of the PER's
3 Summary tables on pages E-3 and E-4, I found some errors with certain components
4 within the tables.

5
6 Q. Could you please discuss these errors?

7 A. Yes. First, under the "Summary of Construction Costs" on page E-3, the Totals for
8 Alternatives C, D, Joint Facility with Agua Fria Division, Joint Facility with Agua Fria
9 Division & City of Surprise, and Joint Facility with City of Surprise were all \$46,000 too
10 low. I added \$46,000 to each of these Totals. Second, under "Summary of Operation &
11 Maintenance Costs", the stated Booster Pump Station cost was not correct. The correct
12 cost should have been \$1,157,073 instead of \$1,114,527, a difference of \$42,546. Third,
13 the stated SCADA cost of \$525,858 was not correct. The correct cost should be \$527,531,
14 a difference of \$1,673. Fourth, with the second and third corrections made under
15 "Summary of Operation & Maintenance Costs", all the Totals have changed.

16
17 Fifth, under "Summary of 50 Year Life Cycle Costs" on page E-4, the CAP Trunk cost for
18 Alternative C of \$7,287,338 was stated incorrectly. The corrected cost should be
19 \$7,819,325, a difference of \$531,987. Finally, with all the corrections made above, the
20 "Summary of 50 Year Life Cycle Costs" costs for the Booster Pump Station, SCADA and
21 Totals would change. I have provided Attachment MSJ-1 showing my changes, as shown
22 shaded, in the three tables.

23
24 Q. After your modification to the summary tables, has your position changed?

25 A. No. The recommended plan for the GSP (Alternative A - Lake Pleasant Road) and its
26 associated plant costs are still the least cost compared to the other alternatives and its plant
27 costs are still reasonable.

1 **SUPPLEMENTAL ENGINEERING REPORT**

2 Q. Have you reviewed the Supplemental Engineering Report filed by the Companies?

3 A. Yes.

4
5 Q. What were the conclusions in the SER?

6 A. The Companies filed the SER to address the nonparticipation of the Hillcrest Golf Course
7 ("Hillcrest") located in the Sun City West with the GSP. Previously, in the PER, the
8 Companies stated, "...without the participation of the two private courses (Hillcrest Golf
9 Club and Briarwood Country Club) in the Sun City West, the GSP will not be
10 operationally feasible." In the SER, the Companies concluded that, 1) the implementation
11 of the GSP in Sun City West will be possible should Hillcrest decide to not participate and
12 although the participation of Hillcrest would lend overall flexibility to the system, it is not
13 necessary for the operation of the GSP, 2) the entire annual CAP allocation to the Sun City
14 West (2,372 acre-feet) can be consumed by the Recreation Centers of Sun City West and
15 Briarwood golf courses (3,735 acre-feet), and 3) the Sun City West conveyance system
16 will be provided with adequate volumetric flexibility through lake volume to allow for
17 safe and continuous operation.

18
19 Q. Do you accept the SER conclusions?

20 A. Yes. I would accept these conclusions.

21
22 Q. Given the apparent contradiction between the PER and the SER on this issue, why do you
23 believe that the SER is reasonable?

24 A. First, the annual CAP allocation for Sun City West is 2,372 acre-feet. The average annual
25 consumption of all Recreation Centers of Sun City West and Briarwood golf courses is
26 3,735 acre-feet. This would indicate a short fall of 1,363 acre-feet. Now, if Hillcrest were
27 to participate, the average annual consumption of all Recreation Centers of Sun City West,

1 Briarwood and Hillcrest golf courses would be 4,504 acre-feet, leaving a larger short fall
2 of 2,132 acre-feet. Therefore, Sun City West does not have enough CAP allocation for all
3 the nine listed golf courses (5,519 acre-feet) listed on page B-10 of the PER and even for
4 the six participating golf courses (3,735 acre-feet), without Hillcrest, as shown on page E-
5 2.

6
7 Second, the lakes in the Recreation Centers of Sun City West golf courses have a total
8 surface area of 51.61 acres and the Briarwood lakes have a surface area of 4.10 acres, for a
9 total of 55.71 acres. ~~Assuming that no water were used for a one-day period and that the~~
10 maximum amount of water that the Sun City West piping system can convey in one day
11 (10.91 acre-feet) must be stored within all the participating golf course lakes, that storage
12 would result in a lake surface elevation rise of 2.35 inches in all of the lakes. This
13 magnitude of rise is considered tolerable, as stated by the Companies.

14
15 For these reasons, the implementation of the GSP in Sun City West would still be possible
16 should Hillcrest decide not to participate.

17
18 **COMMENTS TO SCTA**

19 Q. Have you reviewed Dennis Husted's direct testimony filed by the SCTA?

20 A. Yes.

21
22 Q. What is your general comment about the SCTA's filing?

23 A. I believe the SCTA's filing went beyond the focus and scope of the PER.

24
25 Q. What was the primary focus of the PER?

26 A. In my opinion, the primary focus of the PER, was to: 1) confirm and update the cost
27 estimate of the GSP; 2) address the feasibility of a joint facility with the Agua Fria

1 Division; and 3) address the need for all major elements for the approved GSP concept.
2 My conclusion is based upon the Commission's direction in Decision No. 62293.

3
4 Q. Could you provide some examples of the SCTA filing that go beyond these three issues?
5 A. Yes. The SCTA's testimony discusses recharge, hydrologic analysis, and an alternative
6 using CAP water with the operation of a sewer treatment plant and underground storage
7 facility. Clearly, these subjects fall outside the Commission's directions as set forth in
8 Decision No. 62293.

9
10 Q. Is it reasonable and/or necessary for the PER to address alternatives?
11 A. The only alternative that the PER was to address was the feasibility of a joint facility with
12 the Agua Fria Division.

13
14 Q. Does the PER adequately address this alternative?
15 A. Yes. The PER provides cost breakdowns of the major construction elements of each
16 segment of the GSP construction, plus a proposed five mile route with cost estimates, for
17 this joint facility alternative.

18
19 Q. Do you disagree with the SCTA that the PER does not adequately address the feasibility
20 of a joint facility with the Agua Fria Division?

21 A. I disagree with the SCTA. The Summary of Construction Costs, page E-3 of the PER,
22 shows a complete breakdown of the GSP and the joint facility with the Agua Fria
23 Division. As shown in the summary table, all construction components of the GSP remain
24 the same, except for the CAP Trunk column. If a joint facility were added to the GSP,
25 then the GSP with a joint facility with the Agua Fria Division would cost more than the
26 GSP itself.

27 ...

1 Q. Does the SCTA accurately state the goals and objectives of the PER?

2 A. No. Instead of accurately stating the goals and objectives, the SCTA attempts to persuade
3 the Commission to reconsider items already decided.

4
5 Q. Do you agree with the SCTA's statement as to the primary focus of the PER?

6 A. No, I disagree. The SCTA wants the Commission to re-evaluate the GSP as a concept.
7 The Commission has already approved the concept of the GSP. The primary focus of the
8 PER, as I stated earlier, was to: 1) confirm and update the cost estimate of the GSP; 2)
9 address the feasibility of a joint facility with the Agua Fria Division; and 3) address the
10 need for all major elements for the approved GSP concept.

11
12 Q. Is it appropriate for the parties to be addressing other alternatives?

13 A. Other alternatives, besides a Joint Facility with the Agua Fria Division, are not relevant in
14 this stage of this proceeding. The other alternatives were sufficiently addressed in the
15 initial filing of the CAP Task Force – Final Report in October 1998.

16
17 Q. The SCTA complains that the PER assumes that the project must be designed to deliver
18 2,372 acre-feet of CAP water to Sun City West golf courses and 4,189 acre-feet of CAP
19 water to Sun City golf courses and to all golf courses expressing a willingness to
20 participate. Does the PER contain this assumption?

21 A. Yes, the PER states that 2,372 acre-feet and 4,189 acre-feet of CAP water allocation will
22 be transported to Sun City West and Sun City, respectively.

23
24 Q. Under the circumstances, is it a reasonable assumption?

25 A. Yes. Each CAP water amount is the actual CAP allocation. Using CAP water replaces
26 the use of groundwater. The benefit of the GSP lies in the reduction of the pumping of
27 groundwater by the golf courses. The Sun Cities' areas receive the most benefit by

1 turning off as many groundwater pumps as possible. This means that it is in the public
2 interest to deliver the full allocation to the golf courses.

3
4 Q. Is it reasonable for the SCTA to contend that the Companies could use existing facilities to
5 complete this GSP?

6 A. In general, it is reasonable to try to use existing facilities if they are adequate to the
7 purpose. Here they are not. Existing plant facilities like the existing Sun City West
8 distribution system are constructed to pump in one direction (east to west). This existing
9 distribution system will not operate sufficiently, if at all, if it must pump from west to east.

10
11 Q. Has this issue been addressed before?

12 A. Yes. The operation of the existing Sun City West distribution system and its direction of
13 flow was addressed at the October 18, 1999 hearing and again, in the PER.

14
15 **CONCLUSIONS**

16 Q. What are your conclusions to the PER and SER?

17 A. The PER: 1) updated the cost estimate of the GSP; 2) adequately addressed the feasibility
18 of a joint facility with the Agua Fria Division; and 3) addressed the need for all major
19 elements for the approved GSP concept. The PER and its recommended plan for the GSP
20 and the associated plant costs are reasonable. The conclusions stated in the SER are
21 reasonable and should be accepted.

22
23 Q. Does this conclude your testimony?

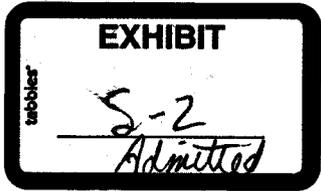
24 A. Yes it does.

Summary of Construction Costs

Alternative	Summary of Construction Costs							Total
	Joint Facility	CAP Trunk	Booster Pump Station	Storage	Treatment	Distribution	SCADA	
A - Lake Pleasant Road (Recommended plan)	-	\$7,014,653	-	-	-	\$6,803,639	\$1,218,399	\$15,036,691
B - 115th Avenue	-	\$3,494,155	\$476,873	-	-	\$6,803,639	\$1,218,399	\$11,993,066
C - El Mirage Road	-	\$4,589,471	\$476,873	-	-	\$6,803,639	\$1,218,399	\$13,088,382
D - Deer Valley Road	-	\$6,211,796	\$476,873	-	-	\$6,803,639	\$1,218,399	\$14,710,707
E - Through SCW	-	-	-	-	-	-	-	-
Joint Facility w/ Agua Fria Division	2,629,723	\$5,991,302	\$476,873	-	-	\$6,803,639	\$1,218,399	\$17,119,936
Joint Facility w/ Agua Fria Division & City of Surprise	2,170,815	\$5,991,302	\$476,873	-	-	\$6,803,639	\$1,218,399	\$16,661,028
Joint Facility w/ City of Surprise	2,806,500	\$5,991,302	\$476,873	-	-	\$6,803,639	\$1,218,399	\$17,296,713
Cost Estimate Presented to CAP Task Force	-	\$6,826,132	\$540,945	\$1,774,732	-	\$5,851,191	-	\$14,993,000

Summary of 50 Year Life Cycle Costs

Alternative	Joint Facility		CAP Trunk		Booster Pump Station		Storage	Treatment	Distribution	SCADA	Total
A - Lake Pleasant Road (Recommended plan)	-		\$7,389,787		-		-		\$7,326,884	\$1,745,930	\$16,462,601
B - 115th Avenue	-		\$6,616,371		\$1,633,946		-		\$7,326,884	\$1,745,930	\$17,323,131
C - El Mirage Road	-		\$7,819,325		\$1,633,946		-		\$7,326,884	\$1,745,930	\$18,526,085
D - Deer Valley Road	-		\$9,909,143		\$1,633,946		-		\$7,326,884	\$1,745,930	\$20,615,903
E - Through SCW	-		-		-		-		-	-	-
Joint Facility w/ Agua Fria Division	2,710,057		\$6,311,766		\$1,633,946		-		\$7,326,884	\$1,745,930	\$19,728,583
Joint Facility w/ Agua Fria Division & City of Surprise	2,222,135		\$6,311,766		\$1,633,946		-		\$7,326,884	\$1,745,930	\$19,240,661
Joint Facility w/ City of Surprise	2,892,234		\$6,311,766		\$1,633,946		-		\$7,326,884	\$1,745,930	\$19,910,760
Cost Estimate Presented to CAP Task Force	-		\$7,134,929		\$1,853,343		\$3,215,794		\$5,851,191	-	\$18,055,257



BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman
JIM IRVIN
Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF THE JOINT)
APPLICATION OF SUN CITY WATER)
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING)
A GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES)
_____)

DOCKET NOS. W-01656A-98-0577
WS-02334A-98-0577

RESPONSIVE TESTIMONY
OF
CLAUDIO M. FERNANDEZ
MANAGER, REVENUE REQUIREMENTS ANALYSIS
UTILITIES DIVISION

JULY 31, 2001

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EXECUTIVE SUMMARY
RESPONSIVE TESTIMONY OF CLAUDIO M. FERNANDEZ
IN THE MATTER OF THE JOINT APPLICATION OF
SUN CITY WATER COMPANY
AND
SUN CITY WEST UTILITIES COMPANY
DOCKET NOS. W-01656A-98-0577 & WS-02334A-98-0577

Mr. Fernandez' responsive testimony addresses the expected effects of the Groundwater Savings Project (GSP) on Sun City Water Company's and Sun Cities West Utilities Company's revenue requirements.

Mr. Fernandez finds that the GSP can be expected to increase Sun City Water Company's revenue requirement by 23 percent, or \$0.39 per thousand gallons if the increase were completely attributed to the per gallon charge.

Mr. Fernandez finds that the GSP can be expected to increase Sun Cities West Utilities Company's revenue requirement by 13 percent, or \$0.26 per thousand gallons if the increase were completely attributed to the per gallon charge.

Finally, Mr. Fernandez addresses the status of certain binding agreements between the two water companies and their client golf courses. The binding agreements face a legal challenge.

Mr. Fernandez observes that it would be imprudent for the Company to begin this project before it know the status of the binding agreement and the SCTA's lawsuit.

1 **INTRODUCTION**

2 Q. Please state your name, occupation, and business address.

3 A. My name is Claudio M. Fernandez. I am a Manager of Revenue Requirements Analysis
4 employed by the Arizona Corporation Commission ("ACC" or "Commission") in the
5 Utilities Division ("Staff"). My business address is 1200 West Washington Street,
6 Phoenix, Arizona 85007.

7
8 Q. Why are you submitting responsive testimony in this proceeding?

9 A. On June 5, 2001, the Commission issued a Procedural Order requesting Staff's responsive
10 testimony to the issues and comments submitted by the Sun City Taxpayers Association
11 ("SCTA") and any other party who opposes the approval or has issues or comments
12 regarding the Preliminary Engineering Report.

13
14 Q. Who submitted opposition to or otherwise had issues or comments regarding the GSP?

15 A. The Sun City Taxpayers Association and the Residential Utility Consumer Office
16 ("RUCO") filed testimonies opposing the Groundwater Savings Project ("GSP").

17
18 Q. What is the purpose of your testimony in this proceeding?

19 A. I will address the financial impact of the GSP. In particular, I address the increase in gross
20 revenue requirements to Sun City Water Company ("Sun City") and Sun City West
21 Utilities Company ("Sun City West").

22
23 **REVENUE REQUIREMENTS EFFECT OF THE GSP**

24 Q. Are Sun City and Sun City West earning their authorized rate of return?

25 A. No. Sun City and Sun City West are not earning their authorized rate of return of 8.73
26 percent, according to the data obtained from the Utilities Annual Report for calendar year

1 ended December 31, 2000. Schedule CMF-1 shows the required increase in gross
2 revenues with and without the implementation of the GSP.

3

4 Q. Has Staff audited the data obtained from the above mentioned Utilities Annual Reports?

5 A. No. Staff did not audit the Utilities Annual Reports.

6

7 Q. What impact would the GSP have on Sun City's revenue requirement?

8 A. The GSP would require an increase in gross revenues of approximately 25 percent.

9

10 Q. What impact would the GSP have in Sun City West's revenue requirement?

11 A. Sun City West would require an increase in gross revenues of approximately 19 percent.

12

13 Q. Please explain the schedule CMF-2.

14 A. Schedule CMF-2 represents Sun City's and Sun City West's Original Cost Rate Base
15 ("OCRB") without the implementation of the GSP as of December 31, 2000. This
16 schedule also reflects the addition of the GSP on a pro forma basis. However, it should be
17 noted that overheads and Allowance for Funds Used During Construction ("AFUDC")
18 that could increase the cost of the GSP were not included in the pro forma OCRBs.

19

20 Q. Does the increase in Sun City's gross revenue requirements constitute "rate shock"?

21 A. The term rate shock is subjective and highly susceptible to professional interpretation. To
22 illustrate; due to the combination of the apparent revenue deficiency and the
23 implementation of the GSP, Sun City could potentially require a 50 percent increase in
24 gross revenue requirements. The 50 percent increase in revenues might be perceived as
25 rate shock by some.

26 ...

27 ...

1 However, the implementation of the GSP would only require a 25 percent increase in
2 revenues or approximately \$1.8 million. This translates to an increase of \$4.95 per
3 connection if the increase is evenly distributed among 31,000 connections, and completely
4 absorbed by the monthly minimum charge. This would result in a monthly minimum
5 charge of \$9.50 based on the current monthly minimum charge of \$5.00. It is Staff's
6 opinion that the required increase to implement the GSP in Sun City is not rate shock

7
8 The commodity rate would increase by \$0.39 per thousand gallons if all the increase was
9 evenly divided by approximately 4.7 billion gallons sold and incorporated into the
10 commodity rate. This increase would produce a first tier rate of \$1.12 per thousand
11 gallons.

12
13 Q. In a typical rate design, is it customary to incorporate all of the revenue increase in either
14 the monthly minimum charge or commodity rate?

15 A. No. Usually the resulting increase in revenue requirements is incorporated into a
16 combination of monthly minimum and commodity charges. In Staff's opinion, the
17 implementation of the GSP in Sun City, consistent with the scenarios described above,
18 would not create rate shock.

19
20 Q. What would be the impact on the monthly minimum charge and commodity rates for Sun
21 City West?

22 A. The impact of the required increase in revenues of \$543,721, if placed strictly in the
23 monthly minimum charge and divided equally between 17,129 connections, would be
24 \$2.65 per connection per month for a total residential monthly minimum charge of \$7.65.

25 The commodity rate would increase by approximately \$0.26 per thousand gallons, from
26 the current first tier rate of \$0.93 to \$1.19 per thousand gallons.

27 ...

1 Q. Does the above described increase in revenues create rate shock?

2 A. No. In Staff's opinion, the implementation of the GSP would not create rate shock in Sun
3 City West.

4
5 Q. Does approval of the Preliminary Engineering Report ("PER") imply that all costs
6 incurred by Sun City and Sun City West will be automatically passed on to the ratepayers?

7 A. No. The Company's rate increase application will be audited and examined for accuracy
8 and reasonableness of the costs incurred in the implementation of the GSP.

9
10 **BINDING AGREEMENTS**

11 Q. Please describe the status of the binding agreements with the golf courses.

12 A. The Companies filed agreements with the Recreation Centers on December 18, 2000.
13 However, these agreements are missing a portion of the contract referred to as the
14 Operating Agreement. In addition, the SCTA filed a complaint in the Superior Court of
15 the State of Arizona, challenging the validity of the binding agreements. Subsequently,
16 Sun City and Sun City West Recreation Centers filed a motion to dismiss the complaint.
17 Oral arguments on both motions are scheduled to commence on September 10, 2001.

18
19 Q. What is Staff's recommendation regarding approving the PER at this time?

20 A. Clearly, the Companies have executed contracts with the recreation centers. The question
21 now becomes whether those agreements were validly executed. This question is beyond
22 the scope of this proceeding and certainly beyond the extent of my expertise. Nonetheless,
23 I would note that it would be imprudent for the Company to begin this project before it
24 knows the status of those contracts and the status of the SCTA's lawsuit.

25
26 Q. Does this conclude your responsive testimony?

27 A. Yes, it does.

COMPUTATION OF INCREASE IN GROSS REVENUE REQUIREMENTS

LINE NO.	DESCRIPTION	[A]		[B]		[C]		[D]	
		SUN CITY		SUN CITY WEST		SUN CITY WEST		SUN CITY WEST	
		DEC. 31, 2000	PRO FORMA	DEC. 31, 2000	PRO FORMA	DEC. 31, 2000	PRO FORMA	DEC. 31, 2000	PRO FORMA
1	Original Cost Rate Base	\$ 19,204,985	\$ 30,337,587	\$ 8,345,901	\$ 11,861,459				
2	Operating Income	628,742	511,534	296,064	281,244				
3	Rate of Return	3.27%	1.69%	3.55%	2.37%				
4	Required Operating Income	\$ 1,676,595	\$ 2,648,471	\$ 728,597	\$ 1,035,505				
5	Required Rate of Return	8.73%	8.73%	8.73%	8.73%				
6	Operating Income Deficiency	\$ 1,047,853	\$ 2,136,937	\$ 432,533	\$ 754,262				
7	Gross Revenue Conversion Factor	1.69	1.69	1.69	1.69				
8	Increase in Gross Revenue Requirements	\$ 1,770,872	\$ 3,611,424	\$ 730,981	\$ 1,274,702				
9	Operating Revenues	7,139,300	7,294,537	3,903,820	4,024,104				
	Percentage Increase in Gross Revenue Requirements								
10	Requirements	24.80%	49.51%	18.72%	31.68%				
11	GSP - 14,993,000		\$ 11,394,680		\$ 3,598,320				
12	OPERATING INCOME		\$ 628,742		\$ 296,064				
13	GSP REVENUE		155,328		120,284				
14	DEPRECIATION EXPENSE- 2.3%		(262,078)		(82,761)				
15	GSP - OPERATION AND MAINTENANCE		(65,563)		(21,512)				
16	CAP WATER EXPENSE		(423,089)		(239,572)				
17	INCOME TAXES - NET EFFECT		478,194		208,741				
18	PRO FORMA OPERATING INCOME		\$ 511,534		\$ 281,244				

ORIGINAL COST RATE BASE

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]
		SUN CITY		SUN CITY WEST	
		DEC. 31, 2000	PRO FORMA	DEC. 31, 2000	PRO FORMA
1	Gross Utility Plant in Service	\$ 37,647,764	\$ 49,042,444	\$ 29,128,878	\$ 32,727,198
2	Less:				
3	Accumulated Depreciation	(13,054,352)	(13,316,430)	(5,251,450)	(5,334,211)
4	Net Plant in Service	\$ 24,593,412	\$ 35,726,014	\$ 23,877,428	\$ 27,392,987
	Less:				
5	Contributions in Aid of Construction	1,042,786	1,042,786	434,456	434,456
6	Advances in Aid of Construction	2,195,311	2,195,311	13,675,226	13,675,226
7	Deferred Investment Tax Credit	410,525	410,525	513,663	513,663
8	Deferred Income Tax	1,704,880	1,704,880	908,182	908,182
9	Total Deductions	5,443,511	5,443,511	15,531,527	15,531,527
	Plus:				
10	Materials and Supplies Inventory	55,084	55,084	-	-
	ORIGINAL COST RATE BASE	\$ 19,204,985	\$ 30,337,587	\$ 8,345,901	\$ 11,861,459

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN
JIM IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF THE JOINT)
APPLICATION OF SUN CITY WATER)
COMPANY AND SUN CITY WEST UTILITIES)
COMPANY FOR APPROVAL OF CENTRAL)
ARIZONA PROJECT WATER UTILIZATION)
PLAN AND FOR AN ACCOUNTING ORDER)
AUTHORIZING A GROUNDWATER SAVINGS)
FEE AND RECOVERY OF DEFERRED)
CENTRAL ARIZONA PROJECT EXPENSES)
_____)

DOCKET NO. W-01656A-98-0577
DOCKET NO. SW-02334A-98-0577

DIRECT

TESTIMONY

OF

MARLIN SCOTT, JR.

UTILITIES CONSULTANT

UTILITIES DIVISION

SEPTEMBER 10, 1999



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1 **INTRODUCTION**

2 Q. Please state your name and business address.

3 A. My name is Marlin Scott, Jr. My business address is 1200 West Washington Street,
4 Phoenix, Arizona 85007.

5
6 Q. By whom and in what position are you employed?

7 A. I am employed by the Utilities Division of the Arizona Corporation Commission
8 (Commission) as an Utilities Consultant - Water/Wastewater Engineer.

9
10 Q. How long have you held this position?

11 A. Since November 1987.

12
13 Q. What are your responsibilities as an Utilities Consultant - Water/Wastewater Engineer?

14 A. Among other responsibilities, I inspect, investigate and evaluate water and wastewater
15 systems; obtain data, prepare reconstruction cost new and/or original cost studies and
16 investigative reports; interpret rules and regulations; suggest corrective action and
17 provide technical recommendations on water and wastewater system deficiencies; and
18 provide written and oral testimony on rate and other cases before the Commission.

19
20 Q. How many water and wastewater companies have you analyzed for the Utilities
21 Division?

22 A. I have analyzed approximately 270 companies in various capacities for the Utilities
23 Division.

24
25 Q. Have you previously testified before this Commission?

26 A. Yes, I have testified in 23 proceedings.

27 ...

28 ...

1 Q. What is your educational background?

2 A. I graduated from Northern Arizona University in 1984 with a Bachelor of Science degree
3 in Civil Engineering Technology.

4
5 Q. Briefly describe your pertinent work experience.

6 A. Prior to my employment with the Commission, I was Assistant Engineer for the City of
7 Winslow, Arizona, for about two years. Prior to that, I was a Civil Engineering
8 Technician with the U. S. Public Health Service in Winslow for approximately six years.

9
10 Q. Please state your professional membership, registrations, and licenses.

11 A. I am a member of the National Association of Regulatory Utility Commissioners
12 (NARUC) Staff Subcommittee on Water.

13
14 **PURPOSE OF TESTIMONY**

15 Q. What is the purpose of your testimony in this proceeding?

16 A. To present the findings of my engineering evaluation of the Sun City Water Company
17 and Sun City West Utilities Company (Sun Cities or Citizens) application for approval of
18 the Central Arizona Project (CAP) water utilization plan as provided in a Final Report –
19 CAP Task Force.

20
21 Q. What is the basis of Staff Engineering's recommendations?

22 A. Staff Engineering reviewed and analyzed the data in the CAP Task Force's Final Report
23 for the CAP water utilization plan.

24 ...

25 ...

26 ...

27 ...

28 ...

1 **CAP WATER USE OPTIONS**

2 Q. Did the Task Force's Final Report provide options for using CAP water?

3 A. Yes. A study and report was prepared for the Task Force by Brown and Caldwell to
4 assist in evaluating six options for using 6,561 acre-feet of CAP water. The options
5 considered were:

6 Option 1: Lease Capacity at the Central Arizona Water Conservation District's
7 (CAWCD) Agua Fria Recharge Project

8 Option 2: Independent groundwater recharge project owned and operated by
9 Citizens Water Resources

10 Option 3: Groundwater savings project or exchange with Maricopa Water District

11 Option 4: Groundwater savings project or exchange with local golf courses

12 Option 5: CAP water treatment plant owned and operated by Citizens

13 Option 6: Lease/purchase capacity at the Pyramid Peak Water Treatment Plant
14 owned by the City of Glendale

15 Q. How were these options evaluated by the Task Force?

16 A. The Task Force developed and defined criteria for evaluating these water use options,
17 including relinquishment, to select a preferred plan for using CAP water. The Task Force
18 also produced a report that described the decision-making process and recommendations
19 of the Task Force.

20
21 Q. What were the final recommendations by the Task Force?

22 A. The Task Force recommended a combination of options to use CAP water and called this
23 the "CAP Water Utilization Plan".
24

25 **CAP WATER UTILIZATION PLAN**

26 Q. Would you briefly describe the CAP water utilization plan?

27 A. The Task Force's Final Report recommended long-term and interim-solutions for CAP
28 water use.

1 The Long-term Solution

2 The Task Force's long-term recommendation is that the CAP water be delivered to the
3 Sun Cities through a non-potable pipeline (8.7 miles), where the water would be used to
4 irrigate golf courses. This project, called the Sun Cities/Youngtown Groundwater
5 Savings Project, would use a combination of new and existing infrastructures. The CAP
6 water will be conveyed from the aqueduct, be stored in reservoirs (3.9 million gallons),
7 and pumped (10,800 gallons per minute) to multiple golf courses for irrigation. This
8 Groundwater Savings Project is projected to be complete in four years at a capital cost
9 estimated at \$14,993,000 and an annual operating cost estimated at \$187,000 (Table 3-4
10 in Brown and Caldwell's report), assuming the Sun Cities construct a combined pipeline
11 project. This project will require extensive permitting including water storage and
12 recharge well permits from the Arizona Department of Water Resources.

13
14 Cost estimates for this Groundwater Savings Project are considered preliminary, and an
15 opinion of probable cost due to the multiple facilities and numerous undefined elements
16 of construction. The estimate is considered conservative, but actual location of facilities,
17 alignment and rights-of-way for the distribution system pipelines could have a substantial
18 impact on costs. It is also assumed that the existing effluent irrigation pumping station is
19 usable after rehabilitation.

20
21 The Interim Solution

22 The Task Force recommended this interim solution to resolve the issue of CAP water
23 being "used and useful" until the Groundwater Savings Project is complete in four years.
24 This interim solution would recharge Citizens' CAP water at the existing Maricopa Water
25 District (MWD) Groundwater Savings Project or, if the MWD project is not available, at
26 the CAWCD Agua Fria Recharge Project. Using the MWD Groundwater Savings
27 Project, CAP water would be delivered through an existing distribution system to farms
28 located in MWD's service area. For every acre-foot of groundwater not pumped by

1 MWD farmers, the Sun Cities will be legally entitled to recover the CAP water, through
2 their wells.

3
4 There are no capital costs associated with the MWD project. In fact, there is actually
5 revenue generated by the project that will be reflected as an offset in the annual operating
6 costs associated with using CAP water. The estimated annual revenue is \$111,000.

7
8 The CAWCD Recharge Project would require Citizens to lease recharge capacity and
9 water would be conveyed from the CAP canal to the recharge facility by gravity through
10 the channel of the Agua Fria River. Recharged water would be recovered through
11 existing wells in the Sun Cities. This Recharge Project is currently under construction.

12
13 Q. What is Staff Engineering's opinion of this CAP Water Utilization Plan?

14 A. Staff Engineering would concur that the interim solution would resolve the "used and
15 useful" criteria when CAP water is put to use. It is Staff Engineering's opinion that the
16 Groundwater Savings Project with the golf courses for the long-term solution is the most
17 favorable solution because, 1) the CAP water would directly be applied on to the golf
18 courses, 2) the high use consumption golf courses would stop pumping groundwater, and
19 3) the direct use of CAP water on to the golf courses would eliminate any type of
20 groundwater pumping to use this CAP water, even through the use recharge wells.

21
22 Q. What is Staff Engineering's opinion of the other CAP water use options?

23 A. As for the recharge projects, Staff Engineering does not favor the use of these projects as
24 the long-term solution because the use of any recharge project would not directly benefit
25 the Sun Cities alone. Many other well owners in the area would benefit from this
26 concept, at the expense of the Sun Cities.

27 ...

28 ...

1 As for treatment plants, these facilities are costly to construct and to operate and
2 maintain. The treatment of CAP water would benefit all the users, but the actual
3 characteristic of treated CAP water would not be cost-effective for drinking water versus
4 irrigation water.

5
6 **STAFF ENGINEERING RECOMMENDATIONS**

7
8 Q. Please summarize Staff Engineering's recommendations in this proceeding?

9 A. Staff Engineering has reviewed the CAP water utilization plan and concurs with the Task
10 Force's recommendation for the long-term and interim solutions. Staff Engineering also
11 concurs that the cost estimates for the long-term project are very preliminary and
12 extremely conservative. Until more final details are developed for this project, Staff
13 Engineering is unable to give a final opinion as to the reasonableness and appropriateness
14 of these costs.

15
16 Q. Does this conclude your direct testimony?

17 A. Yes, it does.
18
19
20
21
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25
26
27
28

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN
JIM IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF THE JOINT APPLICATION)
OF SUN CITY WATER COMPANY AND SUN)
CITY WEST UTILITIES COMPANY FOR)
APPROVAL OF CENTRAL ARIZONA PROJECT)
WATER UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES)

DOCKET NOS. W-01656A-98-0577
SW-02334A-98-0577

DIRECT
TESTIMONY
OF
CLAUDIO M. FERNANDEZ
MANAGER, REVENUE REQUIREMENTS ANALYSIS
UTILITIES DIVISION

SEPTEMBER 10, 1999



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SCHEDULES

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1 **INTRODUCTION**

2 Q. Please state your name and business address.

3 A. My name is Claudio M. Fernandez. My business address is 1200 West Washington,
4 Phoenix, Arizona 85007.

5
6 Q. By whom are you employed and in what capacity?

7 A. I am employed by the Utilities Division of the Arizona Corporation Commission
8 ("Commission" or "ACC") as Manager, Revenue Requirements Analysis.

9
10 Q. Please state your educational background and work experience.

11 A. In 1973, I obtained a Bachelor in Business Administration Degree (B.B.A.) from the
12 University of Texas majoring in Accounting. I have attended several training classes and
13 courses regarding auditing, rate design, income taxes, and other utility related matters.

14
15 From March 1978 to June 1981, I was the Accounting Manager at Sun Valley Hospital in
16 El Paso, Texas. In this capacity, I was responsible for all fiscal services and general
17 ledger maintenance. I also supervised the function of the Accounts Payable, and Payroll
18 Departments. I prepared cash flow projections, and reviewed the annual operating
19 budget. Finally, I was responsible for the preparation of the annual Medicare Cost Report
20 in compliance with the United States Department of Health guidelines.

21
22 From July 1981 to October 1984, I was employed by Fairall, Quindt & Cummins as a
23 Staff Accountant in the Houston, Texas, branch of this public accounting firm. I
24 formulated and executed audit plans regarding audit work of diverse industries such as
25 health care, manufacturing, construction, and oil concerns. I also assisted in the
26 preparation of the Securities Exchange Commission's (SEC) 10K Form in compliance
27 with SEC guidelines.

28 ...

1 From December 1984 to July 1988, I was employed by Valley Community Hospital in El
2 Paso, Texas, as Assistant Controller. I was responsible for performing comprehensive
3 accounting functions, including supervision of four departments.

4
5 In June 1989, I joined the Arizona Corporation Commission. My duties include review
6 and analysis of financial records and other documents of regulated utilities for accuracy,
7 completeness, and reasonableness; and the preparation of work papers and schedules
8 resulting in testimony and/or Staff reports for ratemaking purposes regarding utility
9 applications in the areas of rates, financings and other matters.

10
11 **PURPOSE OF TESTIMONY**

12 Q. What is the purpose of your testimony in this proceeding?

13 A. I am presenting Staff's analysis and recommendations regarding the Sun City Water
14 Company and Sun City West Utilities Company ("Sun Cities" or "Companies")
15 application for approval of recovery of Deferred Central Arizona Project (CAP)
16 expenses, Central Arizona Project Water Utilization Plan, and an accounting order
17 authorizing a Groundwater Savings Fee.

18
19 Q. What is the basis of Staff's recommendations?

20 A. Staff reviewed and analyzed the data to determine its accuracy and relevancy and
21 whether data supports the Sun Cities' claims presented in their application. Staff also
22 verified that the principles applied are in accordance with prior ACC orders.

23
24 In addition, Staff engaged in discussions with Company representatives and made several
25 written requests for data. Staff also made inquiries to other governmental agencies.

1 **BACKGROUND**

2 Q. Please briefly describe the Companies' application.

3 A. The Companies' application was the result of Decision No. 60172, dated May 7, 1997.
4 This Decision recognized that the Sun Cities' decision to obtain allocations of CAP water
5 was prudent. This Decision also allowed the Companies to defer CAP capital costs for
6 future recovery from ratepayers when the CAP allocation has been put to beneficial use
7 for the customers. Decision No. 60172 further stated that future recovery of the deferred
8 CAP charges was subject to the development of an acceptable plan with implementation
9 by December 31, 2000, or the Companies would lose their ability to defer future costs.

10
11 The Sun Cities' filing, in compliance with the above mentioned decision, is seeking
12 Commission approval to recover deferred CAP charges, to recover on-going CAP capital
13 costs and delivery charges (interim solution), and approval of an accounting order for the
14 Sun Cities/Youngtown Groundwater Savings Project (GSP).

15
16 **DEFERRED CAP CHARGES**

17 Q. Would you briefly describe the Companies' proposals regarding the recovery of Deferred
18 CAP Charges?

19 A. Yes. Sun City Water is requesting recovery of Deferred CAP Charges of \$638,946 (as of
20 December 31, 1998) over a period of 42 months. This amount includes \$74,806 in
21 interest charges. The Companies applied an 8.73 percent annual interest rate, which is
22 equivalent to the Commission authorized Rate of Return in the Sun Cities' last rate case
23 proceeding.

24
25 Sun City West (SCW) is requesting recovery of \$361,908 (as of December 31, 1998)
26 over a period of 42 months of which \$42,371 is due to the addition of an interest
27 component at an annual rate of 8.73 percent.

1 Sun City Water is proposing to recover \$638,946 based on a monthly flat fee of \$0.4088
2 per household for the residential customer class and \$0.0406 (per 1,000 gallons) based on
3 usage for the commercial customer class.

4
5 Sun City West would recover \$361,908 based on a monthly flat fee of \$0.4492 per
6 household and \$0.0529 per 1,000 gallons for the commercial customer class.

7
8 Q. Did Staff prepare a schedule representative of Staff's recommended Deferred CAP Cost?

9 A. Yes, please refer to Schedule CF-1.

10

11 Q. Is Staff recommending any changes to the Companies' proposed recovery amounts?

12 A. Yes. Staff is recommending recovery of Deferred CAP Charges of \$767,473 versus Sun
13 City Water's \$638,946 and \$432,827 versus Sun City West's \$361,908.

14

15 Q. What are the differences between Staff's and the Sun Cities' proposed recovery amounts
16 of Deferred CAP Charges?

17 A. The difference is that Staff included \$423,696, which reflects the second half of 1999
18 holding charges and removed the Companies' addition of an interest component.

19

20 Q. Is Staff recommending the addition of an interest rate component to the Deferred CAP
21 Charges?

22 A. No, Staff believes that the addition of an annual interest rate of 8.73 percent to the
23 Deferred CAP Charges is not warranted. As explained above, the Companies added an
24 interest component equivalent to the Rate of Return granted in the Sun Cities last rate
25 case. In other words, the Companies are seeking a return on their investment.

26 ...

27 ...

28 ...

1 Staff cannot recommend approval of the Companies' request because it would be
2 contrary to prior Commission decisions which did not allow those costs until they meet
3 the "used and useful" criteria. Consequently, the Companies are retroactively seeking in
4 this filing a rate of return that the Commission previously denied.

5
6 In addition, Decision No. 60172 allowed deferral of just the CAP Capital Costs for future
7 recovery from ratepayers. This Decision did not mention recovery of CAP Capital Cost
8 plus an interest component equal to the Commission authorized Rate of Return of 8.73
9 percent, or any Rate of Return component.

10
11 Q. Please explain how Staff is proposing to recover the Deferred CAP charges.

12 A. Staff adopted the Companies' rate design methodology. The residential customer class
13 would be billed on a per household, per month basis. The commercial customer class
14 will be billed based on usage.

15
16 Q. Did Staff prepare a schedule representative of Staff's recommended rates for the recovery
17 of the Deferred CAP Charges?

18 A. Yes, please refer to Schedule CF-2. Staff is recommending an amortization period of five
19 years versus the Companies' 42 months. Staff believes that since the balance of the
20 Deferred CAP Charges reflected five years of accumulated charges, it would be
21 reasonable to use the same time period for recovery. Schedule CF-2 reflects Staff's
22 calculations based on the Companies proposed billing determinants which Staff is
23 adopting.

24
25 Staff is recommending residential rates of \$0.3437 per month per household for Sun City
26 Water. The commercial customer class would be charged based on usage at a rate of
27 \$0.0341 per 1,000 gallons.

28 ...

1 Staff is further recommending residential rates of \$0.3761 per month per household for
2 Sun City West. The commercial rate would be \$0.0443 per 1,000 gallons.

3
4 **CAP WATER UTILIZATION PLAN**

5 Q. Would you briefly describe the Companies' proposal regarding the recovery of On-Going
6 CAP Capital and Delivery Charges.

7 A. In conjunction with the Companies' application a document named "Final Report CAP
8 Task Force" was included. This Task Force was assembled in response to intervening
9 parties and Commission comments in the last rate case.

10
11 The intervening parties expressed the need for a public participation process to decide if
12 and how CAP water should be used in the Sun Cities. Under the sponsorship of the
13 Northwest Valley Water Resources Advisory Board (formed by the Governor in 1997),
14 the Board endorsed the formation of a task force of community leaders combined with a
15 broad public outreach program.

16
17 The Task Force was composed of representatives from major associations, Citizens
18 Utilities Company, the Town of Youngtown and four at large members.

19
20 The underlying principle is that CAP water is necessary to maintain the quality of life in
21 the Sun Cities and Youngtown. The mission of the Task Force was to develop consensus
22 on the best plan for the use of CAP water that meets the Arizona Department of Water
23 Resources ("ADWR") guidelines to achieve "safe yield" and that would be supported and
24 paid for by the customers of the Sun Cities.

25
26 The Task Force, over a course of fourteen weeks, met thirteen times and heard from
27 eighteen outside water experts, including hydrologists, engineers, city and state officials
28 and lawyers.

1 The Task Force evaluated a number of options (including relinquishing the CAP water
2 allocation) and concluded that:

- 3 a. It was in the public interest to retain the CAP water allocation of 6,561 acre
4 feet.
- 5 b. The Interim Solution which recommended that the Sun Cities recharge its
6 CAP allotment at the existing Maricopa Water District ("MWD") recharge
7 facility, meets the criteria of "used and useful".
- 8 c. The ratepayers would pay for the Deferred CAP Charges.
- 9 d. The ratepayers would pay for the Ongoing CAP Costs.
- 10 e. The Long-term Solution to deliver CAP water to the Sun Cities through a non-
11 potable pipeline, where the water would be used to irrigate golf courses that
12 have historically used groundwater.
- 13 f. The Deferred CAP Charges and the On-going CAP Costs would be recovered
14 on a per household, per month fee for the residential customer class.
- 15 g. The Deferred CAP Charges and the On-going CAP Costs for the commercial
16 customer class would be recovered based on usage. The fee would be
17 assessed per 1,000 gallons used.

16 MWD RECHARGE OPTION

17 Q. Please describe the recharge option through the existing facilities at the MWD.

18 A. The Task Force opted for an Interim Solution for the utilization of the CAP water until
19 the permanent solution consisting of 46,000 feet of pipeline is constructed to deliver CAP
20 water to the golf courses.

21
22 The MWD option consists of delivering CAP water to the existing groundwater savings
23 project. CAP water would be delivered to farms located in the MWD service area.

24
25 For every acre-foot of groundwater not pumped by MWD farmers, the Companies will be
26 entitled to recover that water to meet existing demands in the Sun Cities. This type of
27 recharge is indirect. The idea behind the Groundwater Savings Facility (GSF) is that
28

1 CAP water or some other surface water is used instead of pumping groundwater, thereby
2 leaving the water in the aquifer.

3
4 Q. What are the on-going costs associated with this option?

5 A. The cost of recharge at the MWD location is \$107 per acre foot consisting of the
6 following charges and credits:

- 7
8 a. Holding charges of \$54 per acre foot.
9 b. Delivery charges of \$69 per acre foot
c. Offset from MWD of (\$16) per acre-foot.

10 **CAWCD-AGUA FRIA RECHARGE PROJECT**

11 Q. Please explain the CAWCD-Agua Fria Recharge Project option.

12 A. The Agua Fria Recharge Project as an interim solution, consists of multiple recharge
13 basins with an estimated recharge capacity of 100,000 acre feet per year. The Companies
14 under this option would lease the recharge capacity and the water would be conveyed
15 from the CAP canal to the recharge facility by gravity through the channel of the Agua
16 Fria River.

17
18 According to Mr. Jim Sweeney, General Manager for the MWD, there are two basic
19 types of recharge, direct and indirect. The Agua Fria Recharge Project is considered a
20 direct recharge because the recharged water could provide a hydrological impact in the
21 Sun Cities' locale. According to Mr. Marvin Glotfelty of Brown and Caldwell, the
22 MWD project is an indirect recharge and would not provide much direct benefit to the
23 Sun Cities. In other words, the MWD would only generate "water credits," but it would
24 not increase the water levels in Sun Cities' wells.

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The capital costs for construction of the CAWCD-Agua Fria Recharge Project will be paid by CAWCD using public funds. Therefore, the cost to participate in this project is limited to the cost of the purchased CAP water and the cost of the pro-rata share of the Operation and Maintenance (O & M) expenses of the facility.

The O & M costs are unknown at this time since construction of the recharge facility has not been completed. However, in the Tucson area where a CAWCD Recharge Facility is in operation the O & M costs are approximately \$20 per acre foot.

This recharge option is not going to be available to the Companies until the facilities are constructed. According to CAWCD, this project should be completed by the latter part of next year.

It is Staff's opinion that the Sun Cities should utilize the CAWCD-Agua Fria Recharge Project as soon as it becomes operational.

The Agua Fria Recharge Project could provide a positive hydrological impact to the Sun Cities. In certain recharge projects the hydrological impact is felt immediately, according to Mr. Tom Harbour, Project Manager of the Agua Fria Recharge facility.

Q. Did Staff prepare a schedule representative of Staff's recommended On-Going CAP Costs?

A. Yes, please refer to Schedule CF-3.

...
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...

1 Q. What is Staff recommended rates for the recovery of the On-going CAP Costs for Sun
2 City Water and Sun City West?

3 A. Staff is recommending a per household, per month surcharge of \$1.0036 for the Sun City
4 Water residential customer class and \$0.0996 per 1,000 gallons for the commercial
5 customer class. For the Sun City West residential customer Staff is recommending
6 \$1.1026 per household per month and \$0.1299 per 1,000 gallons for the commercial
7 customer class.

8
9 Schedule CF-3 reflects Staff's computations based on the Companies' proposed billing
10 Determinants which Staff is adopting.

11
12 **GROUNDWATER SAVINGS PROJECT**

13 Q. Please explain the Sun Cities' request for an Accounting Order authorizing a
14 Groundwater Savings Project/Exchange with Local Golf Courses.

15 A. The Groundwater Savings Project/Exchange with Local Golf Courses consists of the
16 construction of and operation of a non-potable pipeline to deliver raw CAP water to local
17 golf courses that have historically used groundwater. This means that every gallon not
18 pumped by the golf courses would be preserved for drinking water customers in the Sun
19 Cities.

20
21 Pursuant to the application, the capital cost of the Groundwater Savings Project has been
22 very conservatively estimated at \$15 million. Annual operating and maintenance cost are
23 estimated to be approximately \$400,000.

24
25 The Sun Cities are requesting that the Commission approve the general concept of the
26 construction of a pipeline to the golf course as a reasonable and prudent approach for
27 implementing the long-term solution for the utilization of CAP water in the Sun Cities.

28 ...

1 Q. How are the Companies going to finance the GSP?

2 A. It is not clear to Staff how this project is going to be financed and at what cost. The
3 Companies stated that they supported finding alternative methods of financing rather than
4 financing the project themselves.

5
6 The engineering firm of Brown and Caldwell estimated construction costs and also
7 expressed those costs on a per household basis. The Companies stated in their
8 application that the pipeline would not be operational until 2002, and at that time, the
9 deferral would discontinue and the costs associated with the pipeline would begin.

10

11 This cost recovery methodology leaves a gap of four years between the time construction
12 starts and cost recovery begins during which no funding is in place. In the meantime,
13 construction costs will need to be paid (at least \$15 million) without a Commission
14 approved financing plan.

15

16 Q. Did the Companies file a financing application in conjunction with their request for an
17 accounting order?

18 A. No, the Companies did not file a financing application.

19

20 Q. Is Staff recommending that the Commission approve the Sun Cities request for an
21 accounting order?

22 A. No, Staff believes that it would be premature to issue an accounting order at this time,
23 even though the Companies stated that they are not seeking pre-approval of the
24 expenditures for the pipeline project.

25 ...

26 ...

27 ...

28 ...

1 Usually, for ratemaking purposes, accounting orders create assets and/or liabilities
2 measured in monetary terms. In Staff's opinion, the magnitude of this project and the
3 estimated construction cost of \$15 million attached to the concept of the pipeline cannot
4 be ignored.

5
6 As a matter of fact, the Task Force members were given cost estimates and based on
7 upon those estimates (among other considerations like water quality, etc.) they chose to
8 adopt the pipeline concept. The members were also provided with per household
9 recovery rates. In other words, the concept cannot be visualized in its entirety without
10 regard to cost implications.

11
12 Staff believes that the Commission should not issue an accounting order that is going to
13 have a large impact on Rate Base and Operating Expenses and consequently, some type
14 of recovery in rates, where the amount and terms of some type of financing are unknown.

15
16 Consequently, Staff recommends that the Sun Cities file a financing application
17 requesting approval of a plan to fund the construction of the pipeline by June 30, 2000.

18
19 Staff believes that this intermediate step is necessary in order for the Commission to have
20 all the pertinent information on which to base their decision regarding the accounting
21 order.

22
23 **STAFF RECOMMENDATIONS**

24 Q. Please summarize Staff's recommendations in this proceedings.

25 A. Staff recommends that the Commission approve Staff's Deferred CAP Charges and On-
26 Going CAP Costs Surcharge rates as depicted on Schedules CF-2 and CF-3.

27 ...

28 ...

1 Staff further recommends that the Sun Cities submit an annual informational report to the
2 Director of Utilities showing the amounts collected through the deferred CAP costs
3 surcharge and the outstanding balance.

4
5 Staff further recommends that when the Deferred CAP Charges are recovered, the
6 corresponding surcharge be terminated and any over-collection be applied to the On-
7 Going CAP Costs.

8
9 Staff further recommends that when the Agua Fria Recharge Project is operational the
10 Sun Cities be required to utilize this facility instead of the MWD.

11
12 Staff further recommends that if the Sun Cities fail to recharge their CAP water allocation
13 prior to the implementation of long-term solution, the Deferred CAP Cost surcharge
14 should be terminated and the Sun Cities forfeit recovery of the deferred CAP Cost.

15
16 Staff further recommends that the Sun Cities file with the Commission for an adjustment
17 to the On-Going CAP Costs Surcharge to reflect any price fluctuations in the recharge
18 costs or billing determinants. This filing should be made as soon as any fluctuation
19 becomes known and measurable but not less than annually.

20
21 Staff further recommends that the Sun Cities file an informational report with the
22 Director of Utilities on an annual basis reflecting the amounts collected through the On-
23 Going CAP Costs.

24
25 Staff further recommends that the Commission reject the Companies request for an
26 accounting order for approval of the pipeline concept.

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Staff further recommends that the Sun Cities file a financing application no later than June 30, 2000, requesting approval for a plan to fund the construction of the pipeline.

Q. Does this conclude your direct testimony?

A. Yes, it does.

COMPUTATION OF DEFERRED CAP CHARGES

LINE NO.	DATE	A.F.	COST PER ACRE FT.	CAPITAL CHARGE	CREDITS	DEFERRED CHARGES	LATE CHGS.	TOTAL DEFERRED
1	1995	17,274	\$ 21.00	\$ 362,754	\$ (58,265)	\$ 304,489	-	\$ 304,489
2	1995	380	10.50	3,990	0	308,479	-	308,479
3	1996	17,654	30.00	529,620	0	838,099	-	838,099
4	1997	17,654	39.00	688,506	0	1,526,605	-	1,526,605
5	1998	17,654	48.00	847,392	0	2,373,997	4,023	2,378,019
6	1999	17,654	48.00	847,392	0	3,221,389	-	3,225,411

ALLOCATION OF DEFERRED COST

	ACRE FEET	PER A.F.	AMOUNT	LATE CHGS.	TOTALS
7 SUN CITY	4,189	\$ 182.47	\$ 764,382	\$ 3,091	\$ 767,473
8 SUN CITY WEST	2,372	182.47	432,827	-	432,827
9 AGUA FRIA	11,093	182.47	2,024,179	932	2,025,111
10 TOTALS	<u>17,654</u>		<u>\$ 3,221,389</u>	<u>\$ 4,023</u>	<u>\$ 3,225,411</u>

**DEFERRED CAP CHARGES
 RATE DESIGN**

LINE NO		SUN CITY WATER	SUN CITY WEST
1	Deferred CAP Charges (12/31/99)	\$ 767,473	\$ 432,827
2	Amortization Period - Months	60	60
3	Amount to be Recovered-Monthly	\$ 12,791	\$ 7,214
4	Billing Determinants		
5	Residential-Households	29,502	16,731
6	Commercial-Monthly Usage (1,000 gls.)	77,774	20,801
7	Volume Allocation		
8	Residential	79.27%	87.22%
9	Commercial	20.73%	12.78%
10	Recovery Amount		
11	Residential	\$ 10,140	\$ 6,292
12	Commercial	\$ 2,652	\$ 922
13	Deferred CAP Charges Fee		
14	Residential-Per Household Per Month	\$ 0.3437	\$ 0.3761
15	Commercial-per 1,000 gallons	\$ 0.0341	\$ 0.0443

**ON-GOING CAP COSTS
 RATE DESIGN**

LINE NO	SUN CITY WATER	SUN CITY WEST
1 Acre Feet	4,189	2,372
2 Cost per acre foot		
3 Holding Charge	\$ 54	
4 Delivery Charge	69	
5 MWD Offset	(16) \$ 107	\$ 107
6 On-Going CAP Costs	\$ 448,223	\$ 253,804
7 Amortization Period - Months	12	12
8 Amount to be Recovered-Monthly	\$ 37,352	\$ 21,150
9 Billing Determinants		
10 Residential-Households	29,502	16,731
11 Commercial-Monthly Usage (1,000 gls.)	77,774	20,801
12 Volume Allocation		
13 Residential	79.27%	87.22%
14 Commercial	20.73%	12.78%
15 Recovery Amount		
16 Residential	\$ 29,609	\$ 18,447
17 Commercial	7,743	2,703
18 On-Going CAP Costs Surcharge		
19 Residential-Per Household Per Month	\$ 1.0036	\$ 1.1026
20 Commercial-per 1,000 gallons	\$ 0.0996	\$ 0.1299

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN
JIM IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF THE JOINT APPLICATION)
OF SUN CITY WATER COMPANY AND SUN)
CITY WEST UTILITIES COMPANY FOR)
APPROVAL OF CENTRAL ARIZONA PROJECT)
WATER UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES)
_____)

DOCKET NOS. W-01656A-98-0577
SW-02334A-98-0577

SURREBUTTAL

TESTIMONY

OF

CLAUDIO M. FERNANDEZ

MANAGER, REVENUE REQUIREMENTS ANALYSIS

UTILITIES DIVISION

OCTOBER 5, 1999



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SCHEDULES

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1 **INTRODUCTION**

2 Q. Please state your name and business address.

3 A. My name is Claudio M. Fernandez. My business address is 1200 West Washington,
4 Phoenix, Arizona 85007.

5
6 Q. Are you the same Claudio M. Fernandez who filed direct testimony in this case?

7 A. Yes, I am. I filed direct testimony and supporting schedules on behalf of the Utilities
8 Division Staff (Staff) on September 10, 1999.

9
10 **PURPOSE OF TESTIMONY**

11 Q. What is the purpose of your testimony in this proceeding?

12 A. I am presenting Staff's analysis and recommendations concerning Sun City Water
13 Company and Sun City West Utilities Company ("Sun Cities" or "Company") rebuttal
14 testimony regarding the Company's application for approval of Central Arizona Project
15 ("CAP") water utilization plan and an accounting order authorizing a Groundwater
16 Savings Fee.

17
18 Q. As a result of your review of the Company's rebuttal testimony, is Staff changing any of
19 its recommendations found in direct testimony?

20 A. Yes. Staff is changing its recommendation of deferred CAP charges to be recovered and
21 the rate design schedules presented in direct testimony as shown in Schedule CF-1 and
22 CF-2 as a result of the Company's rebuttal testimony.

23
24 **SUMMARY OF COMPANY'S REBUTTAL TESTIMONY**

25 Q. Would you briefly summarize the Company's rebuttal testimony?

26 A. The Company has indicated disagreement with Staff's recommendations on the following
27 issues in its rebuttal testimony.

- 28 1. The amount of deferred CAP costs to be recovered.

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2. The amortization period for the recovery of deferred CAP costs.
3. The disallowance of interest applied by the Company to the deferred CAP costs (carrying charges).
4. Staff's characterization of the requested accounting order.
5. Staff's recommendations regarding the Sun Cities financing application.

Q. Please explain how Staff organized its surrebuttal testimony.

A. Staff utilized the Company's major points of disagreements listed above and made appropriate comments accordingly.

DEFERRED CAP COSTS

Q. Does Staff agree with the Company's deferred CAP charges?

A. Regarding the total deferred CAP charges of \$1,195,515 as of December 31, 1999 to be recovered through a surcharge mechanism, Staff is in agreement. Staff's recalculations, as shown in its revised schedules (which removed late charges of \$4,023), reflected a balance of \$1,197,209, or an immaterial difference of \$1,694. Staff's revised schedules are based on \$1,197,209 to be consistent with the corresponding schedules filed in direct testimony.

Staff confirmed with the Company that the appropriate amounts for recovery of deferred CAP charges found in Mr. Dabelstein's Rebuttal Testimony at Page 3, Lines 3 and 4, should be \$762,320 instead of \$861,354 and \$433,195 instead of \$494,866.

It should be noted that Schedule CWD-1 shows one payment of \$157,464 for 1999. With the exception of that year (1999), the remaining years (1993 through 1998) reflected that at least two payments were made in those years.

...

...

1 The rebuttal testimony of Mr. Jones indicated that in December an additional payment of
2 \$423,696 (\$157,464 attributed to the Sun Cities) will be due. If the payment alluded to
3 by the Company is for the 1999 capital charges, it would represent an increase of
4 \$159,158 (\$1,694+157,464) over the Staff recommended deferred CAP charges to be
5 recovered. Mr. Jones also stated in his rebuttal testimony that the Company is asking for
6 recovery of only \$1,356,220, an amount that Staff has not been able to reconcile with
7 the schedules submitted in rebuttal testimony.

8
9 Staff's calculations of deferred CAP charges to be recovered (Revised Schedule CF-1)
10 were based on the actual cost per acre-foot for the corresponding year. Staff's Schedule
11 CF-1 recognized the expense in the year that the charge was incurred not when it was
12 paid. Staff's recommended deferred CAP charges as of December 31, 1999 of \$1,197,209
13 includes the 1999 accrued capital charges.

14
15 **AMORTIZATION PERIOD**

16 Q. Please explain the Company's position regarding the amortization period for the recovery
17 of deferred CAP charges.

18 A. The Company's rebuttal testimony rejects Staff's recommended five-year amortization
19 period because there is no historical linkage or precedent between the time period during
20 which capital costs are accumulated and their prescribed recovery period. However, the
21 Company's major concern is that Staff is not recommending the Task Force expected
22 amortization period of 42 months, which coincides with the construction of the golf
23 course.

24
25 Q. Please explain Staff's position regarding its recommended amortization period.

26 A. Staff's recommended five-year amortization period, as stated in the Company's rebuttal
27 testimony, was not based on any historical linkage. It was simply based on the same time
28 period that it took to accumulate the deferred CAP charges (from 1995 through 1999).

1 Staff is aware of the Task Force's position as well as the estimated time of the golf course
2 construction period of 42 months. However, Staff believes that due to the Company's
3 possible change of ownership, Citizens Utilities Company (the parent company of the
4 Sun Cities) might not be able to complete the pipeline project. However, Schedule CF-2
5 reflects Staff's recommended rates in the event that the Commission's decision adopts an
6 amortization period of 42 months.
7

8 **DISALLOWANCE OF RATE OF RETURN ON THE DEFERRED CAP COSTS**

9 Q. Does Staff agree with the Company's inclusion of a rate of return to the deferred CAP
10 costs?

11 A. No. Staff is not in agreement with the Company's position that since the same
12 ratemaking standard that applies to plant assets ("used and useful") has been imposed on
13 the deferred

14
15 CAP costs, it is only appropriate that the same cost recovery opportunity be made
16 available as well.
17

18 The Company also used the example of a plant asset that accrues an Allowance for Funds
19 Used During Construction ("AFUDC") until the asset becomes used and useful,
20 consequently, a component of rate base earning a rate of return.
21

22 Staff believes that the deferred CAP costs should be treated as a pass-through cost to
23 ratepayers and as such should not earn a rate of return. The Company's approach is
24 consistent with the revenue requirement criteria where a rate of return is sought.
25

26 In Staff's opinion, unlike a plant asset that accumulates AFUDC and is allowed in rate
27 base when it becomes used and useful, the foregone allocation of CAP water from 1985
28 through 1999 more than likely will never be utilized. In other words, the Company could

1 not increase their allocation for more than the contracted 17,654 acre-feet at any given
2 time because the Company did not take physical possession of their water allocation for
3 15 years. Consequently, the Company should not be allowed to collect carrying charges
4 of \$108,257.

5
6 **STAFF'S CHARACTERIZATION OF THE REQUESTED ACCOUNTING ORDER**

7 Q. Does Staff agree with the Company's characterization of Staff's direct testimony
8 regarding an accounting order authorizing the general concept of the construction of a
9 pipeline?

10 A. No. Staff does not agree with the Company's perception of Staff's recommendation
11 regarding the pipeline project.

12
13 In Staff's opinion, the Company's requested accounting order should not be for the
14 deferral and recovery of the deferred CAP charges since the Commission has issued two
15 Decisions regarding those issues (Decision No. 58750, dated August 31, 1994, and
16 Decision No. 60172, dated May 7, 1997). Furthermore, Staff is not opposing the
17 recovery of the deferred CAP charges.

18
19 Decision No. 58750, dated August 31, 1994, agreed with the Company recognizing that
20 the 1995 capital charges represented a significant operating expense and should be
21 deferred. The accounting order authorizing the deferral of CAP charges also stated at
22 Page 3, Lines 11 through 17, that:

23
24 "Neither Sun City nor Agua Fria made payments in 1993 and 1994
25 because the Interim Subcontract Charges previously paid and associated
26 interest credited to their accounts satisfied the 1993 and 1994 Capital
27 Charge liability. Additionally, these amounts have already been paid and
28 should have, absent specific authorization from the Commission, been
expensed in the period incurred".

1 Decision No. 60172, dated May 7, 1997, reiterated the Commission's Decision
2 No. 58750. This decision ordered the Company to defer CAP capital costs for future
3 recovery from ratepayers when the CAP allocation has been put to beneficial use for the
4 ratepayers.

5
6 Staff believes that an accounting order is not necessary for the Company to recover the
7 on-going CAP costs because Staff is recommending approval for the recovery of those
8 costs through a separate surcharge as outlined in Direct Testimony. The Commission
9 could accept Staff's recommendations, modify them or reject them. If the Commission
10 accepts Staff's recommended recovery of the on-going CAP costs and authorizes a
11 recovery rate, there is no need for an accounting order.

12
13 The only remaining issue is approval of the pipeline concept. The Company's rebuttal
14 testimony stated that the Company is simply asking for approval of the pipeline concept
15 as the correct plan to implement and the level of approval requested would not constitute
16 an accounting order.

17
18 If an accounting order is not necessary, the Company should refer to Mr. Scott's Direct
19 Testimony where he recommended the pipeline concept as the long-term most favorable
20 solution. Mr. Scott also stated in his recommendation that the estimated costs were very
21 preliminary and extremely conservative and was unable to give a final opinion as to the
22 reasonableness and appropriateness of those costs.

23
24 In Staff's opinion, based on the above, there should be no conflict regarding the issue of
25 the approval of the pipeline concept with the understanding that it in no way implies
26 approval of any construction cost estimates used in this proceeding.

1 The Company's position is that they are not requesting pre-approval of the construction
2 costs or any special treatment for those costs. However, the Company's rebuttal
3 testimony asked the Commission to rely upon the Brown and Caldwell cost estimates to
4 approve the plan because it is unlikely that the actual costs will exceed the estimate. In
5 Staff's opinion, those statements seemed contradictory.

6
7 **FINANCING APPLICATION**

8 Q. Please explain the Company's position regarding Staff's recommended financing
9 application.

10 A. The Company, in its rebuttal testimony, indicated that Citizens is prepared to finance this
11 project using existing sources of capital and should an alternative financing method be
12 identified prior to construction, Citizens would then file for Commission approval.

13
14 The Company in the CAP Task Force Final Report (top of Page 14) supported finding
15 alternative methods of financing. Consequently, consistent with the Company's desire
16 not to fund the project, Staff believed that a financing plan to fund the project was
17 necessary to implement the long-term permanent solution. Typically, utility companies
18 look for outside sources to finance projects of the magnitude of the proposed pipeline.

19
20 In Staff's opinion, the Commission should require the Company to file a financing plan
21 to fund the pipeline project. Staff is requesting that the Company comply with its request
22 by June 30, 2000. Staff believes that this deadline is necessary to adhere to the
23 Company's and Task Force's recommended time of completion of 42 months. If the
24 Company is not willing to finance the project, the longer it waits to secure a source of
25 financing the longer the construction project would last.

26
27 Q. Does this conclude Staff's surrebuttal testimony?

28 A. Yes, it does.



BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
Chairman
JIM IRVIN
Commissioner
WILLIAM A. MUNDELL
Commissioner

OCT -7 P 3:43

ARIZONA CORPORATION COMMISSION
DOCUMENT CONTROL

IN THE MATTER OF THE APPLICATION)
OF SUN CITY WATER COMPANY AND)
SUN CITY WEST UTILITIES COMPANY)
FOR APPROVAL OF CENTRAL ARIZONA)
PROJECT WATER UTILIZATION PLAN AND)
FOR AN ACCOUNTING ORDER)
AUTHORIZING A GROUNDWATER SAVINGS)
FEE AND RECOVERY OF DEFERRED)
CENTRAL ARIZONA PROJECT EXPENSES)

DOCKET NO. W-01653A-98-0577
DOCKET NO. SW-02334A-98-0577

WS

NOTICE OF LATE-FILED
SCHEDULES

Staff hereby files the schedules to its Surrebuttal Testimony filed October 5, 1999.

RESPECTFULLY SUBMITTED this 7th day of October, 1999.

By: Christopher C. Kempley
Christopher C. Kempley
Assistant Chief Counsel, Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
(602) 542-3402

The original and ten (10) copies
of the foregoing were filed
this 7th day of October, 1999, with:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

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OCT 8 1999

LEGAL DIV.
ARIZ. CORPORATION COMMISSION

1
2 Copies of the foregoing were mailed
3 and copies of the schedules were faxed
4 this 7th day of October, 1999, to:

5 Craig Marks
6 CITIZENS UTILITIES COMPANY
7 2901 N. Central Avenue, Suite 1660
8 Phoenix, Arizona 85012

9 Scott S. Wakefield
10 RUCO
11 2828 N. Central Avenue, Suite 1200
12 Phoenix, Arizona 85004

13 Michael A. Curtis
14 William P. Sullivan
15 MARTINEZ & CURTIS
16 2712 N. Seventh Street
17 Phoenix, Arizona 85006-1090
18 Attorneys for Sun City Taxpayers Association

19 Walter W. Meek
20 AUIA
21 2100 N. Central Avenue, Suite 210
22 Phoenix, Arizona 85004

23 William G. Beyer
24 BEYER, McMAHON & LaRUE
25 10448 W. Coggins, Suite C
26 Sun City, Arizona 85351
27 Attorneys for CAP Task Force

28
Angela Bennett

SUN CITY WATER AND SUN CITY WEST
 DOCKET NOS. W-01656A-98-0577
 AND SW-02334A-98-0577
 CAP WATER UTILIZATION PLAN

REVISED SCHEDULE CF-1

COMPUTATION OF DEFERRED CAP CHARGES

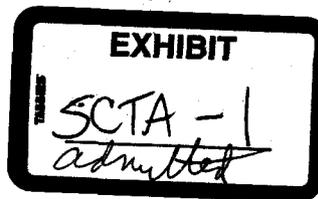
DATE	A.F.	COST PER ACRE FT.	CAPITAL CHARGE	CREDITS	TOTAL DEFERRED
1995	17,274	\$ 21.00	\$ 362,754	\$ (58,265)	\$ 304,489
1995	380	10.50	3,990	0	308,479
1996	17,654	30.00	529,620	0	838,099
1997	17,654	39.00	688,506	0	1,526,605
1998	17,654	48.00	847,392	0	2,373,997
1999	17,654	48.00	847,392	0	3,221,389

ALLOCATION OF DEFERRED CAP CHARGES

	ACRE FEET	PER A.F.	AMOUNT
SUN CITY	4,189	\$ 182.47	\$ 764,382
SUN CITY WEST	2,372	182.47	432,827
AGUA FRIA	11,093	182.47	2,024,179
	17,654		<u>\$ 3,221,389</u>

**COMPUTATION OF DEFERRED CAP COST
 SURCHARGE**

	SUN CITY WATER		SUN CITY WEST	
Deferred CAP Charges (12/31/99)	\$ 764,382	\$ 764,382	\$ 432,827	\$ 432,827
Amortization Period - Months	60	42	60	42
Amount to be Recovered-Monthly	\$ 12,740	\$ 18,200	\$ 7,214	\$ 10,305
Billing Determinants				
Residential-Households	29,397	29,397	16,806	16,806
Commercial-Monthly Usage (1,000 gls.)	81,718	81,718	23,649	23,649
Volume Allocation				
Residential	78.49%	78.49%	85.68%	85.68%
Commercial	21.51%	21.51%	14.32%	14.32%
Recovery Amount				
Residential	\$ 9,999	\$ 14,285	\$ 6,181	\$ 8,830
Commercial	\$ 2,740	\$ 3,915	\$ 1,033	\$ 1,476
Deferred CAP Charges Fee				
Residential-Per Household Per Month	\$ 0.3402	\$ 0.4859	\$ 0.3678	\$ 0.5254
Commercial-per 1,000 gallons	\$ 0.0335	\$ 0.0479	\$ 0.0437	\$ 0.0624



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1999 SEP 10 P 12:08

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
Commissioner - Chairman
JIM IRVIN
Commissioner
WILLIAM A. MUNDELL
Commissioner

AZ CORP COMMISSION
DOCUMENT CONTROL

IN THE MATTER OF THE JOINT) DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER) SW-02334A-98-0577
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES.)

TESTIMONY OF MARY ELAINE CHARLESWORTH

On Behalf of

SUN CITY TAXPAYERS ASSOCIATION
("SCTA")

September 10, 1999

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DIRECT TESTIMONY OF
MARY ELAINE CHARLESWORTH
DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577

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Q. Please state your name, title and business address.

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A. My name is Mary Elaine Charlesworth. I am the President of the Sun City Taxpayers Association, Inc. (SCTA). My business address is 12630 N. 103rd Avenue, Room 221, Sun City, Arizona 85351-3476.

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Q. Who are you testifying on behalf in this proceeding?

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A. I am testifying on behalf of SCTA.

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Q. What is the Sun City Taxpayers Association and what is its purpose?

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A. SCTA was formed in 1970 to protect the interests of the Sun City Community. The Sun City community is a defined, complete and self-contained retirement community. The Sun City community was fully platted and sold out prior to 1980, the year the Groundwater Management Act was adopted. Because many of Sun City's residents live on fixed incomes, the community requires protection from economic threats such as unjustified utility rate increases. As such, SCTA has a history of active participation in rate proceedings involving Citizens Utilities Company, and in particular Sun City Water and Sun City Sewer Companies, for the purpose of ensuring that the rates and charges imposed by the Company are just and reasonable and take into account the unique character of the Sun City community.

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Q. Does SCTA oppose importation of CAP water?

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A. Absolutely not. SCTA recognizes Central Arizona Project (CAP) water represents a critical and important renewable water resource for central Arizona. SCTA does, however, vigorously oppose the imposition of CAP

1 DIRECT TESTIMONY OF
2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 2

5 related costs on the ratepayers of Sun City Water Company in excess of the
6 demonstrable direct benefits received by those ratepayers. The cost of CAP
7 benefits of a regional nature should be borne by the entire region. It is my
8 understanding these costs are already recovered from Sun City Water
9 Company's customers in the form of a property tax assessment imposed by the
10 Central Arizona Water Conservation District, the withdrawal fees imposed by
11 the Department of Water Resources and general tax revenues appropriated by
12 the Legislature to fund the Arizona Water Bank (AWB), the Arizona
13 Department of Water Resources (ADWR) and the Central Arizona Water
14 Conservation District (CAWCD), among others.

15 **Q. Does SCTA support the proposal advocated by Citizens in this proceeding?**

16 **A. No.**

17 **Q. Why not?**

18 **A. Citizens has not demonstrated its proposal is prudent, nor has Citizens**
19 **demonstrated direct benefits to its ratepayers justifying the enormous economic**
20 **burden it seeks to impose on its ratepayers.**

21 **Q. Would you elaborate?**

22 **A. As Mr. Husted's Testimony indicates, the cost of Citizens' proposal to the**
23 **ratepayers of Sun City Water Company through the initial term of the CAP**
24 **subcontract is estimated to be \$58,282,000. Citizens has provided no analysis**
25 **of any kind demonstrating actual tangible benefits to its ratepayers. Rather, it**
26

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2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 3

5 has relied totally on "general" concerns of subsidence, degrading water quality
6 and increased cost of pumping groundwater.

7 **Q. Does Citizens' arguments that depletion of the groundwater may result in**
8 **subsidence, poorer water quality or higher pump costs justify placing the**
9 **costs of using CAP water of Sun City Water Company's ratepayers?**

10 **A.** No. Although these may be legitimate generalized concerns, Citizens should be
11 required to demonstrate how its proposal will actually lessen these problems
12 and quantify the savings to ratepayers before the Commission imposes a
13 \$58,282,000 burden on the ratepayers of Sun City Water Company. If the risks
14 and benefits are identical throughout the region overall, then the costs should be
15 borne by all those benefiting, not just the ratepayers of Sun City Water
16 Company. The ratepayers of Sun City Water Company should only be
17 responsible to pay for benefits they actually receive from CAP water.

18 It should also be emphasized that the factors relied upon by Citizens today to
19 justify imposing \$58,282,000 in costs on Sun City Company's ratepayers were
20 not even considered by Citizens when it decided to take its full allocation. In
21 November 1984, David Chardvoyne, Vice-President of Water presented an
22 analysis of the options available to Citizens related to taking CAP water. See,
23 *Attachment MEC - 1*. Nowhere did Mr. Chardvoyne express a concern over:
24 existing customers' contribution to depletion of the aquifer; land subsidence or
25 other environmental damage; decreased water levels; diminished water quality;
26 well failures or increased pumping costs. In fact the memo stated "Sun City
does not appear to have an immediate need for the allocation to supply quality

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2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 4

5 water service.” Citizens listed only the following advantages to taking its full
6 allocation: (1) securing certificates of assured water supply and providing an
7 incentive for development in Citizens’ certificated area; (2) appeasement of
8 political factions pressuring the private water sector to take CAP water; and (3)
9 the possibility of allocating the CAP water to nearby cities in the future.
10 Citizens clearly took its full CAP allocation to protect its shareholders, not its
11 ratepayers.

12 **Q. Does SCTA have any other concerns regarding Citizens’ proposal?**

13 A. Yes. SCTA does not believe the proposal is prudent. Mr. Husted has
14 evaluated the proposal and found it contains unnecessary and costly
15 components. He has also compared and contrasted Citizens’ proposal to other
16 alternatives. The costs of Citizens’ proposal cannot be justified when compared
17 to these other alternatives. Further, Mr. Husted is critical of the cost recovery
18 methodology proposed by Citizens, as well as Citizens’ proposed recovery of
19 100% of the deferred costs.

20 **Q. Does SCTA advocate any of the alternatives evaluated by Mr. Husted?**

21 A. Unfortunately, SCTA had limited funds and time and was unable to perform an
22 independent cost/benefit analysis or to quantify the value, if any, of potential
23 direct and demonstrable benefits to the ratepayers of Sun City Water Company
24 derived from any of the alternatives Mr. Husted evaluated. To the extent
25 benefits are primarily regional in nature (e.g., participating in recharge with
26 Central Arizona Water Conservation District and/or the Maricopa County
Water Conservation District) the costs of such programs should continue to be

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2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
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5 borne equally throughout the region. Such spreading of costs already occurs so
6 long as the Arizona Water Bank, Central Arizona Water Conservation District
7 or Central Arizona Groundwater Replenishment District utilize these recharge
8 sites. It is my understanding these recharge sites will be maximized by others if
9 not used by Citizens.

10 Although Mr. Husted recognizes all the golf course recharge alternatives he
11 examined provide some direct benefit to Sun City Water's ratepayers, he was
12 unable to conclude those benefits justify the enormous costs of these
13 alternatives. However, it appears obvious to SCTA that Citizens' proposal, the
14 most expensive alternative reviewed by Mr. Husted, is not prudent and is not
15 justified.

16 **Q. Under what circumstances does SCTA believe Sun City Water Company**
17 **should recover CAP related costs?**

18 A. If Sun City Water Company wishes to recover the costs of utilizing CAP water,
19 Sun City Water Company or Citizens, not SCTA, must provide substantial
20 evidence demonstrating that the CAP water is, or within a definite time period,
21 will be used and useful by its customers and that the customers will receive
22 actual tangible benefits equal to or greater than the costs its customers are asked
23 to bear. Any costs that do not satisfy these criteria must be disallowed and
24 borne by the shareholders.
25
26

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4 PAGE 6

4 **Q. Does SCTA believe CAP water is critical to the existence of Sun City?**

5 A. No. Sun City was fully platted and developed prior to either the adoption of the
6 GMA or the execution of Citizens' CAP subcontracts. Moreover, no one
7 disputes the available groundwater is sufficient to satisfy the water demands of
8 the Sun City community for several decades. I am advised the GMA grants
9 Sun City Water the right to withdraw and transport groundwater within Sun
10 City, and the residents of Sun City have the right to use the groundwater so
11 delivered. I am also advised that all newly platted subdivisions must now
12 demonstrate they will utilize a renewable water resource, like CAP water,
13 before they can be platted. It, therefore, appears to SCTA that these new
14 developments should pay the cost of importing and using CAP water.

15 **Q. Was Sun City developed on the assumption that groundwater or CAP**
16 **water would be utilized?**

17 A. Groundwater. In 1974, Wesley E. Steiner, Executive Director of the Arizona
18 Water Commission, the State of Arizona found that "the water supply available
19 to the utility is adequate to meet the needs projected for this area and, therefore,
20 designates the Sun City portion of the franchise as a service area within which
21 developers are not required to submit water supply plans to the Commission."
22 Attachment MEC - 2. This determination was based upon one or more reports
23 submitted by Leonard C. Halpenny and D.K. Greene. As reflected in
24 Attachment MEC - 3, Mr. Halpenny and Mr. Greene, in their "Review of
25 Groundwater Supply, Sun City, Arizona" dated December 21, 1973 concluded:
26

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4 PAGE 7

4 The review described in this report indicates that the water supply
5 available within the Sun City Water Company franchised area is fully
6 adequate to meet demand...

6 ***

7
8 The long-term impact of the Sun City development on groundwater
9 supply of the franchised area has been evaluated in the Chapter entitled
10 "Elements of Adequacy", especially in the subchapter on Rate of Decline
11 of Water Levels. The data reviewed indicate an annual future rate of
12 decline of about three feet per year, at which rate 133 years would elapse
13 before levels had declined an additional 400 feet. By that time the
14 deepest wells (1,300 feet) would still have 550 feet of water available
15 (1,300 minus 350 minus 400). Long before then the total thickness of
16 water-yielding sediments will have become known as a result of drilling
17 future wells deeper than 1,300 feet."

18 Similarly, in 1980 the Director of the newly formed Arizona Department of
19 Water Resources determined Sun City Water Company's service area had an
20 assured water supply under the Groundwater Management Act based solely on
21 groundwater. See, Attachment MEC - 4. The foregoing, as well as Citizens'
22 1994 Water Study entitled "Water Resources Planning Study" all reach the
23 conclusion the groundwater supply is adequate to meet the demands of the Sun
24 City community.

22 **Q. Does SCTA agree with Citizens' proposed amount of recovery for its
23 deferred CAP holding charges and Groundwater Savings Fee?**

24 **A.** No. Citizens' proposal to recover 100% of the deferred holding costs over 42
25 months with an 8.72% rate of return is unreasonable and unfair to ratepayers.
26 The CAP utilization plan Citizens is now proposing, or any of the golf course
recharge alternatives reviewed by Mr. Husted, could have been implemented

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4 PAGE 8

4 fourteen years ago. Citizens could have required Del Webb and/or other
5 developers to finance most, if not all, of the delivery system as an advance or
6 contribution. The Company made a management decision to do the minimum
7 by merely making installment payments, as mandated by CAWCD, to preserve
8 Citizens shareholders' options in the future, rather than moving forward with a
9 permanent solution. Thus, the Company should not be rewarded for failing to
10 put CAP water to beneficial use after holding the CAP water subcontracts for
11 nearly 15 years. To allow such recovery from ratepayers is unreasonable and
12 unfair.

13 The unreasonableness is compounded by Citizens' request for an 8.72% return
14 and recovery over a short 42 month period. If any of the holding charges are
15 deemed recoverable, which SCTA opposes, they should not include a return
16 and should be spread over the remaining life of the CAP subcontract.

17
18 **Q. Does SCTA agree with Citizens' proposed method of recovering the costs
19 of its CAP utilization plan?**

20 **A.** No. Citizens proposes residential ratepayers be billed based on a flat rate per
21 household. SCTA disagrees with this proposal. SCTA believes CAP costs
22 should be recovered primarily from customers entering the system. Any charge
23 on existing ratepayers should be based on water used. This way all ratepayers
24 will be billed directly proportionate to the amount of water they consume,
25 rather than having ratepayers who use limited water subsidize ratepayers who
26 consume large amounts of water. Further, there should be protection for small

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DIRECT TESTIMONY OF
MARY ELAINE CHARLESWORTH
DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
PAGE 9

water users, who generally live on fixed incomes. Again, fairness to the ratepayers is SCTA's main concern in this proceeding.

Q. Do you have a specific rate proposal at this time?

A. No. SCTA does not believe Citizens or Sun City Water Company has met its burden of demonstrating the benefits to ratepayers or the prudence of its proposed CAP utilization plan. Therefore, no cost recovery is currently warranted. However, the guidelines for rate recovery set forth in Mr. Husted's my testimony should be used to establish rates if and when the Company meets its burden and the Commission allows some CAP cost recovery.

Q. Does this conclude your testimony?

A. Yes.

2.17(A)

CENTRAL ARIZONA PROJECT (CAP) WATER ALLOCATION CONTRACTS

I. Ultimately there are only three options in each case regarding the Agua Fria and Sun City CAP water contracts:

- A. Option I - Acceptance of the full allocation.
- B. Option II - Acceptance of a reduced allocation.
- C. Option III - Rejection of the allocation.

II. Facts:

- A. The acceptance date on the Agua Fria CAP allocation is December 11, 1984 (1,439 acre-ft/yr which equals 1.2 mgd).
- B. The acceptance date on the Sun City CAP allocation is January 2, 1985 (15,835 acre-ft/yr which equals 14.1 mgd).
- C. These allocations, if accepted, would be transferable via approvable inter-company agreements among Sun City, Sun City West, and Agua Fria service areas.
- D. Sun City does not appear to have an immediate need for the allocation to supply quality water service.
- E. Agua Fria may have a need for the allocation to supply quality water service if high density development occurs in the certificated area.
- F. Sun City West does not appear to have an immediate need for the allocation to supply quality water service.
- G. Arizona Department of Health Services encourages duplication of sources and facilities and these allocations could be considered backup capacity.
- H. On a per customer per year basis, the cost associated with acceptance of the entire consolidated allocation of 17,274 acre-feet per year is projected to be:

	<u>1985</u>	<u>1990</u>	<u>2005</u>
Total projected annual cost	\$34,548	\$224,562	\$587,316
Projected number of customers	42,421	58,157	77,105
Projected annual cost per customer	\$.81	\$3.86	\$7.62

- I. On a per customer per year basis, the cost associated with acceptance of a reduced allocation of 6,439 acre-feet per year (5.7 mgd) is projected to be:

	<u>1985</u>	<u>1990</u>	<u>2005</u>
Total projected annual cost	\$12,878	\$83,707	\$218,925
Projected number of customers	42,421	58,157	77,105
Projected annual cost per customer	\$.30	\$1.44	\$2.84

III. Advantages and disadvantages of the options:

A. Option I - Acceptance of the full allocation.

1. Advantages

- a. Assured supply for 100 years and incentive for development in our certificated areas.
- b. Appeasement of all political factions pressuring the private sector to bear a substantial portion of the CAP project cost.
- c. Nearby cities may want our allocation in the future (e.g. Scottsdale and Phoenix) and the rights to CAP water will have positive non-monetary value.

2. Disadvantages

- a. The ultimate costs of the commitment are uncertain and we cannot be assured that this will prove to be the most desirable source of supply for our customers.
- b. The ACC has not yet committed to cost recovery mechanisms so there is shareholder risk.
- c. The poor quality of the CAP water will require capital intensive treatment facilities (\$1.11/gallon of capacity construction cost).
- d. Well facilities will still be required since CAP water will probably only be available for 11 months per year.

B. Option II - Acceptance of a reduced allocation.

1. Advantages

- a. Availability of an assured source of supply capable of sustaining a reasonable but diminished existence for our customers should we lose our groundwater supplies for some unforeseen reason.
- b. Appeasement of political factions pressuring the private sector to bear a substantial portion of the CAP project cost.

- c. Possibility of participating in sources of supply other than CAP that may be developed in the future.
- d. Less financial risk than acceptance of full allocation.
- e. Nearby cities may want our allocation in the future (e.g. Scottsdale and Phoenix) and the rights to CAP water will have positive non-monetary value.

2. Disadvantages

- a. The ultimate costs of the commitment are uncertain and we can not be assured that this will prove to be the most cost-effective source of supply for our customers.
- b. Developers may possibly have a more difficult time getting a 100 year assured supply certificate.
- c. The CAP water will require capital intensive treatment facilities (\$1.11/gallon).
- d. In case we should lose our groundwater sources and other sources have not been obtained, we would be forced to enact a stringent conservation program.
- e. The ACC has not yet committed to cost recovery mechanisms so there is shareholder risk.
- f. Well facilities will still be required as backup to CAP supply.

C. Option III - Rejection of the allocations.

1. Advantages

- a. No risk to shareholders due to lack of pass through mechanism.
- b. Ability to participate in more cost-effective alternatives that may be developed in the future.

2. Disadvantages

- a. Developers will certainly have a more difficult time obtaining 100-year assured supply certificate within our CCN areas.
- b. Political factions pressing for private sector cost support may react negatively.
- c. Should our groundwater sources fail we may have no alternative source of supply if other sources have not been secured.

IV. Recommended Approach

- A. Send a letter of intent to CAWCD stating that we intend to contract for some or all of the CAP allocations, explaining that we are seeking approval of a pass through mechanism and asking for an extension of the contracting period to coincide with the Commission's decision.
- B. Submit required plans to the U.S. Bureau of Reclamation.
- C. File requests for pass through mechanisms in both Agua Fria and Sun City.
- D. If CAWCD agrees to the extension period and ACC approves the pass through, we should accept the full allocations in both Agua Fria and Sun City. If the CAWCD does not agree to an extension on the contract period we should continue to pursue the pass through mechanism at the ACC, accept the full Agua Fria allocation, and accept 5,000 acre-feet of the Sun City allocation while requesting first option on the remainder of the allocation.
- E. At the time we send CAWCD a letter of intent and ask ACC for a pass through mechanism we should also request ADHS to acknowledge the benefits and usefulness of a backup source of supply.
- F. At some future date we should develop and seek approval of an equitable means of allocating the costs associated with the CAP allocations between existing customers and developers.

Z. LEONARD
CHAIRMAN
JOHN S. HOOPES
VICE-CHAIRMAN
WESLEY E. STEINER
EXECUTIVE DIRECTOR
AND
STATE WATER ENGINEER



Arizona Water Commission

222 NORTH CENTRAL AVENUE, SUITE 800

Phoenix, Arizona 85004

TELEPHONE (602) 258-7561

MEMBERS
PETER BIANCO
LINTON CLARIDGE
DAVID R. GIPE
DOUGLAS J. WALL
WILLIAM H. WHEELER
EXOFFICIO MEMBERS
ANDREW L. BETTWEY
MARSHALL HUMPHREY

MEC - 2

March 5, 1974

Mr. Paul Emrick, Manager
Sun City Water Company
Post Office Box 687
Sun City, Arizona 85351

Dear Mr. Emrick:

As requested we have evaluated the Sun City Water Company's currently certificated area in and around Sun City as shown on the attached map for possible designation as a service area with an adequate water supply as prescribed in ARS 45-513. It is understood that the Company serves certificated areas outside the area shown on the attached map. These additional areas have not been analyzed by the Commission and are not included in the designation granted herein. The evaluation was based on a report submitted by Mr. Leonard Halpenny of the Water Development Company, Tucson and material available from other sources.

The Commission finds that the water supply available to the utility is adequate to meet the needs projected for this area and, therefore, designates the Sun City portion of the franchise as a service area within which developers are not required to submit water supply plans to the Commission. The service area is considered to be areas served by the utility's system. Conversely, any development within the certificated area but not served by the utility, is considered to be outside the designated service area.

Although the Commission may revoke this designation at any time upon a finding of inadequacy, on the basis of information available today, we feel that the supplies are adequate to meet the projected needs for the foreseeable future. Future additions to these certificated areas will require analysis to determine their water supply adequacy.

Please contact me if you have any questions.

Sincerely,

Wesley E. Steiner
Wesley E. Steiner *TCC*
Executive Director

Enc. 1

cc: Thomas W. Ryan, Del E. Webb Development Co.

ABILITY TO MEET DEMAND

The review described in this report indicates that the water supply available within the Sun City Water Company franchised area is fully adequate to meet demand, that the water-supply system as presently developed is adequate to meet demand, and that the plans for remaining future development are adequate to meet ultimate full water demand. Plans presently exist to convert Well No. 20-A to an observation well when Wells Nos. 4-B, 4-C, 4-D, 5-A, and 5-D are brought into the system. At some future date it will become necessary to take Well No. 29-A out of service; it is a former irrigation well and it would be better to replace it than to attempt deepening. Three new wells for domestic supply are planned at sites shown on Plate 1, and additional wells may become necessary.

The franchise area of Sun City Water Company warrants being designated as a service area where an adequate supply of water exists.

LONG-TERM IMPACT UPON SUPPLY

The long-term impact of the Sun City development upon the ground-water supply of the franchised area has been evaluated in the chapter entitled "Elements of Adequacy", especially in the subchapter on rate of decline of water levels. The data reviewed indicate an annual future rate of decline of about 3 feet per year, at which rate 133 years would elapse before levels had declined an additional 400 feet. By that time the deepest wells (1,300 feet) would still have 350 feet of water available (1,300 - 350 - 400). Long before then the total thickness of water-yielding sediments will have become known as a result of drilling future wells deeper than 1,300 feet.

State of Arizona

DEPARTMENT OF WATER RESOURCES

222 North Central Avenue, Suite 850, Phoenix, Arizona 85004



August 26, 1980

R 8-29

Mr. W. J. Ramo, Manager
 Sun City Water Company
 PO Box 1687
 Sun City, Arizona 85372

Dear Mr. Ramo:

This is to notify you of the designation of the service area of the utility as an area with an assured supply as provided under ARS 45-576 of the new Groundwater Management Act. The act requires that a Certificate of Assured Supply be obtained by any person offering to sell or lease subdivided or unsubdivided land within an Active Management Area, and further provides that the Director may designate service areas of private water companies as having an assured supply. Within areas so designated, the requirement to obtain a Certificate of Assured Supply is waived. The plat of a subdivision cannot be approved by the governing body of the city, town or county until it has been established by service area designation or certificate from this Department that an assured supply is available, and the plat must bear a notation from the governing body that this requirement has been met.

The drafters of the legislation intended that a Central Arizona Project water supply be a primary means of demonstrating the existence of an assured supply. An unconditional offer to enter into a contract creates a presumption of an assured supply. The recent action by the Secretary of the Interior, however, indicates that the allocations to municipal and industrial users will be delayed at least another 90 days. I have decided to proceed with designations based on evaluations that led to designations under the prior water supply adequacy program, and information that has become available in the interim period.

The act defines the service area of a city, town or private water company, in part, as the area of land actually being served water, and requires these entities to maintain current maps of their service areas in the Department. A previous letter has been sent to all water distribution entities requesting copies of said maps.

The designation granted herewith applies only to the area that is served water directly by the company's system, or indirectly through an interconnect or similar agreement; areas within the exterior boundaries of the certificated area that are not served water are outside the service area designated by this notice, and any person offering land for sale or lease must obtain an individual certificate of assured supply.

Think Conservation!

Administration 255-1550, Water Resources and Flood Control Planning 255-1566, Dam Safety 255-1541,
 Flood Warning Office 255-1548, Water Rights Administration 255-1581, Hydrology 255-1586.

Mr. W. J. Ramo
Page 2
August 26, 1980

This designation is based on criteria previously established for determining adequacy of supply, which allow greater overdraft than may be allowed under management plans developed for your area under the requirements of the new law. The designation made herein will be revoked if, under future evaluations or experience, it is found to be inconsistent with the achievement of the management goal for the Active Management Area, unless the utility has protected its designation by filing with the Director an unconditional offer to contract for CAP water and proceeds to enter into the contract when offered by the Secretary.

Please contact Philip C. Briggs, the Department's Chief Hydrologist, if you have any questions.

Sincerely,


Wesley E. Steiner
Acting Director



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BEFORE THE ARIZONA CORPORATION COMMISSION

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CARL J. KUNASEK
Commissioner - Chairman
JIM IRVIN
Commissioner
WILLIAM A. MUNDELL
Commissioner

IN THE MATTER OF THE JOINT)	DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER)	SW-02334A-98-0577
COMPANY AND SUN CITY WEST)	
UTILITIES COMPANY FOR APPROVAL OF)	
CENTRAL ARIZONA PROJECT WATER)	
UTILIZATION PLAN AND FOR AN)	
ACCOUNTING ORDER AUTHORIZING A)	
GROUNDWATER SAVINGS FEE AND)	
RECOVERY OF DEFERRED CENTRAL)	
ARIZONA PROJECT EXPENSES.)	

SURREBUTTAL TESTIMONY OF MARY ELAINE CHARLESWORTH

On Behalf of

**SUN CITY TAXPAYERS ASSOCIATION
("SCTA")**

October 1, 1999

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SURREBUTTAL TESTIMONY OF
MARY ELAINE CHARLESWORTH

DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577

Q. Please state your name, title and business address.

A. My name is Mary Elaine Charlesworth. I am the President of the Sun City Taxpayers Association, Inc. (SCTA). My business address is 12630 N. 103rd Avenue, Room 221, Sun City, Arizona 85351-3476.

Q. Are you the same Mary Elaine Charlesworth that filed Direct Testimony in this proceeding?

A. Yes.

Q. What is the purpose of your testimony?

A. I am providing surrebuttal testimony to the rebuttal testimony of Citizens' witnesses Ray Jones, Carl Dabelstein and Terri Sue Rossi.

Q. Would you summarize SCTA's position in this case?

A. SCTA will only support paying for CAP costs to the extent Citizens affirmatively demonstrates direct benefits proportionate to the costs ratepayers are being asked to pay. SCTA recognizes it is important for central Arizona to fully utilize its CAP water supply. This public policy, however, does not justify a for profit company, like Citizens, imposing costs on its ratepayers in excess of the actual benefits received. The foundation of the "used and useful" and "just and reasonable" concepts of ratemaking is that ratepayers receive benefits equal to the costs being imposed.

1 SURREBUTTAL TESTIMONY OF
2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 2

5 Citizens has never presented evidence of any direct benefits to its ratepayers
6 from the CAP Utilization Plan presented in this proceeding. Rather, Citizens
7 relies on general statements that overdraft will result in increased pump costs,
8 poorer water quality and/or subsidence. Citizens consistently refuses to provide
9 evidence of the direct benefits of its proposal. SCTA believes such a
10 demonstration is necessary before the Commission authorizes Citizens to
11 commence on a course that is estimated to cost Sun City Water ratepayer over
12 58 million dollars over the remaining life of the CAP subcontract, with a similar
13 burden for ratepayers residing in Sun City West.

14 Further, SCTA opposes rewarding Citizens for failing to put CAP water to use
15 for fourteen (14) years. With each passing year, the potential benefits under the
16 CAP subcontracts are diminished. The Commission has steadfastly recognized
17 Citizens' ratepayers do not benefit from the mere existence of CAP
18 subcontracts. Citizens has never presented any credible justification for its
19 inaction. In fact, SCTA believes Citizens would still be simply holding its CAP
20 subcontract but for the Commission's instance that CAP water be utilized as a
21 condition to recovering CAP related costs. Therefore, SCTA opposes Citizens'
22 recovery of deferred CAP costs.

23 To the extent Citizens presents evidence of actual benefits to its ratepayers from
24 utilization of CAP water and CAP costs are deemed recoverable, SCTA
25 requests the Commission insist that Citizens present a viable, least cost,
26 alternative for CAP utilization prior to authorizing recovery of any CAP related
costs.

5 To the extent CAP related costs are deemed recoverable, SCTA supports
6 spreading recoverable deferred costs, if any, over the remaining life of the CAP
7 subcontract and collecting CAP related costs through a combination of
8 connection fees and gallonage charges. SCTA generally supports RUCO's rate
9 design for those recoverable CAP costs, not collected as connection fees.

10 **Q. Do you have any general comments on Mr. Jones' and Ms. Rossi's**
11 **characterization of the CAP Task Force and SCTA's participation in the**
12 **Task Force?**

13 **A.** Mr. Jones and Ms. Rossi have misrepresented both the CAP Task Force and
14 SCTA's participation in the Task Force. Mr. Jones admits in his direct
15 testimony that the so called community based Task Force is the creation of
16 Citizens itself. Citizens interviewed individuals and dictated which persons
17 should be allowed to participate in the Task Force. Citizens also controlled the
18 agendas of the meetings, along with the flow of information. As its creator,
19 Citizens mandated that any plans formulated by the Task Force must include
20 provisions that the Sun Cities pay all costs of any recommended CAP
21 utilization plan, including all deferred CAP related costs.

22 At the first meeting of the Task Force, Citizens proposed and secured adoption
23 of a Mission Statement committing the Task Force to: 1) utilizing CAP water;
24 2) collecting all CAP related costs from Citizens' ratepayers; and 3) seeking
25 community support for its recommendation. Thus, from day one, before
26 considering any alternative or the costs related thereto, the CAP Task Force had
adopted Citizens' goals and objectives.

5 Ms. Rossi's contention that the CAP Task Force fully considered
6 relinquishment is not supported by the facts. Ms. Rossi is, however, correct in
7 stating SCTA, throughout the Task Force process, did continue to press for
8 discussion of relinquishment as a viable option. Over the objection of some
9 members of the Task Force, the concept of relinquishment was finally discussed
10 at the April 28, 1999 meeting of the Task Force. In my opinion, the issue of
11 relinquishment was never given serious consideration by the members of the
12 CAP Task Force.

13 **Q. Does SCTA view the CAP Task Force Final Report as a "community
14 consensus" recommendation?**

15 **A.** Because its formation and operation was orchestrated by Citizens, SCTA does
16 not view the CAP Task Force Final Report as a "community consensus"
17 recommendation. Further, it is difficult for a handful of persons to truly
18 represent a consensus of the diversity of opinion in the Sun Cities. This is
19 especially true where the composition of the Task Force, the agendas of the
20 Task Force and the information received by the Task Force were all controlled
21 by Citizens.

22 If the Commission believes this matter is to be determined by a "community
23 consensus" on how best to deal with the CAP water issue, SCTA believes all
24 viable options, including relinquishment, should be presented to all 78,000
25 ratepayers of Sun City and Sun City West. This could be done by a
26 Commission approved ballot mailed to all affected ratepayers. SCTA would
fully honor the outcome of any such election.

4 **Q. Does SCTA agree with any of the recommendations contained in the CAP**
5 **Task Force Final Report?**

6 A. Yes. SCTA agrees with the conclusion of the CAP Task Force that: 1) the
7 benefits from recharge projects outside Citizens' service area are too remote to
8 justify the costs; 2) that delivering treated CAP water is too expensive to be
9 viable; and 3) that of the options to put CAP water to use presented to the Task
10 Force, delivery to the golf courses has the best chance of viability. SCTA
11 differs from the Task Force in the Task Force's apparent unwillingness to
12 consider relinquishment as a viable option and its willingness to recommend an
13 option without requiring Citizens to quantify its benefits or demonstrate the
14 option is both viable and least costly.

15 **Q. Does SCTA believe relinquishment is the only viable option?**

16 A. SCTA is willing to support a golf course use option if the benefits to ratepayers
17 are demonstrated to equal or exceed the costs to ratepayers; and provided
18 further cost recovery is designed taking into account the unique character of our
19 ratepayers. This does not mean SCTA supports recovery of holding costs.

20
21 **Q. Did SCTA attempt to fairly and objectively evaluate the recommendation**
22 **of Citizens and the CAP Task Force?**

23 A. Despite strong reservations regarding the process followed by Citizens to reach
24 its proposed CAP utilization plan, SCTA determined to examine Citizens'
25 proposal fairly and objectively. It hired Mr. Husted for this purpose. As
26 demonstrated by Mr. Husted's testimony, Citizens' proposal is incomplete and
does not represent the least cost alternative to delivering CAP water to the golf

5 courses. Further, Mr. Husted agrees, from an engineering perspective, that a
6 cost/benefit analysis should be performed by Citizens to show the
7 reasonableness of its proposal. Mr. Husted also supports SCTA's position that
8 requiring ratepayers to pay deferred CAP costs improperly rewards Citizens for
9 failing to put CAP water to use for over fourteen (14) years. Finally, Mr.
10 Husted supports collecting any recoverable CAP water costs from new
11 customers and secondarily based upon water usage.

12 **Q. If SCTA believes a cost/benefit analysis is so important, why didn't it**
13 **perform its own?**

14 **A.** First, SCTA believes this is the obligation of Citizens. Secondly, SCTA has
15 limited funds. Interestingly, the CAP Task Force apparently secured a grant
16 from the Department of Water Resources to review the engineering analysis
17 done by Brown & Caldwell on behalf of Citizens, but did not perform a
18 cost/benefit analysis of the option or explore any of the other options for
19 delivering CAP water to the golf courses. Further, an analysis of the cost and
20 benefits presupposes a viable option. Citizens has not yet presented a viable
21 option.

22 Finally, SCTA was forced to scramble to secure a consultant to perform an
23 engineering analysis of Citizens' proposal. Originally, SCTA had hired
24 Resource Management International, Inc. (RMI) to perform both an engineering
25 and cost/benefit analysis of Citizens' proposal. However, in mid-July, three
26 months after SCTA had identified RMI as its consultant, Citizens complained to
RMI that working for SCTA presented a conflict of interest (because another

5 division of RMI's parent, Navigent Consulting, Inc., was apparently performing
6 some work in which Citizens was a participant). As a result, with
7 approximately two months left to prepare direct testimony in this proceeding,
8 RMI declared a potential conflict and asked to be relieved of its commitment.
9 Fortunately, SCTA was able to retain the services of Mr. Husted on short
10 notice and complete the engineering analysis.

11 **Q. Do you agree with Mr. Jones' claims that the findings in Decision No.**
12 **61072 indicate that the Commission has already determined that the use of**
13 **CAP water in Sun City is prudent and provides sufficient direct and**
14 **indirect benefits to justify the cost?**

15 **A.** No. As explained by Mr. Husted, SCTA believes Decision No. 61072 leaves
16 these issues open. Importantly, Decision No. 61072 predates Citizens' current
17 plan. Certainly, Decision No. 61072 does not constitute a blank check for
18 Citizens' to impose deferred CAP costs, on-going CAP costs and CAP related
19 construction costs on Sun City ratepayers for a plan never considered by the
20 Commission. Decision No. 61072 recognized that the parties "don't necessarily
21 agree on the solution; on who should pay; or how or when payment should be
22 made." The Decision left these questions to be answered later.

23 **Q. Do you agree with Mr. Jones' claim that with respect to costs associated**
24 **with the construction and operation of Citizens' proposed CAP project,**
25 **that the amount of economic burden to be placed on the Sun City**
26 **ratepayers and whether ratepayers receive a direct benefit are irrelevant**
considerations?

1 SURREBUTTAL TESTIMONY OF
2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 8

5 A. Certainly not. As a matter of fairness to its Sun City ratepayers, Citizens has a
6 duty to demonstrate how its proposed plan will actually and directly benefit
7 these ratepayers will be asked to pay for the plan. Certainly, the Commission
8 should require such a showing before approving Citizens' plan which will
9 impose more than \$58 million dollars of CAP related costs on Sun City
10 ratepayers, and a similar burden on the ratepayers in Sun City West. Citizens,
11 thus far, has performed no cost/benefit study demonstrating that the cost of its
12 proposed CAP utilization project, or any alternative plan, is justified in light of
13 the benefits of the project. Moreover, if it is determined that any proposed plan
14 only indirectly benefits the Sun City ratepayers, then it is only fair that they pay
15 only their pro rata share of that benefit.

16 **Q. Do you agree with Mr. Jones and the Commission that a reason Citizens**
17 **contracted for CAP water was to help Citizens provide sufficient water to**
18 **all of its service areas at ultimate development?**

19 A. Yes. In fact, it appears to SCTA to be a major reason Citizens contracted for
20 CAP water. It is well known that Sun City was built-out well before the
21 adoption of the GMA and the execution of Citizens' CAP subcontracts. The
22 Commission can read Mr. David Chardvoynne's 1984 analysis itself and
23 determine whether the driving factor for Citizens' decision to contract for CAP
24 water was to benefit its shareholders by providing an incentive for development
25 in Citizens' yet-to-be developed certificated area. If the Commission agrees this
26 was a driving force behind Citizens' decision to execute its CAP subcontracts,
then, as a matter of fairness, Citizens' shareholders and/or new development in

4 Citizens' certificated area, not Sun City ratepayers, should bear the holding
5 costs of Citizens' CAP subcontracts.

6
7 **Q. Do you believe Mr. Jones when he says that Citizens was not able to
8 propose projects for use of CAP water over the past fourteen years?**

9 A. No. Citizens could have designed a system to deliver CAP water to the Sun
10 Cities fourteen (14) years ago. Citizens, however, opted to do nothing and
11 merely preserve its shareholders' future options rather than move forward with a
12 permanent solution.

13 **Q. Do you agree with Mr. Dabelstein's arguments attempting to justify
14 recovery of deferred CAP costs and why the Commission should accept
15 Citizens' method of recovering the deferred and on-going CAP costs?**

16 A. No. It is unreasonable and unfair to the ratepayers of Sun City to allow Citizens
17 to recover 100% of its deferred CAP holding charges and Groundwater Savings
18 Fee when the Company' has failed to justify its decisions: 1) to simply hold its
19 CAP water for 14 years; and 2) foregoing the opportunity to require
20 developments (such as Sun City West and Sun City Grand and even more
21 recent, but smaller subdivisions) from contributing to both the holding costs and
22 the costs of building CAP infrastructure.

23 **Q. Are you familiar with the Task Force survey referred to by Ms. Rossi in
24 her rebuttal testimony, and if so do you have any comments?**

25 A. I am familiar with the Task Force survey. First and foremost, this was not a
26 scientific survey and holds no statistical significance. Only 103 persons of the

5 78,000 ratepayers in Sun City and Sun City West completed surveys. Further,
6 the survey itself was written in such a way to favor a specific response.

7 As explained above, SCTA believes that if Citizens and/or the Commission
8 truly believe a community consensus should control how Citizens' CAP water
9 subcontracts are handled then the Company should agree to an election, to be
10 supervised by the Commission, allowing all 78,000 ratepayers of Sun City and
11 Sun City West an opportunity to decide this issue once and for all.

12 **Q. Why does SCTA not advocate any specific CAP water use option at this**
13 **time?**

14 **A.** Because it cannot. Citizens has the burden of providing substantial evidence
15 demonstrating that any particular CAP water use option will be used and useful
16 and ratepayers will receive actual tangible benefits equal to or greater than the
17 costs ratepayers must bear. Instead of presenting a viable, least cost option,
18 supported by a cost/benefit analysis, Citizens' strategy seems to be to rely
19 solely on the recommendations of the CAP Task Force Report. Neither
20 Citizens nor the Commission may abdicate their responsibilities to 78,000
21 ratepayers to the nineteen individuals composing the CAP Task Force (two of
22 whom represented Citizens, four of whom represented the recreation centers
23 (potential beneficiaries of the recommended option) and at least one of whom is
24 not even a resident of the Sun Cities or Youngtown).

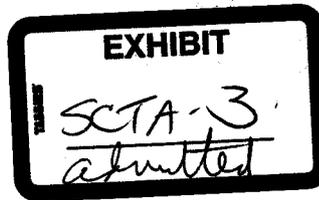
1 SURREBUTTAL TESTIMONY OF
2 MARY ELAINE CHARLESWORTH
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 11

5 **Q. What is SCTA's recommendation at this time?**

6 A. SCTA recommends rejecting Citizens' proposal at this time and requiring
7 Citizens to return with a viable, least cost alternative for delivering CAP water
8 to the golf courses. The plan should include binding commitments from all
9 participating golf courses, attempt to maximize use of CAP water in Sun City
10 West, include an examination of a joint project with the Aqua Fria Division and
11 a detailed cost/benefit analysis. All significant engineering details should be
12 resolved. Only then can the Commission and the ratepayers properly weigh the
13 proposal.

14 **Q. Does this conclude your testimony?**

15 A. Yes.
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BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
Commissioner - Chairman
JIM IRVIN
Commissioner
WILLIAM A. MUNDELL
Commissioner

IN THE MATTER OF THE JOINT) DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER) SW-02334A-98-0577
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES.)

TESTIMONY OF DENNIS HUSTEAD

On Behalf of

**SUN CITY TAXPAYERS ASSOCIATION
("SCTA")**

September 10, 1999

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DIRECT TESTIMONY OF
DENNIS HUSTEAD
DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577

Q. Please state your name, title and business address.

A. My name is Dennis Hustead. I am a Registered Civil Engineer with Hustead Engineering. My business address is 568 W. Moon Valley Drive, Phoenix, Arizona, 85023.

Q. Please state your qualifications to testify in this matter.

A. I am a Registered Civil Engineer in the states of Arizona and California with thirty-five years experience. I have significant expertise in managing the planning and design of major public works and transportation projects throughout Arizona and California. My statement of professional qualifications is provided in Attachment DH - 1.

Q. Who are you testifying on behalf in this proceeding?

A. I am testifying on behalf of the Sun City Taxpayers Association ("SCTA").

Q. SCTA retained your services for what purpose?

A. I was retained by SCTA to review the technical and economic impacts of Citizens' proposed plan for putting CAP water to use and to develop possible modifications or alternatives if possible. I also reviewed the recharge options potentially available to put the CAP water to proper use.

Q. What is the cost of Citizens' proposed CAP utilization plan (Option 4) to Sun City Water Company and its ratepayers over the remaining life of the CAP subcontract?

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5 A. I have estimated the total cost of Citizens' proposed Cap Utilization Plan
6 (Option 4) to Sun City Water Company and its ratepayers based upon the data
7 available in the Final Report of the CAP Task Force. My use of the data
8 supplied by Citizens throughout my testimony does not indicate acceptance of
9 Citizens' calculations or Citizens' positions regarding recovery. The purpose of
10 these calculations are to provide the Arizona Corporation Commission with a
11 better understanding of the full cost and impact of Citizens' proposal over the
12 remaining life of the CAP subcontract. I estimate there are 42 years remaining
13 on the initial term of Citizens' CAP subcontract, with a right to renew for an
14 additional 50 years. It is important that the Arizona Corporation Commission
15 consider the long-term benefits and costs to these companies and their
16 ratepayers; not just the immediate benefits and costs.

17 Further, my calculations will tend to understate the actual costs because I have
18 assumed a constant cost for O&M and CAP water over the remaining term of
19 the CAP subcontract, where it is reasonable to anticipate inflationary increases.
20 I have also assumed the golf courses will contribute \$131,000 per year for using
21 the CAP water in lieu of pumping. I have also averaged Citizens' proposal
22 Capital Cost Component using 50% of the estimated cost of construction as the
23 average base over the remaining life of the Cap subcontract. Based upon the
24 foregoing assumptions, over a 42 year period, the total impact of Citizens'
25 proposal (Option 4) is \$58,282,000.
26

4 **Q. Do you think it prudent to approve Citizens' proposed plan, or any plan**
5 **dependent on placing CAP water on the golf courses before there are**
6 **enforceable contracts in place with the golf courses?**

7 A. Definitely not. The entire concept is dependent on the golf courses taking the
8 CAP water. Therefore, without contracts in place, the proposal is speculative at
9 best. Moreover, without a binding contract, the revenues Citizens is projecting
10 \$5,502,000 (\$131,000 per year x 42 years) in fees from the golf courses to help
11 offset the costs of the proposed plan are likewise speculative.

12
13 **Q. Did your review of Citizens' proposed plan (Option 4) for use of CAP**
14 **water discern any problems with the plan from an engineering viewpoint.**

15 A. My review of Citizens' proposed plan (Option 4) reached the conclusion that the
16 plan is far more costly than it needs to be. Specifically, it includes extra costs
17 for a pump station and a reservoir, which are simply not necessary. Regarding
18 the pump station, the delivery system should be a closed pipeline from the CAP
19 turnout to delivery at the golf courses. This negates the need for a pump
20 station. This is true because the turnout at the CAP canal at Lake Pleasant Road
21 is at an approximate elevation of 1500 feet, and the golf courses are at
22 elevations ranging from 1300' to 1200'. Thus, the pipeline will be operating
23 with a head of over 200 feet and will produce sufficient pressure to deliver the
24 flow to each golf course without the need for a pump station.

25 Regarding the reservoir, there is no need to store water in a reservoir prior to
26 delivery to the golf courses because the golf courses already have reservoirs on

5 site. These golf reservoirs are designed to store the daily irrigation
6 requirements of the golf course (continuous water flow over 24 hours and
7 irrigate at night during a 12-hour period), plus an emergency supply of water to
8 last one to three days. Thus, the reservoir designed under Citizens' proposed
9 plan (Option 4) is simply not needed.

10 Further, I determined that it would be most cost effective to maximize CAP
11 water deliveries to Sun City West golf courses where a distribution system
12 already exists and thereby minimize the installation of a new distribution
13 system in Sun City. I will refer to this alternative as "Option 4 Modified".

14
15 **Q. What are the cost impacts of the Option 4 Modified on Sun City Water
16 Company?**

17 **A.** Eliminating the pump station and reservoir and maximizing deliveries to Sun
18 City West, reduces total construction costs from about \$15 million to about \$9
19 million. A table of Capital Cost for Citizens' plan as modified is shown in
20 Attachment DH - 2. Sun City Water Company's costs would be reduced from
21 over 9.6 million dollars to approximately 5.7 million dollars. Importantly, this
22 cost allocation is based on Citizens allocating 4,189 af to Sun City and 2,372 af
23 to Sun City West. If cost allocations followed the place of use, Sun City Water
24 Company's costs would be even lower, but Sun City West's costs would
25 increase.
26

5 The elimination of the pump station and reservoir from the system under
 6 Citizens' proposed plan would also reduce annual O&M costs as follows:

7 Annual Costs in \$1,000s

	Citizens' Plan (as proposed)		Citizens' Plan (as modified)	
	<u>Sun City</u>	<u>Sun City West</u>	<u>Sun City</u>	<u>Sun City West</u>
8 Reservoir O&M	36	20	0	0
9 Pipeline Maint.	10	5	10	5
10 Pump Station Maint.	40	31	0	0
11 Pump Station Power	165	102	0	0
12 O&M Contingency	47	30	5	2
13 GW Pumping Offset	(131)	(90)	(131)	(90)
14 Total Annual Costs	\$150	\$89	(\$116)	(\$83)

15 Again, the foregoing table reflects Citizens' speculative assumption that the
 16 golf courses will actually take delivery of and pay for CAP water. The
 17 assumption is speculative until there are binding contracts in place with the golf
 18 courses.

19
 20 **Q. What is the total economic impact of the Option 4 Modified on Sun City
 21 Water and its ratepayers over the remaining life of the CAP subcontract?**

22 **A.** Under Option 4 Modified, the cost of CAP water would not change, but the
 23 capital component and O&M would decrease significantly. I did not have the
 24 time or data necessary to calculate the precise total impact, but have
 25 approximated the cost to provide a comparison between the various plans.

5 Using the same methodology as set forth for calculating total costs of Citizens'
6 proposal (Option 4), the estimated costs of Option 4 modified are \$40,214,000.

7 **Q. Did your review of Citizens' proposed plan (Option 4) reveal the possibility**
8 **of yet another alternative plan for putting CAP water to use?**

9 A. Yes. A joint transmission facility could be built with the Aqua Fria Division so
10 all CAP water available to Citizens could be delivered to its certificated area.
11 The joint transmission pipeline would be constructed from the CAP canal at
12 Grand Avenue to the Aqua Fria delivery point at Sarival Avenue, and would
13 continue along Grand Avenue and the Beardsley alignment to a tie at the Sun
14 City West delivery system at the Hillcrest Golf Course. Other alignments
15 should be examined to determine the most cost-effective route. The existing
16 Sun City West distribution system would deliver the water supply to all the golf
17 courses in Sun City West and transport the remainder of the CAP supply to the
18 existing pump station at Beardsely and 107th Avenue. From this point, the Sun
19 City distribution would deliver the supply to only the Willow Brook and Union
20 Hills Golf courses. See Attachment DH - 3 which shows the system layout
21 under this alternative plan.

22 **Q. What are the project cost impacts of the alternative plan?**

23 A. This alternative plan actually costs about \$10 million compared to the \$15
24 million for Citizens' proposed plan (Option 4) or the \$9 million for Option 4
25 Modified. However, under this alternative the Aqua Fria Division would also
26 be able to deliver its full CAP allocation. A significant portion (62.8%) of the

5 construction costs for the joint facilities would be allocated to the Agua Fria
6 Division and away from Sun City and Sun City West. Certain costs would be
7 allocated to the Sun Cities only and some costs would be assigned to a
8 particular water system. Compared to Citizens' proposed plan (Option 4),
9 where Sun City and Sun City West ratepayers are being asked to provide
10 approximately \$21,761,000 in cost of capital, this alternative reduces this
11 potential obligation to about \$15,783,000. Further, it provides the Agua Fria
12 Division a means of delivering its 11,093 af of CAP water to its service area.
13 Please see Attachment DH - 4 for details on the construction costs under this
14 alternative plan.

15 **Q. What is the total economic impact of the alternative plan on Sun City**
16 **Water Company and its ratepayers over the remaining life of the CAP**
17 **subcontract?**

18 Utilizing the same methodology as set forth above, the estimated cost of this
19 alternative to Sun City Water and its ratepayers over the remaining 42 year term
20 of the CAP subcontract would be approximately \$34,362,000.

21 **Q. Did you review the possible options of putting the CAP water to use by**
22 **either leasing capacity at CAWCD's Agua Fria Recharge Project or**
23 **utilizing the Groundwater Savings Project/Exchange with Maricopa Water**
24 **District?**

25 **A. Yes. I reviewed these two options using the data provided by Citizens. Under**
26 **the CAWCD Agua Fria Recharge Project option, Citizens would lease recharge**

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5 capacity in the CAWCD's Agua Fria Recharge Project. Water would be
6 conveyed from the CAP canal to the recharge facility by gravity via the channel
7 of the Agua Fria River. Recharged water would be recovered through existing
8 wells in Sun City and Sun City West. The total cost of this option to Sun City
9 Water Company over the remaining life Citizens' CAP subcontracts would be
10 approximately \$26,844,000.

11 Under the Groundwater Savings Project/Exchange with Maricopa Water
12 District option, CAP water would be delivered through an existing distribution
13 system to farms located in MWD's service area that have historically used
14 groundwater pumped by MWD. By doing this, every gallon of groundwater not
15 pumped by MWD would legally available to Citizens be withdrawn later as
16 CAP water. CAP water recharged or exchanged with MWD would be recovered
17 through existing wells in Sun City and Sun City West or from other recovery
18 wells, even if the water was not used in the Sun Cities. If the water is
19 withdrawn, especially if it withdrawn for use outside the Sun Cities, there
20 would be no net benefit to the aquifer or the Sun City Water Company's
21 ratepayers. The total cost of this option to Sun City Water Company over the
22 remaining 42 year life of Citizens' CAP subcontracts is estimated to be
23 \$20,334,000.
24
25
26

5 **Q. Please summarize the total economic impact of all of the options reviewed
6 on the Sun City community over the life of Citizens' CAP subcontracts.**

7

8 <u>Option:</u>	9 <u>Total Cost:</u>
10 Citizens' Project (Option 4)	\$58,282,000
11 Option 4 Modified	\$40,214,000
12 Alternative Joint Project	\$34,362,000
13 CAWCD/Agua Fria Recharge Project	\$26,844,000
14 MWD Recharge Project	\$20,334,000

15 These calculations are summarized on Attachment DH – 5.

16 **Q. Do any of the alternatives you reviewed provide direct benefits to Sun City
17 Water Company ratepayers?**

18 A. The CAWCD and MWD recharge projects may provide very long range and
19 indirect benefits to Sun City Water Company ratepayers if the water is not
20 recovered, but there is nothing in Citizens' filing that allows me to quantify this
21 benefit. Further, the benefits would be substantially the same for persons
22 residing elsewhere in the region.

23 The benefits to Sun City Water Company ratepayers would be more direct and
24 greater with any of the three golf course recharge alternatives I have discussed.
25 However, again, nothing in Citizens' filing allows me to quantify these benefits
26 or permits me to determine whether the benefits are sufficient to justify

5 incurring the significant costs associated with direct delivery to the golf
6 courses.

7 **Q. What is your opinion of Citizens' request to include recovery of deferred
8 CAP recovery charges?**

9 A. I believe that these costs have accrued because Citizens, for more than ten (10)
10 years, failed to design a plan to put CAP water to use. Thus, to retroactively
11 collect these charges from existing customers, many of whom may not have
12 resided in Sun City during the period the charges were incurred, is not
13 equitable. If any of these deferred costs are to be collected from the ratepayers,
14 a better method might be to charge a connection fee to all new developments
15 and new existing service reconnections.

16 **Q. Do you agree with Citizens' proposed method of recovering costs of its
17 CAP utilization plan?**

18 A. No. The Final Report of the CAP Task Force, page 14) states that "CAP water
19 should be considered the first water supply delivered to customers, roughly the
20 first 3,500 gallons, instead of making CAP water a portion of every gallon
21 delivered. If CAP water is assessed based on consumption, then the larger
22 water users will unfairly subsidize small water users even though on a per
23 household basis the demand is comparable." I disagree with this statement.

24
25 The best method to recover the cost for utilization of CAP water is from
26 customers entering the system today. To the extent CAP costs are recovered

5 from existing customers, these costs should be blended with the rates generally
6 and not recovered as a flat per household charge. The more water consumed by
7 a customer, the greater the need for CAP water. Therefore, CAP costs should
8 be recovered based upon usage, if not totally recovered from customers entering
9 the system. This places the greatest burden on those using the most water,
10 encourages conservation and protects persons on fixed incomes.

11 **Q. At this time, can you recommend which option, if any, should be adopted**
12 **by the Commission to put the CAP water to use?**

13 A. No. Although I now have a good understanding of the costs for each of the
14 options, I was unable to perform an independent cost/benefit analysis or to
15 quantify the value of potential direct and demonstrable benefits to the Sun City
16 community. Certainly the golf course recharge options provide more potential
17 to directly benefit Sun City's ratepayers than the other recharge options, but at
18 significant cost. The CAWCD and MWD recharge projects appear to provide
19 regional benefits rather than direct benefits for the Sun Cities. To the extent
20 benefits of these projects are regional in nature, the costs of such recharge
21 projects should be borne equally throughout the region. Such costs spreading
22 already occurs when the AWB, CAWCD or CAGR D utilize these recharge
23 sites.

24 **Q. Does this conclude your testimony?**

25 A. Yes.

HUSTEAD ENGINEERING**Dennis Hustead, P.E.****TITLE**

President

replacement of new pavement to provide proper drainage. The design incorporated the requirement to provide continued operations at the yard during the repaving.

REGISTRATION

Arizona, 1972, Civil Engineer, No. 8566
 Arizona, 1984, Land Surveyor, No. 16840
 California, 1967, Civil Engineer, No. 39180

**Glenrosa and Union Hills Service Center
 Phase I Paving & Lighting - City of
 Phoenix**

Preparation of grading and drainage plans for replacement of existing pavement on the south portion of Glenrosa and, and lighting at Glenrosa and Union Hills to properly illuminate the sites. The sites are each about 7.5 acres.

EDUCATION

B.S., 1963, Civil Engineering
 California State University - Los Angeles

Organizational - Financial Management
 Stanford Univ., Graduate School of Business

Mountain View Park - City of Phoenix

This project included preparation of plans for site grading to alleviate drainage problems, landscape design, and lighting for an 8 acre recreation area at Grovers and 9th Street.

PROFESSIONAL MEMBERSHIPS

American Society of Civil Engineers
 American Public Works Association
 American Water Works Association
 National Society of Professional Engineers
 Water Pollution Control Federation

**24th Street and Yuma Intersection at Sky
 Harbor - City of Phoenix**

The design of this intersection at the airport provides improved access for the interterminal buses from the air freight terminal to the passenger terminals via 24th Street and Buckeye. The project included saw cutting the curb from the gutter and use of the remaining gutter as a valley gutter across the new intersection.

EXPERIENCE

Mr. Hustead offers 35 years of civil engineering experience with significant expertise in managing the planning and design of major public works and transportation projects throughout Arizona and California. Mr. Hustead typically serves as a Project Manager for unique projects with complex design, extensive agency coordination and/or "fast track" project schedules. Mr. Hustead also assumes the role of Project Principal for various other in-house projects, where his responsibilities include quality assurance/quality control, overall project management, and technical assistance.

**Site Development at Fire Station # 30 - City of
 Phoenix**

This design included the parking, paving, and utilities to serve the new fire station. The project also included the widening of Belmont Avenue to facilitate the access by fire trucks to the station.

**Glenrosa Service Center Paving and Lighting
 Phase II - City of Phoenix**

Preparation of plans for repaving and lighting the north portion of Glenrosa. The project also included the design for construction of the south half of Turney Street with curb and gutters to protect the site from offsite drainage.

PAVING/DRAINAGE, SITE DEVELOPMENT

West Water Yard Paving - City of Phoenix

Preparation of construction plans for the removal of deteriorating surface and

WATER

Water System Appraisal/Valuation,

including RCNLD, economic analysis, water rights determination and expert witness in court proceedings for:

- **Carefree Water Co. -**
(Major Stockholders)
Carefree Water Company
- **City of Chandler -**
Kyrene Water Company
Palm Water Company
Cooper System Tankersley Water Co.
- **City of Phoenix -**
Paradise Valley Water Company
Sende Vista Water Company
Consolidated Water Utilities Ltd.
- **City of Scottsdale -**
Pinnacle Paradise Water Company
Desert Springs Water Company
Ironwood Water Company
North Valley Water Company

Expert Testimony on Water Rights for Colorado River Indians. Project Manager for expert testimony on water rights in Arizona vs. California Litigation of Colorado River adjudication including agricultural development project for the Colorado River Indians.

Planet Ranch Water Resources Study - La Paz County, for the City of Scottsdale. Project Manager for the planning and analysis of cost to develop water resources, establish water rights and transport a supply to the City of Scottsdale for domestic use. The study included the planning of a collection system, pump stations and pipelines to deliver the Planet Ranch water right to the CAP canal for delivery to the City. Cost estimates of the purchase of the ranch and facilities to transport the water were the basis for an economic evaluation of the acquisition.

University Avenue Water Line for City of Phoenix. Project Manager for the design of a 2 mile segment of a 60-inch transmission line conveying domestic water to the City's storage reservoir at South Mountain and 41st Street, and included tunneling under the I-10 freeway.

South Mountain Reservoir for City of Phoenix. Project Manager for design and inspection of a 20 MG reservoir located in South Mountain Park. The reservoir was designed as a free

formed structure to blend with surrounding terrain, and was awarded NSPE recognition for landscaping and environmentally sensitive design.

Navajo Indian Reservation Water and Sanitation Authority Establishment. Project Manager and principal investigator in the establishment of a water and sanitation authority to provide service for the entire Navajo Indian Reservation. Assignment included preparing a master plan report which inventoried all facilities for the 25,000 square mile Indian reservation, structuring of an agency to provide maintenance and operation of facilities, and the establishment of rate structures for the services to be provided.

Colorado River Indian Tribe Irrigation Project, La Paz County. Project Manager to plan and design a irrigation system for the Colorado River Indian Tribe's 11,000 acre agricultural development project. Project included feasibility analysis, preliminary design involving environmental planning, clearing and leveling the land, farm layout, operations and maintenance. Assistance was also provided in securing a Bureau of Rec. PL 84-984 loan for financing the project, analyzing water costs, and developing a loan repayment program. Design for the irrigation system provided for 19 miles of concrete canals, 80 miles of farm distribution laterals, farm land development, and appurtenant roads, housing and farm buildings.

Design of Hydroelectric Generating Facility for Yuma County Water Users Association. Project Manager for planning, design and construction administration of 4.7 MW hydroelectric generating facility at Siphon Drop in Yuma County.

Water System Planning for Fort Mojave Indians in Yuma County. Project Manager responsible for agricultural water system planning for 32,000 acres of arid desert land near the Colorado River.

Santa Fe Avenue Water System Improvements for City of Flagstaff. Design for water system improvements, including pipeline services, appurtenant valves and fittings within Santa Fe Avenue for City of Flagstaff and involving extensive coordination with the ADOT.

Water and Sewer Master Plan for Grover City, California - for a population of 15,000 with estimated construction costs for the 20-year program of \$1.3 million. Preparation of the master plan was in accordance with HUD requirements for water and sewer systems improvements.

Economic Analysis of Agricultural Lands in Cawelo and Kem Delta Water Districts, California. Prepared engineering and economic studies for the agricultural lands in Cawelo and Kem Delta Water Districts, including planning of water ex-changes, and for transmission and distribution facilities for 175,000 acres of farm land.

Water Master Plan for City of Atascadero, California. As Project Manager, Mr. Husted was responsible for preparing a water system master plan for the City of Atascadero for the purposes of securing a HUD grant. The report included a comprehensive study of water usage and improvements to production, storage, and distribution facilities for a community of 12,000 people. Estimated cost for the 20-year improvement program was \$1.3 M.

Groundwater Recharge Analysis for Rosedale-Rio Bravo Water Storage District, California. As Project Manager, Mr. Husted evaluated the effect of groundwater recharge for this 43,000 acre agricultural district. The recharge project had the capability of delivering about 100,000 acre-feet per year to the district. Plans and specifications were prepared for a 42-inch transmission main to import water for agricultural use to the district.

Kufra 25,000 Acre Agricultural Development Project located in the Sahara Desert in Libya, North Africa. As resident project engineer, Mr. Husted was responsible for the planning and development of water production and distribution facilities for the development of 25,000 acres of previously barren desert. Nine 16-inch diameter production wells with capacities of 2,000 and 3,000 gpm at 600 feet depth, and 45 miles of distribution systems, including on-farm sprinkler systems for the first phase were designed. Trained and supervised Libyan personnel in installation, operation, and maintenance of the system.

Developers in Scottsdale joined forces to finance and construct a system to deliver treated wastewater effluent to their golf courses. Nine golf courses were initially involved in the project, with provisions to accommodate an additional 11 golf courses. The implementation of this project will enable the golf course operators to convert from the use of domestic quality water to reclaimed wastewater or raw (untreated) CAP water. Key design features included:

- 12 miles of pipeline 30" - 16"
- 2 miles of 36-inch pipeline
- 1.5 miles of 20-inch Gravity Line
- 10 MG Storage Reservoir
- 50,000 gal. Steel Tank Reservoir
- 21 MGD Pump Station
- 14 MGD Pump Station
- 3 Pump Stations (10 MGD or less)

As Project Manager, Mr. Husted was responsible for the overall project management and coordination of the project. His involvement included extensive coordination with representatives of the City of Scottsdale, the developers and other affected agencies to assure that the project remained on the fast-track schedule and stayed within budget.

Urban Phoenix 208 Study - Phoenix, Arizona for the U.S. Army Corps of Engineers. Project Director for the evaluation and planning for reuse of treated effluent from sewage treatment plants including golf course and green belt irrigation, industrial cooling, and ornamental water features. The study evaluated the acceptability of use, regulatory criteria, and feasibility.

RECLAIMED WATER

Scottsdale Effluent Delivery System for Southwest Community Resources.

SEWAGE

Sewage Collection and Treatment Facility -

Miami, Arizona for the Town of Miami. Mr. Husted directed the engineering design and construction inspection for a 16,000 ft. interceptor sewer involving 12- and 15-inch diameter pipe, and a 300,000 gpd sewage treatment plant serving the town of Miami. This facility, serving 3,400 residents, was financed by EPA and the Four Corners Commission, to replace the existing line and oxidation ponds that were subjected to repeated damage by flooding from the Miami and Blood Tanks Washes. Replacement of the facility, was accomplished by building a pump station outside the floodplain and locating the treatment plant on top of the 300 foot high tailings dam of Inspiration Copper Company. The effluent from the treatment plant is used for irrigation of an adjacent golf course or for revegetation of the tailing dam.

Route Study and Design of Camelback Road Trunk Sewer for City of Phoenix.

Project Manager for a route study and design of 3 miles of 21" to 39" trunk sewer in Camelback Road for the City of Phoenix. The selected route traverses through the Biltmore Shopping Plaza, and by-passes major utility conflicts at the 24th Street and Camelback intersection, providing relief capacity for the overburdened sewer system of the area.

Regional Sewage Treatment Facility Master Plan for City of Taft, California.

As Project Manger, Mr. Husted prepared an engineering report on the planning and financing of a regional sewage treatment facility for a community of 17,000 people. The report was used to support a bond authorized election and to obtain federal and state grants to fund the \$1 million project. Earthen aerated lagoons were recommended as a solution to the subsiding soils problem that had forced abandonment of the existing trickling filter plant due to structural damage to its concrete components.

DRAINAGE

Design of 48th Street Storm Drain for City of

Phoenix. Project Manager for 48th Street storm drain project serving Tempe and Phoenix. The 90" and 102" diameter pipe included a crossing at I-10 junction with an existing 54" pipe and outlet to Tempe drain.

Indian Bend Wash Open-end Contract for U.S. Army Corps of Engineers.

Project included

electrical/mechanical investigations, design of lighting for Indian Bend Wash Project, site development for recreational facilities, study of drainage and flood control facilities.

East Yuma Storm Drainage Study.

Study provided pipelines, channelization and detention basins to protect the East Meas area of Yuma. The assignment also included the planning and design of the East Mesa Outfall to the Colorado River.

MISCELLANEOUS

Preliminary Design of Dreamy Draw Dam

Recreation Park for the U.S. Army Corps of Engineers. Mr. Husted provided the preliminary design and plans for park facilities, parking lot, kiosks, restrooms and equestrian tunnels under Northern Avenue.

Rio Salado Golf Course Design for the City of

Phoenix. Project Manager for planning and design of golf course and park development on south bank of Salt River at 7th Street. The site was reclaimed from landfill operations and included the design of a methane gas collection system and utility supports to withstand settlement caused by decomposing refuse in the landfill. The project also included bank protection, well design, irrigation, and drainage to protect against groundwater pollution.

TPC Golf Course for the City of Scottsdale.

This project included the drainage design for constructing a golf course in the detention area of the CAP dike, as well as development of a water supply from a well and from the CAP, and use of lakes on the golf course for groundwater recharge.

Open Ended Planning and Design Contract in

Arizona for the U.S. Army Corps of Engineers. As Project Manager, Mr. Husted was responsible for the planning and design of miscellaneous facilities and related work in Phoenix and Tucson, Arizona. Contract work included analysis and design of electrical and mechanical systems at military bases; architecture, landscape architecture and associated site development at recreational areas; as well as flood control analysis and design of facilities.

Design and Inspection Services at Usery Mountain Park in Maricopa. Project included roads, parking and water system improvements, as well as improvements to the admittance station and maintenance building.

Repair, Restoration and Maintenance for Electrical Systems at Yuma Proving Grounds for U.S. Army Corps of Engineers. As Project Manager, Mr. Husted conducted a field survey of the electrical utility system to determine the required repairs for the transmission system. Subsequent service contracts were issued over 50 miles of pole lines and six substations (69, 34, 12 and 4 kv).

Repair of Marine Corps Air Station Piping Systems in Yuma, for the U.S. Navy. Project included the design, plans, specifications and cost estimates for interior repair of baths and waste piping for 182 units at the Marine Corps Air Station.

Gas System Rehabilitation for Northern Arizona University in Flagstaff. This project included the design and inspection of 20,000+ L.F. of gas line, pressure regulation stations and other appurtenances. In addition, pavement replacement was also included as part of the design.

CAPITAL COST OF SYSTEM
OPTION #4 "MODIFIED"

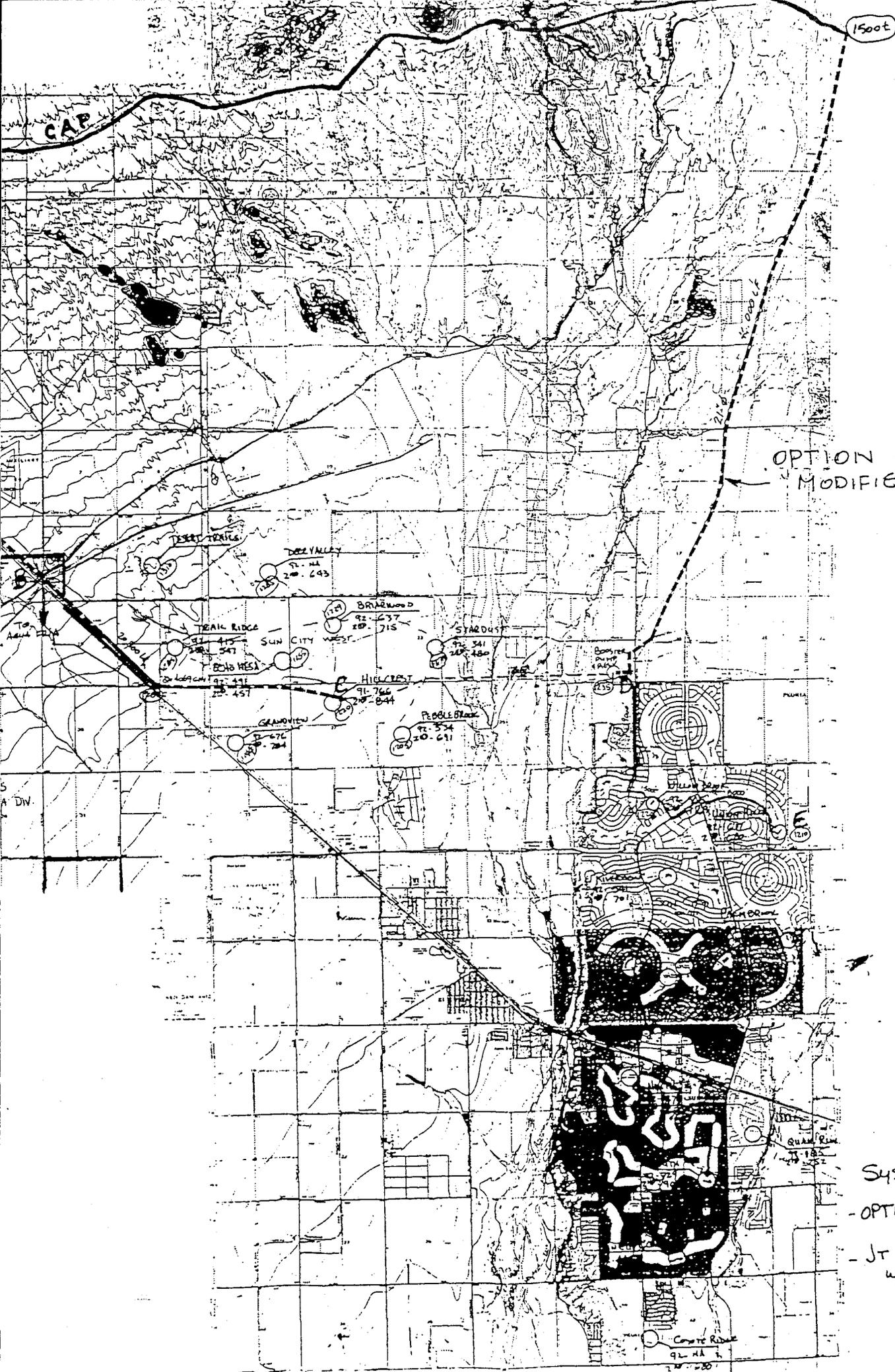
Alignment along Lake Pleasant Road to pump station @ Beardsley & 107th Avenue; Joint transmission with Sun City West; Delivery of 5161 AF/Yr to golf courses in Sun City West through existing effluent delivery system; Delivery of 1400 AF/Yr to Willow Brook and Union Hills golf courses in Sun City; Closed system with no reservoir or pump station required; Reduced delivery system to Sun City (20,000 LF - 10" Diameter Pipe); Sun City capacity = 63.8%, Sun City West capacity = 36.2%, based on CAP allocation.

	<u>DESCRIPTION</u>	<u>TOTAL</u>	<u>SUN CITY</u>	<u>SUN CITY WEST</u>
1	Transmission Pipe (Q=5416GPM) 21,000 LF ; 21" Dia.	\$4,404	\$2,810	\$1,594
2	Storage Reservoir Not Required	0	0	0
3	Booster Pump Station Rehab for SCW	\$ 149	0	\$ 149
4	Distribution System (6561 AF/Yr)			
	a) Sun City West (5161 AF/Yr)	\$ 218	0	\$ 218
	b) Sun City (1400 AF/ Yr) 20,000 LF - 10" Dia. @ \$36/LF	\$ 720	\$ 720	0
	Subtotal	\$5,491	\$3,530	\$1,961
	Contingency 30%	\$1,647	\$1,059	\$ 588
	Engr, Adm, Legal 25%	\$1,785	\$1,147	\$ 637
	TOTAL PROJECT COST	\$8,923	\$5,736	\$3,186

1,145

1.689
300
4.200

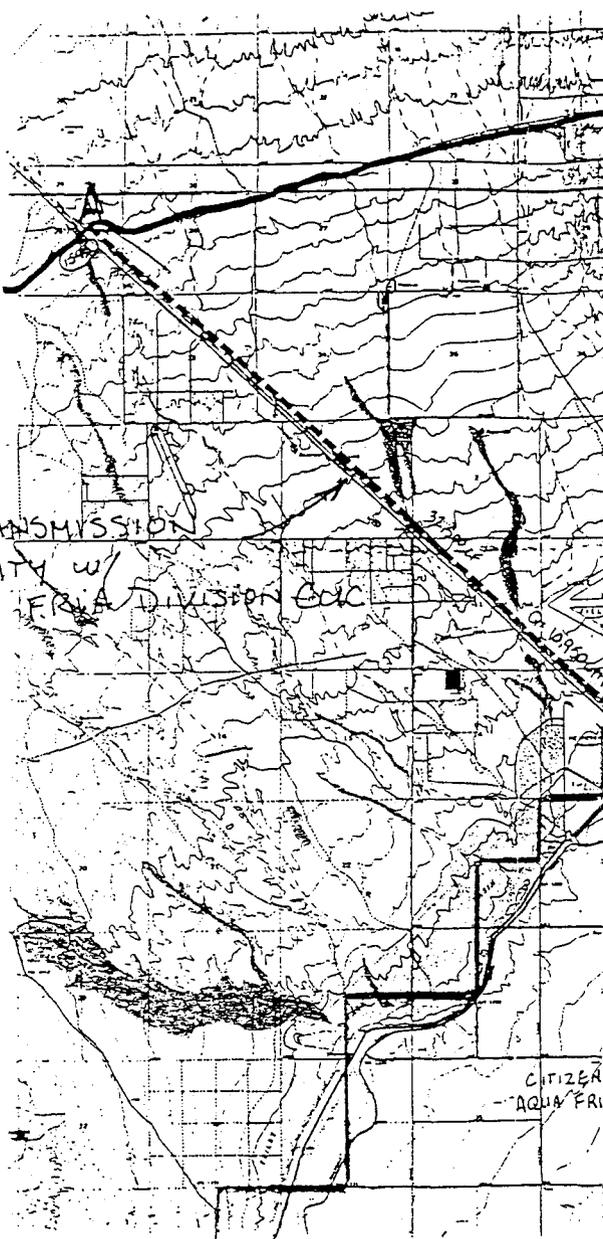
375
9
2.80



OPTION 4
"MODIFIED"

SYSTEM LAYOUT
 - OPTION 4 MODIFIED
 - JT TRANS. FACILITY
 w/ AQUA FRIA DIV.

JT. TRANSMISSION
FACILITY w/
AQUA FRIA DIVISION GAC



CITIZEN
AQUA FRIA

CAPITAL COST OF SYSTEM
JOINT TRANSMISSION SYSTEM w/ AQUA FRIA DIVISION

Alignment along Grand Avenue from CAP turnout to Beardsley alignment, then east to Hillcrest GC; tie into existing Sun City West effluent distribution system for delivery of 5161 AF/yr to golf courses in Sun City West; Delivery of 1400 AF/ Yr to Willow Brook and Union Hills golf courses in Sun City from 107th Avenue; Closed system with no reservoir or pump station required; Reduced delivery system to Sun City(20,000 LF - 10" Diameter Pipe); Sun City capacity = 23.7%, Sun City West capacity = 13.5%; Aqua Fria capacity = 62.8%, based on CAP allocation.

Capacity in Grand Avenue Transmission Line to Aqua Fria Delivery point: (A to B)

USER	CAP allocation	%
Sun City	4,189 AF/Yr	23.7%
Sun City West	2,372 AF/Yr	13.5%
Aqua Fria Divison	11,093 AF/Yr	62.8%

Capacity in Transmission Line from Aqua Fria Delivery Point to Hillcrest GC: (B to C)

USER	CAP allocation	%
Sun City	4,189 AF/ Yr	63.8%
Sun City West	2,372 AF/ Yr	36.2%

Cost of Facilities and Allocation of Costs:

Joint Transmission Line

Reach	Q gpm	Size	LF	Unit \$	\$1000	SC	SCW	A. F.
A - B	14,559	30"	32,000	\$120/lf	3,900	924.3	526.5	2,449.2
B - C	5,411	18"	20,500	\$ 70/lf	1,435	915.5	519.5	0
C - D	Use	Exist.	SCW	System		0	0	0
D - E	1,155	10"	20,000	\$ 36/lf	720	720.0	0	0
Subtotal					6,055	2,559.0	1,046.0	2,449.2
Contingency					30%	1,816.5	767.9	734.8
Engr,Adm,Legal					25%	1,967.9	831.9	796.0
TOTAL PROJECT COST					9,839.4	4,159.6	1,699.8	3,980.0

SUN CITY WATER COMPANY

Total cost burden on the Sun City community over the lives of the projects.

	<u>Citizens Plan</u>	<u>Citizens Plan (Modified)</u>	<u>Joint Pipeline (Alternative)</u>
Holding Costs	\$629,000	\$629,000	\$629,000
CAP Costs	\$22,696,000	\$22,696,000	\$22,696,000
Operating Costs	\$5,011,000	\$630,000	\$756,000
Cost of Capital	\$35,448,000	\$21,761,000	\$15,783,000
Less CAP Fees	(\$5,502,000)	(\$5,502,000)	(\$5,502,000)
Total Costs	<u>\$58,282,000</u>	<u>\$40,214,000</u>	<u>\$34,362,000</u>

SUN CITY WATER COMPANY

Total cost burden on the Sun City community over the lives of the recharge projects.

	<u>CAWCD Recharge</u>	<u>MWD Recharge</u>
Holding Costs	\$629,000	\$629,000
CAP Costs	\$22,696,000	\$22,696,000
Lease Costs	\$3,519,000	\$0
CAP Fees	<u>\$0</u>	<u>(\$2,991,000)</u>
Total Costs	\$26,844,003	\$20,334,000

EXHIBIT

SCTA-4
admitted

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BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
Commissioner - Chairman
JIM IRVIN
Commissioner
WILLIAM A. MUNDELL
Commissioner

IN THE MATTER OF THE JOINT)	DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER)	SW-02334A-98-0577
COMPANY AND SUN CITY WEST)	
UTILITIES COMPANY FOR APPROVAL OF)	
CENTRAL ARIZONA PROJECT WATER)	
UTILIZATION PLAN AND FOR AN)	
ACCOUNTING ORDER AUTHORIZING A)	
GROUNDWATER SAVINGS FEE AND)	
RECOVERY OF DEFERRED CENTRAL)	
ARIZONA PROJECT EXPENSES.)	

SURREBUTTAL TESTIMONY OF DENNIS HUSTEAD

On Behalf of

SUN CITY TAXPAYERS ASSOCIATION
("SCTA")

October 1, 1999

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SURREBUTTAL TESTIMONY OF

DENNIS HUSTEAD

DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577

Q. Please state your name, title and business address.

A. My name is Dennis Hustead. I am a Registered Civil Engineer with Hustead Engineering. My business address is 568 W. Moon Valley Drive, Phoenix, Arizona, 85023.

Q. Are you the same Dennis Hustead who filed Direct Testimony in this proceeding?

A. Yes.

Q. What is the purpose of this testimony.

A. I am providing surrebuttal testimony to the rebuttal testimony of Citizens' witnesses Blain Akine, Carl Dabelstein and Ray Jones.

Q. After reviewing Mr. Akine's rebuttal testimony, do you still stand by your assertion that enforceable contracts should be in place with the golf courses before Citizens' plan, or any plan, that is dependant on placing CAP water on golf courses is approved by the Commission?

A. Yes. The financial impact analysis of Citizens' proposed plan (Option 4) and the alternatives presented in my direct testimony assume CAP water can be delivered to the golf courses and incorporate a cost recovery component from the golf courses for CAP water in lieu of pumping. Binding commitments from the golf courses for CAP water, in lieu of groundwater pumping, need to be in place. These commitments should outline the basic terms of delivery of CAP water to the golf courses, including the cost to the golf courses. Solidifying the

5 commitments of the golf courses to take and pay for CAP water may take
6 several months to accomplish, but should be done before proceeding with a
7 plan that may not have any takers for CAP water when the details of delivery
8 and cost are finalized.

9 If Citizens' speculative anticipation of revenues from the recreational center
10 golf courses is inaccurate, the costs to ratepayers would increase by \$131,000
11 annually.

12
13 **Q. Are non-binding resolutions indicating a desire to take CAP water
14 sufficient?**

15 **A.** No. The ratepayers should have no obligation to pay for deferred CAP costs or
16 on-going CAP costs until a viable long-term plan has been presented. Binding
17 commitments must exist with the golf courses in order for the golf course
18 option to be deemed viable.

19 **Q. Do you agree that certain golf courses in Sun City West should be ignored?**

20 **A.** No. Citizens should be proposing engineering solutions that maximize benefits
21 while minimizing costs. This is clearly accomplished by maximizing the use of
22 existing infrastructure. To the extent millions of dollars of infrastructure costs
23 can be avoided, the Commission should require Citizens to pursue the lesser
24 cost alternative.
25
26

4 **Q. Do you agree with Mr. Akine's rationale for ignoring this lower cost**
5 **solution on pages 4 and 5 of his rebuttal testimony?**

6 A. No. Mr. Akine acknowledges that the total demand on all Sun City West golf
7 courses is 5,451 af/yr, but claims the expansion golf courses are prohibited from
8 using CAP water, and that private golf courses should not benefit from use of
9 CAP water because they did not participate in the CAP Task Force.

10
11 Mr. Akine did not provide a copy of the County prohibition relating to the
12 expansion golf courses. However, even if a prohibition currently exists, it does
13 not mean that the County would not consider amending the prohibition if the
14 same or greater benefits result from the use of CAP water. If, in fact, the
15 expansion golf courses are prohibited from using CAP water, this would only
16 amount to a 970 af/yr reduction in CAP water use in Sun City West leaving
17 4,521 af/yr that could still be used there.

18
19 As to the use on private courses, it is my understanding that the concern of the
20 CAP Task Force and Citizens is to leave groundwater in the ground. This is
21 accomplished whether the golf courses are private or public. As for the private
22 golf courses non-participation in the Task Force, it is my understanding that
23 Citizens determined which groups participated in the CAP Task Force. Further,
24 if there is an economic advantage to taking CAP water, I believe the private
25 golf courses will be interested in participating. Accordingly, the private golf
26 courses should be contacted and encouraged to participate in the use of CAP
water in lieu of pumping groundwater.

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SURREBUTTAL TESTIMONY OF
DENNIS HUSTEAD
DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
PAGE 4

Q. Does exceeding Sun City West's 2,372 af/yr allocation concern you?

A. No. Citizens should be designing a CAP use plan to maximize benefits to all of its ratepayers at the least cost. Further, it is my understanding that the allocation between the Sun Cities is not yet accomplished.

Q. Do you believe that the Commission should limit its review to the plan proposed by Citizens for CAP Task Force consideration?

A. Absolutely not. The CAP Task Force considered only three general alternatives for putting CAP water to use:

- (1) Recharging outside its service area (with MWD, CAWCD, McMicken and Citizens' own recharge site);
- (2) Delivery to golf courses; and
- (3) Treatment and direct delivery.

Treatment and direct delivery was rejected as too costly, while recharge outside Citizens' service area was rejected as providing only indirect benefits. Therefore, delivery to golf courses was recommended. However, the CAP Task Force was presented with and considered only one option to accomplish delivery of CAP water to the golf courses. It did not consider the options I have proposed in my direct testimony. If an option or options exist that provide substantially the same benefits, but at a significantly lower cost, the least cost alternative should be considered.

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SURREBUTTAL TESTIMONY OF
DENNIS HUSTEAD
DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
PAGE 5

Q. Please comment on Mr. Akine's rebuttal of your recommendation to modify Citizens' proposed plan to reduce construction costs.

A. As explained in my direct testimony, my review of Citizens' proposed plan concluded that this plan is far more costly than it needs to be. Specifically, the plan includes extra costs for a pump station and a reservoir, which are simply not necessary. Regarding the pump station, the delivery system should be a closed pipeline from the CAP turnout to delivery at the golf courses. This negates the need for a pump station. This is true because the turnout at the CAP canal at Lake Pleasant Road is at an approximate elevation of 1500 feet, and the golf courses are at elevations ranging from 1300' to 1200'. Thus, the pipeline will be operating with a head of over 200 feet and will produce sufficient pressure to deliver the flow to each golf course without the need for a pump station.

Regarding the reservoir, there is no need to store water in a reservoir prior to delivery to the golf courses because the golf courses already have reservoirs on site. These golf reservoirs are designed to store the daily irrigation requirements of the golf course (continuous water flow over 24 hours and irrigate at night during a 12-hour period), plus an emergency supply of water to last one to three days. Thus, the reservoir designed under Citizens' proposed plan is simply not needed.

Further, I determined that it would be most cost effective to maximize CAP water deliveries to Sun City West golf courses where a distribution system

4 already exists and thereby minimize the installation of a new distribution
5 system in Sun City.

6
7 The cost impacts of eliminating the pump station and reservoir and maximizing
8 deliveries to Sun City West, reduces total construction costs from about \$15
9 million to about \$9 million. Sun City Water Company's costs would be
10 reduced from over 9.6 million dollars to approximately 5.7 million dollars.
11 Importantly, this cost allocation is based on proposed CAP allocations of
12 Citizens allocating 4,189 af to Sun City and 2,372 af to Sun City West. If cost
13 allocations followed the place of use, Sun City Water Company's costs would
14 be even lower, but Sun City West's costs would increase.

15
16 Mr. Akine's seems to contradict himself in regard to my recommended
17 modifications to Citizens' proposed plan. For example, on the one hand, he
18 immediately rejects my proposal. But on the other hand, he admits that my
19 proposal may have merit, but needs to be examined closer. As an engineer, I
20 believe that Citizens should have the significant details of its proposed plan
21 worked-out before it asks the Commission to approve the concept.

22 **Q. Did Mr. Akine comment on your alternative plan to build a joint CAP**
23 **transmission pipeline with the Agua Fria Division?**

24 **A.** Yes. As explained in my direct testimony, a joint transmission facility could be
25 built with the Aqua Fria Division so all CAP water available to Citizens could
26 be delivered to its certificated area through one transmission pipeline

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SURREBUTTAL TESTIMONY OF
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constructed from the CAP canal at Grand Avenue to the Aqua Fria delivery point at Sarival Avenue. The pipeline would continue along Grand Avenue and the Beardsley alignment to a tie at the Sun City West delivery system at the Hillcrest Golf Course. There may be other, even more cost effective, alignments. The existing Sun City West distribution system would be used to maximize delivery of CAP water to all the golf courses in Sun City West. The remaining CAP supply would be transported to the existing pump station at Beardsley and 107th Avenue and then a new distribution would be constructed to deliver the CAP water to the Willow Brook and Union Hills Golf courses.

This alternative joint plan actually costs about \$10 million compared to the \$15 million for Citizens' proposed plan or the \$9 million for Option 4 Modified. However, under this alternative the Aqua Fria Division would also be able to deliver its full CAP allocation. Because a significant portion (62.8%) of the construction costs for the joint facilities would be allocated to the Agua Fria Division and away from Sun City and Sun City West (with certain costs being allocated to the Sun Cities and some costs being assigned to a particular water system), the costs for each system would go down.

In summary, by pursuing a joint project with the Aqua Fria Division, rather than Option 4 as currently proposed by Citizens, there is a potential for reducing costs to the ratepayers of Sun City Water by \$23,920,000 over the remaining 42 year life of the CAP subcontract (\$34,362,000 vs. \$58,282,000). This savings is more fully set forth in Attachment DH-5 to my direct testimony.

5 It should be emphasized that this savings will be experienced by the ratepayers
6 of Sun City Water. Similar savings should be experienced by the ratepayers of
7 Sun City West. Further, since more than 37% of the costs of the joint project
8 would be allocated away from the Aqua Fria Division for a pipeline that would
9 deliver its CAP supply, the ratepayers of the Aqua Fria Division also will see a
10 savings.

11 **Q. Did Mr. Akine support a joint CAP use alternative?**

12 **A.** Although he did not dispute that there may be significant savings from a joint
13 project with the Aqua Fria Division, he rejected the option because "the plan
14 and the timing for required physical delivery of CAP water into the Aqua Fria
15 Division differs from the proposed CAP Task Force Plan."

16 **Q. Do you find this to be a valid reason to reject a joint CAP use plan?**

17 **A.** No. We are talking about saving potentially millions of dollars and a difference
18 in timing of approximately two years in implementing a project that will be in
19 place for forty or more years. As noted above, these options were never
20 presented to the CAP Task Force. Citizens has hired Brown & Caldwell to
21 complete a master plan for the Aqua Fria Division. The contract should be
22 expanded to incorporate a joint pipeline with the Sun Cities.

1 SURREBUTTAL TESTIMONY OF
2 DENNIS HUSTEAD
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
4 PAGE 9

5 **Q. Do you have an opinion on Mr. Akine's statement that the Beardsley Canal**
6 **could be used to transport CAP water to Aqua Fria?**

7 A. Yes. The use of the Beardsley Canal to transport CAP water may have some
8 merit and should be investigated, both for Aqua Fria and the Sun Cities. Use of
9 the canal would likely require a pump station to deliver water to the golf
10 courses and probably Aqua Fria. The cost of the pump station versus the
11 reduction in cost associated with elimination of a portion of the pipeline may
12 result in less expensive capital costs, but increased annual operating costs. If by
13 using the Beardsley Canal costs can be reduced, then use of the Canal should be
14 incorporated into the CAP delivery system to Sun City, Sun City West and
15 Aqua Fria and the cost savings shared by all Citizens' ratepayers in an equitable
16 fashion.

17 **Q. Do you believe Citizens' ratepayers are benefited by designing separate**
18 **delivery systems for the Aqua Fria Division and the Sun Cities?**

19 A. No. My analysis demonstrates that the ratepayers will maximize benefits at the
20 least cost by designing a "joint system." Citizens should have presented a CAP
21 Utilization plan for its entire CAP allocation. By treating the Sun Cities
22 separately, it appears Citizens will be increasing construction costs by millions
23 of dollars. This additional burden should not be placed on Citizens' ratepayers.
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5 Thus, Citizens' insistence on two separate and expensive plans for putting CAP
6 water to use in the Sun Cities and the Aqua Fria Division, when a single less
7 costly plan may be available, violates least cost principals, especially when the
8 relative timing of both projects is so close.

9 **Q. Do you agree with Mr. Dabelstein's Testimony on page 9, lines 6 and 7 of**
10 **his Rebuttal Testimony that "the only remaining obstacle for cost recovery**
11 **[of deferred CAP costs] was meeting the 'used and useful' test that had**
12 **been imposed"?**

13 **A.** No. Obviously, the Commission is the best judge of what it intended. However,
14 I believe that Mr. Dabelstein, as well as Mr. Jones at pages 3-4 of his rebuttal
15 testimony, have mischaracterized the Commission's findings in Decision No.
16 60172. Both Mr. Dabelstein and Mr. Jones have cited certain findings in
17 Decision No. 60172 for the proposition that review of the costs and benefits of
18 the specific proposal now being presented by Citizens and the recovery of
19 deferred CAP costs has been permanently foreclosed.

20 It should be emphasized that the plan for CAP utilization now presented by
21 Citizens, and for which Citizens' requests Commission approval, was not
22 specifically included in the options presented in the dockets which resulted in
23 Decision No. 60172. Further, the Commission in Decision No. 58750 granted
24 deferral of CAP capital costs expressly contingent upon the following
25 conditions:
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SURREBUTTAL TESTIMONY OF
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DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
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- “A. That the Companies be required in any rate proceeding to demonstrate that the deferred CAP costs were prudent when they were incurred.
- B. That this order not be construed to grant present or future permission for the Companies to amortize or include in rate base any CAP-related costs.
- C. That the Companies be required to prepare and retain accounting records sufficient to permit detailed review of all deferred CAP costs in future rate proceedings.
- D. That each Company’s authorization to defer CAP costs cease three years from the date of this order if the Company has not submitted a rate application that requires examination of the deferred costs addressed herein by or before that date or, in the alternative, if the Company has not applied for a renewal of this accounting order.”

Decision No. 58750 was entered August 31, 1994. At page 10, lines 15-17 of Decision No. 60172, dated May 7, 1997, the Commission extended the time during which CAP capital charges could continue to be accrued “subject to a development of a plan and date of implementation by December 31, 2000. If CAP water is not implemented by December 31, 2000, then Citizens will lose it ability to defer future costs.”

5 Clearly, the development and implementation of a CAP utilization plan is a
6 necessary condition to Citizens' recovery of deferred CAP charges. However,
7 nothing in the Decision guarantees Citizens the right to recover all, or even a
8 portion, of the deferred costs if a plan is developed and implemented by
9 December 31, 2000. In fact, the Commission, at footnote 8 on page 10 of
10 Decision No. 60172, expressly recognized that "with each passing year, the
11 amount of water ultimately deliverable is reduced by 1/50th, thereby reducing
12 the maximum potential benefits deliverable under the subcontracts." The
13 Commission further pointed out that as of 1997 the Company had held its CAP
14 allocation for more than 11 years "but has not delivered or put to beneficial use
15 any CAP water."

16 In my view, these provisions leave open the questions of the cost/benefits of the
17 specific proposal, as well as whether deferred CAP capital costs should be
18 borne by Citizens' shareholders, Citizens' ratepayers or split in some manner
19 between the two.

20 **Q. Do you believe that the issue of recovery of deferred costs, as well as the**
21 **reasonableness of the plan to put CAP water to use, requires a cost/benefit**
22 **analysis?**

23 **A.** Yes. The Commission, in Decision No. 60172, recognized that merely holding
24 a "CAP allocation by definition is not 'used' and 'useful.'" The test is not
25 simply used, but used and useful. In my opinion, in order to be useful, the
26 various alternatives available to the ratepayers, the concerns sought to be

5 addressed and the costs of various alternatives all must be explored. In order to
6 make this analysis, the costs and benefits of the various alternatives should be
7 fully examined.

8 **Q. Has Citizens performed a cost/benefit analysis with regard to its current
9 CAP Utilization Plan (Option 4)?**

10 **A.** No. Although estimated costs for various alternatives have been derived, the
11 benefits have not been quantified. Further, the cost analysis includes improper
12 assumptions. For example, there are no contracts in place with the golf courses.
13 Nor did Citizens examine the options I suggested in my direct testimony, such
14 as proceeding jointly with the Aqua Fria Division.

15 Citizens has not provided a hydrologic analysis demonstrating the benefits
16 derived from putting this volume of water on the golf courses. Citizens appears
17 to have access to one or more groundwater models which could readily reflect
18 the impacts of the golf course proposal. From this analysis, the hydrologic
19 benefits of Citizens' proposal (Option 4), if any, as well as those of my
20 alternatives, would be readily apparent. Of course, such an analysis requires
21 one to know which pumps will and will not be utilized, where the water will be
22 applied, and whether water will be withdrawn at a later date through the use of
23 long-term storage credits.

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5 **Q. Do you believe the Commission should approve the current CAP Plan**
6 **(Option 4) proposed by Citizens?**

7 A. No. Option 4 does not appear to be the least cost alternative available for
8 bringing CAP water to the golf courses. I agree with ACC Staff that Citizens
9 should be ordered to return to the Commission once its has a complete proposal.
10 Furthermore, Citizens should be required to evaluate the options I have
11 proposed, as well as use of the Beardsley Canal.

12 **Q. Could Citizens have proposed its current plant (Option 4) earlier?**

13 A. Yes. Contrary to Citizens' contentions, use of CAP water on golf courses has
14 been an option since it executed its CAP subcontracts in 1985. It is only the
15 possibility of having the water designated as stored water and securing long-
16 term credits that was first authorized in 1990. Importantly, if long-term storage
17 credits are used to recover groundwater in excess of that which would otherwise
18 be recovered, the benefits of placing CAP water on the golf courses could
19 disappear entirely. In fact, it is my understanding that some of the golf courses
20 currently rely on long-term storage credits generated from stored effluent. If
21 these credits are transferred elsewhere or otherwise utilized to support
22 additional pumping, the benefits to the ratepayers of importing CAP water
23 could also disappear.
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SURREBUTTAL TESTIMONY OF
DENNIS HUSTEAD
DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577
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Q. Do you have an opinion regarding Citizens' argument justifying recovery of deferred cost and on-going CAP cost as the first water used instead of a conservation oriented rate structure?

A. In regard to Citizens' rate design for recovery of CAP water related costs, the Company proposes that residential ratepayers be billed based on a flat rate per household. Although SCTA opposes Citizens' recovery of 100% of the deferred water costs, if the Commission were to allow Citizens' recovery of some percentage of the deferred costs, it is my recommendation that any charge for CAP costs should be recovered primarily from customers entering the system. Any charge on existing ratepayers should be recovered through a rate schedule that encourages conservation. The customers who have reduced their water consumption should not have to pay the higher rates associated with importation of CAP water. This method would encourage conservation by placing a greater allocation of the cost burden on those water consumers who use the most water. This method also allows customers on fixed incomes to have some control over how much of the CAP costs they are burdened with. I believe the CAP Task Force was incorrect in its conclusion that CAP water should be treated as the first resource used.

Q. Do you agree that imposing connection fees today is no longer viable?

A. No. Certainly by delaying utilization of CAP water, Citizens has lost the opportunity to collect connection fees from developers on a substantial portion of Citizens certificated area. However, I understand that additional development is still occurring. Further, customers are constantly leaving and

5 entering Citizens water systems. It would be possible to impose a CAP based
6 fee on all new customers as part of the establishment of a new account. This
7 would recognize that those who currently live in the Sun Cities purchased their
8 homes with no expectation that they would have to pay for CAP water.

9 **Q. Do you agree with Mr. Dabelstein's and Mr. Jones' arguments as to why**
10 **the Commission should accept Citizens' method of recovering the deferred**
11 **CAP costs?**

12 A. No. Citizens made a business decision to hold the CAP allocation, rather than
13 putting the CAP water to use. As a result, the benefits available under the
14 subcontract have diminished. Further, Citizens has lost the opportunity to
15 collect these costs, as well as infrastructure costs, from developers or new lot
16 owners. I understand Citizens has only sought permission to collect costs from
17 existing ratepayers. It is also my understanding that Citizens has been told that
18 CAP costs are not recoverable from existing ratepayers without a plan to put
19 CAP water to use. To my knowledge, this is the first proceeding Citizens has
20 ever committed to a plan to put CAP water to use.

21 **Q. Do you agree with Mr. Dabelstein's argument that deferred costs should**
22 **earn a return?**

23 A. No. Again, although I oppose Citizens' recovery of 100% of its deferred water
24 costs, if the Commission were to allow Citizens recovery of some percentage of
25 the deferred costs, I agree with both the ACC Staff and RUCO that under no
26 circumstances should Citizens be allowed to earn any rate-of-return on the

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SURREBUTTAL TESTIMONY OF
DENNIS HUSTEAD
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deferred CAP costs because it is contrary to Commission precedent. It is my understanding that Decision No. 60172, on its face, does not authorize recovery of a rate of return on Citizens' deferred CAP costs. Further, Decision No. 58750 specifically precluded treating deferred CAP costs as a "rate base" item. This is what Mr. Dabelstein is proposing.

Q. Do you agree with Mr. Dabelstein that any deferred CAP costs should be recovered over a 42 month period?

A. No. In regard to the length of period for recovery of deferred CAP costs, I reassert the position that if any of the deferred costs are deemed recoverable these costs should be spread over the remaining life of Citizens' CAP subcontracts, as opposed to just 42 months under Citizens' proposal or the 60 months proposed by the ACC Staff.

Q. Does this conclude your surrebuttal testimony?

A. Yes.

EXHIBIT
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admitted

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ARIZONA DEPARTMENT OF WATER RESOURCES
BEFORE THE DIRECTOR

DO NOT FILE UNTIL
ALL ITEMS CHECKED.
AND INITIALED *(Signature)*

IN THE MATTER OF THE MANAGEMENT PLANS)
FOR THE FIRST AND SECOND MANAGEMENT)
PERIODS FOR THE PHOENIX ACTIVE MANAGEMENT) NO. PHX-56-002008.0000
AREA)
) STIPULATION AND
) ORDER ON REVIEW
APPLICATION FOR ADMINISTRATIVE)
REVIEW NO. 56-002008,0000)
)
APPLICANTS: CAVE CREEK WATER COMPANY)
EAGLE CREEK GOLF CLUB, INC.)
EAGLE CREEK MANAGEMENT, INC.)

The Arizona Department of Water Resources ("Department")
Cave Creek Water Company ("Cave Creek"), Eagle Creek Golf Club,
Inc. ("Owner"), and Eagle Creek Management, Inc. ("Lessee"),
stipulate and agree as follows:

For the first management period and in accordance with
the First Management Plan ("FMP"), Cave Creek received from the
Director of Water Resources ("Director") by certified mail an
Official Notice Of Municipal Conservation Requirements and Moni-
toring and Reporting Requirements - Municipal Provider ("FMP
Municipal Notice") which gave notice to Cave Creek that it shall
achieve for the first full calendar year following December 31,
1986, a Gallons Per Capita Per Day ("GPCD") rate equal to or less
than 204 GPCD and shall maintain a GPCD rate equal to or less
than 204 GPCD until the effective date of any applicable conser-
vation requirements prescribed in the Second Management Plan
("SMP") for the Phoenix Active Management Area. For the second
management period, Cave Creek has received from the Director by

RECEIVED Certified mail a Notice of Municipal Conservation Requirement and

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MARTINEZ & CURTIS

1 Monitoring and Reporting Requirements for Existing Large Provi-
2 ders ("SMP Municipal Notice") which gave notice to Cave Creek,
3 that it shall achieve for the first intermediate period a Total
4 GPCD rate of 204, for the second intermediate period a Total GPCD
5 rate of 165, and for the final period a Total GPCD rate of 160.
6 The FMP and SMP Municipal Notices will hereinafter be referred to
7 collectively as the "Municipal Notices."

8 In calculating Cave Creek's GPCD rate for the first
9 management period, Section 3 of the FMP Municipal Notice mandates
10 that the Director determine the total gallons of water from any
11 source, except effluent, withdrawn, diverted or received by the
12 municipal provider for non-irrigation use during the calendar
13 year. In accounting for compliance with Cave Creek's Total GPCD
14 requirement for the second management period, Section 5-105 of
15 the SMP Municipal Notice requires the Director to account for the
16 total gallons from any source, including effluent but only if it
17 is recovered effluent, withdrawn, diverted or received during the
18 calendar year for non-irrigation use.

19 On December 31, 1984, the Owner received from the Direc-
20 tor by certified mail an Official Notice of Industrial Conserva-
21 tion Requirements and Monitoring and Reporting Requirements -
22 Turf-Related Facilities ("Industrial Notice") which gave notice
23 to the Owner that it shall achieve for the first full calendar
24 year following December 31, 1986, and for each calendar year
25 thereafter until the compliance date of any subsequent SMP re-
26 quirement, a maximum annual water allotment equal to or less
27 than its maximum annual water allotment requirement as calculated
28 pursuant to Section 4 of the Industrial Notice. The Industrial

1 Notice also requires the Owner to achieve other conservation
2 requirements appropriate for existing turf-related facilities for
3 each calendar year following December 31, 1986, until the compli-
4 ance date of any subsequent SMP requirement.

5 The Owner has entered into four separate agreements
6 which have laid the foundation for this request for administra-
7 tive review. The Owner has entered into an agreement with Cave
8 Creek in which Cave Creek has agreed to supply the Owner with
9 untreated Central Arizona Project ("CAP") water in addition to
10 the groundwater supplied to the Owner's turf-related facility's
11 clubhouse. In exchange, the Owner has entered into a transfer of
12 well agreement with Cave Creek in which it has agreed to transfer
13 ownership of three wells formerly used in conjunction with Gener-
14 al Industrial Use Permit No. 59-511789 to Cave Creek. The Owner
15 has also entered into an agreement to purchase effluent supplies
16 as such supplies become available from the Cave Creek Sewer Com-
17 pany.

18 Finally, the Owner has entered into a lease/purchase
19 agreement with the Lessee. The Lessee has since taken over oper-
20 ations of the Eagle Creek Golf Club ("turf-related facility") and
21 has retained an option to purchase the turf-related facility.
22 The Owner, however, continues to be obligated to comply with the
23 provisions of the Industrial Notice. Both the Owner and Lessee
24 agree to be bound by the terms of this administrative review.

25 On October 24, 1989, Cave Creek filed for an administra-
26 tive review of the method for calculating its annual GPCD rate
27 for the first management period. On March 20, 1990, Cave Creek
28 timely filed an administrative review request, requesting that

1 the Department set a higher GPCD for Cave Creek for the second
2 management period, or, in the alternative, that the Department
3 exclude all CAP water use from its calculation of Cave Creek's
4 GPCD. On April 16, 1990, Cave Creek also filed an administrative
5 review based on extraordinary circumstances not in existence at
6 the time their SMP notice was received. In this administrative
7 review request, Cave Creek specifically requests that deliveries
8 of untreated CAP water by Cave Creek to the turf-related facility
9 be exempt from the Department's calculation of Cave Creek's
10 GPCD. The Director has consolidated the administrative review
11 request for the first management period, and that portion of the
12 second management period administrative review requests which
13 requests relief for Cave Creek's delivery of untreated CAP water
14 to the turf-related facility pursuant to A.A.C. R12-15-212.
15 Those portions of the administrative review requests for the
16 second management period which do not specifically apply to the
17 turf-related facility are not consolidated herein, and will be
18 addressed in a separate Decision and Order. These issues in-
19 clude, but are not limited to Cave Creek's contention that its
20 GPCD requirements for the second management period are too low,
21 and their argument that CAP water should not be counted in deter-
22 mining Cave Creek's GPCD.

23 The Department has considered the following in evaluat-
24 ing the consolidated administrative review request:

25 (1) Cave Creek will begin serving untreated Central
26 Arizona Project (CAP) water for turf-related watering purposes to
27 a turf-related facility currently managed by the Lessee, and to
28 any proper successor in interest, assignee or purchaser of the

1 Owner's turf-related facility.

2 (2) Cave Creek has previously served groundwater to the
3 Owner's turf-related facility.

4 (3) Serving untreated CAP water to the turf-related
5 facility will allow Cave Creek to use a renewable water source
6 that it would not otherwise be capable of using at this time.

7 (4) As a result of Cave Creek's actions, the Owner
8 shall relinquish a general industrial use permit No. 59-511789,
9 thus reducing the amount of groundwater mined in the Phoenix
10 Active Management Area.

11 (5) The Owner and the Lessee eventually plan to
12 substitute effluent for untreated CAP water they would have
13 otherwise received and in return to make the supply of untreated
14 CAP water available to other users.

15 Cave Creek requests that the Department acknowledge this
16 beneficial use of a renewable water source as an extraordinary
17 circumstance not in existence at the time Cave Creek received its
18 Municipal Notices. Cave Creek specifically requests that the
19 Department exempt delivery of any untreated CAP water and any
20 "emergency water" as that term is defined below to the turf-
21 related facility from the calculation of Cave Creek's GPCD rate.

22 The Owner and the Lessee acknowledge that without this
23 administrative review, they could not obtain Central Arizona
24 Project water from Cave Creek. The Owner and Lessee also acknow-
25 ledge that Cave Creek is supplying groundwater to its customers
26 within its service area. In consideration of the benefits which
27 they receive pursuant to this Stipulation and Order on Review,
28 and because the turf-related facility will be receiving water

1 from a municipal provider that supplies groundwater to the Lessee
2 and Owner and to its other customers, the Owner and Lessee agree
3 to remain bound by their Management Plan conservation require-
4 ments, and to be accountable for any untreated CAP water received
5 as if it were groundwater during the term of this agreement.

6 In complete settlement of all issues raised the Depart-
7 ment, Cave Creek, the Owner and the Lessee agree to the following
8 terms of the settlement.

9 (1) Cave Creek's delivery of untreated CAP water to the
10 turf-related facility promotes the use of a renewable water re-
11 source in the Phoenix Active Management Area and constitutes an
12 extraordinary circumstance not in existence at the time Cave
13 Creek received its Municipal Notices which makes Cave Creek's
14 GPCD rates in the Municipal Notices unreasonable.

15 (2) In recognition of this beneficial practice, begin-
16 ning calendar year 1990, the Department shall exempt Cave Creek's
17 untreated CAP water deliveries to the turf-related facility from
18 the calculation of Cave Creek's GPCD rate as prescribed in the
19 Municipal Notices.

20 (3) Because Cave Creek serves both groundwater and
21 other water for municipal uses within its service area generally
22 and to the Owner and Lessee specifically for their turf-related
23 facility, Cave Creek, the Owner and Lessee agree that the Owner
24 and Lessee are individual users for whom conservation measures
25 are appropriate within the meaning of A.R.S. §§ 45-564.A.2 and
26 45-565.A.2.

27 (4) In recognition of the water management benefits
28 which will accrue because use of groundwater will be replaced by

1 use of untreated CAP water for part of the total water supply for
2 a turf-related facility, the Department shall, beginning calendar
3 year 1990, consider all water used by the Owner and Lessee for
4 turf-related watering purposes as groundwater for the purpose of
5 determining the Owner and Lessee's compliance with their applic-
6 able maximum annual water allotment as currently calculated under
7 the FMP and SMP.

8 (5) As individual users for whom conservation measures
9 are appropriate, and in recognition of the benefits which will
10 accrue to the Owner and the Lessee as a result of this adminis-
11 trative review, the Owner and Lessee, beginning calendar year
12 1990, will comply with their applicable conservation requirements
13 and monitoring and reporting requirements, including but not
14 limited to their maximum annual water allotment as set forth in
15 their First Management Plan and Second Management Plan notices,
16 as though all water used for turf-related watering purposes were
17 groundwater.

18 (6) Beginning calendar year 1990, the Owner and the
19 Lessee shall report annually the amount of water applied for
20 turf-related watering purposes by source.

21 (7) Except for emergency water, commencing upon the
22 effective date of their agreement, Cave Creek shall not serve
23 groundwater to the Owner and/or Lessee, for turf-related watering
24 purposes. "Emergency water" means water which Cave Creek has
25 received approval from the Department's Phoenix Active Management
26 Area Director or his acting representative to serve to the turf-
27 related facility in lieu of untreated CAP water because of main-
28 tenance or repairs of the CAP distribution system which are not

1 part of a regular maintenance schedule or because of shortages on
2 the Colorado River which have significantly reduced the avail-
3 ability of CAP water to Cave Creek. In order to request that
4 water be deemed emergency water, Cave Creek, the Owner, or the
5 Lessee, shall deliver their written request (with copies to the
6 other parties to this Stipulation and Order on Review), whether
7 in person, by FAX or otherwise stating the reasons for the re-
8 quest, to the Director of the Phoenix Active Management Area.
9 The Phoenix Active Management Area Director or his designate will
10 respond within two business days of a request for the classifi-
11 cation of water as emergency water. If no response is given by
12 the Department within two business days, the water will be deemed
13 to be emergency water. If the request is disapproved, the De-
14 partment within 7 days of the receipt of the request shall notify
15 Cave Creek of its specific reasons for denying the request.

16 (8) Beginning calendar year 1990, Cave Creek shall
17 serve no more water to the Owner or Lessee for turf-related
18 watering purposes than an amount which, when combined with the
19 amount of water supplies received from other sources by the Owner
20 or Lessee, equals the Owner's maximum annual water allotment as
21 calculated in the Owner's First Management Plan and Second Man-
22 agement Plan notices.

23 (9) Owner and Lessee acknowledge and agree that Cave
24 Creek's obligation to deliver, and Owner's and Lessee's right to
25 receive water from Cave Creek, to and on Owner's turf-related
26 facility for the turf-related watering purposes is expressly
27 limited to the obligations and rights arising under written
28 agreements between Cave Creek and Owner, and in Particular, the

1 Central Arizona Project Water Resale Agreement ("CAP Lease Agree-
2 ment") and the Water Transportation Agreement ("CAP Transporta-
3 tion Agreement"). Nothing in this Stipulation and Order on Re-
4 view creates any right to the delivery of water from Cave Creek
5 beyond the terms of the CAP Lease Agreement and the CAP Transpor-
6 tation Agreement, nor precludes the execution of further agree-
7 ments, consistent with the terms and conditions of the Stipula-
8 tion and Order on Review, relating to the delivery of water to
9 Owner's turf-related facility for turf-related watering purposes.

10 (10) In addition to the Monitoring and Reporting Re-
11 quirements prescribed in the Municipal Notices, beginning calen-
12 dar year 1990, Cave Creek shall measure and report in its annual
13 report, required by A.R.S. § 45-632, the amount of untreated CAP
14 water it serves to the Owner's turf-related facility.

15 (11) Beginning in the calendar year 1990, Cave Creek
16 shall meter all of its deliveries of untreated CAP water to the
17 Owner's turf-related facility with a measuring device meeting the
18 specifications established in accordance with A.R.S. § 45-604 and
19 A.A.C. R12-15-901 et seq.

20 (12) The terms of this Stipulation and Order on Review
21 shall remain in effect until the earlier of the first compliance
22 date of a substitute Third Management Plan requirement or in the
23 event the Arizona Legislature or a court of competent jurisdic-
24 tion determines that the Department may not enforce the provi-
25 sions of this Stipulation and Order on Review.

26 (13) Those provisions of the Municipal Notices and the
27 Industrial Notice not altered pursuant to the terms of this
28 Stipulation and Order on Review shall remain in full force and

1 effect to the extent otherwise permitted by law.

2 (14) Those portions of Cave Creek's March 20, 1990 re-
3 quest for administrative review requesting that the Department
4 adjust Cave Creek's GPCD requirement, and requesting that the
5 Department not include any CAP water use in its calculation of
6 Cave Creek's GPCD are not addressed in this Stipulation and Order
7 on Review.

8 (15) Nothing in this Stipulation and Order on Review
9 shall constitute, nor be construed to constitute, an admission by
10 Cave Creek that CAP water is groundwater or that the Department
11 has the authority to include the volume of CAP water served by
12 Cave Creek to all of its customers in determining Cave Creek's
13 compliance with its municipal conservation requirements. The
14 parties agree not to introduce, or in any manner raise, this
15 Stipulation and Order on Review in any administrative or judicial
16 proceeding for the purpose of alleging, or attempting to show,
17 such admission by Cave Creek.

18 (16) The Department does not waive any argument that CAP
19 water should generally be included in the calculation of Cave
20 Creek's GPCD.

21 (17) Cave Creek, the Owner, and the Lessee hereby
22 waive the right to a hearing under A.R.S. § 45-575.C. on those
23 portions of their Applications for Administrative Review address-
24 ed in this Stipulation and Order on Review, and agree that this
25 Stipulation and Order on Review, when signed and approved by the
26 Director or his designated representative, shall have the force
27 and effect of a final decision and order in this case. Cave
28 Creek, the Owner, and the Lessee, waive the right to raise in any

1 enforcement proceeding involving this Stipulation and Order on
2 Review questions of fact or issues of law determined in this
3 Stipulation and Order on Review.

4 (18) Cave Creek, the Owner, and the Lessee waive the
5 right to appeal this Decision and Order to the Superior Court.

6 (19) The terms of this Stipulation and Order on Review
7 shall be binding on any purchaser of Cave Creek's system or the
8 Owner's turf-related facility or other successor in interest.
9 Cave Creek or the Owner shall provide any prospective purchaser
10 of the system or the turf-related facility or other successor in
11 interest with a copy of this Stipulation and Order on Review
12 prior to any sale or transfer, and shall make the sale or trans-
13 fer conditional upon the prospective purchaser or successor in
14 interest becoming a party to the Stipulation and Order on Review
15 and being bound by the terms thereof immediately upon purchase or
16 transfer of the system or the turf-related facility. Cave Creek
17 or the Owner shall notify the Department of any sale or transfer
18 of the system or the turf-related facility, or any part thereof,
19 within ten working days after the sale or transfer, and shall
20 provide the Department with proof of its compliance with this
21 requirement at that time.

22 (20) The Director may invoke the provisions of Title 45,
23 Chapter 2, Article 12 to enforce the provisions of this Stipula-
24 tion and Order on Review, and, in addition, may terminate this
25 Stipulation and Order on Review if Cave Creek violates section
26 (7) of this Stipulation and Order on Review. If a violation of
27 section (7) of this Stipulation and Order on Review occurs, the
28 Department may to the extent otherwise permitted by law account

1 for all water delivered by Cave Creek to the turf-related facili-
2 ty, including untreated CAP water, in calculating Cave Creek's
3 GPCD for the year in which the violation occurred.

4 (21) The terms of this Stipulation and Order on Review
5 shall become effective upon the date of signature by the Director
6 of Water Resources or his representative.

7 (22) By their signatures, the undersigned acknowledge
8 their authority to bind the parties on whose behalf the signa-
9 tures are made to the provisions of this Stipulation and Order on
10 Review.

11 DATED this 29 day of October, 1990.

12 CAVE CREEK WATER COMPANY ARIZONA DEPARTMENT OF WATER RESOURCES

13
14 By *Myrtle Gump* By *Herb Dishlip*
15 Title President Herb Dishlip
Deputy Director

16 EAGLE CREEK GOLF
17 CLUB, INC.

18 By *William Johnston*
19 Title vice president

20 EAGLE CREEK MANAGEMENT,
21 INC.

22 By *[Signature]*
Title *[Signature]*

23 // /
24 // /
25 // /
26 // /
27 // /
28 // /

ORDER ON REVIEW

IT IS ORDERED that the terms of the foregoing Stipulation are approved and adopted as the final Decision and Order in this case.

BE IT SO ORDERED this 29 day of October, 1990.

N.W. Plummer
N.W. Plummer, Director
Department of Water Resources
15 South 15th Avenue, 2nd Floor
Phoenix, Arizona 85007

A copy of the foregoing document was mailed certified mail this 31 of October, 1990 to:

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Cave Creek Water Co.
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Phoenix, Arizona 85018

Certified Mail No. P509417475

William P. Sullivan
Martinez & Curtis, P.C.
2712 North Seventh Street
Phoenix, Arizona 85006-1003

Certified Mail No. P509417476

Eagle Creek Golf Club, Inc.
Attn: Joe Garaqiola
6221 East Huntress Drive
Paradise Valley, Arizona 85353

Certified Mail No. P509417477

Joe MacNokes

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A copy of the foregoing document was mailed certified mail this 31st day of October, 1990 to:

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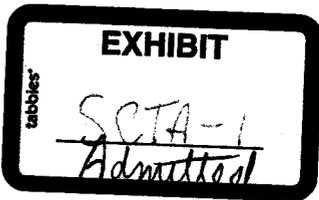
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Rose Mae Hobbs



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BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman
JIM IRVIN
Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF THE JOINT) DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER) SW-02334A-98-0577
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES.)

DIRECT TESTIMONY

OF

DENNIS HUSTEAD

On Behalf of

**SUN CITY TAXPAYERS ASSOCIATION
("SCTA")**

JULY 10, 2001

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1 DIRECT TESTIMONY OF
2 DENNIS HUSTEAD
3 DOCKET NOS. W-01656A-98-0577 and SW-02334A-98-0577

4 **I. INTRODUCTION**

5 **Q. Please state your name, title and business address.**

6 A. My name is Dennis Husted. I am a Registered Civil Engineer with Husted
7 Engineering. My business address in 568 West Moon Valley Drive, Phoenix,
8 Arizona, 85023.

9
10 **Q. Please state your qualifications to testify in this matter.**

11 A. I am a Registered Civil Engineer in the states of Arizona and California with
12 thirty-five years experience. I have significant expertise in managing the
13 planning and design of major public works and transportation projects
14 throughout Arizona and California. My statement of professional qualifications
15 was provided as Attachment DH-1 to my previous Testimony filed in this
16 docket on September 10, 1999.

17
18 **Q. Who are you testifying on behalf in this proceeding?**

19 A. I am testifying on behalf of the Sun City Taxpayers Association ("SCTA").

20
21 **Q. SCTA retained your services for what purpose?**

22 A. I was retained by SCTA to review and evaluate the Preliminary Engineering
23 Report (the "PER"), dated July 2000 and the Supplemental Engineering Report
24 (the "Supplement"), dated December 18, 2000 for completeness, accuracy,
25 compliance with the Arizona Corporation Commission's directives set forth in
26 Decision No. 62293 and to determine whether the PER provides a proper basis

1 on which to authorize Citizens to proceed with the Alternative recommended in
2 the PER.

3
4 **Q.** Do you believe that the PER and Supplement are complete, accurate,
5 comply with the Commission's Decision No. 62293 and provide a sound
6 basis to authorize the expenditure of over 15 Million Dollars?

7 **A.** No. As I will explain more fully in my testimony, I believe that the PER is
8 premised upon flawed assumptions and fails to properly evaluate the
9 Alternatives in relation to the primary overall objective of the project—to
10 maximize the benefits to the aquifer underlying the Sun Cities at the least cost
11 to Citizens' ratepayers. While the Commission approved the "concept" of the
12 Groundwater Savings Project, and authorized Citizens to proceed with a PER,
13 the Decision did not find the concerns raised by the Residential Utilities
14 Consumer Office ("RUCO"), the Commission's Staff, as well as myself on
15 behalf of SCTA, in the hearing conducted October 18 and 19, 1999 to be
16 without merit. To the contrary, the Commission ordered the PER specifically
17 address: a) the feasibility of a joint project with the Agua Fria Division,
18 including the timeframe for any such joint facility; b) the need for all major
19 elements of proposed plans (including, without limitation, storage and booster
20 stations); and c) binding commitments from golf courses, public and private,
21 and the terms and conditions related thereto. The Commission, in Finding of
22 Fact No. 24 in Decision No. 62293, further found that "while the use of CAP
23 water will support the State's water policy goals, CAP water at any cost is not
24 necessarily a prudent decision". Unfortunately, the PER reflects a very narrow
25 focus and attempts to justify Citizens' existing proposal rather than identify and
26 design a plan that will maximize benefits to the aquifer underlying the Sun
Cities at the least cost to Citizens' ratepayers.

1
2 **II. THE PER FAILED TO ASSESS THE ALTERNATIVES IN THE**
3 **CONTEXT OF THE OVERALL GOALS AND OBJECTIVES OF THE**
4 **PROJECT**

5 **Q. Have you previously designed facilities to take untreated CAP water to golf**
6 **courses?**

7 **A. Yes. I was Project Manager of the Reclaimed Water Delivery System**
8 **("RWDS") designed to deliver Central Arizona Project ("CAP") water or**
9 **reclaimed water to up to twenty (20) golf courses in north Scottsdale. The**
10 **project included approximately 15.5 miles of pipeline, two storage reserves and**
11 **five pump stations.**

12 **Q. Were the goals and objectives of that project the same as faced by the Sun**
13 **Cities?**

14 **A. The underlying motivating factors were entirely different in the RWDS. In**
15 **Scottsdale, developers were willing to finance a CAP delivery system because**
16 **that was the only way they could construct golf courses in connection with new**
17 **subdivisions. The developers were very cost conscious and constantly**
18 **reviewed the plans to ensure they would provide an adequate water delivery**
19 **system at the least cost possible. The RWDS was designed as the primary**
20 **water source for all the golf courses. Only eleven (11) golf courses were**
21 **involved initially, but the RWDS was designed to ultimately meet water**
22 **demands of twenty (20) golf courses. The goal and objective of the RWDS was**
23 **to provide a dependable water supply to the golf courses.**

24 In contrast, the Sun Cities already have existing golf courses and, except as I
25 discuss further herein, have an existing water supply for these golf courses.
26 The only reason for pursuing the project is to provide benefit to the aquifer

1 underlying Citizens' service areas in the Sun Cities. Therefore, the primary
2 focus of the PER should be to ensure that the benefit to the aquifer underlying
3 Citizens' service areas in the Sun Cities is maximized at the lowest possible
4 cost to ratepayers, not the mere delivery of the CAP allocations to Sun City
5 West and Sun City, respectively. The requirement contained in Decision No.
6 62293 to evaluate "the need for all major elements" required the PER to
7 evaluate all major elements of the proposal in the context of this overriding
8 goal. Unfortunately, the PER ignored the primary purpose of the project.

9
10 **Q. How would you have approached the evaluation of Citizens' proposal for a**
11 **groundwater savings project?**

12 A. I would have attempted to review all Alternatives, which would maximize the
13 goal (i.e., the benefits to the aquifer underlying the Sun Cities while minimizing
14 the costs), and compare the Alternatives based upon their relative costs to
15 achieve the goal. Additionally, I would attempt to maximize the use of existing
16 facilities, minimize the need for new facilities, obtain partners to share the costs
17 and eliminate components that are either unnecessary or are too costly in
18 relation to the goal of benefiting the aquifer.

19 **Q. Was this type of analysis performed in the PER or the Supplement?**

20 A. No. The PER does not provide any confirmation or even analyze the benefits
21 provided the aquifer by the various Alternatives being examined. Instead, the
22 PER examines only whether the Alternative is capable of delivering 2,372 acre
23 feet ("af") to the Sun City West golf courses and 4,189 af to the Sun City golf
24 courses and the relative cost thereof.

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1 **III. THE PER IS PREMISED UPON UNSUPPORTED ASSUMPTIONS**

2
3 **Q.** In evaluating the PER, do you agree with the conclusions and
4 recommended Alternative?

5 **A.** No.

6
7 **Q.** Why not?

8 **A.** There are significant factors that are either assumed as necessary components of
9 the Plan or rejected without sufficient evaluation and explanation.

10 **Q.** Please explain to what factors and assumptions you are referring.

11 **A.** First, the Plan assumes that the project must be designed to deliver 2,372 af of
12 CAP water to Sun City West golf courses and 4,189 af of CAP water to Sun
13 City golf courses and to all golf courses expressing a willingness to participate.
14 This assumption results in a recommendation to build an expensive and
15 unnecessary distribution system in Sun City. The PER fails to assess how the
16 new infrastructure can be minimized by maximizing use of existing facilities
17 and maximizing deliveries to golf courses in Sun City West and, to the extent
18 necessary at all, in the northern portion of Sun City.

19
20 Second, certain golf courses were entirely excluded from the process. The
21 Recreation Centers of Sun City demanded exclusive right to use CAP water
22 (PER at A-4). The Sun City Recreation Centers have no right to demand
23 exclusive right to utilize CAP water. This eliminated consideration of three
24 golf courses with an annual water demand of 1,875 af, two of which are north
25 of Bell Road. This unwarranted demand should not have been accepted unless
26 the golf courses accepted the additional costs associated with it. In Sun City

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West, two golf courses that currently utilize recovered effluent were summarily excluded from the Plan. The only reason given for excluding these two golf courses is: "These courses cannot participate in the GSP because they do not have groundwater rights." (PER at A-4) Based on this rationale alone, the PER eliminates consideration of an annual water demand of 1,015 (PER at B-11). I am aware of nothing that precludes Citizens from directly delivering CAP water to these golf courses, even though they do not have groundwater rights.

Third, the PER assumes every drop of the CAP allocation must be delivered to a golf course and that all golf courses expressing willingness to participate must be included in the Plan. The PER should have evaluated which deliveries were most cost effective.

Fourth, recharge was entirely ignored. Recharge should have been treated as a base case, with all Alternatives compared against recharge. Further, recharge should have been considered as a method of providing operational flexibility.

Fifth, the Beardsley Canal dry-up period was assumed to create insurmountable operational problems (PER at D-4). This was never substantiated and is not correct.

Sixth, the wheeling charge assumed for the Beardsley Canal was presented without negotiations of any kind (PER at D-4) skewing the PER to Alternative A.

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1 Seventh, the Recreation Centers of Sun City West's assertion that the existing
2 system cannot be used to transport water West to East because of obligations to
3 provide effluent was accepted without evaluation or analysis (PER at D-19).

4
5 Eighth, the existing effluent distribution system in Sun City West was
6 considered without evaluation of any improvements (PER at D-19). Yet, by
7 relatively simple improvements to the existing system, various Alternatives
8 rejected or not studied at all by the PER become feasible.

9
10 Ninth, the text, individual summaries and cumulative summaries do not
11 correlate with regard to booster station and right-of-way costs resulting in
12 skewing the recommendation toward Alternative A.

13 Tenth, the PER assumes the golf courses have sufficient water rights to
14 effectuate an exchange with Citizens. As indicated in Response to SCTA Data
15 Request C-1.34, as of August 2005, 1,639 af of General Industrial Use Permits
16 held by Sun City West Recreation Centers and Briarwood will expire, leaving
17 1,405.27 af of annual pumping not encompassed by an existing water right.

18
19 **IV. FAILURE TO CONSIDER RECHARGE AS AN OPTION RENDERS**
20 **THE PER INCOMPLETE**

21 **Q. Do you believe the PER is incomplete and inaccurate due to its failure to**
22 **consider the recharge option?**

23 **A. Yes. When hearings were previously conducted on this matter in 1999, the**
24 **Commission had not recognized recharge as meeting the used and useful**
25 **criteria. Decision No. 62293 found that recharge could satisfy the used and**
26 **useful criteria for ratemaking purposes. Additionally, the Agua Fria recharge**

1 site is now under construction, rather than a mere speculative possibility.
2 Further, at a minimum, the PER should have considered recharge as both the
3 base Alternative and as a method of taking a portion of the allocation if so
4 doing would eliminate significant infrastructure cost.

5
6 **V. THE PER FAILED TO ASSESS THE IMPENDING EXPIRATION OF**
7 **GENERAL INDUSTRIAL USE PERMITS**

8 **Q. Do you have any specific concerns with the viability of the Alternatives that**
9 **have been proposed?**

10 **A. Since this Plan has been designed as a groundwater exchange, the entity**
11 **receiving water must have valid water rights in order to participate in the**
12 **exchange. I have prepared a chart that demonstrates that upon expiration of the**
13 **current Industrial Use Permits currently utilized by the participating golf**
14 **courses in Sun City West, in August 2005 there will be a deficiency of 1,405.27**
15 **af per year, meaning existing water rights are insufficient to cover the annual**
16 **usage anticipated by the participating golf courses on an average year. See,**
17 **Attachment DH-6. (Note, numbering of Attachments continue from my pre-**
18 **filed testimony submitted September 10, 1999.) The deficiency will increase in**
19 **heavy water use years and will decrease in low water use years. During an**
20 **average year, the participating golf courses will have rights to receive only**
21 **2,329.73 af of groundwater, which will also constitute the maximum amount of**
22 **CAP water that can be exchanged. This amount does not even reach the 2,372**
23 **af of CAP water available to Sun City West Utilities, Inc. ("SCW"). The PER**
24 **did not address this deficiency at all.**

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Q. If the participating golf courses have insufficient grandfathered rights to exchange for CAP water, does that preclude the delivery of CAP water to the golf courses?

A. It does under the Plan proposed by Citizens. However, the golf courses are within the boundaries of Citizens' service areas. Citizens can deliver CAP water to any of these golf courses without an "exchange" agreement. However, Citizens would not be able to characterize its withdrawals of groundwater as CAP water.

Q. What benefits to the aquifer are derived by Citizens characterizing its withdrawals as CAP water?

A. There is no advantage to the aquifer. In fact, it is conceivable, depending on how the Department accounts for CAP water withdrawn by Citizens, that characterizing withdrawals of pumped water as CAP water would negatively impact the aquifer.

Q. How could characterizing withdrawals as CAP allow Citizens to negatively impact the aquifer?

A. Citizens has to meet conservation requirements as well as assured water supply rules. CAP water is deemed a renewable resource. Therefore, to the extent Citizens is deemed to be utilizing CAP water, it is more likely to meet assured water supply standards and conservation requirements. This all depends on how the Department actually accounts for the CAP water both with regard to conservation requirements and assured water supply requirements. I am neither a hydrologist nor an expert on the Groundwater Management Act, therefore, I have not attempted to quantify the impact to Citizens. However, a complete

1 PER should examine how characterizing Citizens' pumped water as CAP water
2 may adversely impact the aquifer. The PER does not contain this analysis.
3

4 **VI. THE LACK OF A HYDROLOGIC ANALYSIS RENDERS THE PER**
5 **INCOMPLETE AND INADEQUATE**

6 **Q. Does the PER include any hydrologic analysis?**

7 A. No. This is another major deficiency of the PER. Unlike the Scottsdale project
8 where developers were paying the initial construction costs in order to provide
9 an initial water source to golf courses, the purpose of this project is to maximize
10 the benefits to the aquifer underlying the Sun Cities at the least cost to Citizens'
11 ratepayers. The PER evaluates the Alternatives solely from the prospective of
12 the cost of delivering 2,372 af to specific Sun City West golf courses and 4,189
13 af to specific Sun City golf courses. There is no attempt to evaluate the
14 Alternatives in context to their impact on the aquifer or to compare them with
15 the impact of recharge and direct delivery alternatives that are available.

16 **Q. If a hydrological analysis is critical to evaluating the Alternatives, why**
17 **haven't you and/or another expert for SCTA independently performed the**
18 **analysis?**

19 A. Such an analysis is beyond my expertise. It is my understanding that SCTA did
20 not pursue a separate hydrological analysis for this hearing because of the
21 limited nature of this evidentiary hearing as framed by the Procedural Order,
22 limited time, and limited finances.

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1 Q. Do you believe that such a hydrologic analysis should be performed and
2 evaluated prior to the Commission authorizing Citizens to proceed with
3 this project?

4 A. As I have indicated, the focus of this project and the main reason it is being
5 pursued at all is the belief that it would provide more direct benefits to the
6 aquifer underlying the Sun Cities instead of the less costly recharge projects
7 (such as the Agua Fria Recharge—estimated to cost as little as \$4.00 per af to
8 use). While logically it seems likely that eliminating use of groundwater within
9 the Sun Cities would provide greater direct benefits to the aquifer than
10 recharging that water four or five miles north of the Sun Cities, I am not aware
11 that any hydrologic evidence has ever been presented to this Commission (or to
12 the CAP Task Force for that matter) comparing the hydrologic benefits of the
13 two projects. Certainly, before the Commission authorizes imposing more than
14 \$15 million in direct construction costs and its related return as well as the
15 annual operation and maintenance costs of this proposal on the ratepayers, it
16 should require the Company to substantiate the underlying premise that led to
17 this proposal in the first instance—that the aquifer underlying the Sun Cities
18 will be benefited more directly and in an sufficient amount to justify this Plan
19 over the less expensive recharge options. This requires a hydrologic analysis of
20 comparing the various Alternatives to each other and to recharge as a base case.

21 In this regard, it is important to recognize that the technical advisors to the CAP
22 Task Force substantially discounted the weight to be given the direct benefit of
23 this project and as a result, actually rated recharge ahead of this project. See,
24 Attachment DH-7. For these reasons, the PER is incomplete and inadequate
25 basis to authorize Citizens to proceed without such an analysis.

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2 **VII. THE CREDITABILITY OF THE PER IS ADVERSELY IMPACTED BY**
3 **BENEFITS RECEIVED UNRELATED TO THE ACTUAL PURPOSE OF**
4 **THE PLAN**

5 **Q. Are there benefits to the golf courses and the Recreation Centers derived**
6 **from this project unrelated to benefits to the aquifer?**

7 **A. As discussed earlier in my testimony, participating golf courses in Sun City**
8 **West must secure a replacement source of water by August 2005 for 1,405.27**
9 **af to meet annual demands. This project solves the need for securing a new**
10 **source of water. Another option available to these golf courses is to take direct**
11 **delivery of effluent, as originally planned when the General Industrial Use**
12 **Permits were issued as a temporary bridge source. If all the effluent generated**
13 **in Sun City West was directly delivered to golf courses, approximately 2,800 af**
14 **of pumping could be eliminated at no cost to Citizens' ratepayers.**

15 Another benefit to both Recreation Centers is lowering their costs to operate the
16 golf courses. CAP water is being provided at 80% of their power costs to pump
17 groundwater.

18 **Q. How does the existence of these other factors impact the creditability of the**
19 **PER?**

20 **A. In this instance, none of the contracting parties will ultimately be responsible**
21 **for the costs of constructing, operating or maintaining the approved facilities, as**
22 **it is my understanding that the construction costs, operation, maintenance and**
23 **return will be recovered from rates imposed on Citizens' ratepayers. Therefore,**
24 **there is no assurance that the parties are attempting to design the least cost**
25 **alternative. As a result, items that ease operation, but are not truly necessary,**
26 **such as a telemetry central supervision control and data acquisition control**

1 system, are included. Further, parties have no incentive to avoid imposing
2 conditions that may increase costs (such as insisting that certain golf courses
3 not participate, insisting that the respective CAP allocations are delivered to the
4 golf courses in the service area having the allocation, or refusing to consider
5 utilization of the existing effluent distribution system for West to East
6 deliveries). The fact that the PER accepted these propositions with no real
7 scrutiny emphasizes the dangers of having facilities designed by parties who are
8 not ultimately responsible for paying either the construction or operating costs
9 of the facilities they approve.

10
11 **Q. What other aspects of Citizens' operations impact the aquifer?**

12 A. Citizens relies almost exclusively on groundwater to meet its water demands.
13 Therefore, its decisions to operate particular wells, to drill or abandon wells and
14 to expand its service territories all impact the aquifer.

15 As indicated in Response to SCTA Data Request C-1.11, in 2000 Citizens
16 commenced operating the Underground Storage Facility at the CWR water
17 campus pursuant to Permit No. 71-534362.0001. This storage facility is
18 permitted to store 3,041.5 af per year. During 2000, 2,896 af of reclaimed
19 water was delivered to the facility. Response to SCTA Data Request C-1.12.
20 Of that amount, 2,772.98 af was deemed stored. Response to SCTA Data
21 Request C-1.11. The entire 2,772 af of effluent was recovered in 2000 as
22 follows: Sun City Water Company ("SC") recovered 1,409.49 af; and SCW
23 recovered 1,363.49 af. *Id.*

24 In addition, 701.27 af of long-term storage credits earned at the storage facility
25 in previous years were recovered by SCW and delivered to the Deer Valley and
26

1 Desert Trail Golf Courses in Sun City West. *Id.* Thus, while allegedly
2 pursuing a 15 million dollar project to eliminate golf course pumping, the very
3 effluent that was supposed to be utilized on golf courses in the first instance, is
4 being "stored" and annually recovered by the two water companies, but only
5 20% of the recovered effluent is used to meet the demands of the golf courses.

6
7 Furthermore, the CAP water Citizens is "storing" in the MWD Storage Facility
8 is also being recovered annually: 2,100 af of CAP water is being recovered
9 annually by Citizens Utilities Agua Fria Division; 4,189 af of the CAP water is
10 being recovered annually by SC; and another 2,372 af of CAP water is
11 recovered annually by SCW. In short, Citizens is recovering every drop of
12 water it is "storing," with no assurance of a net benefit to the aquifer.

13
14 **Q. Did the PER evaluate benefits to the aquifer achievable through changes in
Citizens' operations?**

15 **A. No.**

16
17 **VIII. THE PER FAILED TO EVALUATE INTEGRATING CAP DELIVERIES**
18 **WITH OPERATION OF CITIZENS' SEWER TREATMENT PLANT**
19 **AND UNDERGROUND STORAGE FACILITY**

20 **A. An Integrated Operation Plan Reduces Costs by \$9,071,141 and**
21 **Reduces Pumping More Than a Stand Alone CAP Delivery**
22 **System**

23 **Q. Did the PER study integrating SWC's existing Sewer Treatment Plant and**
24 **its Underground Storage Facility as part of a CAP delivery system?**

25 **A. No it did not.**

26 **///**

1 Q. Could you explain how the two systems could be utilized together?

2 A. Sun City West's golf courses were designed to take direct delivery of effluent.
3 However, the quality of the effluent, in particular its nitrogen content, was
4 unacceptable by the golf courses (PER at A-4). Thus, although a distribution
5 system was in place, the golf courses refused to accept delivery of effluent. The
6 PER did not evaluate whether a similar decision could be made after the CAP
7 distribution water system is installed. The effluent recharge basins associated
8 with the treatment plant were permitted as an Underground Storage Facility,
9 allowing the accumulation of storage credits that could be recovered. Response
10 to SCTA Data Request C-1.11. As noted above, the credits are currently being
11 used to support delivery of water to only two Sun City West golf courses. The
12 rest of the stored effluent is apparently being recovered and delivered elsewhere
13 in the service areas of SC and SCW. Citizens Communications Co.-Agua Fria
14 Division also holds storage and recovery permits for use at the storage facility,
15 but according to the Response to SCTA Data Request C-1.11, these permits
16 were not utilized in the year 2000.

17 Recently, Citizens acquired ownership of the treatment plant and has added or
18 is adding a denitrofication component to the plant. This should substantially
19 improve the water quality making it usable for direct delivery to the golf
20 courses. Once the denitrofication component is operational, if it is not already,
21 Citizens should be able to make direct deliveries to the Sun City West golf
22 courses of effluent alone or, if any variation of one of the Alternatives is
23 constructed, of a combination of effluent and CAP water. Under a normal year,
24 the private and Recreation Center golf courses, in the Sun City West area have
25 a demand of approximately 5,519 af (PER at B-11). Thus, the golf courses in
26 Sun City West could take direct delivery of the approximate 2,800 af of effluent

1 that is generated by the plant, supplemented by CAP water deliveries of
2 approximately 2,719 af of the 6,561 af CAP allocation. This leaves 3,842 af of
3 CAP water available. 3,041 af of this amount could be stored at the storage
4 facility, subject to amending the Underground Storage Permit to allow storage
5 of CAP water. Further, Citizens has indicated it believes the storage capacity of
6 the facility could be increased somewhat, although they have done no studies to
7 determine to what degree the storage facility could accommodate more storage
8 during the year. Response to SCTA Data Request C-1.14. A study should be
9 undertaken to determine the additional storage capacity of the existing
10 Underground Storage Facility. It is possible the entire residual 801 af of the
11 CAP allocation, or even a greater amount, could be stored at Citizens' existing
12 Underground Storage Facility.

13 **Q. If joint use is made of the existing Underground Storage Facility, what**
14 **portions of the proposed Plan become unnecessary?**

15 **A.** The Sun City distribution system and SCADA system costs would be
16 eliminated from all Alternatives, with possible exception of Alternatives that
17 use the existing effluent distribution system to carry CAP water West to East.
18 This represents a savings of \$9,071,141 on all Alternatives, directly benefiting
19 all Citizens' ratepayers. To the extent all residual CAP water (up to 801 af)
20 cannot be stored at Citizens' existing Underground Storage Facility, this
21 residual CAP water could be stored at the Agua Fria recharge site. Joint use of
22 the existing Underground Storage Facility will permit delivery of all or most of
23 the CAP allocation into the Sun Cities' service areas. It likely would eliminate
24 all pumping that currently occurs at all the Sun City West golf courses. A
25 construction of a distribution line to the Willowcreek/Willowbrook Golf
26 Courses, which have an annual demand of 1,329 af, could also be evaluated.

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This should eliminate the need to recharge any of the CAP allocation outside of the Sun Cities. However, the additional cost of this distribution system must be closely scrutinized to determine whether there are sufficient benefits to the aquifer or to the operations of the system associated with actual delivery of this additional CAP amount (801 af) versus the far less expensive option of recharge to justify the costs of extending the distribution system to the Willowcreek/Willowbrook Golf Courses.

Q. Would you summarize the benefits of this proposal?

A. Jointly using an Underground Storage Facility and maximizing direct deliveries of effluent would achieve the goal of getting Sun City West totally off pumps. It would use all available effluent directly, while bringing 5,800 af of CAP water, or more, into the Sun Cities' service areas. It eliminates the entire Sun City distribution system and the SCADA system. Further, it provides an interconnection with the CAP canal and a delivery system that could be utilized in the future if potable water supplies were necessary. The life cycle cost of all Alternatives would be reduced by \$9,071,141, with the possible exception of those relying on the existing effluent system to carry CAP water West to East.

IX. USE OF STORED WATER AND WATER CREDITS NEEDS TO BE RESTRICTED

Q. Do you have any recommendations regarding recovering water stored at a joint use Underground Storage Facility?

A. Since the goal is to maximize benefits to the aquifer, Citizens should not be able to recover or transfer any of the water stored at the facility if doing so increases the amount of pumping that would otherwise be allowed. The Commission, in Decision No. 62293, ordered that "approval of the use of CAP

1 water is conditioned upon water credits not being utilized in a manner that
2 would result in additional groundwater depletion in the Sun Cities area.” As set
3 forth earlier in my testimony, Citizens is accounting for all stored water as
4 recovered on an annual basis and thus avoiding the accrual of “water credits”.
5 To eliminate this loophole in Decision No. 62293, the Commission should
6 order use of stored water by SC or SCW (of any source) and any water credits
7 earned thereby be limited to addressing conservation related penalties imposed
8 on existing customers unless otherwise ordered by the Commission. This
9 limitation will preserve the stored water for the benefit of existing Citizens
10 customers.

11 **X. THE USE OF THE BEARDSLEY CANAL WAS NOT PROPERLY**
12 **EVALUATED BY THE PER**

13
14 **Q. Are there any other alternatives that you believe the PER failed to**
15 **properly examine?**

16 **A. The PER analysis of the use of the Beardsley Canal and the existing system to**
17 **deliver waters East to West is also inadequate.**

18 **Q. Please explain the PER’s inadequacies in analyzing the Beardsley Canal.**

19 **A. The PER fails to adequately examine the use of the Beardsley Canal in lieu of a**
20 **new CAP trunk line and the cost estimates associated with its use are not based**
21 **upon any firm negotiations. Citizens met with MWD only one time. Response**
22 **to SCTA Data Request C-1.15. MWD expressed significant interest in**
23 **wheeling water for Citizens. *Id.* However, the use of the Beardsley Canal was**
24 **rejected in the PER on the following basis:**

1 “The Beardsley Canal currently does not convey water
2 during four months of the year. Until this changes, the
3 GSP will have to use all of its allotment in eight months
4 instead of twelve. This scenario would require an
5 increased trunk pipe size and an increase in the size of
6 pumps at the booster pump station required for all of the
7 Beardsley Canal Alternatives, above that which was
8 estimated in this study. This enlarged system would then be
9 inactive for four months of the year. This effectively
10 eliminates Alternative B as long as the MWD continues to
11 undergo an annual dry-up in the Beardsley Canal.”
12 (Emphasis in original.)

13 An identical statement was set forth relating to Alternative D and would also
14 apply to Alternatives C and E, to the extent they rely on the Beardsley Canal.

15 **Q. Do you agree with this assessment of the Beardsley Canal and its impact on**
16 **the Alternatives that utilize the Canal?**

17 **A.** No. The PER contains no analysis to support this broad negative conclusion.
18 There is no indication that MWD would not be willing to shorten the dry-up
19 period considerably. It should be noted that the Salt River Project used to have
20 a much longer dry-up period. However, as non-agricultural water demand
21 increased, the dry-up period has been shortened and now averages
22 approximately two weeks. In view of MWD’s adoption of a general wheeling
23 policy and expression of interest to participate in this particular project, there
24 should have been further exploration with MWD before summarily rejecting the
25 option. Typical maintenance requirements in the northern portion of the
26 Beardsley Canal could be performed much more quickly than the current four
 month dry-up period.

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Q. Is the Beardsley Canal rendered nonviable if the current dry-up period is continued?

A. Only 480 af are used on the participating golf courses in the months of December, January and February. An additional 421 af is utilized on the participating golf courses in November (See, PER at B-11). To the extent this volume of water cannot be delivered in the remaining eight months with the system as designed, it could be recharged in the Agua Fria Recharge Facility. Furthermore, the delivery system being designed will operate for many years. The dry-up period can be anticipated to be reduced over time, which will eliminate or minimize issue.

Q. Does the PER's treatment of the Beardsley Canal reflect a basic flaw with the PER?

A. Yes. This aspect of the PER illustrates the adverse impacts created by assuming certain golf courses will not participate and the system must be designed to ensure that every acre foot of CAP water can be delivered every year to the designated golf courses and used proportionately on the participating golf courses. The system should be designed to optimize CAP water deliveries while minimizing costs to Citizens' ratepayers. This is accomplished by maximizing the use of existing infrastructure and maximizing deliveries to the closest golf courses. The Agua Fria Recharge Facility should be integrated into the Plan to minimize oversizing and to provide operational flexibility. The PER failed to follow any of these guidelines for optimizing CAP water deliveries at the least cost to Citizens' ratepayers.

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2 **XI. IMPROPER OR INADEQUATE TREATMENT OF WHEELING**
3 **COSTS, BOOSTER STATION COSTS AND RIGHT-OF-WAY COSTS**
4 **SKEWED THE RECOMMENDATION TOWARD ALTERNATIVE "A"**

5 **Q. Do you have any other problems with the Beardsley Canal analysis?**

6 **A.** The wheeling cost associated with the Beardsley Canal option constitutes a
7 \$2,686,025 component to the life cycle cost to Alternatives B, C, D and E. This
8 cost is computed at the wheeling rate of \$25 per acre foot. However, neither
9 the PER nor the Responses to Data Requests indicate any negotiations were
10 conducted concerning the wheeling rate. The wheeling cost may be able to be
11 reduced sufficiently such that the life cycle costs for Alternatives B and C
12 would be equal to or lower than Alternative A, even before taking into account
13 the other adjustments I discuss below.

14 **Q. Are there other issues in the comparison of costs that you have identified?**

15 **A.** Pages E-3 and E-4 of the PER indicate a life cycle cost for the booster pump
16 station of \$1,591,400 composed of \$476,873 in construction costs and
17 \$1,114,527 in operation and maintenance costs. However, the booster pump
18 station summary contained on page D-47 of the PER reflects total life cycle
19 costs of \$1,157,073 composed of capital costs of \$307,660 and O&M costs of
20 \$849,413. Yet, a lower cost for the booster pump station is reflected in each of
21 the various Alternatives (PER at D-14, D-16 and D-18) where a capital cost of
22 \$307,660 and a present worth O&M of \$125,954 is utilized. Thus, the
23 comparative summary on pages E-3 and E-4 overstates the costs associated
24 with the booster pump station from a high of \$1,157,786 (if the individual
25 estimates are utilized) or by \$434,327 (if the booster pump station summary
26 contained on page D-47 is utilized).

1 Q. Have you identified any other costs that may affect the comparison of the
2 Alternatives?

3 A. The manner in which right-of-way is treated in the various Alternatives is not
4 fully explained and appears to be inconsistent. For Alternative A, the PER at
5 D-12 indicates right-of-way costs could be as low as \$50,000 if, but only if,
6 Peoria successfully obtains the right-of-way. Otherwise, the right-of-way cost
7 estimate ranges from a low of \$152,000 to a high of \$555,000. The cost
8 summary for Alternative A, set forth on page D-13, uses right-of-way costs of
9 \$100,000. Therefore, it is possible that the Alternative A cost summaries on
10 pages E-3 and E-4 underestimate right-of-way costs by as much as \$455,000
11 based upon the estimates contained in the PER.

439,327

889,3

12 In contrast, the right-of-way costs for Alternatives B, C and D all use values
13 significantly greater than the highest estimated right-of-way acquisition cost
14 contained in the text of the PER. For example, at page D-14, costs for easement
15 or right-of-way acquisition for Alternative B are estimated to range from
16 \$49,000 to \$68,000. The summary uses a value of \$116,000. Page D-15
17 estimates right-of-way costs for Alternative C to range between \$60,000 to
18 \$90,000. The summary of costs utilizes right-of-way costs of \$150,000.
19 Similarly, the actual estimate of right-of-way costs for Alternative D, reflected
20 on page D-7, is \$80,000 to \$120,000, but the summary utilizes a value of
21 \$200,000. By overestimating the right-of-way costs for Alternatives B, C and
22 D, while using a low estimate for right-of-way costs for Alternative A results in
23 a disparity in the cost summary of Alternative A relative to Alternatives B, C
24 and D by as much as \$535,000. This coupled with the improper use of the
25 booster station costs reflects an overestimate of Alternatives B, C and D relative
26 to Alternative A by as much as \$864,327. If a lower wheeling rate is also

455,000

889,327
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1 negotiated, Alternatives B, C and D could be over priced, relative to Alternative
2 A, by more than 2 million dollars each. After these adjustments, Alternatives B
3 and C would be cheaper than Alternative A, warranting additional evaluation.
4

5 **XII. THE EVALUATION OF ALTERNATIVE "E" WAS INADEQUATE**

6
7 **Q. The PER at D-45 indicates the hydraulics of the existing effluent system**
8 **would not accommodate the flow of the entire CAP allocation for the Sun**
9 **Cities without "nearly a complete reconstruction of the entire system".**
10 **How do you respond to this contention?**

11 **A.** I have not performed a separate hydraulic analysis and it is clear from the
12 analysis included in the PER that there are some constraints associated with
13 merely connecting a new CAP transmission line to the existing system along
14 Johnson Boulevard. However, the analysis should not have ended there. While
15 HDR did perform some hydraulic analysis with improvements necessary to
16 accommodate direct delivery of effluent to the Deer Valley Golf Course, no
17 attempt was made to identify the impacts of specific improvements to the
18 existing system or alternative connection points in an effort to address
19 constraints to moving CAP water West to East. (See Attachment DH-8).
20 Therefore, the PER is inadequate and insufficient to justify eliminating
21 Alternative E.

22 **Q. Please explain further how the PER should have studied Alternative E.**

23 **A.** From Figure D-4, Appendix F and Responses to SCTA Data Requests, it
24 appears the hydraulic study examined delivering the entire CAP allocation at a
25 connection on Johnson Boulevard with no improvements to the existing system.
26 When this run identified constraints, a run could have been, and should have
been made reflecting alternatives, such as: 1) installation of a 14 inch line from

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Johnson Boulevard south along Tanglewood Drive and 150th to connect with the existing system at the Grandview Golf Course; or 2) installation of the new 24 inch line along the Grand Avenue alignment past Johnson Boulevard to Meeker Boulevard, and into Meeker Boulevard and connecting with the 16 inch and 14 inch lines located on Meeker. Either of these modifications should significantly improve the hydraulics of the existing system with flows traveling West to East. A few additional internal improvements could also be evaluated such as new short interconnections (a) along Trail Ridge Drive; (b) along Echo Mesa and Greenview; and (c) within Hillcrest. A depiction of the location of these various improvements is attached as Attachment DH-9. These improvements would create an internally looped system and should significantly improve the existing system hydraulics making Alternative E viable. These improvements do not constitute "nearly a complete reconstruction of the entire system" as the PER suggests would be required.

Q. Do you have any estimates of the amount of water such a system could likely handle?

A. As shown by Alternative D and Alternative A, the PER has concluded that an unpressurized gravity flow 24 inch line is sufficient to handle the entire Sun Cities' allocation. Here you would have a 16 inch line looped with primarily a 14 inch line (with some 12 inch line). A combination of these two lines should more than adequately handle the entire 6,561 af of Sun Cities' allocation if desired. A booster station may, however, be required if the head from the Beardsley Canal or a joint facility with the Agua Fria Division and/or the City of Surprise is inadequate.

///
///

1 Q. Do these improvements provide operational flexibility?

2 A. With these improvements, it may be possible to operate the system as a totally
3 CAP system at times, running from West to East; a totally effluent system at
4 times, running from East to West; or even to deliver effluent East to West,
5 while delivering CAP water West to East. Such an operation, like the proposal
6 to use the existing Underground Storage Facility as a joint facility in
7 combination with direct deliveries of effluent, should allow for total or almost
8 total elimination of all pumping by golf courses in Sun City West.

9
10 Q. What portions of the proposed system become unnecessary under this
Alternative?

11 A. Under this scenario, the entire recommended Alternative A becomes
12 unnecessary. Instead, a new Alternative E is utilized in conjunction with use of
13 the Beardsley Canal or a joint facility with the Agua Fria Division and/or the
14 City of Surprise.

15
16 Q. Have you estimated the cost of your revised Alternative E?

17 A. No. Until a hydraulic model is run identifying actual flows that could be
18 expected and identifies which of the possible improvements should be made, it
19 is premature to perform a cost analysis.

20
21 **XIII. A SCADA SYSTEM IS NOT WARRANTED**

22 Q. Do you agree with the PER's conclusion that a Telemetry Central
23 Supervision Control And Data Acquisition ("SCADA") control system is
24 required for this project?

25 A. If money is no object, such a SCADA system optimizes the convenience to the
26 operator. However, such a system is not mandatory. It should be noted that the

1 RWDS in Scottsdale, which serves 20 golf courses, was designed and installed
2 without a telemetry SCADA system. Here, the need is far less.

3
4 **Q. Please explain why the need for telemetry SCADA system is less with the**
5 **present system than in the Scottsdale system.**

6 **A.** Primarily because this project is a gravity system that operates on a demand
7 basis for golf course turnouts. The RWDS in Scottsdale is a series of pump
8 stations transporting water up hill. Additionally, the Sun City and Sun City
9 West golf courses already have significant experience with operations. There is
10 significant historical data to assist in making annual and monthly estimates of
11 water demand, and experienced golf course personnel who have been adjusting
12 lake levels, in some instances for decades. All that is required is that these
13 persons communicate their water needs in a timely and uniform fashion so that
14 orders can be properly placed with the CAWCD and possibly MWD. The golf
15 course personnel would be required to operate the valves so that waters are
16 directed appropriately to the lakes in a timely fashion. Again, the golf courses
17 already have personnel on staff responsible for monitoring lake levels and
18 operating the golf course wells. The operation of the valving and placing orders
19 is no more complicated and should require no additional personnel.

20 **Q. Will the entire cost of the SCADA system be eliminated?**

21 **A.** No. Certain components will be totally eliminated, such as the remote
22 RTU/Radio Sites, the FCC License Application Fee, and the Radio Line of
23 Sight Study. The meters, meter vaults and valving would still be required;
24 however, manually operated meters and valving are significantly cheaper than
25 radio operated components. Further, my proposals eliminate entirely the
26 distribution system for the Sun Cities areas together with the proposed SCADA

1 system. This eliminates \$712,802 of the estimated capital cost of \$1,218,399
2 for a joint SCADA system. Since the operation of the valves would be the
3 responsibility of the golf courses, there would be very little operation expense
4 associated with manually controlled valves. There would be some
5 maintenance.

6
7 **XIV. THE SUPPLEMENT'S CONTRADICTION OF THE PER,**
8 **DEMONSTRATES THE UNRELIABILITY OF THE PER**

9 **Q.** The PER indicates that its analysis has determined that without the
10 participation of the two private golf courses in Sun City West, the GSP will
11 not be operationally feasible (PER at A-4). A Supplemental Engineering
12 Report was provided by Citizens to refute the conclusion in its own Report.
13 Does the Supplement demonstrate that the GSP proposed by Citizens will
14 be possible should Hillcrest Golf Course decide not to participate?

15 **A.** The Supplement provides no new data that was not available and discussed in
16 the PER. The fact that upon further evaluation of the same data previously
17 available to its consultant, Citizens has reached a contrary conclusion to the
18 consultant should raise significant concerns regarding the thoroughness of the
19 PER in the first instance. Secondly, it evidences how the same data can be
20 utilized to justify different conclusions depending on the goal trying to be
21 achieved. Clearly, Hillcrest Golf Course's lack of participation will reduce the
22 operating tolerances of the Sun City West system. It emphasizes the need to
23 have all Sun City West golf courses participate. Participation by the Desert
24 Trail and Deer Valley Golf Courses, as I have suggested, will also provide
25 operational flexibility. Further, if Citizens participates in the Agua Fria
26 recharge, it can immediately notify CAWCD to divert its deliveries to the Agua
Fria Recharge site and thereby minimize the onsite storage that is necessary.

1
2
3 **XV. THE EVALUATION OF JOINT PROJECTS WAS INCOMPLETE**

4 **Q. Did the PER adequately address the feasibility of joint participation with**
5 **the Agua Fria Division and the City of Surprise?**

6 **A.** The evaluation reflected in the PER is not an in-depth analysis. However, the
7 study presented indicates that participation with one or both of these entities
8 will substantially reduce the cost of bringing CAP water to the Sun City West
9 service area as compared with constructing the Alternative A trunk line. The
10 scenario that was not evaluated, however, was limiting CAP deliveries to those
11 that could be made utilizing the existing effluent system in a West to East
12 direction. Nor is there an evaluation of whether the pump station, if required,
13 can be operated as a joint facility thereby significantly reducing the cost to the
14 Sun Cities.

15 **XVI. RECOMMENDATIONS**

16 **Q. Do you recommend proceeding with any of the Alternatives presented in**
17 **PER and Supplement at this time?**

18 **A.** No. I do not believe the PER and Supplement provide a sufficient basis to
19 proceed with any of the Alternatives reviewed by the PER. Serious questions
20 remain regarding all the Alternatives identified in the PER. Further, the PER
21 did not evaluate the hydrologic impact of the various Alternatives and failed to
22 consider viable options such as joint use of Citizens' existing Underground
23 Storage Facility and the Alternative E I have discussed in my testimony. Under
24 these circumstances, I would recommend that the Commission require Citizens
25 to continue to recharge the CAP water at the present time. I would also
26 recommend the Commission closely scrutinize the manner in which Citizens is

1 recovering the water being stored through recharge of both CAP water and
2 effluent and place tighter limitations thereon.
3

4 **Q. If the Commission decides to proceed with some sort of direct delivery**
5 **option, do you have a recommendation?**

6 **A.** Because of the uncertainties with the existing PER and Supplement, I would
7 advise the Commission to proceed very cautiously and to authorize construction
8 in phases. Before authorizing any new construction, I recommend Citizens
9 further evaluate the existing distribution system and quantify the amount of
10 delivery that could be made if it were looped so that the flows could travel in
11 either direction. Because use of the existing Beardsley Canal turnout close to
12 Grand Avenue offers the best opportunity to minimize capital costs, I
13 recommend that option be further analyzed, including negotiating an actual
14 wheeling price with MWD.

15
16 If the use of the existing distribution system is demonstrated to be unworkable
17 after an adequate analysis is performed and if the cost of wheeling is not
18 significantly reduced after actual negotiations with MWD, then I recommend
19 proceeding with the Alternative A pipeline in conjunction with Citizens'
20 existing Underground Storage Facility and the Agua Fria Storage Facility.

21 Under no circumstances would I recommend allowing construction to
22 commence on the \$7.3 million distribution system in Sun City or the \$1.7
23 million SCADA system until there is sufficient experience in operating the Sun
24 City West portion of the system to identify both operational problems and
25 whether there really is a need for participation by Sun City golf courses and a
26 SCADA system. This would probably take at least three years of operation in

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Sun City West. Thereafter, if a distribution system could be justified in Sun City, I would require the system to be designed so that both Recreation Centers and private golf courses are able to participate and that deliveries to the northernmost golf courses be maximized before any system is constructed below Bell Road.

Q. Does this conclude your testimony?

A. Yes.

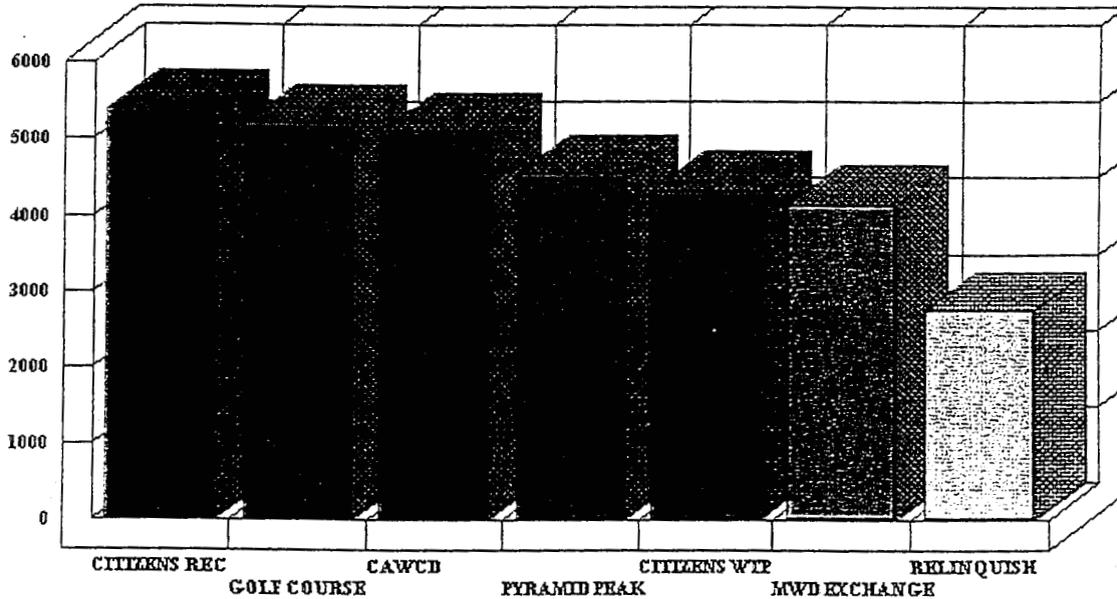
**UPON EXPIRATION OF GENERAL INDUSTRIAL USE PERMITS
(AUGUST 2005)**

<u>Golf Course</u>	<u>Annual Demand</u>	<u>Type 1 or Type 2 Rights</u>	<u>Excess/ (Deficiency)</u>
Stardust & Echo Mesa:	1,021	417	(604)
Grandview:	761	368.5	(392.5)
Pebblebrook:	689	753	64
Trail Ridge:	539	306.38	(232.62)
Briarwood:	<u>725</u>	<u>484.85</u>	<u>(240.15)</u>
TOTALS	3,735	2,329.73	(1,405.27)

For both communities, the direct use of CAP water for golf course irrigation was the preferred option followed by the CAWCD Recharge Project and the Citizens Recharge Project. Relinquishment was least preferred.

During the ranking process, concern was expressed by a few Task Force members that some participants were voting for their favorite water-use option, rather than objectively ranking how well each option performed against the criteria. To understand the effect of this perceived situation, a Technical Team, consisting of Kerry Brough and Marvin Glotfelty, both of Brown & Caldwell, and Terri Sue C. Rossi of Citizens, developed detailed definitions for each of the "one to nine" levels for the criteria (see Appendix M). Based on these definitions, the Technical Team consistently rated each of the options against the criteria. The technical ratings were combined with the criteria weights assigned by the Task Force, and the results are shown below.

Worth - Technical Committee



The most significant difference between the Task Force and Technical Team's results was the effect of a higher rating of *direct benefits* for the recharge options by the

technical team. They also rated *used and useful* lower on the CAWCD option than the Task Force did, while rating *regulatory compliance* higher overall.

The results of the Technical Team substantially reaffirmed the selection of the top three options. The Citizens Recharge Facility came out slightly above the Golf Course option followed by the CAWCD Recharge Project. These results also coincided with the feedback from the public at the open houses. People who responded to the open house questionnaire from both Sun City and Sun City West open houses preferred the golf course irrigation option followed by the Citizens Recharge and the CAWCD Recharge options. Only five out of 103 respondents to the open house questionnaire said to relinquish the allocation.

V. Recommendation

At their meeting on May 19, 1998, the Task Force recommended a combination of options that will fulfill the long and short-term needs of the Sun Cities (see 5/19/98 meeting notes). Termed the Sun Cities/Youngtown Groundwater Savings Project, the Task Force recommended that CAP water be delivered to the Sun Cities through a non-potable pipeline. The CAP water would then be used to irrigate golf courses that have historically pumped groundwater. By doing this, every gallon of groundwater not pumped by the golf courses would be preserved for delivery to drinking water customers in the Sun Cities. Assuming the Arizona Corporation Commission approves the Task Force recommendation this year, the project could be completed by 2002.

While the Task Force recommended that Citizens proceed immediately with permitting and designing the groundwater savings project with the local golf courses, the Task Force realized that an interim solution was required to resolve the issue of CAP water being "used and useful". Until the golf course project is completed, the Task Force recommended that Citizens recharge the CAP water at the existing MWD Groundwater Savings Project or, if not available, at the CAWCD Agua Fria Recharge Project, once

Sun City West Models

Model 1 - Model number 1 illustrates the existing systems at 50% of July daily demand. Delivery is available for all non-expansion courses. Flow will need to be further restricted to match ideal flow in mainline pipe (15cfs).

Model 2 - The second model simulates an additional 16" pipe along Stardust Blvd to convey CAP water. The new pipe has been over designed to allow 20% more flow. Delivery is available for all non-expansion courses at 50% of July daily demand. Flow will need to be further restricted to match ideal flow in mainline pipe (15cfs).

Model 3 - This run adds effluent from the water treatment plant which is to be conveyed to the expansion courses (Deer Valley and Desert Trails). Additional 12" pipe is needed to connect expansion courses to the system along 151st Avenue. Full demand of the expansion courses is modeled and additional investigation into effluent supply is needed to determine if it can be supplied. All non-expansion courses have CAP water delivery at 50% of July daily demand. CAP flow will need to be further restricted to match ideal flow in mainline pipe (15cfs).

Model 4 - The fourth simulation is similar to Model 3 however an additional 16" pipe has been added along Stardust Boulevard. The pipe has been over designed to accommodate an extra 20% of flow.

Model 5 - This simulation is an expansion to Model 4 by replacing the delivery to Deer Valley with a new delivery pipe along 135th Avenue (Deer Valley 2). The 12" pipe delivers to the southeast corner of the golf course.

Model 6 - Model 6 is similar to Model 5 except the new pipe along Stardust Boulevard is 20" in diameter.

Model 7 - This run includes effluent from the water treatment plant and delivery to Deer Valley Golf Course from the new pipe along 135th Avenue. Full demand of the expansion courses is modeled and additional investigation into effluent supply is needed to determine if it can be supplied. All non-expansion courses have CAP water delivery at 50% of July daily demand. Flow times have been adjusted to lower hourly peak. The pipe along Stardust Boulevard is 16" in diameter. CAP flow will need to be further restricted to match ideal flow in mainline pipe (15cfs).

Model 8 - This run includes effluent from the water treatment plant. Additional pipe is needed along 151st Avenue to connect expansion courses to the distribution system. 50% of July peak daily demand for the expansion courses is modeled and additional investigation into effluent supply is needed to determine if it can be supplied. All non-expansion courses have CAP water delivery at 50% of July daily demand. CAP flow will need to be further restricted to match ideal flow in mainline pipe (15cfs).

Model 9 - This run includes effluent from the water treatment plant and delivery to Deer Valley Golf Course from the new pipe along 135th Avenue. 50% of July peak daily demand for the expansion courses is modeled and additional investigation into effluent supply is needed to determine if it can be supplied. All non-expansion courses have CAP water delivery at 50% of July daily demand. The pipe along Stardust Boulevard is 16" in diameter. CAP flow will need to be further restricted to match ideal flow in mainline pipe (15cfs).

Sun City Model

One model was run to size the new pipes needed for the distribution system. The design reflects a 20% over design. Final flows will fluctuate on any given day based on golf course demand and CAP supply. All recreation courses and Maricopa Lake have CAP water delivery at 75% of July daily demand.

Final Model

The final model simulates the Sun City Model and the Sun City West Model 7 combined and reduced total flows to approximately match the mainline alternative design flows (15cfs).

SUN CITY WEST MODELS

	1	2	3	4	5	6	7	8	9
Max CAP Flow Through Mainline Pipe A (cfs)	16.1	16.1	16.1	16.1	16.1	16.1	15.6	15.8	16.1
Min HGL @ Start of Sun City West System (ft)	1357.4	1357.4	1357.7	1357.7	1357.7	1357.7	1365.6	1357.6	1357.6
Max HGL @ Start of Sun City West System (ft)	1392.3	1392.3	1392.5	1392.5	1392.5	1392.5	1407.9	1392.4	1392.4
Sun City Delivery (cfs)	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Effluent Added (cfs)	0.0	0.0	3.3	3.3	3.3	3.3	3.3	1.7	1.7
Stardust Min Delivery Pressure (psi)	56.6	56.6	51.7	51.7	51.7	51.7	56.0	56.4	54.4
Stardust Max Delivery Pressure (psi)	73.7	73.7	69.8	69.8	69.8	69.8	78.4	71.9	69.1
Brarwood Min Delivery Pressure (psi)	50.8	50.8	44.5	44.5	44.5	44.5	48.9	47.9	47.9
Brarwood Max Delivery Pressure (psi)	69.7	69.7	64.8	64.8	64.8	64.8	72.9	67.5	63.7
Hillcrest Min Delivery Pressure (psi)	38.2	38.2	31.9	31.9	31.9	31.9	36.3	35.3	35.3
Hillcrest Max Delivery Pressure (psi)	58.0	58.0	53.1	53.1	53.1	53.1	61.2	55.8	55.8
Pebblebrook Min Delivery Pressure (psi)	60.9	63.4	47.8	55.0	55.8	56.8	60.7	77.1	59.9
Pebblebrook Max Delivery Pressure (psi)	81.7	82.8	71.3	76.1	76.6	77.4	84.7	55.0	80.0
Deer Valley Min Delivery Pressure (psi)	**	**	ND	ND	**	**	**	ND	**
Deer Valley Max Delivery Pressure (psi)	**	**	ND	14.0	**	**	**	23.5	**
Deer Valley 2 Min Delivery Pressure (psi)	**	**	**	**	13.9	17.4	18.7	**	22.9
Deer Valley 2 Max Delivery Pressure (psi)	**	**	**	**	36.0	38.4	44.1	**	43.7
Echo Mesa Min Delivery Pressure (psi)	28.7	38.5	ND	31.5	28.2	31.6	32.9	15.5	33.9
Echo Mesa Max Delivery Pressure (psi)	55.6	58.7	28.7	48.5	50.4	52.7	58.5	44.6	55.2
Grandview Min Delivery Pressure (psi)	32.0	40.0	1.9	27.3	29.8	36.1	36.2	19.1	35.5
Grandview Max Delivery Pressure (psi)	58.4	61.0	35.8	51.7	53.3	55.2	61.4	49.1	57.8
Trail Ridge Min Delivery Pressure (psi)	13.5	23.4	ND	ND	7.8	11.8	11.1	ND	17.0
Trail Ridge Max Delivery Pressure (psi)	41.4	44.6	7.5	27.8	36.3	38.6	44.4	28.5	41.1
Desert Trails Min Delivery Pressure (psi)	**	**	ND	ND	ND	2.1	1.4	ND	13.7
Desert Trails Max Delivery Pressure (psi)	**	**	ND	15.5	35.4	37.7	43.6	ND	40.3

Model 1 - No Effluent and No New Pipes
 Model 2 - No Effluent and New Starduct Blvd Pipe
 Model 3 - 3.3 cfs Effluent - Full Demand, No Stardust Blvd Pipe
 Model 4 - 3.3 cfs Effluent-Full Demand and No New Deer Valley2 Delivery
 Model 5 - 3.3 cfs Effluent-Full Demand and New Deer Valley2 Delivery
 Model 6 - 3.3 cfs Effluent - Full Demand, New Deer Valley2 Delivery and 20" Starduct Blvd Pipe
 Model 7 - 3.3 cfs Effluent-Full Demand, New Deer Valley2 Delivery, Change in Flow Times and 16" Stardust Blvd Pipe
 Model 8 - 1.65 cfs Effluent-50% Demand and No Stardust Blvd Pipe
 Model 9 - 1.65 cfs Effluent-50% Demand, New Stardust Blvd Pipe and Deer Valley2 Delivery

All Numbers based on 50% July Peak CAP Demand
 ND - No Delivery Allowed Due to Negative Pressures
 ** No Demand

Facility Annual Totals

Facility	Acrefeet / year*	Peak daily usage**	Peak demand (cfs) July	Ave demand (cfs)	Low Demand (cfs) January
Sun City Rec Center;					
Lakes East/Viewpoint Lake	594	3.56	1.79	0.82	0.14634
Lakes West/Dawn Lake	863	5.17	2.61	1.19	0.21138
North GC	623	3.73	1.88	0.86	0.14634
Quail Run GC	231	1.38	0.70	0.32	0.06504
Riverview GC	447	2.68	1.35	0.62	0.11382
South GC	819	4.91	2.48	1.13	0.19512
Willowcreek/Willowbrook	1329	7.96	4.01	1.83	0.3252
Sun City Private Clubs;					
Palmbrook CC	613	3.67	1.85	0.85	0.14634
Sun City CC	533	3.19	1.61	0.74	0.13008
Union Hills CC	729	4.37	2.20	1.01	0.17886
Maricopa Lake*****	15	0.09	0.05	0.02	0
Sun City West Rec Center;					
Deer Valley GC***	546	3.27	1.65	0.75	0.13008
Desert Trails GC*****	469	2.81	1.42	0.65	0.11382
Echo Mesa GC***	592	3.55	1.79	0.82	0.14634
Grandview GC	761	4.56	2.30	1.05	0.19512
Pebblebrook GC	689	4.13	2.08	0.95	0.1626
Stardust GC	429	2.57	1.30	0.59	0.11382
Trail Ridge GC	539	3.23	1.63	0.74	0.13008
Sun City West Private Clubs;					
Briarwood CC	725	4.34	2.19	1.00	0.17886
Hillcrest GC	769	4.61	2.32	1.06	0.19512
TOTAL	12315	73.78	37.20	16.99	3.04062

* - 6-year data (93-98)

** - average July daily usage X 1.10

*** - 4-year data (95-98)

**** - 3-year data (96-98)

***** - 2-year data (96&99)

Data source - Arizona Dept of Water Resources

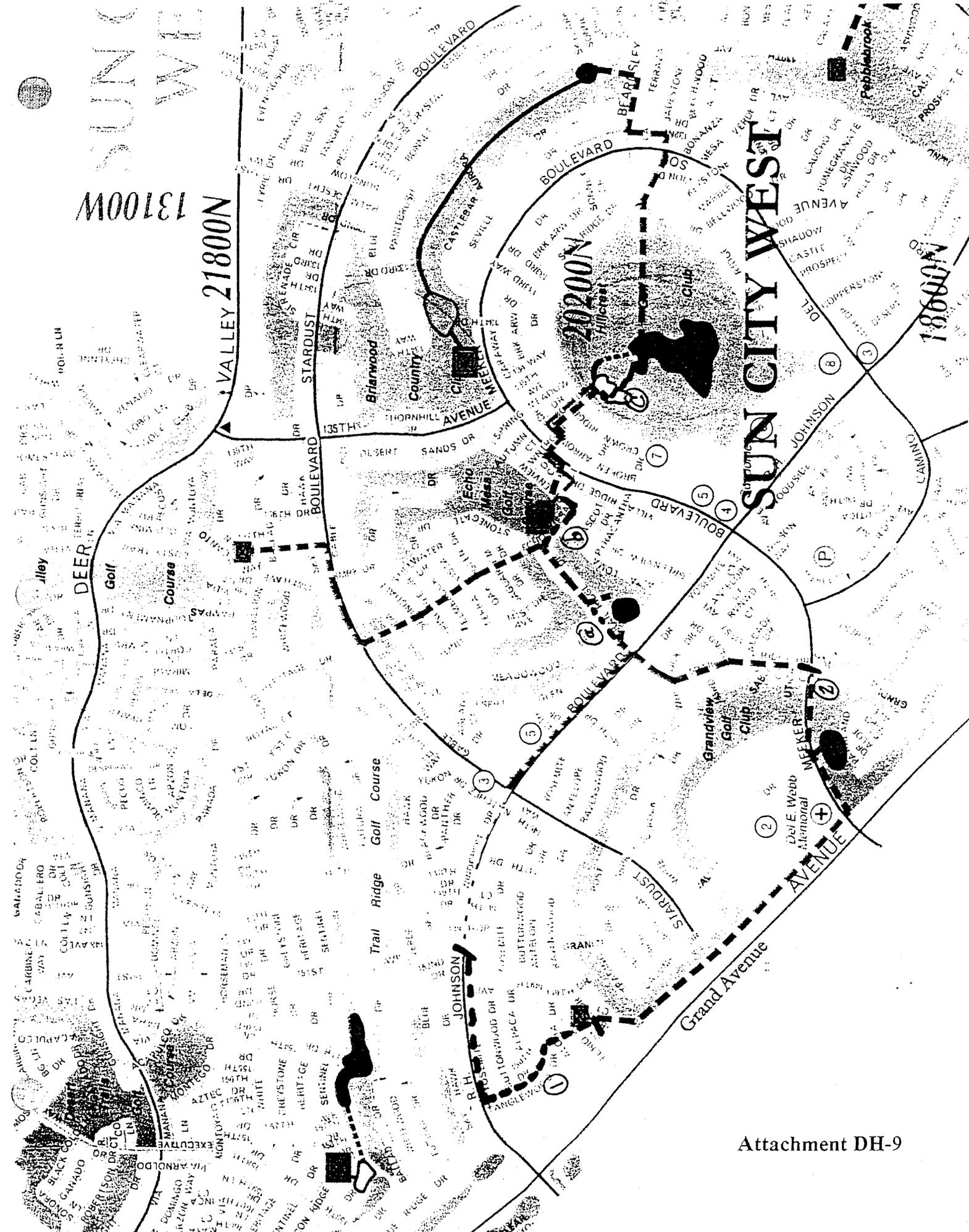
13700W
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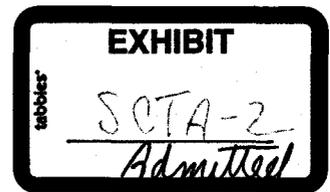
VALLEY 21800N

20200N

SUN CITY WEST

18600N





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BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman
JIM IRVIN
Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF THE JOINT) DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER) SW-02334A-98-0577
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES.)

SURREBUTTAL TESTIMONY

OF

DENNIS HUSTEAD

On Behalf of

**SUN CITY TAXPAYERS ASSOCIATION
("SCTA")**

SEPTEMBER 6, 2001

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I. INTRODUCTION

Q. What is your name and occupation?

A. My name is Dennis Hustead. I am the owner of Hustead Engineering.

Q. Are you the same Mr. Hustead who has previously filed testimony in this Docket on behalf of the Sun City Taxpayers' Association ("SCTA")?

A. Yes.

Q. Have you had an opportunity to review the testimony filed on behalf of the Arizona Corporation Commission ("Commission") Staff ("Staff"), Sun City Water, Sun City West Utilities (collectively "Citizens") and the Residential Utilities Consumer Office ("RUCO") in this matter?

A. Yes I have.

Q. Would you summarize how you intend to proceed with your surrebuttal testimony?

A. Preliminarily I will focus on the engineering concerns I raised in my direct testimony and the responses thereto. In particular, I will address the responses to my criticism of the PER for failing to justify the need for all major components of the Groundwater Storage Project (GSP) proposed by Citizens. In this regard I will discuss Citizens' and Staff's failure to adequately rebut my criticism that the PER is incomplete, inadequate and forms an insufficient basis to authorize proceeding with the GSP because it failed to evaluate integrating operations of the GSP with Citizens' existing recharge facility at its Water Complex, the failure to properly evaluate which golf courses could most economically be served by the GSP, the failure to properly evaluate the use of the existing reclaimed water distribution system in Sun City West resulting in

1 an inadequate evaluation of all the joint participation alternatives, as well as the
2 use of the Beardsley Canal, and the addition of an automated SCADA system. I
3 will also discuss the parties' positions regarding the proper role of a hydrologic
4 analysis in a PER for this particular project.

5
6 Next I will discuss the responses to my criticisms of the lack of water rights to
7 effectuate water exchanges on a long-range basis, and the inadequate analysis
8 of the change in position regarding the need for the Hillcrest golf course.

9
10 I will conclude by discussing why the criticism of the scope of my testimony is
11 not well taken.

12 **II. THE PER FAILED TO JUSTIFY THE NEED FOR ALL COMPONENTS**
13 **OF THE GSP**

14 **A. The PER's Failure To Evaluate A GSP Integrated With Citizens'**
15 **Existing Recharge Facility That Could Reduce The GSP 50 Year**
16 **Life Cycle Costs Over \$8,300,000, Is Not Rebutted**

17 **Q. Would you summarize what components of the GSP proposed by Citizens**
18 **are unnecessary?**

19 **A. Most, if not all of the Sun City distribution system and the automated SCADA**
20 **system related thereto are rendered unnecessary if deliveries to the Sun City**
21 **West golf courses are maximized. This can best be accomplished by**
22 **integrating the GSP with Citizens' existing recharge facility at its Water**
23 **Complex and, if necessary, using other recharge facilities (such as the Agua**
24 **Fria facility). Elimination of the Sun City distribution system and associated**
25 **SCADA system reduces the 50 year life cycle costs of the GSP by up to**
26 **\$7,326,884 for the distribution system, up to \$1,023,113 for a SCADA system**
in Sun City. It must not be forgotten that 76%, or \$11,427,885 of the total GSP

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1 rate base of \$15,036,691 is likely to be allocated to Sun City for rate making
2 purposes. Minimizing these costs are critical to SCTA and the ratepayers in
3 Sun City. Additionally, by eliminating the automated SCADA system
4 completely, a portion of the \$722,817 in 50 year life cycle costs for the Sun
5 City West SCADA system could also be eliminated.
6

7 *Citizens may also be able to minimize costs by eliminating the CAP trunk line
8 Citizens proposes along Lake Pleasant Road (\$7,389,787, 50 year life cycle
9 costs) and replacing it with a joint transmission line with the Agua Fria
10 Division and/or the City of Surprise along 163rd Avenue or Grand Avenue
11 (\$2,222,135 to \$2,892,234) and adding a booster pump (\$1,591,400). If a
12 separate line along Deer Valley Road is required, the PER indicates this option
13 is not less expensive than the separate CAP trunk line along Lake Pleasant
14 Road. Unfortunately, the PER fails to adequately evaluate the use of
15 Alternative E and the existing Sun City West reclaimed water system as an
16 alternative to constructing the major new line along Deer Valley Road.
17 Therefore, neither the Commission nor I can determine whether Alternative E,
18 coupled with improvements to the existing effluent distribution system and a
19 joint facility is less costly than Citizens' preferred Alternative A. Based upon
20 the summary of 50 year life cycle costs set forth on page E-4 of the PER,
21 Alternative E and the improvements to the existing reclaimed water system
22 should be seriously evaluated if they can be accomplished for \$3,000,000 or
23 less (i.e., the cost of the Lake Pleasant Road Trunk less both the cost of joint
24 transmission line and the cost of booster pump).
25
26

1
2 **Q. Did any rebuttal witness address the ability to eliminate the Sun City**
3 **distribution system?**

4 A. No. However, Mr. Scott, on behalf of Staff (pp. 5, lines 10-11) and Mr.
5 Jackson on behalf of Citizens (p.4, lines 3-8) assert that Decision No. 62293 did
6 not require such an evaluation. It is astonishing to me that these witnesses
7 would chose to ignore any alternative that would make use of all, or almost all,
8 of the 6,541 AF CAP allocation and 2,800 AF of effluent to replace up to 5,519
9 AF of pumped groundwater and store up to 3,822 AF of CAP/reclaimed water
10 within the Sun Cities, while eliminating more than \$8,300,000 of the GSP's 50
11 year life cycle costs.

12 **Q. Would you explain again how all these beneficial results could be**
13 **accomplished?**

14 A. As I stated at pages 15-17 of my direct testimony the private and Recreation
15 Center golf courses in Sun City West have a water demand of 5,519 AF during
16 a historical normal year (PER at B-14). Operating a more limited GSP, one that
17 stops at Citizens' Water Campus or brings water to the eastern portion of the
18 existing Sun City West effluent distribution system, in conjunction with the
19 existing recharge facility at the Citizens' Water Campus, could eliminate the
20 need for all, or most of the Sun City distribution system being proposed by
21 Citizens. Such a joint system would enable Citizens to take delivery of most of
22 its CAP water and deliver it directly to the Sun City West golf courses. The
23 effluent generated at the wastewater treatment plant would be used to
24 supplement deliveries, thereby minimizing pumping by the Sun City West golf
25 courses. Any CAP and effluent supplies in excess of the real time demands of
26 the Sun City West golf courses would be temporarily "stored" at the recharge
facility. Thereafter, the stored water could be "recovered" at the recharge site,

1
2 by golf courses in Sun City West and/or Sun City, or, alternatively, by Sun City
3 Water and Sun City West Utilities. However, the GSP would operate to halt the
4 pumping at Sun City West golf courses.

5 **Q. What alternatives are available if the existing recharge facility could not be**
6 **expanded sufficiently to permit delivery of the excess CAP allocation over**
7 **that delivered to the Sun City West golf courses?**

8 **A.** If the recharge facility cannot be expanded to operationally accommodate the
9 excess CAP allocation, together with the reclaimed water effluent generated at
10 the Wastewater treatment plant, then two options should be considered:
11 constructing a limited distribution system for Sun City or recharging the excess
12 CAP water at the Agua Fria or MWD recharge facilities. A limited distribution
13 system constructed to the northernmost golf courses in Sun City, the
14 Willowcreek/Willowbrook Golf Courses, would provide an annual demand of
15 1,329 AF (PER at B-11). Extending the distribution system to the adjacent
16 Palmbrook Country Club golf course would increase the average annual golf
17 course water demand to Sun City courses to 1,942 AF. However, the cost of
18 constructing even this limited distribution system to Sun City golf courses must
19 be weighed against the amount of excess water and recharging that amount at
20 the Agua Fria or MWD recharge facilities. Because of proximity to the Sun
21 Cities, SCTA would favor utilization of the Agua Fria recharge facility.

22 **Q. Is your suggestion consistent with the fundamental goals sought to be**
23 **achieved by the GSP?**

24 **A.** Yes. The entire CAP allocation will be delivered to the Sun Cities. All, or a
25 significant portion of the CAP water will be directly delivered and direct
26 deliveries of effluent will also be enhanced. Groundwater pumping is reduced.
In fact, this option should result in very little, if any actual pumping by the Sun

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2 City West golf courses. While some recovery pumping by the golf courses in
3 Sun City, Sun City West or the water companies may be integrated into this
4 concept, the alternative is to have Citizens, either voluntarily or through
5 Commission mandate, agree all water "stored" under this program would be
6 non-recoverable. It is my understanding that non-recoverable water credits can
7 still be used to address water conservation requirements or penalties imposed
8 by the Arizona Department of Water Resources. Agreeing to this limited use of
9 stored CAP water helps to ensure that the CAP water being paid for by
10 ratepayers is not being used to support new growth in Citizens' service areas
11 and thereby negating the benefits of the GSP.

12 **Q. Has your proposal ever previously been considered by either the CAP Task**
13 **Force or the Commission?**

14 **A.** To my knowledge, Citizens has never independently raised this cost-saving
15 alternative. No one proposed this alternative at the hearings conducted in
16 October of 1999, where I testified on behalf of SCTA. It should be
17 emphasized, however, Citizens only took over ownership and control of the
18 recharge facility at the beginning of 2000. Further, prior to the addition of
19 denitrification equipment on the wastewater treatment plant, this option may
20 not have met water quality concerns of the golf courses and the Arizona
21 Department of Environmental Quality and the Arizona Department of Water
22 Resources.

23 **Q. Do you believe the PER should have evaluated this option?**

24 **A.** The PER recognized the need to evaluate new alternatives when it evaluated a
25 joint facility with the City of Surprise. The option I am now proposing, having
26 the potential of saving over \$8,000,000 over the 50 year life cycle of the GSP,
likewise, should have been evaluated in the PER. To suggest, as Mr. Jackson

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2 does at page 13, line 8 - 10 of his Rebuttal testimony, that "the 'integration'
3 debate simply is not part of the PER" because the CAP Task Force and the
4 Commission "rejected" a Citizens only recharge project and participation in a
5 joint recharge project, is without merit. First, the Commission in approving the
6 concept of the GSP did not preclude recharge as an option or as an integral part
7 of a modified GSP. Second, the integration project I am now suggesting has
8 not previously been presented to or considered by either the CAP Task Force or
9 the Commission. Third, unlike any of the pure recharge projects previously
10 considered outside of the Sun Cities areas, my suggestion allows delivery of
11 water to golf courses, at least in Sun City West, and possibly to the northern
12 portion of Sun City, with recharge being conducted within the Sun Cities
13 themselves. To reject a concept that would reduce the total 50 year life cycle
14 costs by just under 50% because it was not an available option or was otherwise
15 undisclosed to the CAP Task Force and the Commission in the past, could not
16 conceivably be deemed to be in the public interest.

16 **B. The PER's Failure To Evaluate Maximizing Deliveries To Sun**
17 **City West Was Not Rebutted**

18 **Q. What rebuttal was provided to your criticism of the PER's assumption that**
19 **the GSP must be designed to deliver 2,372 AF to golf courses in Sun City**
20 **West and 4,189 AF to golf courses in Sun City?**

21 **A.** Mr. Jackson makes the blanket claim that this "was ordered by the
22 Commission" (p. 4, lines 19-20). Yet I find no such direction in Decision No.
23 62293. In fact, the Commission's caution in Finding of Fact 24 that "CAP
24 water at any cost is not necessarily a prudent decision" should have encouraged
25 Citizens to design the most efficient GSP possible. Mr. Jackson also admits
26 that the GSP was designed and the PER performed to achieve "complete

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1 consumption of Citizen's entire annual allotment of CAP water allocated to the
2 Sun Cities and Youngtown. Jackson Rebuttal at page 8, lines 2-4. While in the
3 abstract this may appear to be an appropriate goal, it is unreasonable to insist on
4 achieving the goal where to do so adds millions of dollars in the form of an
5 unnecessary Sun City distribution system.

6
7 .Mr. Scott, at pages 6 through 7 of his rebuttal, similarly concludes that the
8 assumption was reasonable because the benefit of the GSP lies in the reduction
9 of the pumping of groundwater by golf courses and turning off as many
10 groundwater pumps as possible. While I agree that to the extent any attempt
11 has been made to justify this 16 million dollar GSP on the record, other than
12 merely pointing to the recommendation of the CAP Task Force, it has been
13 based on the perceived additional benefits derived from reducing groundwater
14 pumping and turning off pumps. Unfortunately, nothing in the record supports
15 the generalizations made by Mr. Scott. The lack of such evidence is precisely
16 why I have criticized the PER for not having a hydrologic component.

17 Furthermore, maximizing deliveries to Sun City West does result in the
18 reduction of groundwater pumping and turning off pumps, it is just done in a
19 more economical and geographically compact manner. Finally, the
20 Commission must not lose sight of the fact that \$11,394,680 of the GSP related
21 rate base, or 76%, of the total \$14,993,000, is proposed to be allocated to Sun
22 City, as reflected in Schedule CMF-1 of Mr. Fernandez' testimony. More than
23 \$8,000,000 of this cost is directly related to construction a new distribution
24 system paralleling its potable system to deliver non-potable water to Sun City
25 golf courses. The Commission should remain open to any option that meets the
26 goals of the GSP, while lessening the severe adverse financial impact on Sun
City ratepayers, including eliminating as much of the Sun City distribution

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2 costs as possible. My suggestion to integrate the GSP with Citizens' recharge
3 facility and maximize the deliveries to Sun City West eliminates costly and
4 unnecessary plant.

5 C. The PER's Inadequate Consideration Of The Appropriate Golf
6 Course Participation Was Not Rebutted

7 Q. Is rebuttal offered to your criticism of the Sun City Recreation Centers
8 refusal to allow participation by private clubs?

9 A. Staff does not comment on the Sun City Recreation Centers' position that
10 private clubs may not participate in the GSP. Mr. Jackson states that "it is
11 certainly the 'right' of the Recreation Centers of Sun Centers not to participate
12 in the project" and that their lack of participation might preclude the use of 497
13 acre feet of the CAP allotment due to lack of sufficient turf area at the
14 remaining three golf courses." (pp.7-8) Designing a facility in response to this
15 type of demand, rather than to minimize costs is not good engineering practice,
16 nor in the public's best interest. Moreover, Mr. Jackson's analysis, once again,
17 ignores the option of maximizing deliveries to Sun City West and thereby
18 minimizing or even eliminating the need for any distribution system in Sun
19 City. However, to the extent a distribution system is needed, deliveries should
20 be maximized to the northernmost golf courses. Unfortunately, in my direct
21 testimony I mistakenly identified the Westbrook Village Golf Club as one of
22 the private clubs north of the Bell Road. While Westbrook is north of Bell
23 Road and not a Recreation Center golf course, it was not one of the golf courses
24 included in the PER. Apparently it is located outside of Sun City Water's
25 service area.
26

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**D. The PER's Inadequate Evaluation Of Improvements To And Use
Of The Existing Effluent Distribution System Was Not Rebutted**

**Q. Was there a response to your criticism of the PER for its failure to fully
evaluate the use of the Sun City Distribution system?**

A. Mr. Scott states that the existing Sun City West distribution system is
constructed to pump in only one direction (east to west) and will not operate
sufficiently, if at all, if it must pump from west to east (p. 7, lines 4-9). Mr.
Jackson states that the analysis of Alternative "E" indicated that it is not
hydraulically possible to deliver the flow rate required by this project through
the existing piping system in a west to east direction, necessitating the
development of Alternative "D" (p. 11, lines 16-20). Mr. Jackson also contends
that I did not provide any support for my position that new piping will
"significantly improve the existing system hydraulics making Alternative "E" a
viable alternative." (p.15, lines 13-20)

Q. Do you agree with these comments and criticisms of your testimony?

A. Mr. Scott is wrong when he states that the existing system is not constructed to
pump from west to east. Most water and reclaimed water systems permit flow
in either direction and often are designed to do so, especially to accommodate
peak demands and fire flows. There is no evidence to support his contention
that the Sun City West Effluent Distribution System could not transport flow
from west to east. The issue is whether the existing system can accommodate
sufficient flows from west to east to make it a viable alternative method to
delivering CAP as part of a GSP.

I have acknowledged that the existing Sun City West Effluent Distribution
System would likely suffer the problems identified by the PER, unless modest
improvements are made to the system. However, contrary to implications of

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2 Mr. Jackson's testimony at page 15, lines 13-20, I did identify a method to
3 address the issues raised by the PER with regard to Alternative E. My
4 Attachment DH-8 generally identifies the limited improvements needed to the
5 existing Sun City West Distribution System to enable the CAP allocation to
6 flow west to east utilizing the existing system. Because of limited data, the
7 existence of a model in HDR's possession, a limited budget and the fact that
8 Citizens has the affirmative obligation to perform an adequate PER, a separate
9 hydraulic model was not created to test the hydraulic pressures needed to move
10 the entire CAP allocation if my suggested improvements to the existing system
11 were made. I did, however, roughly calculate the carrying capacity of the
12 existing system, assuming water entered at both the northern and southern loops
13 and that the loops were continuous to the 16" line at Stardust Boulevard and
14 Beardsley Road. The carrying capacity of the two loops should handle the
15 entire CAP allocation at reasonable pressures. I would expect this alternative to
16 be further evaluated in the PER as an option to the expensive new 24" line
17 (Alternative D) along the Deer Valley Road alignment (with its 50 year life
18 cycle cost of \$7,903,166; PER C-6). It must be emphasized that the cost of
19 Alternative D, together with the cost of a booster station, was added to every
20 joint use alternative. It was these facilities that rendered to render the joint
21 facility more costly than Alternative A.

22 **Q. Why would you expect the PER to include an examination of internal
23 improvements to the existing effluent distribution system?**

24 **A.** The PER should have considered internal improvements to the existing effluent
25 distribution system because Alternative D (the new 24" line along the Deer
26 Valley alignment) was so expensive. The 50 year life cycle costs on E-4 of the
PER reflect that the most expensive joint facility, together with a stand-alone

1
2 booster station costing \$2,906,153 less than the trunk line along Lake Pleasant
3 Road (\$7,389,787 - (\$2,892,234 + \$1,591,400)). Thus, if Alternative E and the
4 improvements to the existing system can be made for \$2,906,153, or less, then
5 all the joint facility alternatives would be less expensive than the preferred
6 Alternative A. Unfortunately, the PER only looked at the expensive Alternative
7 D alignment as an option. (Rebuttal Testimony of Mr. Jackson at p. 11, lines
8 16-20)

9 **Q. What leads you to believe Alternative E, including improvements to the**
10 **existing effluent distribution system may cost less than \$2,906,153?**

11 **A.** Whereas Alternative D requires construction of approximately 7.4 miles of a
12 new 24" pipeline (PER at p. D-18), Alternative E would require construction of
13 approximately two miles of 24" inch line (PER at p. D-18). At the rate of
14 \$88.45 per linear foot specified for Alternative D's 24" inch pipe (PER at D-
15 18), the cost for two miles of pipeline would be approximately \$935,000,
16 leaving just under \$1,965,000 for internal improvements to the system. Based
17 upon the limited nature of the required improvements, it is my opinion that the
18 viability of the option should have been studied further before the joint facilities
19 alternatives were rejected on the basis that they are too costly compared to
20 Alternative A.

21 **Q. After you raised this possibility in your direct testimony, did Citizens**
22 **supplement the PER or otherwise re-examine Alternative E.**

23 **A.** Mr. Jackson merely reiterated the conclusion contained in the PER that the
24 analysis of Alternative E indicated that it was not hydraulically possible to
25 deliver the flow rate required by this project. (p. 11, lines 16-18). There was
26 no attempt to re-evaluate Alternative E based upon my suggestions. Therefore,
the PER remains deficient in this regard.

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E. The PER's Inadequate Evaluation Of The Beardsley Canal Was Not Adequately Rebutted

Q. Do you have any comments regarding Mr. Jackson's rebuttal to your criticism of the PER's analysis of the Beardsley Canal?

A. Mr. Jackson contends that I erred in stating that the PER assumes that the operational problems created by the annual dry-up are insurmountable. While he is correct that these precise words were not used in the PER, the PER clearly intended to convey that impression since its stated, at three separate places and in bold its conclusion that "as long as the MWD continues to undergo an annual dry-up in the Beardsley Canal" the alternatives that rely on the Beardsley Canal are effectively eliminated. Mr. Jackson then states that the analysis in the PER assumes year-round operation since there are no months in the annual schedule in which CAP water is not delivered. The reader of the PER is lead to an entirely different conclusion—that CAP water must be delivered monthly, but that the Beardsley Canal cannot accommodate such a delivery schedule. Therefore, the PER implies that Alternatives B, C and D, even if otherwise cost competitive, should be disregarded. Apparently Mr. Jackson is testifying that dry-up is not a determinative factor.

Mr. Jackson does not address the PER's failure to complete its analysis of Alternative E. This Alternative used the Beardsley Canal in conjunction with the existing Sun City West effluent distribution system. This Alternative was abandoned without examining what improvements could be made to the existing distribution system. Instead, Citizens examined only the construction of an entirely new pipeline along Deer Valley Road alignment.

1 Utilizing the figures included at D-18 of the PER to evaluate Alternative E, it is
2 clear that Alternative E holds significant promise. The required MWD
3 improvements would cost only approximately \$150,000. A booster station,
4 according to Citizens, would have a 50 year life cycle costs of \$1,591,400. The
5 total estimated life cycle costs connected with use of the Beardsley Canal are
6 \$3,376,883. Therefore, the total cost to bring the CAP allocation to the West
7 side of Sun City West is \$5,118,283, well below the \$7,389,787 cost of the
8 Lake Pleasant Road trunk line. Thus, again, so long as the interconnection from
9 the Beardsley Canal to the existing system (approximately 1½ miles) and the
10 internal improvements to the existing system can be accomplished for under
11 \$2,271,500, Alternative E is less expensive on a 50 year life cycle basis than
12 Alternative A, even assuming Citizens could not negotiate a better wheeling
13 cost than originally proposed by MWD. Mr. Jackson's rebuttal testimony does
14 not refute the inadequacy of the PER to study both the Beardsley Canal and
15 Alternative E.

16 **F. The PER's Failure to Justify An Automated SCADA System Was**
17 **Not Rebutted**

18 **Q. Do you agree with Mr. Jackson's assertion that an automated SCADA**
19 **system is necessary for the GSP?**

20 **A.** I agree with Mr. Jackson's statement that the GSP would best operate if water
21 deliveries are orchestrated from a central point. However, this does not require
22 an automated SCADA system. Citizens only needs to require periodic
23 measurements of the lake levels and proposed water orders on a regular
24 schedule. This information would be reviewed and analyzed by Citizens and an
25 order placed with the CAWCD. The golf courses that are to receive water
26 would be told when to open and close their respective delivery gates. An

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automated system, while more convenient to Citizens and the golf courses, is not necessary to have a centrally controlled water delivery system. In fact irrigation districts operate far more complex systems with manual delivery systems.

6

7

Q. Does the existence of pumping stations, like those in the RWDS project of Scottsdale, make an automated SCADA system more or less desirable?

8

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A. A system with pumping stations such as the RWDS project of the City of Scottsdale is a far more likely candidate for an automated SCADA system than the GSP, because it is a pressurized system pushing water uphill versus a gravity system flowing downhill.

12

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Q. Does the need for flow meters, level sensors and valves equate to the need for an automated SCADA system?

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A. Certainly items such as flow meters, level sensors and valves are needed in any complex distribution system. The issue here is whether they should be manual or automated. This is a matter of cost versus convenience. The reduction in work force, if any, allowed by the automated system would affect the Recreation Centers and not Citizens. To operate the system centrally, Citizens needs one employee to review the data supplied by the golf courses and place orders with CAWCD. There is no need for Citizens to be responsible for opening and closing valves. The golf courses can be told when to open and close the valves. If the golf courses fail to comply, it can be dealt with just as any other breach of the operating agreement.

24

25

26

In reality, CAWCD orders are made approximately a day ahead of time. They are made for the entire system. Various lakes are not opened and closed differently than what is originally planned for any particular delivery. The

1
2 bottom line is that an automated SCADA system is a convenience, with a
3 significant cost. Neither the PER nor Mr. Jackson have justified an automated
4 SCADA system as an operational necessity.

5 **Q. Did the GSP considered by the CAP Task Force and this Commission in**
6 **1999 include an automated SCADA?**

7 **A. No.** The GSP, initially presented to the CAP Task Force and this Commission,
8 did not have an automated SCADA system. The cost of the manual aspects of
9 the SCADA system were included in the distribution costs. It should be noted
10 that the cost of the CAP trunk line and the distribution line, even after removing
11 the control and measurement components thereof, has increased almost \$2
12 million above the cost estimates provided the CAP Task Force and the
13 Commission in October 1999. As a result of these increased costs and the
14 addition of the automated SCADA system, the \$5 million in cost savings
15 achieved from eliminating the booster pump station and storage reservoirs, as I
16 suggested in 1999, have been consumed.

17 **G. The PER's Inadequacy Due To The Absence Of Any Hydrologic**
18 **Analysis Was Not Rebutted**

19 **Q. Do you concur with Mr. Jackson's claims that a hydrologic analysis was**
20 **not necessary because the groundwater savings associated with the GSP**
21 **comes from replacement of groundwater that the golf courses would have**
22 **pumped from the aquifer via wells?**

23 **A.** Mr. Jackson misses the point. The hydrologic analysis is necessary to
24 determine the extent of hydrologic benefit, if any, derived from turning off
25 certain wells versus other wells. Further, if the base study I suggested had been
26 incorporated, the difference between the benefits of a recharge project and the
GSP would have been evaluated. This type of analysis was never submitted to

1 the CAP Task Force nor presented to this Commission. Where, as here, a
2 fundamental purpose of the GSP is to provide direct benefits to the aquifer, not
3 just deliver water; cost alone is an inadequate basis upon which to evaluate the
4 alternatives. A hydrologic study is integral to such an analysis. The PER does
5 not contain such an analysis and therefore it is inadequate.
6

7 **III. THE EXPIRATION OF GROUNDWATER RIGHTS IN 2005 WAS NOT**
8 **ADEQUATELY ADDRESSED IN REBUTTAL**

9 **Q. Has Mr. Larson's Rebuttal Testimony resolved the issue of the impact of**
10 **the expiration of the General Industrial Use Permits ("GIUPs") relied**
11 **upon by the Recreation Centers of Sun City West and Briarwood?**

12 **A.** Mr. Larson indicates that even if the GIUPs are not renewed by 2005 those golf
13 courses may exchange their groundwater for all but 42.27 acre feet of Sun City
14 West Utilities Company's CAP allocation. He does not provide any support for
15 his calculations. Further, he ignores the fact that the golf courses need a source
16 to meet their full demand, not just to do an exchange with the CAP allocation.
17 As my attachment DH-6 indicates, without the GIUPs the golf courses
18 historical annual demands will exceed the available groundwater supply by
19 1,405.27 acre feet.

20 He also criticizes me for not considering the impacts of the operating agreement
21 between Citizens and the Recreation Centers of Sun City. First, it should be
22 noted that the agreement with the Recreation Centers of Sun City was neither
23 executed nor filed prior to my filing of Direct Testimony. Secondly, it is my
24 understanding that there is litigation over whether the Recreation Centers of
25 Sun City had authority to execute an exchange agreement, to which the
26 operating agreement is an exhibit. Obviously, if there is no valid agreement,
Mr. Larson's characterization of the operating agreement is irrelevant.

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2 Mr. Larson also asserts that 2,800 acre feet of effluent generated by the Sun
3 City West Treatment Facility could be utilized as a source of additional water.
4 It was my understanding that this water source was already committed to the
5 two non-participating Sun City West Recreation Center golf courses (Deer
6 Valley and Desert Trails). Mr. Larson's statements that such effluent could be
7 provided to the Sun City West Recreation Center golf courses through a CAP
8 "water/effluent water exchange between Citizens and the Recreation Centers
9 conflicts with the PER at A-4. The PER indicates that golf courses without
10 groundwater rights "could not participate in the GSP".

11 **Q.** Do you agree with Mr. Larson indicates that groundwater rights pooling is
12 preferred over use of effluent to "enable the continued use of effluent
13 credits...to offset potential regulatory actions by ADWR related to
14 compliance with the water conservation requirements" (p. 5, lines 3-7)?

15 **A.** Mr. Larson presents no evidence that the recovery of effluent credits are being
16 utilized to offset conservation requirements or to avoid penalties. In reality,
17 Citizens' ability to use "recovered effluent" without counting the use against
18 the communities gallons per capita per day (GPCD) conservation target"
19 (Larson at p. 5, lines 7-9), allows Citizens to pump 2,800 acre feet more
20 groundwater. To the extent this encourages Citizens to continue to expand its
21 service area or forego water conservation methods, the aquifer is negatively
22 impacted by this additional pumping. This is why I recommend the
23 Commission require Citizens to utilize water exchanged under the GSP solely
24 to address conservation requirements and/or conservation penalties derived
25 from the Sun Cities water usage.
26

1
2 **IV. CRITICISM OF THE SCOPE AND NATURE OF THE PER WAS**
3 **NECESSARY AND APPROPRIATE; THE NARROW READING OF**
4 **DECISION NO. 62293 DOES NOT SERVE THE PUBLIC INTEREST**

5 Q. Do you agree with Mr. Jackson's assertion that the "PER was not intended
6 to cover other possible CAP water plans" because the "Commission
7 approved the GSP concept as recommended by the CAP Task Force" (p. 4,
8 lines 6-8)?

9 A. This criticism is without any merit. First, the CAP Task Force did not approve
10 a specific GSP. The specific recommendation was "that CAP water be
11 delivered to the Sun Cities through a non-potable pipeline. The CAP water
12 would then be used to irrigate golf courses that have historically pumped
13 groundwater." Final Report, CAP Task Force, page 31. In fact, under the
14 project described to the CAP Task Force "Citizens would need to obtain a
15 groundwater savings facility permit . . . [and] the accompanying water storage
16 permits and recovery well permits." While Citizens would also obtain an
17 exchange permit and negotiate an exchange agreement with local golf courses
18 "as a backup in the event the groundwater savings project could not be
19 operated," Citizens stated: "it is unlikely that such a back-up mechanism would
20 be necessary since the golf courses are exclusively dependent on groundwater
21 . . ." Further, the proposed GSP included storage reservoirs and multiple
22 booster pumps, and no automated SCADA system. Chapter 2, Cost Analysis
23 For CAP Water Use Options, pp 14 - 17 set forth as Appendix J to Final
24 Report, CAP Task Force. In fact, the concept was offered, "to be used for
25 comparison of options *only*." Id. at page 3. Clearly the GSP now proposed by
26 Citizens has altered significantly the concept considered by the CAP Task
Force. The exchange concept is now the primary vehicle for the GSP, the
storage reservoirs and multiple booster pumps have been eliminated as I

1 suggested and an expensive automated SCADA has been added. To suggest
2 other features could not be added or eliminated is simply not supported by the
3 CAP Task Force Final Report.
4

5 Similarly, Decision No. 62293 only approved the "concept" of the GSP. In
6 fact, based on the concerns raised by Staff, SCTA and RUCO, the Commission
7 refused to approve the plan as proposed by Citizens. Instead, the Commission
8 authorizes Citizens only to proceed with the PER. The Commission also
9 permitted comments, objections, and recommendations regarding the
10 *preliminary* design and updated cost estimates. Finally, the Commission
11 directed the Hearing Division to either set the matter for hearing or submit a
12 recommended Opinion and Order for Commission consideration. This is not a
13 procedure that would be followed if the only review was a validation of cost
14 estimates. SCTA representatives left the open meeting wherein Decision No.
15 62293 was entered with the understanding that the GSP was still open to full
16 and complete scrutiny by the Commission. No particular GSP was specifically
17 approved.

18 I believe Decision No. 62293 specifies "minimum" requirements for the PER. I
19 find nothing in the Decision that precludes the PER from including recharge
20 alternatives as a base case, or an evaluation of the hydrologic benefits gained
21 from the base case, versus a Sun City West only GSP, versus a Sun City West
22 and limited Sun City GSP, versus the GSP proposed by Citizens. In fact, the
23 requirement that the PER address "the need for all major elements of its
24 proposed plan" should be construed to require such analysis.
25
26

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Q. Do you agree with Mr. Fernandez' statement that it would be imprudent for the Company to begin this project until the lawsuit challenging the validity of the Agreements with the Recreation Centers of Sun City is resolved?

A. Yes. I would agree with Mr. Fernandez' conclusion that the GSP should not go forward until the lawsuits are finally settled.

Q. So you agree with Marlin Scott, Jr. that you're requesting the Commission to reevaluate the GSP as a concept.

A. My testimony was limited to providing Central Arizona Project (CAP) water to golf courses in the Sun Cities. While I believe that the PER, to be complete, should have provided the necessary information to allow the Commission to evaluate the various GSP proposals against other alternative, including recharge, I only advocated recharge as a component of a GSP project, not as a separate alternative.

Q. Do you believe that a Preliminary Engineering Report undertaken by a public service corporation that will impose more than \$2.3 million a year on ratepayers should ignore lesser-cost alternatives?

A. The Commission has not ordered Citizens to proceed with the GSP. It has merely approved the concept of a GSP. Critical to that underlying approval was the Commissions reliance on representations from the CAP Task Force that the GSP had the consensus support of the community.

Q. Could you explain why your evaluation of the PER differs so drastically from that of Citizens and Staff?

A. The difference arises because I am reviewing the PER to determine whether it is actually achieving the underlying justification of the GSP (i.e., to achieve

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2 greater direct benefits from bringing water into the golf courses than recharge at
3 the lowest possible cost to ratepayers). In contrast, Citizens and Staff examine
4 the PER solely to determine whether there are major engineering deficiencies
5 with the GSP plan recommended by Citizens. In my opinion, the PER should
6 represent a tool for this Commission to evaluate the alternatives against the
7 GSP's objective of benefiting the aquifer.

8 **Q. Does the financial impact of the GSP make a comprehensive PER even a**
9 **greater necessity?**

10 A. Yes. This magnitude of increased rates resulting from the GSP requires a very
11 comprehensive PER. In the present case, according to Mr. Fernandez'
12 Schedule CMF-1, the GSP represents a 59% increase in Sun City Water's rate
13 base and a 43% increase in Sun City West Utilities' rate base. The GSP's
14 estimated 50 year life cycle cost is \$16,460,928 (PER E-4). Investing the time
15 and effort at the front end for a complete, thorough and accurate PER is only
16 appropriate. Unfortunately, the PER presented by Citizens does not satisfy this
17 criteria.

18 **Q. Do you agree with Mr. Fernandez' contention that the GSP in Sun City**
19 **would not create rate shock?**

20 A. Staff recognizes that in Sun City, based upon Sun City Water's 2000 Annual
21 Report, Sun City Water Company potentially would be requesting a 50%
22 increase in gross revenue requirements, 25% of which, or approximately \$1.8
23 million is directly attributable to the GSP. It would seem that the Commission
24 Staff would be more concerned about a 50% increase, half of which is directly
25 related to the proposed GSP for persons who are on fixed incomes and are used
26 to having low water rates. Moreover, by focusing on one year's impact and the
dollar increase spread over 31,000 customers, the Commission Staff's analysis

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2 trivializes the impact of the GSP. After 10 years, these persons on fixed
3 incomes will have had to pay \$18, 405,000 for the GSP. After 40 years they
4 will have paid over \$73 million for this project.

5 The cost to Sun City West residents represents another \$543,721 annually or
6 \$21,748,840 after 40 years.

7
8 Importantly, the residents of Sun City are being required to pay 239% more for
9 the GSP than the Sun City West residents. The impact of the GSP falls much
10 more heavily on Sun City than it does on Sun City West.

11 **Q. Does the impact of the GSP on the Sun Cities rates support your**
12 **recommendation that any implementation of this project be done**
13 **deliberately and in phases?**

14 **A.** The magnitude of the rate impact, especially in Sun City, emphasizes the
15 appropriateness in minimizing costs and phasing the project. It also emphasizes
16 the importance of determining the benefits the aquifer receives from the
17 proposed GSP versus other alternatives, including recharge in the Agua Fria.

18 **Q. Does this conclude your testimony?**

19 **A.** Yes.

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BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chairman
JIM IRVIN
Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF THE JOINT) DOCKET NO. W-01656A-98-0577
APPLICATION OF SUN CITY WATER) SW-02334A-98-0577
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR APPROVAL OF)
CENTRAL ARIZONA PROJECT WATER)
UTILIZATION PLAN AND FOR AN)
ACCOUNTING ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVERY OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES.)

SURREBUTTAL TESTIMONY

OF

RAYMOND E. DARE

On Behalf of

**SUN CITY TAXPAYERS ASSOCIATION
("SCTA")**

SEPTEMBER 6, 2001

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I. INTRODUCTION

Q. Please state your name and address?

A. My name is Raymond E. Dare. My address is 12630 North 103rd Avenue, Room 221, Sun City, Arizona 85351-3467.

Q. On whose behalf are you offering testimony in this matter?

A. The Sun City Taxpayers Association ("SCTA").

Q. Have you reviewed the rebuttal testimony filed on behalf of Sun City Water and Sun City West Utilities (hereinafter referred to as "Citizens") filed in the above-referenced docket on or about August 17, 2001?

A. Yes I have.

Q. What is the purpose of your testimony?

A. I am offering the perspective of a ratepayer and an organization that participated in the CAP Task Force regarding the impacts of the GSP on the ratepayer and the level of deference that should be shown to the CAP Task Force's recommendation. In particular, I will testify that, contrary to the position of Staff, a 25% increase in rates caused by the GSP, especially in addition to a potential 25% increase without the GSP, will have a severe financial impact on the ratepayers residing in Sun City. Further, I will respond to the position of Citizens that the CAP Task Force's recommendation constituted approval of the specific proposal recommended by the PER.

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2 **II. THE RATE INCREASE PROJECTED BY RUCO AND STAFF WILL**
3 **IMPOSE FINANCIAL HARDSHIPS AND RATE SHOCK FOR**
4 **RATEPAYERS IN SUN CITY**

5 **Q. Staff's witness, Claudio Fernandez, states that the level of rate increase**
6 **projected from the GSP does not constitute rate shock. Do you agree?**

7 **A. Absolutely not. It is well known that the Sun City community is composed of**
8 **persons over 55 years of age, mostly retired and mostly on fixed incomes. They**
9 **are attracted to Sun City because of affordable housing prices and the**
10 **availability of shopping, medical services and amenities that make the**
11 **community extremely attractive. Their fixed incomes are allocated to providing**
12 **life's necessities. When costs increase above the cost of living adjustment they**
13 **receive to their fixed income, they must attempt to adjust their budget to**
14 **eliminate costs. Cost of living adjustments to these fixed incomes have been**
15 **modest and well below 25%. It will take several years of cost of living**
16 **adjustments to equal the 25% increase. Therefore, any increase over the cost of**
17 **living adjustments that they receive create hardship. An increase of 25%, or in**
18 **this case a projected increase of 50%, in my opinion, will constitute a financial**
19 **hardship and rate shock for many of the Sun City Water Company's ratepayers.**

20 **Q. Will the Sun City Water ratepayer be impacted more than the Sun City**
21 **West Utilities ratepayer?**

22 **A. The analysis provided by Staff reflects that 76% of the rate base being added**
23 **through the GSP will be allocated to the Sun City Water Company. In**
24 **particular, Staff witness, Mr. Fernandez, indicates that \$11,394,680 of the \$14,**
25 **993,000 rate base addition will be borne by the ratepayers of Sun City Water**
26 **Company. The additional revenue requirement imposed by the GSP for Sun**
City Water is \$1.8 million versus \$543,721 for Sun City West Utilities.

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2 **Q. What do you understand is the cause of this disproportional increase on**
3 **the ratepayers of Sun City Water Company versus the ratepayers of Sun**
4 **City West Utilities?**

5 **A. Citizens is proposing to install \$8 million worth of distribution lines and a**
6 **SCADA system for a dedicated golf course system. In contrast, the existing**
7 **effluent distribution water system in Sun City West is available to minimize**
8 **costs. That is why SCTA adamantly opposes construction of a new distribution**
9 **system in Sun City.**

10 **Q. Why is SCTA concerned about the impact on the ratepayers of the Sun**
11 **City Water Company?**

12 **A. SCTA is a totally volunteer organization. Its primary objective is to evaluate,**
13 **and when deemed appropriate, oppose unnecessary or unfair impacts on the**
14 **pocketbooks of Sun City residents.**

15 The intent of SCTA remains to protect the pocketbook interest of its members.
16 Thus, from the outset, SCTA has strongly recommended the Commission
17 evaluate the costs versus the benefits of the GSP proposed by Citizens and the
18 various alternatives now available. SCTA requests the Commission not
19 foreclose the possibility of recharging all or some of the CAP water.

20 **Q. What has SCTA's role been with regard to Citizens' CAP allocation?**

21 **A. When SCTA first involved itself with the issue of CAP water by Citizens, it**
22 **actively opposed Citizens' proposal to recover all accrued and ongoing CAP**
23 **charges associated with its full 17,000 acre foot allocation. At the time Citizens**
24 **had only identified a "preferred alternative", made no commitment to actually**
25 **put its CAP water to beneficial use and the hydrologic evidence provided by**
26 **Citizens did not indicate much direct benefit to the Sun Cities. At that time, the**

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2 Commission had never found "recharge" of water to satisfy the "used and
3 useful" concept of ratemaking. Further, since Sun City has the highest
4 population, and the Agua Fria Division had only a nominal population, the
5 ratepayers of Sun City, under Citizens' proposal, were being requested to bear
6 the vast majority of the total accrued and ongoing expenses for CAP water.
7 Under these circumstances, SCTA supported relinquishment over retention of
8 the CAP allocation.

9 SCTA maintained a preference for relinquishment through the CAP Task Force
10 process. However, when the Commission was asked to approve the GSP,
11 SCTA enlisted the services of Mr. Husted to review the GSP from an
12 engineering standpoint. Mr. Husted concluded that the original proposal
13 included unnecessary reservoirs and booster stations. He further concluded that
14 the majority of the CAP water allocated to the Sun Cities could be put to use to
15 satisfy the water demands of the Sun City West golf courses, thereby
16 eliminating the need for most of the new water distribution system that would
17 be required if water was to be delivered to golf courses in Sun City. He also
18 confirmed that Citizens had not provided a cost benefit analysis to demonstrate
19 that additional benefits will be received by the Sun Cities' areas over and above
20 the less costly recharge options.

21 When the Commission ordered a hearing on the Preliminary Engineering
22 Report ("PER), SCTA requested Mr. Husted to critically evaluate the PER and
23 determine whether the PER fully and fairly evaluated all reasonable alternatives
24 available to maximize use of the CAP allocation on golf courses within the Sun
25 Cities and whether the alternative recommended by the PER and Citizens
26 constituted the least cost method of doing so. As Mr. Husted has testified, his
conclusion is that the PER is not complete, did not study all viable alternatives

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adequately and in fact did not study the integration of the GSP with the recharge facility at Citizens' water complex or with the Agua Fria recharge. As a result, SCTA vigorously opposes the impacts that the proposed alternative will have on the pocketbooks of the residents of Sun City. If the Commission will not reconsider its decision to proceed with the GSP, SCTA respectfully requests that it require Citizens to construct the most economical GSP system available. In effect, Citizens is requesting to expend over \$8 million on an internal distribution system and related SCTA system to potentially delivery less than 1,000 acre feet of CAP water over and above that which would be delivered to the Sun City West golf courses alone. Citizens' existing recharge facility appears capable of being enlarged to accommodate this excess CAP water.

Finally, over the past few months, SCTA has met with representatives of the surrounding communities, as well as representatives of CAWCD. SCTA is now convinced that the Sun Cities will receive direct benefits from utilization of the Agua Fria recharge site. In contrast, Citizens has never quantified what additional benefits that will actually be received through the GSP versus recharge. SCTA requests the Commission to require such a demonstration before the GSP is authorized.

III. THE CAP TASK FORCE DID NOT SET THE PARAMETERS OF THE PER

Q. Do you have any comments regarding Mr. Larson's rebuttal testimony?

A. I strongly disagree with Mr. Keith Larson's statement that "the basic parameters of the Preliminary Engineering Report ("PER") were set by the CAP Task Force and the Commission in Decision No. 62293."

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2 Q. Why do you disagree with Mr. Larson's statement that the CAP Task
3 Force set the parameters of the PER?

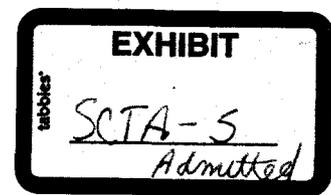
4 A. The CAP Task Force reviewed various alternatives but did not review
5 combinations of alternatives or even address how the GSP should be designed.
6 The CAP Task Force, like the Commission, merely embraced the "concept" of
7 the GSP, not a particular design. Furthermore, while the GSP was
8 recommended, by the Final Report of the CAP Task Force, there was
9 significant support expressed for other alternatives, including recharge. In fact,
10 SCTA opposed the manner used to formulate the "consensus recommendation"
11 and did not participate in the final voting and did not approve the Final Report.

12 The CAP Task Force was not asked and never recommended a design for the
13 GSP. It never imposed qualifications that every drop of CAP water must be
14 used on golf courses or that the CAP allocation had to be applied to only
15 Recreation Center golf courses or to all Recreation Center golf courses. The
16 CAP Task Force was never presented with an option to eliminate the Sun City
17 distribution system as now suggested by Mr. Husted, nor was the lack of
18 groundwater rights for Sun City West and the pooling arrangement disclosed or
19 discussed as a part of an exchange. The GSP recommended by the PER and the
20 options thereto were never presented to nor adopted by the CAP Task Force.

21 Q. Does this conclude your testimony?

22 A. Yes.

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7.0 RECOMMENDED MASTER PLAN

7.1 WATER RESOURCES PLAN

Water supply for the Agua Fria Division will be provided by a conjunctive water resource system utilizing a combination of groundwater, CAP water, and surface water supplies from the Agua Fria River. The water resources will be used directly from a surface water plant treating CAP and Agua Fria water, and from groundwater. The CAP and Agua Fria water resources will also be used indirectly through groundwater recharge and recovery using surface water to augment groundwater supplies that is subsequently recovered through wells. Both CAP and Agua Fria surface water supplies are planned to be delivered through the Beardsley Canal, owned and operated by the Maricopa Water District (MWD).

To meet the ADWR management goal for the Phoenix AMA of "safe yield by the Year 2025," the water resources plan will diminish the reliance on groundwater pumping and utilize renewable water resources to the maximum extent possible. Comparison of the projected demands and the potentially available renewable resources indicates that demand will exceed the available renewable water resources at build-out of the Agua Fria Division. Without the acquisition of additional renewable water supplies, a significant portion of the groundwater withdrawn will need to be replenished through recharge and recovery by Citizens or through the Central Arizona Groundwater Replenishment District (CAGR).

The plan for use and development of water resources is related to the availability of the water supply and the planned rate of development in the Division. While the master plan focuses on the Central Service Area, the use of water resources needs to consider the entire division. The water resources budget for each service area was identified and a water balance for the entire Division developed in Chapter 5.

7.1.1 Water Resources Budgets

The water resource budget for the Division is summarized in Table 7-1. The following sections summarize the assumptions and water resource plan for each service area.

7.1.1.1 Northern Service Area

The plan for water supply in the Northern Service Area is to use groundwater pumping to meet the current and projected demands. For that portion of the demand in the Northern Service Area not supplied by "residual groundwater," renewable water resources will be needed to recharge the groundwater for recovery by existing and new wells. Initially, the recharge will utilize CAP water.

Recharge of CAP water in the Northern Service Area may be accomplished initially through in-lieu recharge by turning off MWD wells and utilizing the Citizens CAP allocation for irrigation.

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Agua Fria water may also be used to replenish groundwater through recharge after completion of an agreement with MWD. This agreement is expected to take up to 5 years to complete. Agua Fria surface water is limited to the lands that comprise the MWD that will be converted from agricultural to municipal and industrial (M&I) use in the Northern Service Area. The availability of this resource is limited by prior developer agreements in this service area. It is estimated to be 2,902 acre-feet per year at build-out. Agua Fria surface water is also anticipated to be utilized through in-lieu recharge in conjunction with MWD.

Depending on the actual allocation of CAP supply to the three service areas in the Division, there will be water supply deficit of 850 acre-feet in 2020 increasing to approximately 4,000 acre-feet at build-out in the Northern Service Area.

7.1.1.2 Central Service Area

The water resource plan for the Central service area is to supply water through the direct use of renewable water resources.

Treatment of CAP and Agua Fria surface water is expected to be on-line by the Year 2005. Until that time, groundwater pumping will be used to provide water supply. After 2005, groundwater will be used as a secondary or backup to surface water. It will also be used to meet extreme peak demands. Total groundwater pumping as a redundant and peaking supply is estimated to be 10 percent of the total demand in the Central Service Area. Groundwater pumping in the Central Area will need to be replenished by renewable water supplies.

By the Year 2020, 2,690 acre-feet per year of Agua Fria surface water is estimated to be available in the Central Service Area. At build-out Agua Fria supply is estimated to be 11,360 acre-feet. The remainder of the supply to meet the demand must be met with CAP water. Depending on the actual rate of development, the planned allocation of CAP water is approximately 3,990 acre-feet per year. Based on this allocation, there is adequate water supply for the Central Service Area in 2020, but there is a water supply deficit of approximately 6,900 acre-feet at build-out.

7.1.1.3 Southern Service Area

The water supply for the Southern Service Area will be provided primarily by renewable water resources from a surface water treatment plant.

Treatment of CAP and Agua Fria surface water is expected to be on-line by the Year 2005. Until that time, groundwater pumping will be used to provide water supply. After 2005, groundwater will be used as a secondary or backup to surface water. It will also be used to meet extreme peak demands. Total groundwater pumping as a redundant and peaking supply is estimated to be 10 percent of the total demand in the Southern Service Area. Groundwater pumping will need to be replenished by renewable water supplies.

Citizens Water Resources
Central Agua Fria Master Plan

Available Agua Fria surface water in the Southern Service Area is estimated to be approximately 800 acre-feet in 2020, and 4,760 acre-feet at build-out. Demand in 2020 would be met with residual groundwater use or CAGR. At build-out, additional supply of about 2,000 acre-feet will be needed to meet the demand. Reclaimed water supply of up to 4,800 acre-feet in the Southern Service Area may be available at build-out.

TABLE 7-1 WATER RESOURCE BUDGET

WATER RESOURCES						
acre-feet/year						
	2000	2005	2010	2015	2020	Build-out
NORTH SERVICE AREA						
Demand	3520	8220	11250	12380	12970	13100
Physical Supply						
Treated surface water	0	0	0	0	0	0
Groundwater pumping	3520	8220	11250	12380	12970	13100
Water Resource						
Agua Fria surface water	0	1820	2490	2740	2870	2900
CAP surface water	2880	5340	6800	7330	6860	3780
Residual groundwater	640	1060	1960	2310	2390	2410
CAGR or other	0	0	0	0	850	4010
CENTRAL SERVICE AREA						
Demand	500	1960	3210	4370	5260	22240
Physical Supply						
Treated surface water	0	1760	2890	3940	4730	15350
Groundwater pumping	500	200	320	430	530	6890
Water Resource						
Agua Fria surface water	0	1000	1640	2240	2690	11360
CAP surface water	500	960	1570	2100	2570	3990
Residual groundwater	0	0	0	0	0	0
CAGR or other	0	0	0	30	0	6390
SOUTH SERVICE AREA						
Demand	1130	1360	1390	1420	1460	8690
Physical Supply						
Treated surface water	0	1220	1250	1280	1310	6420
Groundwater pumping	1130	140	140	140	150	2270
Water Resource						
Agua Fria surface water	0	740	760	780	800	4760
CAP surface water	380	540	550	0	0	1660
Residual groundwater	750	80	80	80	80	240
CAGR or other	0	0	0	560	580	2030

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Citizens Water Resources
Central Agua Fria Master Plan

WATER RESOURCES						
acre-feet/year						
	2000	2005	2010	2015	2020	Build-out
AGUA FRIA DIVISION TOTAL						
Demand	5150	11540	15850	18170	19690	44030
Physical Supply						
Treated surface water	0	2980	4140	5220	6040	21760
Groundwater pumping	5150	8560	11710	12950	13650	22270
Water Resource						
Agua Fria surface water	0	3560	4890	5760	6360	19020
CAP surface water	3760	6840	8920	9430	9430	9430
Residual groundwater	1390	1140	2040	2390	2470	2650
CAGR or other	0	0	0	590	1430	12930

7.1.1.4 Water Resources Summary

At build-out of the Agua Fria Division, Agua Fria River surface water will provide up to 19,000 ac-ft/yr. CAP surface water will provide 9,400 ac-ft/yr. There will be a water supply deficit of approximately 13,000 ac-ft. This deficit will need to be supplied from unidentified renewable water resources or purchased through CAGR. Reclaimed water in the Southern Service Area could potentially supply a portion of this deficit.

Depending on the rate of development with the Division, safe yield by the Year 2025 is probably achievable with currently identified water resources.

7.1.2 Water Conservation Plan

(To be provided by Citizens staff.)

7.1.3 Water Resources Acquisition

From a regulatory perspective, the extent of CAGR replenishment creates a supply acquisition target of roughly 13,000 acre-feet for the Agua Fria Division. If demands remain as projected, neither Citizens nor its customers would have to rely on CAGR for replenishment services if that volume of renewable supplies were acquired. The estimated 4,800 acre-feet of effluent anticipated to be produced within the South Service Area could be used to offset the supply acquisition need through direct reuse, recharge/recovery, or water exchanges.

Should groundwater supplies, from either a physical availability or water quality perspective prove unattractive or unattainable for the utility, Citizens may need to acquire additional renewable water supplies to meet demands. In that case, the assumed groundwater pumping in the Physical Budget (Table 5-2), roughly 22,000 acre-feet, could serve as a supply acquisition target. Serving the entire

Draft Report-Use or disclosure of data contained on this sheet is subject to the restriction specified at the beginning of this document.

Division with surface water or CAP supplies would require the development of alternative supply redundancy other than the well backup currently contained within this master plan.

Alternative water supplies could be in the form of additional CAP water, acquired through ADWR's transfer and relinquishment policy, reallocation of unallocated CAP supplies at some time in the future, or lease of Indian CAP allocations. Other potential renewable supplies include, but may not be limited to, effluent from either inside or outside the Agua Fria Service Area, groundwater pumped from within the water-logged areas to the south, groundwater pumped from outside the AMA, and non-CAP Colorado River water. Based on the projected rate of development and the currently available water supplies, these acquisition efforts may not be necessary for approximately 20 years. Citizens will need to continually evaluate their water supply acquisition program during that time as supplies become available.

7.2 FACILITIES PLAN

7.2.1 General Description

The recommended facilities plan for the Central Service Area of the Agua Fria Division for the planning year 2020 is based on the construction of a surface water treatment plant (WTP) near the center of the service area, in the vicinity of Cactus Road and State Route 303. Raw water supply from the Central Arizona Project (CAP) and Agua Fria would be transported into the service area by the existing Maricopa Water District Beardsley Canal, and then from the canal to the treatment plant with a new raw water transmission pipeline. Due to the potential for either the Beardsley Canal or the CAP to be out of service for periods of a month or more, a redundant groundwater supply would be provided through the installation of new wells throughout the Central Service Area.

Three pressure zones are planned in the Central Service Area. Finished water from the treatment plant would be boosted into Zone 3, and potentially to Pressure Zone 4 as a secondary supply. Primary water supply to Pressure Zone 4, in the northwest corner of the Central Area, would be supplied from the Northern Service Area. Water from Pressure Zone 3 would be supplied to Pressure Zone 2 and the Southern Service Area through one or more pressure reducing valves (PRVs).

Figure 7-1 is the general facility plan of the system for the Year 2020.

7.2.1.1 Raw Water Transmission

The Beardsley Canal has available capacity of at least 94 million gallons per day (MGD) to Cactus Road, but currently has no available capacity downstream. Therefore, the raw water transmission line will need to connect to the canal in the vicinity of Cactus Road with a canal turnout and screening facility. A new 36-inch raw water transmission line east along Cactus Road is sized for the ultimate treatment plant capacity to avoid costly parallel lines in the future.

Detailed evaluation of the costs and funding of this line may determine that a smaller diameter line is cost effective during early years of the planning period.

7.2.1.2 Water Treatment Plant

A centralized WTP is planned to be constructed in stages, with the first phase completed before 2005. The treatment capacity in the planning Year 2020 is 7.5 MGD. The treatment plant is planned to meet at least average day demands for the Central and Southern Service Areas, with the maximum day supply being supplemented by the backup wells. This reduces the costs of the treatment plant and makes use of the well facilities for peak demands. Use of the well equipment to meet peak demands also exercises the equipment during extended periods when they are not needed for backup supply.

Since the plant may need to treat groundwater as well as surface water, the use of a membrane process for treatment would be favored. Citizens success with membrane treatment of CAP water at Anthem would further support the suitability of a membrane process. Treatability studies of the groundwater would determine the type of membrane process and other water treatment processes needed.

If groundwater treatment is not required, or until groundwater treatment is required, the central WTP would provide blending of treated surface water and untreated groundwater before discharge to the distribution system. A finished water storage reservoir and booster station is planned at the WTP site. The planned capacity of the central storage reservoir is 3 million gallons (MG). The planned booster station capacity in 2020 is 8,200 gallons per minute (gpm) to meet maximum day demand including 3,000 gpm fire flow in the Central Service Area, plus average day demand in the Southern Service Area (not including Zone 4).

7.2.1.3 Water Supply Wells

Wells will be required to meet initial demands until the WTP can be completed, and will need to provide back-up supply for the WTP when the canals or WTP are out of service for maintenance or repair. In addition, the wells can be used to supplement the surface water supply from the treatment plant to meet maximum day demands, thereby reducing the capacity and cost of the treatment plant. Adequate well supply to meet average day demand is planned since extended maintenance outages of the Beardsley Canal are scheduled for winter months when demand is lower. A total of six wells at an average capacity of 1,000 gpm are estimated to be needed by Year 2020.

The capacity and quality of new wells are unknown until they are drilled. Areas of moderate to high potential for acceptable groundwater quantity and quality are developed as part of this study, but are no guarantee of suitability. Therefore, specific location of wells and associated water storage/booster plants and groundwater transmission lines will need to be determined as facilities are implemented.

**Sun City / Sun City West Groundwater
Savings Project**

**Technical Advisory Committee Meeting Minutes
April 3, 2000 - 1:30 p.m.**

**Hoover Meeting Room
Sun City Library
16828 North 99th Ave
Sun City, Arizona**



Introduction of Project Team and Attendees

Team Members

Ron Jackson	Citizens Water Resources Project Manager
Jim Pembroke	HDR Project Principle
Dave Buras	HDR Project Manager
Chip Howard	Turf Science Inc. - Golf Course Expert
Leonard Dueker	DCI Inc - Technical Expert
Gary Patchett	Universal Fields Services - Easement and Property Assessment
Frank Costello	Terrane Engineering - Geotechnical Investigation
David Penner	HDR - SCADA System
Terri Smith	AZ Construction Services - Public Participation
Jack Allen	HDR - Regulatory and Environmental Permitting
Andera Helmstetter	HDR - Biological Investigation
Barbara MacNider	Archaeological Consulting Services - Cultural Resources Investigation

Review of Project History and Background

The HDR team task is to study and prepare preliminary plans to bring CAP water into Sun City / Sun City West and distribute it to participating golf courses. HDR shall utilize the technical advisory committee to hear and possibly incorporate technical ideas and opinions from groups represented.

HDR Scope

Golf Course Inventory: Interview all operators and obtain data for water usage, storage.

Pipeline Route Survey: Investigate individual routes to move CAP water into the Sun City /Sun City West Area including utilizing topographic and aerial mapping, geotechnical investigation and existing utility determination.

- Via Hayden -Rhodes Aqueduct (CAP) at Lake Pleasant Road
- Via Beardsley Canal
- Via Beardsley Canal through Sun City West

- Shared project with CWR Central Agua Fria CAP Water Delivery System via pipeline through Sun City West.

Easement/ Right of Way Acquisition: HDR to identify property ownership and provide assessment of acquisition costs and times. Alternative A is Citizens Right of Way, alternative B and C are located on state land.

Hydraulic Investigation: The HDR team is to perform calculations and provide pipe sizes, locations, pumps, storage and possible treatment facilities. The main line to move CAP water to a central location shall be gravity flow with pumping occurring in the golf course delivery network.

Environmental Considerations: Biological, cultural and environmental summary for each alternative.

Regulatory Considerations: Summary of regulatory permits and approvals required for each alternative.

Project Cost Estimates: Calculation of complete cost estimates for each alternative and component of the alignment based on July 2003 service.

Project Timeline: Preparation of timeline for activities, design, construction, permitting and reviews based on July 2003 service.

Public Relations: Technical Advisory Committee meeting to allow for community input and ongoing review of project.

Rate Study: Establish current cost of delivering groundwater to golf courses for use of establishing CAP rates.

Design Report: Present all study findings in a final report giving recommendations for final design.

Schedule

Notice to Proceed: March 1, 2000

Design Study 30% Status: April 14, 2000

Design Study 60% Status: May 19, 2000

Design Study 90% Status: June 16, 2000

Design Study 100% Status: July 14, 2000

Presentation to the Arizona Corporation Commission: July 31, 2000

Next Meeting

The next meeting is scheduled for **May 5, 2000 at 1:30 p.m.** in the **Hoover Meeting Room** of the Sun City Library. 30% Submittal shall be reviewed at this

time and shall be sent to technical advisory committee members approximately 2 weeks after submittal.

Questions and Comments

Q: Is the most economical way to use CAP water being considered? Can use all the water on the Recreation Center golf courses.

A: ACC order is to consider all courses public and private and determine costs for all who want to participate. Final recommendation may or may not include all courses.

Q: Cost determination for delivering to courses south of Grand Avenue.

A: HDR is tasked with determining best alternative to get CAP water into Sun City /Sun City West area and distribution network. This includes pipe sizing, demand, pump necessity and to determine what is reasonable to do.

Q: Are there provisions for later tie-ins?

A: No. Only existing golf courses are to be investigated.

Q: Economic considerations should not be the highest priority.

A: Correct. A recommended alternative will be decided based on best use of CAP water including economics but not solely economics. All other alternatives will be thoroughly investigated and results included in the final documentation.

Q: The people of Sun City approved only one concept and that should be the only one investigated.

A: Previous task force investigated how to use CAP water and the decision was to use it on golf courses which was supported by all except Sun City Tax Payers. ACC ordered the investigation to include all golf courses public and private, investigation of joint Agua Fria project and evaluation of pump, storage and savings. This task force is for technical input and to express opinions on how to best accomplish what was ordered by the people that will benefit from it.

Q: Is this a concept study or a plan?

A: This is a preliminary plan study producing a final alignment. No final plans will be produced but it will lead into the final design phase.

Q: What will happen after 100% submittal?

A: There will be approximately a 150 day review and comment period by multiple groups leading to a decision of where project is to be built. Final design will begin. Completion and in service date of 2004.

Q: Has an above ground pipe in the Auga Fria River bed been investigated.

- A: No. Will be investigated and information will be included in the report.
- Q: Open channel /canal investigation should be considered as an alternative to pipe.
- A: Will investigate use of canal for moving CAP water to central location and will be included in report.
- Q: Can the project be held off until the 2002 water level evaluation?
- A: No. The ACC ordered investigation to be completed.
- Q: When is the engineering criteria developed?
- A: The judgement criteria is ongoing and at completion of the study.
- Q: What is involved in the 30% design?
- A: Acquiring data from golf courses to allow for modeling of demand. Cultural, biological, geological, right of way and environmental studies begun. 30% will include rough plan and profile sheets and a rough report with sections for all future data.
- Q: The recreation centers will accept all water will the private courses?
- A: The private course have agreed to the study and to negotiate for the water, they have not agree to take any water. If it is not technically acceptable or cost effective to use private course we will stop negotiations. Agreements must be in place soon to have a practical alignment.

**Sun City / Sun City West Groundwater
Savings Project**

**Technical Advisory Committee
April 3, 2000 - 1:30 p.m.**

Name	Group/Address	Phone
Eve Holder	12062 St. Ames Drive Sun City, AZ 85351	
Robert Jones	22725 N. Dusty Blvd Sun City, Az	214-0761
Gene Zylstra	9501 Cedar Hill Circle N. Sun City, AZ 85351	972-9151
John Powel	13677 N. 108 th Drive Sun City, AZ 85351	974-1450
Warren Miller	13230 N. Cedar Drive Sun City, AZ 85351	974-3774
Don Coleman	9826 Pinecrest Drive Sun City, AZ 85351	933-1162
Preston Welch	13018 N. 99 th Drive Sun City, AZ 85351	933-6343
Raymond Dare	Sun City Taxpayers	933-7530
Jim Sander	Briarwood Country Club 20800 N 135 th Ave Sun City West, AZ 85375	546-8484
Mary Elaine Charlesworth	Sun City Taxpayers Association 17845 North Country Club Drive Sun City, AZ 85373-1752	933-9530
Jack McLaughlin	Union Club	972-0040
Donald Needham	Town of Youngtown 12030 Clubhouse Square Youngtown, AZ 85363	974-6076

Jerry Sovintek	Recreation Center	974-3800
Ron Jackson	Citizens Utilities 12425 W. Bell Road Suite C306 Surprize, AZ 85374	815-4309
Blaine Akine	Citizens Utilities 12425 W. Bell Road Suite C306 Surprize, AZ 85374	815-4306
Terri Sue Rossi	Citizens Utilities 15626 N. Del Webb Blvd Sun City, AZ 85351	815-3149
Ray Jones	Citizens Utilities 15626 N. Del Webb Blvd Sun City, AZ 85351	815-3124
Dave Buras	HDR Engineering 2141 E. Highland Ave Suite 250 Phoenix, AZ 85016	602-508-6616
Jami Erickson	HDR Engineering 2141 E. Highland Ave Suite 250 Phoenix, AZ 85016	602-508-6612



Buras, Dave

From: Ron jackson [rcjackso@czn.com]
Sent: Monday, July 10, 2000 3:01 PM
To: Buras, Dave
Cc: Blaine Akine
Subject: SC/SCW GW Savings Plan

Dave,

A couple of other thoughts that the CWR staff has come up with since thursday.

Pipeline routing in Sun City - The pipeline routing shown in the 90% report is rather inefficient. We believe that all the lakes in question can be reached by much shorter routes. We have scratched out routing layout which I will share with you when I come to your office tuesday or wednesday. However I think the shorter routes will be obvious if you spend some time with the map of Sun City.

Simultaneous well and CAP delivery - During the summer when wells must be used to make up the difference between peak flow demand and max CAP system capacity at the GC's with streams that pass water to the storage lakes, will the streams be overwhelmed by the simultaneous flow from the well and the CAP delivery point. I suppose there is an operational way this can be avoided but this condition should be anticipated and discussed in the report.

Golf Course Analysis - Chip (you HDR for Chip) need to do a complete write up on the work that was done to develop the GC flows and quantities. This write up must include the rationale to address the comments that certain golf courses or portions thereof in SC should be dropped out of the project. Also that chart that Chip has showed us that demonstrates how far into the year it will take to use all the allocation in each community should be included.

Control Issues - The rec centers are pretty aggressive on the point that they want to control the valves at their courses. CWR will not give up that control. The hydraulic reasons that this cant happen need to be clearly stated. A very important point is the fact that CAP allows only two flow adjustments per day. CWR can not develop a system or enter into a contract with the rec centers that would violate our contract with CAP.

Ron

A) Intro

B) Cost Assessment

C) Feasibility of Joint Transmission Facility with Aqua Fria Division

D) Analysis of Major elements of Groundwater Savings Facility Project

1 - Transmission Pipeline Component Analysis

- Intro - why are we doing this analysis - into the options
- What criteria are we using + why
- Common elements
- Option 1
- Option 2
- Option 3
- Evaluation Summary

E) Recommendations

Intro

ALL THE DIFFERENT THINGS CONSIDERED

SUMMARY CHART AND DISCUSSION

COST	1	2	3	4
ALF				
ALF				

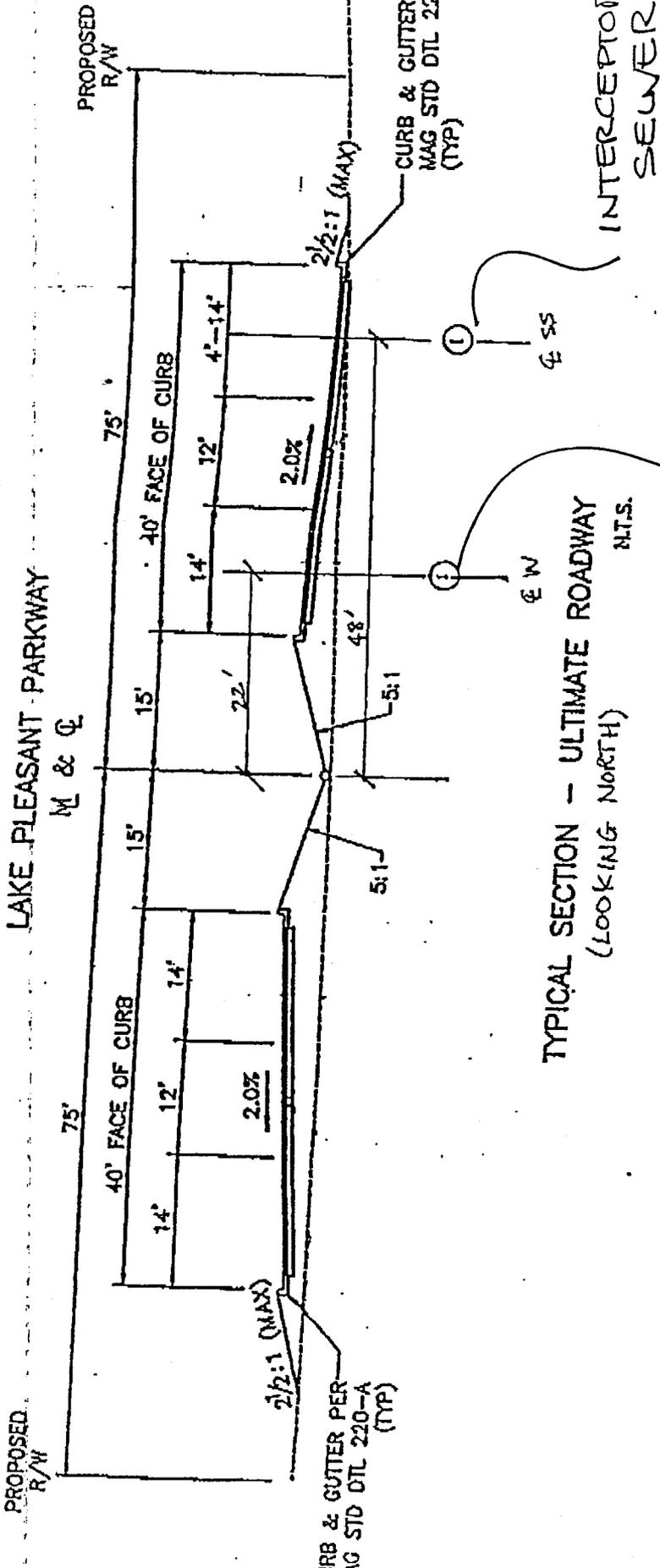
OPTIONAL ELEMENTS

INVESTMENT IN FLOW COST ESTIMATE
COST PER GALLON

CONTRACTUAL

LAND ACQUISITION

TIME / RELATIVE COST OF ACQUISITION



TYPICAL SECTION - ULTIMATE ROADWAY
(LOOKING NORTH)
N.T.S.

30-INCH WATER
TRANSMISSION LINE
(DO NOT TAP!)

DAVE -

These are my notes from site
visit. Either side would
accommodate pipeline, although
R/W on E. side, N. of Vornax, gets
pretty tight (based upon fence loc.)

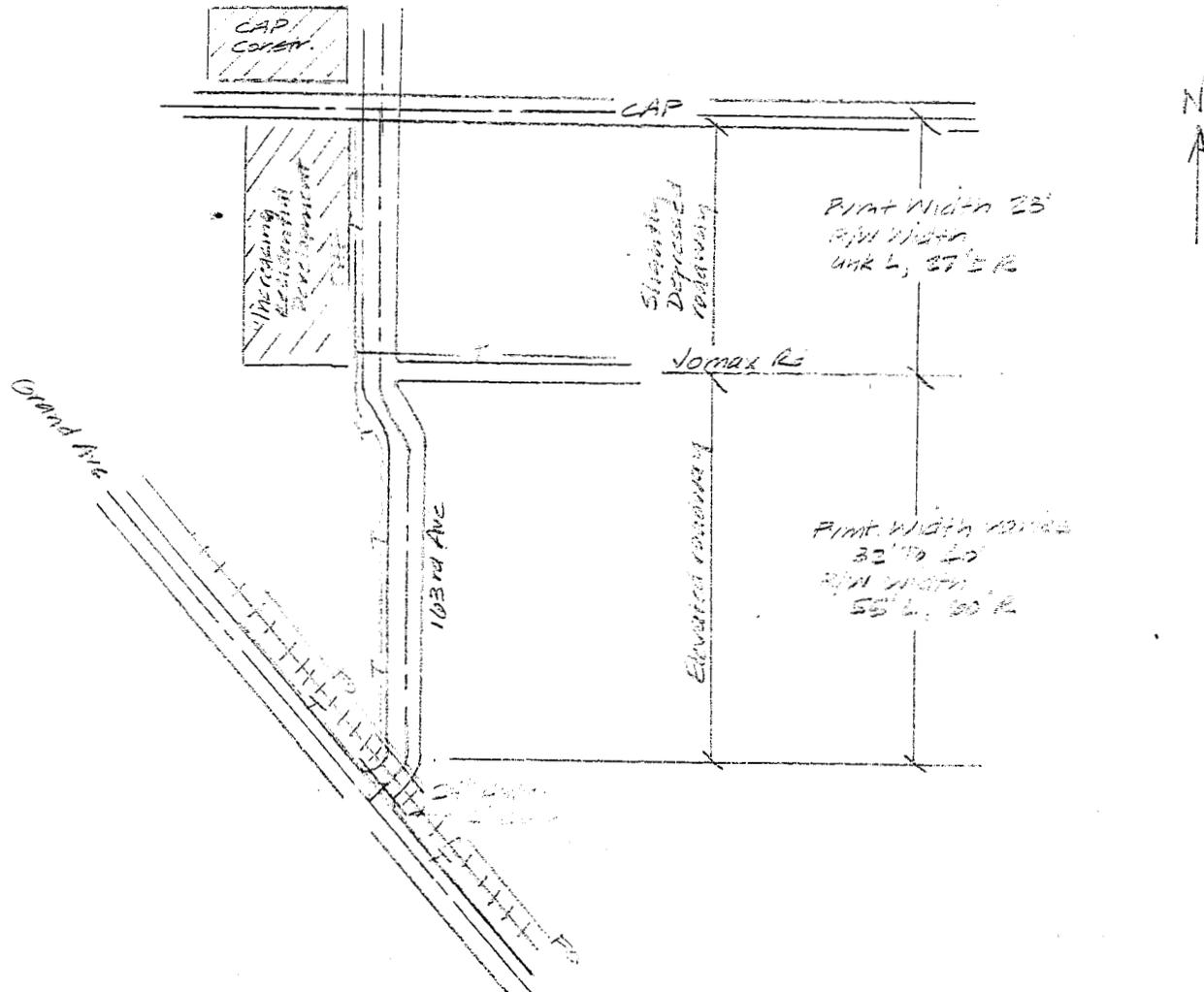
E-star photo was closed on
Monday (i.e. Tues, of course). I'll
get the files in there on Wed. A.M.

Eric

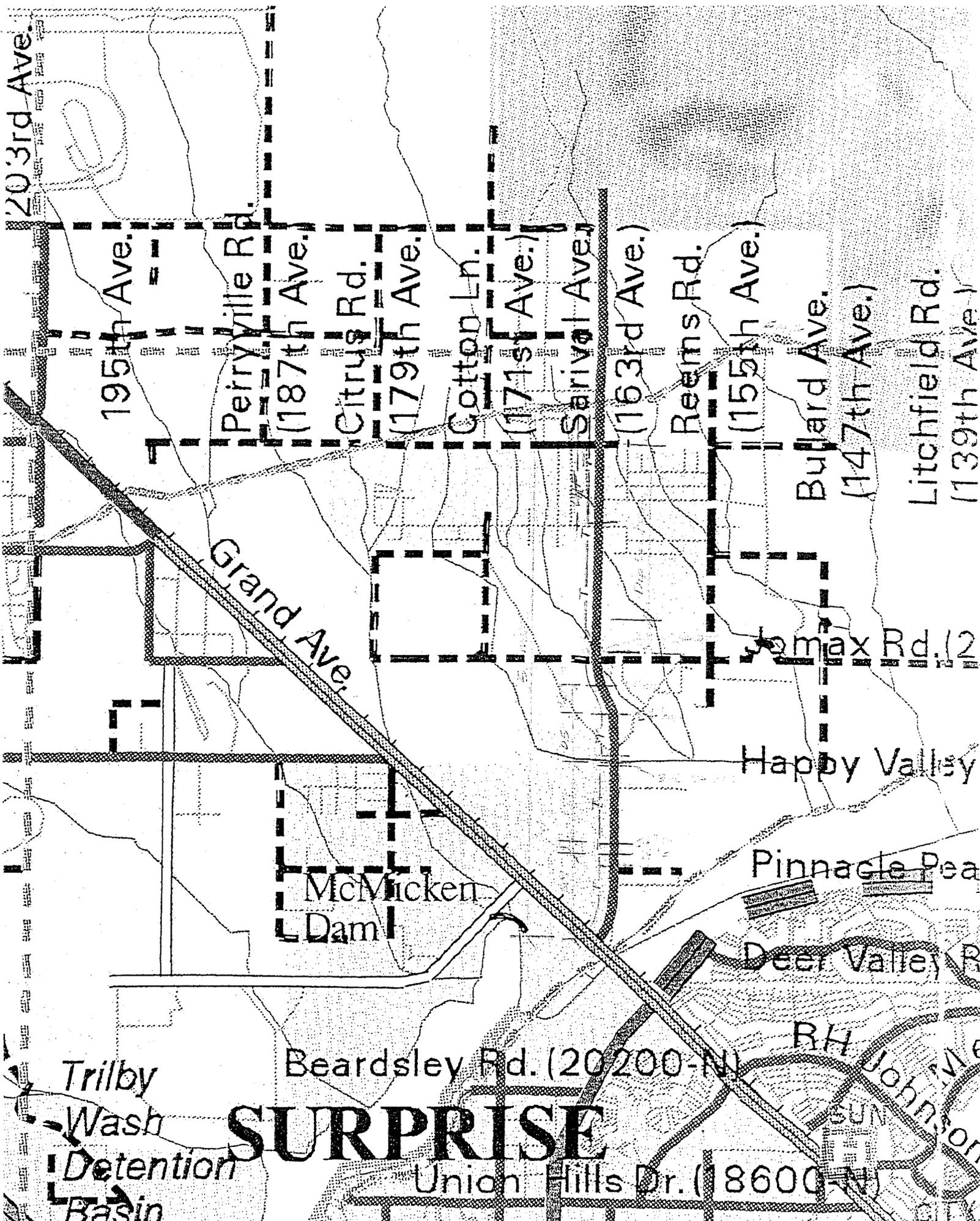
HDR Computation

HDR

Project <i>OT 2006</i>	Computed <i>EL</i>	Date <i>7/3/00</i>
Subject	Checked	Date
Task	Sheet	Of

163rd Ave., CAP to Grand Ave.

1. Total length = 5.0 miles
2. Two-lane roadway, see sketch for pavement widths. Right-of-way widths based upon fence locations. No fence on west side, north of Jomax.
3. Only apparent underground utilities are telephone as shown on sketches. Fiber optic indicated parallel to railroad at Grand Ave. The paralleling telephone (on west side) crosses the roadway periodically to serve residences on the east side. There is an overhead power line that runs for a mile or so, south of the CAP on the west side. This line apparently serves the growing number of homes being constructed in that area.
4. No turnouts visible on CAP near 163rd Avenue.
5. Numerous cross culverts from Grand to Jomax. Roadway dip sections only from Jomax north.
6. There are probably a half dozen or more dirt cross roads (residential accesses?) that intersect 163rd which do not show on the attached map sketch.



203rd Ave.

195th Ave.

Perryville Rd.

(187th Ave.)

Citrus Rd.

(179th Ave.)

Cotton Ln.

(171st Ave.)

Survival Ave.

(163rd Ave.)

Reems Rd.

(155th Ave.)

Bullard Ave.

(147th Ave.)

Litchfield Rd.

(139th Ave.)

Grand Ave.

Jamax Rd. (2)

Happy Valley

McMicken Dam

Pinnacle Peak

Deer Valley R

Trilby Wash Detention Basin

Beardsley Rd. (20200-N)

SURPRISE

Union Hills Dr. (18600-N)

RH Johnson

Irrigation Water Usage

In order to predict the future water usage for irrigation of the SC and SCW golf courses, we can reflect upon records of prior water consumption. From this data, the future peak flows and annual consumptions can be anticipated.

A. Historical Water Usage

Each year, every golf course within the Phoenix AMA that consumes non-effluent irrigation water is required to file an annual report with the Arizona Department of Water Resources. These reports contain annual water consumption totals and were the information source for the following information. Except where noted, the data represents 6-year averages (1993 - 1998).

Facility Annual Totals

Facility	Acrefeet / year*
Sun City Rec Center;	
Lakes East/Dawn Lake	594
Lakes West/Viewpoint Lake	863
North GC	623
Quail Run GC	231
Riverview GC	447
South GC	819
Willowcreek/Willowbrook	1329
Sun City Private Clubs;	
Palmbrook CC	613
Sun City CC	533
Union Hills CC	729
Maricopa Lake****	15
Sun City West Rec Center;	
Deer Valley GC**	546
Desert Trails GC***	469
Echo Mesa GC**	592
Grandview GC	761
Pebblebrook GC	689
Stardust GC	429
Trail Ridge GC	539
Sun City West Private Clubs;	

Briarwood CC	725
Hillcrest GC	769
TOTAL	12315

* - 6-year data (93-98)

** - 4-year data (95-98)

*** - 3-year data (96-98)

**** - 2-year data (96&99)

Data source - Arizona Dept of Water Resources

B. Estimated Monthly Use Pattern

The demand for irrigation water is not constant throughout the year. Rather demand is low in the Winter and high in the Summer. Knowledge of this monthly use pattern is necessary in planning the design and operational concept for the system. Prior experience over a period of several years with the SCW golf courses has provided information upon which to base an monthly model of irrigation water consumption. By applying that model to each of the facility annual totals listed above, the facility consumptions can be estimated for each month of the year. Those estimations are as follows.

Estimated Monthly Use Pattern
(Data in Acrefeet)

	Ann total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sun City Rec Center;													
Lakes East/Viewpoint Lake	594	9	13	15	43	90	88	105	66	56	69	29	11
Lakes West/Dawn Lake	863	13	19	22	62	131	128	153	96	82	99	42	16
North GC	623	9	14	16	45	94	93	110	69	59	72	30	12
Quail Run GC	231	4	5	6	17	35	34	41	26	22	26	11	4
Riverview GC	447	7	10	11	32	68	67	79	50	42	51	22	8
South GC	819	12	18	21	59	124	122	145	91	78	94	40	15
Willowcreek/Willowbrook	1329	20	29	33	96	201	198	235	148	126	153	65	25
Sun City Private Clubs;													
Palmbrook CC	613	9	13	16	44	93	92	108	68	58	71	30	11
Sun City CC	533	8	12	13	39	81	79	94	59	51	61	26	10
Union Hills CC	729	11	16	18	53	110	108	129	81	69	84	36	14
Martcopa Lake	15	0	0	0	1	2	2	3	2	2	2	1	0
Sun City West Rec Center;													
Deer Valley GC	546	8	12	14	39	83	81	96	61	52	63	27	10
Desert Trails GC	469	7	10	12	34	71	70	83	52	44	54	23	9
Echo Mesa GC	592	9	13	15	43	90	88	104	66	56	68	29	11
Grandview GC	761	12	16	19	55	115	113	135	85	72	88	37	14
Pebblebrook GC	689	11	15	17	50	104	102	122	77	65	79	34	13
Stardust GC	429	6	9	11	31	65	64	76	48	41	49	21	8
Trail Ridge GC	539	8	12	14	39	82	80	95	60	51	62	26	10
Sun City West Private Clubs;													
Brianwood CC	725	11	16	18	52	110	108	128	81	69	83	35	14
Hillcrest GC	769	12	17	19	55	116	114	136	86	73	89	38	14
TOTAL	12315	187	266	309	890	1867	1831	2178	1373	1168	1417	601	229

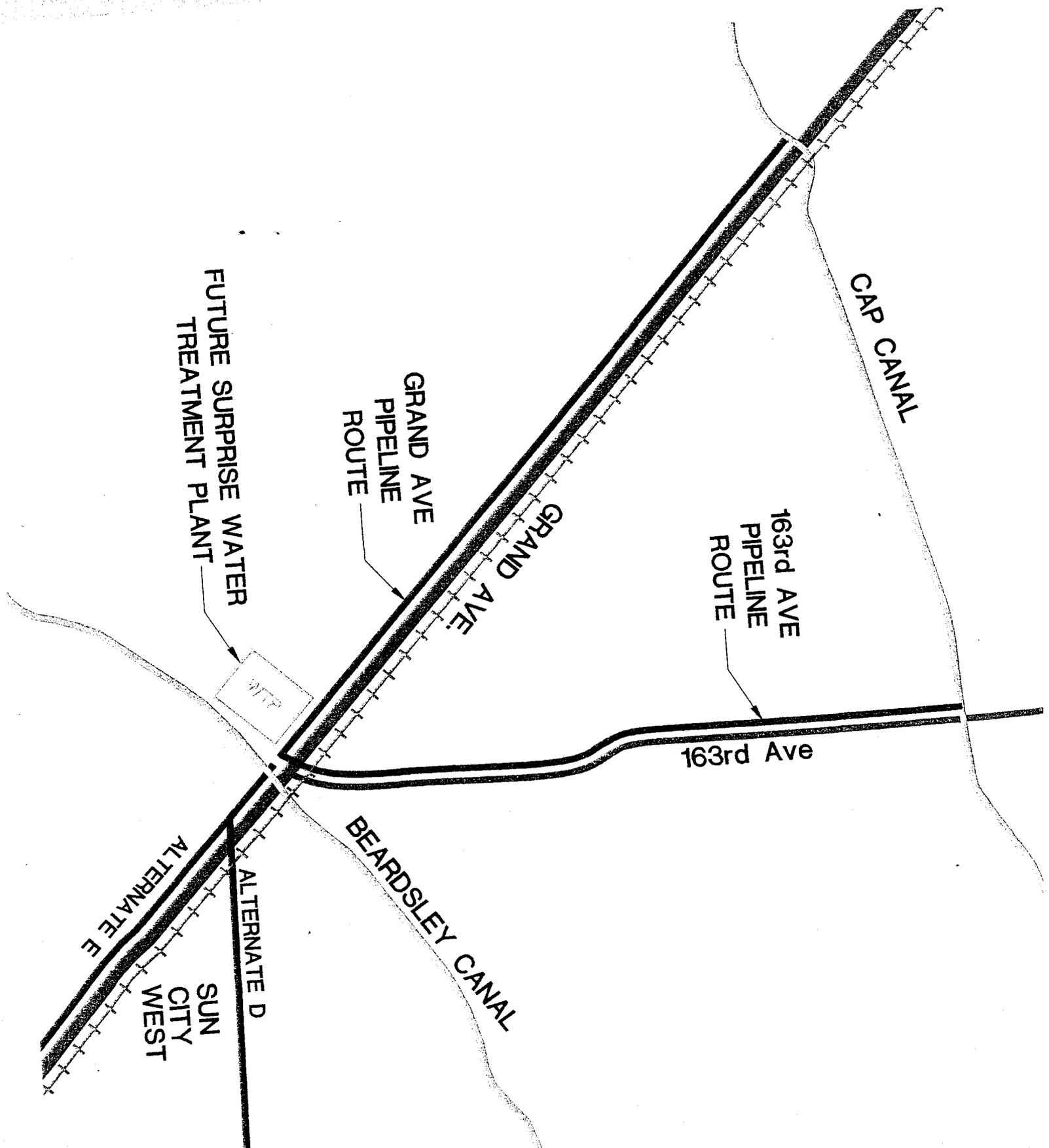
C. Peak Demand

As illustrated above, the system demand is not constant throughout the year. Rather, demand peaks during the month of July. In order to evaluate the supply system design versus demand, it is desired to estimate the peak demand. The peak demands listed below occur during the month of July. It is recognized that demand is not constant throughout the month due to weather fluctuations, operational issues and operator preferences. Hence, the peak demand will be somewhat higher than the average daily demand for the month of July. The following estimates of peak demand are calculated from the average daily demand during the month of July times a correction factor of 1.1.

Facility Peak Demand

Facility	Peak daily usage*
Sun City Rec Center;	
Lakes East/Dawn Lake	3.56
Lakes West/Viewpoint Lake	5.17
North GC	3.73
Quail Run GC	1.38
Riverview GC	2.68
South GC	4.91
Willowcreek/Willowbrook	7.96
Sun City Private Clubs;	
Palmbrook CC	3.67
Sun City CC	3.19
Union Hills CC	4.37
Maricopa Lake	0.09
Sun City West Rec Center;	
Deer Valley GC	3.27
Desert Trails GC	2.81
Echo Mesa GC	3.55
Grandview GC	4.56
Pebblebrook GC	4.13
Stardust GC	2.57
Trail Ridge GC	3.23
Sun City West Private Clubs;	
Briarwood CC	4.34
Hillcrest GC	4.61
TOTAL	73.78

* - average July daily usage X 1.10



CALL KUMAR
MUNDRA

DOCUMENT NEEDS TO SUPPORT "COURT CASE" AS WELL AS
ENLIGHTENING DOCUMENT [JIM IRUM IS AGAINST IT]
OBVIOUS, DIRECT, CONCLUSIONS

NEED TO ADDRESS CLEARLY A) & B) FROM THE ORDER
PAGES 52T.

SECTION 1 (REWRITTEN BY MEMOIR) (BY TERRI SUE)

→ WRITE AN EXECUTIVE SUMMARY (E) SEPARATELY BOUND
DATE LABEL AFTER REPORT IS SUBMITTED. (ROH) (WAT)

(PULL OUT E AND PUT IT IN A)

INTRO (SETUP)

ACC ORDER ITEM A (JOINT PRODUCT A.F.) (1, 2)

" " " B (MISSION COMPONENTS) (2, 3, 4)

RECOMMENDED PLAN w/ COST ESTIMATE (5, 6)

GENERAL DISCUSSION

OPERATIONS

WEIGHTING POLICY

COMPONENTS

PROBABLE

ALT ROUTE

CRITERIA
COST
P/W
ENV
SCHED

A) INTRO (SECTION 1)

B) ACC ORDER ITEM A (JOINT A.F. PROJECT) (HOW)

C) " " " B

GENERAL DISCUSSION

OPERATIONS

IMPLEMENTATION POLICY

COMPONENTS

1) ALT ROUTES

2) CRITERIA

3) COMMON FEATURES

4) SPECIFICS

5) G60TECH

6) UTILITIES

ETC.

- EVALUATION SUMMARY

D) RECOMMENDED PLAN

INFLATION FACTOR APPLIES TO DIFFERENT ALTERNATIVES (2000 DOLLARS OR SOME OTHER BOSS "2002"?) NEED R/W DOLLARS

DEVELOPED FOR BANK OPTION (PERMITTING COST)

ILLUSION OF PRECISION (MAY COST PER ACRES FOOT OF WATER)

JUSTIFY 3% OR WHATEVER INFLATION IS)

GET BETTER THAN 8.5% NUMBER

• BETTER BEGINNING NUMBER

TOTAL COST FOR RECOMMENDED PLAN

Arizona Department of Water Resources
Groundwater Right/Facility Report



RIGHT #: 58-101680.0000 STATUS DATE: 01/01/1985
AMA: PHOENIX AMA RIGHT/PERMIT/FACILITY TYPE: TYPE-II NON-IRRIGATION GFR
LAND OWNERSHIP: CORPORATION FILE STATUS: ACTIVE - ACTIVE
2001 ALLOTMENT: 1,428.00 IRRIGATION ACRES: 0.00 RETIRED ACRES: 0.00
WATER DUTY ACRES: 0.00 WATER DUTY: 0
IRRIGATION DISTRICT NAME: MAWA: 0

NAME & ADDRESS

SUNLAND MEMORIAL PARK
15826 N DEL WEBB BLVD

TYPE: OWNER

SUN CITY AZ 85351

PLACE OF USE

SE NE SE 06 T3.0N R1.0E

BOOK/MAP/PARCEL

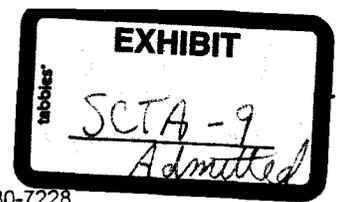
*** NO DATA FOUND ***

WELL SERVING

Well#	Location	Year
55-609021	SE NE SE 6 T3.0N R1.0E	2001



P.O. Box 87228
Phoenix, Arizona 85080-7228
Telephone: (623) 869-2127 Fax: (623) 869-2674
Email: hwthomasjr@worldnet.att.net



The West Salt River Valley CAP Subcontractors Planning Process

Augmentation Grant No.: AUG96PH13-00
2000-01 Overall Project Report

June 30, 2001

Prepared By: Harold W. Thomas Jr.

Director

**Least Cost Analysis Comparison of NT9 to Base Case
Dollars Per Acre-Foot (Normalized To The Year 2000)**

WESTCAPS member	NT9	Base Case
Arizona Water Company	\$131	\$132
Town of Buckeye	\$138	\$139
Citizens Utility Company	\$ 67	\$ 69
City of Glendale*	\$109	\$109
City of Goodyear	\$175	\$177
LPSCO	\$ 76	\$ 80
City of Peoria	\$108	\$110
City of Phoenix*	\$ 71	\$ 71
Sunrise & West End Water Co.	\$ 81	\$ 82
City of Surprise	\$ 97	\$106
West Maricopa Combine	\$ 98	\$ 98
Total	\$108	\$110

* No unused CAP allocation available for recharge.

NT10: SUN CITIES/YOUNGTOWN GROUNDWATER SAVINGS PROJECT³⁵

DESCRIPTION: There are 19 golf courses located in Sun City and Sun City West. These courses currently meet 100% of their demands with groundwater pumped from a variety of withdrawal authorities. The total demand for all the golf courses is approximately 12,600 acre-feet per year. Demands for two of the courses are met with effluent recovered from golf course wells, leaving a total of roughly 11,600 acre-feet of demand that can be offset with CAP water.

Sun City Water Company and Sun City West Utilities Company have CAP allocations totaling 6,561 acre-feet. This leaves an additional capacity of around 5,000 acre-feet available for other water providers and for entities like the Central Arizona Groundwater Replenishment District and the Arizona Water Banking Authority.

The project requires the conveyance of the CAP water through a non-potable pipeline down to a storage facility located at the existing water campus for the Sun City West Utilities Company Wastewater Treatment Plant. From the water campus, booster pumps will force the water into an irrigation distribution system that will carry the water to its final destination at each golf course irrigation reservoir.

The following costs are estimated for the project:

Facility	Thousand Dollars
Transmission Pipeline and Turnout	\$5,196
Storage Reservoirs	\$1,956
Booster Pumps	\$414
Irrigation Distribution System	\$4,600
Contingency	\$3,649
Engineering/Administration/Legal	\$3,041
Total Capital Cost	\$18,856

This option will largely be paid for by using revenues from Sun City Water Company and Sun City West Utilities Company. The incremental cost needed to increase the capacity of the facility to receive an additional 5,039 acre-feet and some currently undetermined portion of the base cost of the facility represents the cost of this option to outside parties.

SUMMARY: This option is intended to provide a capacity of 6,561 acre-feet. Under a regional concept, this project could be expanded to include an additional 5,039 acre-feet of golf course demand, or the project could be increased to include other non-golf course demands. The project has some regulatory and legal considerations that could delay or even stop project construction. The most notable aspect of the project is that it replaces long-time existing groundwater demands and brings water users to the table who are not obligated to curtail groundwater pumping.

In this option, it is assumed that Peoria could recharge 5,039 acre-feet per year of CAP water in the GSF and continue to pump groundwater to meet demands. If ADWR allows WESTCAPS members to use the recharged water to demonstrate an Assured Water Supply, the cost for implementing this option (\$147.55 per acre-foot) would replace the CAGR fee of \$188 per acre-foot. If ADWR does not allow WESTCAPS members to use the recharged water to demonstrate an Assured Water Supply, this option would simply represent an additional cost to WESTCAPS members. This option would allow a water provider to accumulate CAP water credits that could be used to write off groundwater pumping with ADWR and to potentially help demonstrate an Assured Water Supply. Whether or not the credits can actually be used to demonstrate an Assured Water Supply or to write off future groundwater pumping depends upon the individual circumstances of the water agency involved. On a regional basis, the change in economics is small for two reasons. First, there is no reduction in groundwater pumping by WESTCAPS members since the recharged CAP water would be "recovered" through the use of the wells. Secondly, the CAGR tax of \$188 per acre-foot is still assessed on most of the projected groundwater pumping by 2025.

OPTION CONSIDERATIONS:

CAP Utilization: This option increases the utilization of the unused portion of CAP subcontracts controlled by members of WESTCAPS by 6,561 acre-feet on the low end of the range to 11,655 acre-feet on average on the high end of the range. The capacity of the project could be expanded to include other non-golf course demands, making projected maximum capacity unpredictable.

Renewable Resource Utilization: This option will not directly increase the utilization of additional renewable resources, but it could be used to facilitate an exchange that could bring about the utilization of renewable supplies other than CAP water.

Groundwater Decline: This option directly serves to mitigate groundwater decline in the northwest Salt River Valley by reducing groundwater pumping at the cone of depression.

Financial Viability: The incremental cost of expanding this facility to meet 100% of the golf course demands is roughly \$4.1 million. This increased capacity would provide an additional 5,000 acre-feet. At \$4.1 million, the cost to construct the additional capacity would be slightly over \$800 per acre-foot of

annual delivery capacity or approximately \$32.55 per acre-foot of water delivered over the 25-year period. In comparison to the original cost of the facility would be roughly \$2,286 per acre-foot of annual storage capacity or approximately \$114.96 per acre-foot of water delivered over the 25-year period. The incremental costs of the expansion would be nearly one third of the base costs. This appears to provide some financial viability for expansion of the project. The capital cost to a WESTCAPS member interested in participating in this facility would include all the incremental capital costs and some, yet to be determined, portion of the base cost of the project.

Since there is no rate structure or contracts established for leasing or partnering in this project. The estimated cost for WESTCAPS member to recharge their unused portion of their CAP allocation is as follows:

\$ 12.54 ac-ft O&M cost to pump water to golf courses
\$ 54.00 ac-ft to pump CAP water (energy and fixed)
\$ 48.00 ac-ft Capital costs for CAP allotment
\$116.00-ac-ft in overall O&M Costs

\$114.96 ac-ft Capital cost for Citizens (incremental cost only)
\$ 32.55 ac-ft Capital cost for WESTCAPS member (incremental cost only)

\$229.96 ac-ft overall cost to Citizens
\$147.55 ac-ft overall cost to WESTCAPS member

Each WESTCAPS members unused portion of their CAP allocation is recharged up to but not exceeding their estimated Base Case water demand. Five percent of the recharged amount is cut to the aquifer, so groundwater credits are received on the remaining 95%. The following table shows that this option is economically more favorable than the Base Case.

Legal/Regulatory Considerations: These considerations are further divided into considerations related to the Arizona Corporation Commission (Commission) and those related to the Arizona Department of Water Resources (ADWR).

1. Commission Considerations

For Sun City Water Company and Sun City West Utilities Company to participate financially in the project, the Commission must approve the groundwater savings facility concept, before Citizens will be prepared to invest the capital to plan, design and construct the project. The merits of the project debated before the Commission on October of 1999.

Should the Commission approve the project and Sun City Water Company or Sun City West Utilities Company ultimately finance, construct and own the Sun Cities/Youngtown Groundwater Savings Project and capacity is increased to bring an additional 4,439 acre-feet, the Commission could structure the costs of participating in the project such that all costs, not just the incremental increase, of the project would be placed on outside parties.

2. ADWR Considerations

The ability to effect a groundwater savings facility permit, while not specifically disallowed, is not explicitly authorized by State statute. In practice, ADWR has only issued groundwater savings facility permits for irrigation districts and irrigation grandfathered rights. If a groundwater savings facility cannot be effected, the project could be facilitated through an exchange instead. An exchange could be limited by the type 1 non-irrigation rights held primarily in Sun City West.

Public acceptability: This project currently enjoys the support of all but one of the major organizations in the Sun City and Sun City West area even though the monthly cost would represent a dramatic increase in water bills in those areas. Outside the Sun Cities, this project should be positively viewed since existing demands would be weaned off groundwater causing less damage to surrounding users. The incremental

costs are manageable. The project is located in an area that will best mitigate the 83rd Avenue and Bell Road cone of depression.

Timeliness: The project is currently planned to be constructed by 2003. This project will take considerable time to plan, design and construct.

Adaptability: This project is adaptable from the perspective of shifting from a groundwater savings project to a surface water treatment plant or a direct recharge project. The pipeline will bring the water to the heart of the Sun Cities. From there, the water could be used in a variety of ways. Should the golf course project derail, the project could change course and provide finished water. The project is not as adaptable from an expandability perspective. The pipeline and facilities will be designed to meet the golf course demands (i.e. roughly 11,000 acre-feet). Since this is the extent of the demand at the courses, to expand the project, non-golf course demands would have to be identified. The pipeline would need to be upsized to meet these new demands. The pipeline is planned to be located in prime location to bring CAP water to a number of communities making it more versatile than other projects.

Environmental Acceptability: Since this project will eliminate existing groundwater pumping, the aquifer will realize an immediate benefit as opposed to offsetting a future demand. This will free up more groundwater for proving physical availability under the assured water supply rules.

**Least Cost Analysis Comparison of NT10 to Base Case
Dollars Per Acre-Foot (Normalized To The Year 2000)**

WESTCAPS member	NT10	Base Case
Arizona Water Company	\$132	\$132
Town of Buckeye	\$139	\$139
Citizens Utility Company	\$ 80	\$ 69
City of Glendale*	\$109	\$109
City of Goodyear	\$177	\$177
LPSCO	\$ 80	\$ 80
City of Peoria	\$111	\$110
City of Phoenix*	\$ 71	\$ 71
Sunrise & West End Water Co.	\$ 82	\$ 82
City of Surprise	\$106	\$106
West Maricopa Combine	\$ 98	\$ 98
Total	\$113	\$110

* No unused CAP allocation available for recharge.

Exhibit ~~TF-1~~
TF-1

REBUTTAL TESTIMONY OF CAROLE J. HUBBS
CAP TASK FORCE
W-01656A-98-0577
SW-02334A-98-0577

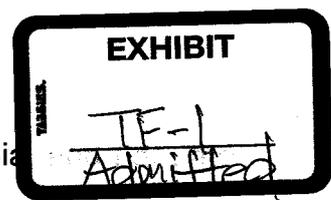
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Q: Please state your name and address.

A: My name is Carol J. Hubbs, and I live at 21511 Limousine Drive, Sun City West, Arizona 85375.

Q: What is your current occupation and position.

A: I am an attorney at law, licensed in both Arizona and California president of the Recreation Centers of Sun City West.



Q: What has been your interest in water matters in Sun City West?

A: I helped create the joint water committee of PORA and the Recreation Centers of Sun City West, and I was a member of the CAP Task Force team which developed the recommendations which are before the Commission by the CAP Task Force as an intervenor in this case.

Q: Have you reviewed the Statement of the CAP Task Force which has been submitted to the Commission as part of this docket?

A: Yes.

Q: Are you in agreement with the recommendations contained in that Statement.

A: Yes, and I would like to refer to the materials expressed in that Statement as the basis for my testimony here today.

Q: What is the purpose of your testimony today?

A: I would like to supplement the discussion contained in the Statement of the CAP Task Force by taking issue with two points which have been raised by other intervenors.

Q: Have you read the testimony of Mr. Dennis Husted on behalf of the Sun City Taxpayers Association?

A: Yes I have.

Q: Do you have a comment to make with regard to Mr. Husted's testimony?

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3 A: Yes. On page 3, Mr. Husted expresses his concern that no contract has as
4 yet been signed between the Recreation Centers organizations of both Sun
5 City and Sun City West with Citizens to implement the use of CAP water on
6 the golf courses. What he may have been unaware of is the fact that
7 subsequent to expressing their support for the recommendations of the Task
8 Force, both the Boards of Directors of the Recreation Centers of Sun City and
9 the Recreation Centers of Sun City West (collectively, I'll refer to them as the
10 "Recreation Centers") met and passed resolutions which indicated their
11 willingness to enter into a contract with Citizens for the use of CAP water on
12 their golf courses. Copies of those resolutions are attached as an exhibit to
13 my testimony. These resolutions confirm that the Recreation Centers will,
14 upon approval of the Commission of the long-term plan for the use of CAP
15 water in our communities, enter into contracts to implement that use, upon the
16 general terms and conditions which were defined in the proceedings of the
17 Task Force.

18 Q: Could you have entered into a contract with Citizens prior to a decision in this
19 case?

20 A: No. That would simply not have been practical since we really have no idea
21 what decision the Commission will make or what kind of Order they may
22 fashion on this matter.

23 Q: If the Commission decides to follow the general recommendations of the CAP
24 Task Force, do you feel that the necessary contract can be developed between
25 the Recreation Centers and Citizens?

26 A: Yes I do. We have been a party to negotiations with Citizens in the past and
27 know what to expect from them. And although those negotiations may be

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3 tough, this is definitely something that can be accomplished.

4 Q: Have you reviewed the testimony of Marylee Diaz Cortez as submitted by
5 RUCO?

6 A: Yes I have.

7 Q: Do you have any comments on her testimony?

8 A: Yes. Mrs. Diaz Cortez analysis of this case is carefully crafted and very
9 insightful. It had the kind of professional ring to it that was a delight to read.
10 However, her comments, commencing on page 9 of her statement, to the
11 effect that the Commission should not approve the long-range plan for the use
12 of CAP water as recommended by both Citizens and the CAP Task Force are,
13 in my view, mistaken. As I understand her argument, she believes that
14 because there is a least cost use which can be made of the CAP water, then
15 that least cost plan should be adopted. Where I would differ with Mrs. Diaz
16 Cortez is that the "least cost" solution which she considered is really not a
17 viable solution to the use of CAP water since it does not provide a benefit to
18 the ratepayers who would be paying for it. As pointed out in the Statement of
19 the CAP Task Force, remote recharge plans do not provide any real benefit to
20 the retirement communities. Remote recharge or in lieu exchange programs
21 simply do not address the issues of subsidence, water quality or regulatory
22 demands which are the requirements pressing on the retirement communities
23 and which are the justification for the use of CAP water. Therefore, the
24 comparative costs of such remote recharge plans is immaterial.
25 Mrs. Diaz Cortez is correct in demanding that the CAP water be put to
26 beneficial use for the ratepayers, and that position logically requires that the
27 implementation of that the proposed use of the CAP water must not be such

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that the benefit to the ratepayer is lost.

The analysis paper developed by Mr. Herb Schumann and referred to in Mr. Chappellear's rebuttal testimony paints a clear and forceful picture on why remote recharge plans simply do not provide a benefit to the ratepayers of the retirement communities and hence are not a viable use of CAP water from the perspective of those ratepayers.

What the CAP Task Force has been able to show is that the long-term plan of partially shutting down groundwater pumping by putting CAP water on the golf courses is, in fact, the least cost method of putting CAP water to direct and beneficial use the retirement communities.

Q: Does that conclude your testimony?

A: Yes.

Carole J. Hubbs

Date: _____

RESOLUTION**RECREATION CENTERS OF SUN CITY WEST, INC.****Meeting of the Board of Directors****January 22, 1999**

WHEREAS, the Recreation Centers of Sun City West, Inc. ("Rec Centers") has actively participated in the cooperative planning process of the CAP Task Force and has indicated its support for the conclusions reached and the recommendations made in the report of the CAP Task Force; and

WHEREAS, an implementation of the plan recommended in the CAP Task Force report will require the Rec Centers to enter into a contract with Citizens Utility whereby Citizens will deliver CAP water to the Rec Centers for distribution onto its golf courses.

BE IT RESOLVED:

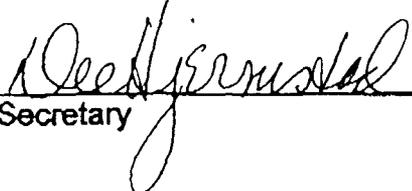
The Board of Directors of the Rec Centers, in a regular meeting, by motion made, seconded and passed, hereby adopts the following resolutions:

1. The Board of Directors of the Rec Centers hereby confirms that it is willing to and desirous of entering into a contract with Citizens Utility pursuant to the recommended plan developed by the CAP Task Force;

2. The Board of Directors of the Rec Centers hereby authorizes and directs the President and the General Manager of the Rec Centers to enter into the requisite contract with Citizens for the delivery of CAP water to its golf courses under those terms and conditions which were defined in the CAP Task Force report on the recommended plan, subject to final review by this Board; and

3. The proper officers, agents and employees of the Rec Centers are, and each of them is, hereby authorized and directed to do all such acts as may in their or such officer's discretion be deemed necessary or desirable to carry out and comply with the terms, provisions and intent of this Resolution. All of the acts of the officers of the Rec Centers which are in conformity with the intent and purposes of this Resolution, whether heretofore or hereafter taken or done, shall be and the same are hereby ratified, confirmed and approved in all respects.

ATTEST:


Secretary

Date: 2 FEB. '99

REVISED

RESOLUTION

RECREATION CENTERS OF SUN CITY, INC.

Meeting of the Board of Directors

February 25, 1999

WHEREAS, the Recreation Centers of Sun City, Inc. ("Rec Centers") has actively participated in the cooperative planning process of the CAP Task Force and has indicated its support for the conclusions reached and the recommendations made in the report of the CAP Task Force; and

WHEREAS, an implementation of the plan recommended in the CAP Task Force report will require the Rec Centers to enter into a contract with Citizens Utility whereby Citizens will deliver CAP water to the Rec Centers for distribution onto its golf courses.

BE IT RESOLVED:

The Board of Directors of the Rec Centers, in a regular meeting, by motion made, seconded and passed, hereby adopts the following non-binding resolutions:

1. The Board of Directors of the Rec Centers hereby confirms that it is willing to and desirous of entering into a contract with Citizens Utility ("Citizens") pursuant to the recommended plan developed by the CAP Task Force, subject to Citizens' performance as defined below;

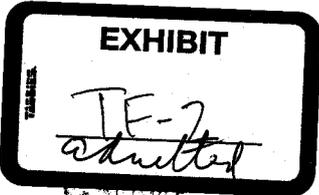
2. The Board of Directors of the Rec Centers hereby authorizes and directs the President of the Rec Centers to enter into the requisite contract with Citizens for the delivery of CAP water to its golf courses under those rates, terms and conditions which were defined in the CAP Task Force report on the recommended plan, subject to final review by this Board; and

3. The proper officers, agents and employees of the Rec Centers are, and each of them is, hereby authorized and directed to do all such acts as may in their or such officer's discretion be deemed necessary or desirable to carry out and comply with the terms, provisions and intent of this Resolution. All of the acts of the officers of the Rec Centers which are in conformity with the intent and purposes of this Resolution, whether heretofore or hereafter taken or done, shall be and the same are hereby ratified, confirmed and approved in all respects.

ATTEST:

Robert J. Prusio
~~Secretary~~ President
RCSC Board of Directors

Date: 2-25-99



AZ 30 SEP 1999

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DOCUMENT CONTROL

BEFORE THE ARIZONA CORPORATION COMMISSION

CARL J. KUNASEK
CHAIRMAN
JAMES M. IRVIN
COMMISSIONER
WILLIAM A. MUNDELL
COMMISSIONER

IN THE MATTER OF THE JOINT)
APPLICATION OF SUN CITY WATER)
COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR)
APPROVAL OF CENTRAL ARIZONA)
PROJECT WATER UTILIZATION)
PLAN AND FOR AN ACCOUNTING)
ORDER AUTHORIZING A)
GROUNDWATER SAVINGS FEE AND)
RECOVER OF DEFERRED CENTRAL)
ARIZONA PROJECT EXPENSES.)

DOCKET NO. W-01656A-98-0577
SW-02334A-98-0577

NOTICE OF FILING
REBUTTAL TESTIMONY

The CAP Task Force hereby provides Notice of Filing Rebuttal Testimony for
Carole Hubbs and Dess Chappellear in the above-referenced docket.

Respectfully submitted this September 30, 1999.

BEYER, McMAHON & LaRUE



William G. Beyer, Esq.

1 **AN ORIGINAL AND TEN COPIES**

2 of the foregoing mailed this
3 30th day of September, 1999
4 to:

5 Docket Control
6 Arizona Corporation Commission
7 1200 W. Washington
8 Phoenix, Arizona 85007

9 **COPIES** of the foregoing mailed/
10 hand delivered this 10th day of
11 September, 1999 to the following:

12 Jerry Rudibaugh, Chief Hearing Officer
13 Hearing Division
14 Arizona Corporation Commission
15 1200 W. Washington
16 Phoenix, Arizona 85007

17 Lyn Farmer
18 Assistant Chief Hearing Officer
19 Arizona Corporation Commission
20 1200 W. Washington
21 Phoenix, Arizona 85007

22 Deborah R. Scott, Director
23 Utilities Division
24 Arizona Corporation Commission
25 1200 W. Washington
26 Phoenix, Arizona 85007

27 Paul Bullis, Chief Counsel
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Arizona Corporation Commission
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Attorneys for Sun City Taxpayers Association

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9 Phoenix, Arizona 85004

10 Scott S. Wakefield
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12 Arizona Reporting Service, Inc.
13 2627 North Third Street, Suite 3
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Q: Please state your name and address.

A: Dess Chappellear, and I live at 13837 W. Oak Glenn Drive, Sun City West, Arizona 85375.

Q: Please state your employment background.

A: I am currently retired, but I spent over 38 years in water resources development with the Department of the Interior, Bureau of Reclamation. My most recent assignment was Assistant Project Manger of the Central Arizona Project.

Q: Please state your professional qualifications.

A: I was a professional engineer, now retired, and my qualifications are indicated on the attached exhibit.

Q: Have you been involved in the CAP Task Force?

A: Yes. I was a member of the CAP Task Force referred to in the basic pleadings filed by Citizens Utilities Company, and actively participated in all of the hearings and deliberations of that group.

Q: Have you reviewed the Statement of the CAP Task Force which has been submitted to the Commission as a part of this Docket?

A: Yes.

Q: In your view, is that Statement an accurate summary of the position of the CAP Task Force?

A: Yes. I would, however, recommend that the two "safeguards" which were suggested be put in any Order crafted by the Commission (see Section 6, page 14 of the Statement) should be expanded to include a fixed time limit be placed on the life of the contract for the short-term arrangement between Citizens and MWD. As has been pointed out by several commentators, that

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3 arrangement offers virtually no real benefits to the Retirement Communities,
4 and should only last for the 42 month deadline established for the construction
5 of the pipeline infrastructure required for the long-term solution to the use of
6 CAP water.

7 Q: For purposes of your testimony today, will you adopt that Statement as your
8 own testimony?

9 A: Yes.

10 Q: What is the purpose of your testimony today?

11 A: To supplement the Statement of the CAP Task Force in response to testimony
12 which has been provided by certain other parties to this proceeding.

13 Q: Have you read the testimony provided by Mary Elaine Charlesworth
14 representing the Sun City Taxpayers Association ("SCTA")?

15 A: Yes I have.

16 Q: Are there elements of that testimony with which you would disagree, and if so,
17 what?

18 A: Yes, I disagree with much of that testimony, but perhaps the area which is
19 most contrary to my views would be her statements on page 6 to the effect
20 that CAP water is not critical to Sun City. It is disappointing to see that after
21 all the years of experience and fact finding which has taken place regarding
22 the groundwater situation in the Sun Cities, that SCTA still does not recognize
23 that the Sun Cities are over-drafting their water table and that serious and
24 immediate consequences are flowing from that situation. As was repeated
25 several times for emphasis in the Statement by the CAP Task Force, the
26 current over-drafting of the groundwater aquifer in the area of the retirement
27 communities is inescapably leading to subsidence and water quality problems.

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3 Further, the current regulatory environment has made it clear that such
4 overdrafting will no longer be tolerated. As a result, we cannot agree that CAP
5 water is not needed in the Sun Cities.

6 Q: Have you reviewed the testimony of Claudio Fernandez of the Corporation
7 Commission staff, and do you have any comment on his testimony?

8 A: Yes. Although I respect the conclusions reached by Mr. Fernandez, I was
9 disappointed to see an apparent failure to recognize that the use of CAP water
10 on the golf courses is the only approach which will directly affect a benefit to
11 the ratepayers of the Sun Cities and Youngtown. We take particular exception
12 to the conclusions which Mr. Fernandez seemed to reach in support of a
13 possible, future Agua Fria recharge program as described on page 8 of his
14 testimony. As was confirmed in the investigations of the CAP Task Force,
15 discharge at remote sites north of the retirement communities may well benefit
16 the Northwest Valley region as a whole, it will offer no real benefit to the
17 retirement communities, at least not for many decades to come. The major
18 reason for this is the extremely low propagation rates of underground water. A
19 secondary reason is the potential for water recharged in the Agua Fria river
20 bed to flow into the low spots of the Northwest valley aquifer, such as the Luke
21 cone of depression, and thus not be of any real benefit to the Sun Cities
22 residents.

23 Q: Have the issues of subsidence and the remote recharge plans been of
24 continuing interest to the CAP Task Force?

25 A: Yes they have. Even though the materials presented to the CAP Task Force
26 during its deliberations appeared conclusive regarding the fact that any remote
27 recharge plan which could be considered did not really provide a direct benefit

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3 to the ratepayers of the retirement communities, it was felt that a more
4 definitive analysis of that issue could be helpful in explaining the issue to the
5 communities. As a result, all the governance organizations of the retirement
6 communities (Rec Centers, HOA, PORA, Youngtown) asked Mr. Herb
7 Schumann, a recognized expert in hydrogeology, to review the issue and
8 provide us with a further analysis. Mr. Schumann did so, and his most recent
9 study paper on this matter is attached as Exhibit A and included in my
10 testimony, along with a summary of Mr. Schumann's qualifications.

11 We believe that Mr. Schumann's analysis should be helpful to the Commission
12 in recognizing that remote recharge plans simply do not benefit the retirement
13 communities who would have to pay for the CAP water to implement them.

14 Q: Was there a special reason why the CAP Task Force submitted a statement as
15 compared to the usual Q & A format used to provide testimony to the
16 Commission?

17 A: Yes, there were several reasons the use of a Statement seemed important to
18 us. At the prior Commission hearing on this matter, the Commission members
19 in effect challenged the people of the retirement communities to come together
20 and work out what they felt was best for their communities with respect to how
21 CAP water should be put to beneficial use and then report that
22 recommendation back to the Commission. The responsible leadership of Sun
23 City, Sun City West and Youngtown did just that in the form of the work of the
24 CAP Task Force study team. The Task Force team reported the results of its
25 study to the Boards of Directors of the Sun City Homeowners Association
26 (HOA), the Recreation Centers of Sun City, the Property Owners and
27 Residents Association of Sun City West, the Recreation Centers of Sun City

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3 West, and the city council of the Town of Youngtown, all of whom constitute
4 the governance organizations of the retirement communities. Those
5 organizations accepted and endorsed the findings and conclusions of the CAP
6 Task Force. As a result, it was felt that testimony by some one person was
7 inadequate to convey that the retirement communities as a group had
8 responded to the Commission's earlier challenge, and that it was a group
9 statement being made to the Commission.

10 Further, it was felt that the most important service which the CAP Task Force
11 could perform for the Commission was to convey the sense of why the
12 combined organizations of the retirement communities had come to the
13 conclusion which they had. The Statement of the CAP Task Force was thus
14 intended as an explanation of the logic and reasoning which had been the
15 basis for the recommendation which the retirement communities are making to
16 the Commission. A statement format was used since we were trying to
17 convey not just the facts which had guided the Task Force, but their reasoning
18 from those facts.

19 In addition, various members of the Corporation Commission had
20 recommended that the governance organizations should make a special effort
21 to make sure that the recommendations of the CAP Task Force had been
22 communicated, on a broad basis, to as many of the residents of the retirement
23 communities as possible. The Commissioners' concern was that they wanted
24 whatever recommendation that was brought forward to truly reflect the will of
25 the majority of the people in those communities. Thus, the Statement was also
26 a communication back to the Commission explaining that the governance
27 organization of the retirement communities had indeed met that burden through

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3 seminars, public forums, publications and the like, and felt they were on a
4 sound basis in stating that the recommendations of the CAP Task Force met
5 with a strong and positive level of support from within the communities who
6 would have to pay the costs of implementing the recommendations.

7 However, I have included, by reference in this rebuttal testimony, the
8 Statement previously submitted by the CAP Task Force, and stand ready to
9 answer any questions on it.

10 Q: Does this conclude your testimony?

11 A: Yes.

12
13 
14 Dess Chappellear

15 Date: 9-30-99
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biographical sketch

DESS L. CHAPPELEAR

Born January 21, 1930, in a farmhouse in southwest Oklahoma near the small farming community of Mountain View during a major snowstorm, Chappelear went on to receive his B.S. degree in Civil Engineering from Okla. A & M college in 1956. He was a member of Chi Epsilon and Sigma Tau Honorary Engineering Fraternities, a registered professional engineer in the state of Texas, a member of the American Society of Civil Engineers, and the United States Committee on Large Dams.

He is retired and lives with his wife, the former Retha I. Pritchard, in Sun City West, Arizona, moving there from Moon Valley in Phoenix in 1987.

Chappelear served in the United States Air Force from 1951 to 1955 and has an honorable discharge.

In 1956 and 1957 he worked as a hydraulic engineer in the Oklahoma City Development Office of the Bureau of Reclamation. He then moved to the Washita Basin Project to work in the laboratory collecting design data for the design and construction of Fort Cobb Dam and later Foss Dam. In 1961 he transferred to the Canadian River Project in Texas and was involved in the construction of Sanford Dam.

In 1963, he transferred to Amarillo, Texas to become Chief, Main Aqueduct Branch, South Division and was responsible for preconstruction activities. In 1964 he was named Chief, Lubbock Aqueduct Branch, moving to Lubbock, Texas to supervisor construction activities and coordinate work with the contractors for that 140 mile segment of the aqueduct system taking water to seven cities in the Texas Panhandle.

Chappelear transferred to the Washington D. C. headquarters office of the Bureau of Reclamation in the Division of Water and Land in 1968, and until 1971 performed staff functions relating to multipurpose water control facilities and the operation and maintenance of the channel of the lower

Colorado River which has been of international concern between Mexico and the United States.

In 1971, Chappellear was made Chief of the Construction and Contracting Activities Branch in the Division of General Engineering.

In December, 1973, the Department of the Interior announced that Commissioner of Reclamation Gilbert G. Stamm was appointing Chappellear to be Reclamation's Chief of the Division of General Engineering.

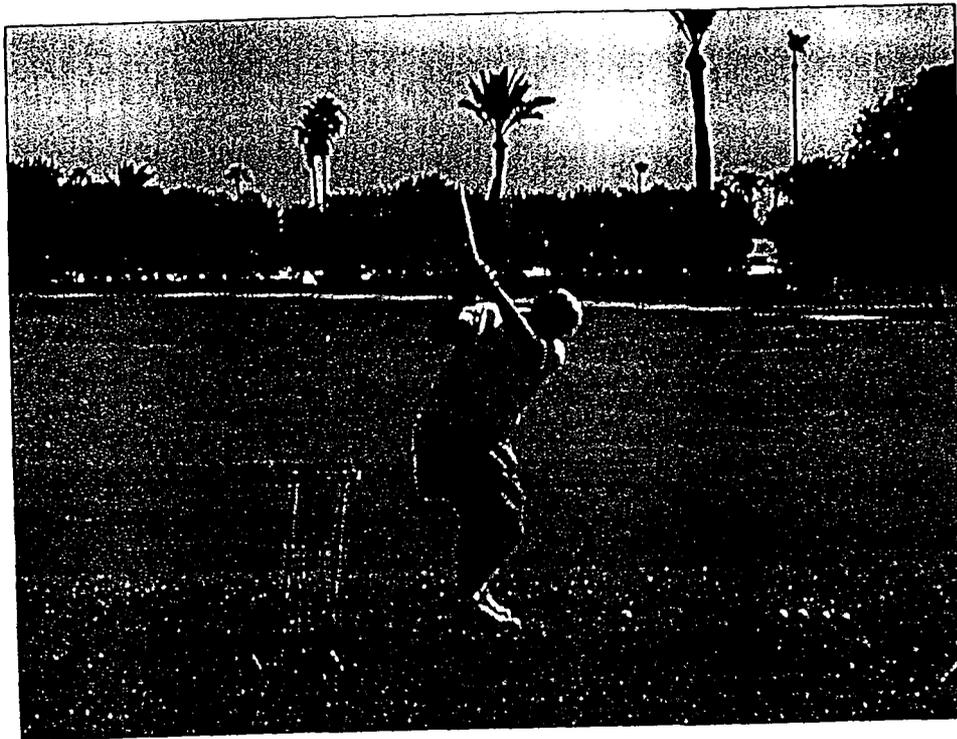
In 1977 Chappellear was transferred from the Washington Office to become Assistant Project Manager of the Arizona Projects Office, Phoenix, Arizona. In this position he carried out all technical and administrative functions in management of that offices activities including the Bureau's largest construction project, the Central Arizona Project and had direct technical and administrative supervision over the Office of Distribution Systems, Environmental Division, Operations Division, Advanced Planning Division and the Lands Division.

Prior to retirement Chappellear was awarded the Meritorious Service Award by the Secretary of the Interior for his exceptional career in engineering and management with the Bureau of Reclamation particularly with respect to the 3 billion dollar Central Arizona Project.

After retiring in 1985 the United States Committee on Large Dams asked Chappellear to participate in the 1988 International Committee on Large Dams San Francisco Meeting as a technical tour guide of the dams of the lower Colorado River. There were about 80 foreign French and English speaking Engineers in the entourage.

Recently Chappellear has been serving on various water committees in Sun City West including the Property Owners and Residents Association's Committee, the Recreation Centers 1993 Water Resources Committee and the Sun Cities Water Resource Council.

UTILIZATION OF CENTRAL ARIZONA PROJECT
WATER IN SUN CITY AND SUN CITY WEST, AZ



Prepared By

Herbert H. Schumann and Associates
1007 East Lilac Dr./Tempe, AZ 85281

September 21, 1999

UTILIZATION OF CENTRAL ARIZONA PROJECT
WATER ON GOLF COURSES IN
SUN CITY AND SUN CITY WEST, AZ

Prepared For

William Gray Beyer
Beyer, McMahon & La Rue
10448 West Coggins, Suite C
Sun City, AZ 85351

Prepared By

Herbert H. Schumann and Associates
1007 East Lilac Dr./Tempe, AZ 85281

September 1999

UTILIZATION OF CENTRAL ARIZONA PROJECT WATER IN SUN CITY AND SUN CITY WEST, AZ

By

Herbert H. Schumann

The citizens of Sun City and Sun City West are willing to pay for Central Arizona Project (CAP) water provided they get a direct benefit from the utilization of the CAP water. The utilization must also improve the condition of the alluvial aquifer in their local area. This paper will address those concerns and suggest a plan for the utilization of the CAP water.

CONCERNS AND BACKGROUND

The citizens of Sun City and Sun City West are concerned about the need to utilize renewable water resources in view of the historic and projected large-scale groundwater depletion in the west Salt River Valley.

The west Salt River Valley is underlain by several thousand feet of alluvial sediments that store large quantities of ground water (Eaton, Peterson and Schumann, 1972). These sediments yield large volumes of water to properly designed deep wells. Figure 1 shows that in 1900, prior to large-scale groundwater development, groundwater flowed from north to south across the area. In 1900, the groundwater system was believed to be in balance, because the rates of inflow or recharge were about equal to rates of discharge.

GROUNDWATER DEPLETION

Historically, pumping rates have far exceeded rates of replenishment or recharge to the alluvial-aquifer system. Figure 2 indicates that between 1900 and 1983, groundwater pumping had caused water levels in wells to decline more than 300 feet throughout much of the western Salt River Valley. Figure 3 indicates that, by 1991, a deep cone of depression extended from the area west of Glendale to the northeast into the areas of Sun City and Sun City West.

In 1995, the Arizona Department of Water Resources (ADWR) developed a digital groundwater flow model to evaluate future changes in the elevation of water in the alluvial aquifer system which underlies the Salt River Valley. The groundwater flow model indicated that continued groundwater depletion would occur in the northern part of the western Salt River Valley.

Figure 4 shows the projected elevations of water levels in wells in the year 2025. According to the ADWR model, the deepest part of the cone of depression will be located in the area of Sun City and Sun City West. Figure 5 shows model projections of water level changes for the period 1983 to 2025 and indicates that an additional 300 feet of water-level decline may occur in the Sun City, Sun City West and Peoria areas.

Figure 6 shows the static water levels in well (A-3-1)4baa, which is located in the northeastern part of Sun City. These data indicate a decline in the static water level from 84 feet in 1924 to more than 405 feet below the land surface in 1994. These data confirm the large-scale groundwater depletion that has occurred.

Figure 7 shows the projected water-level changes that can be expected at the end of 20 years of recharging 100,000 acre-feet/year at the Central Arizona Water Conservation District's recharge site on the Agua Fria about 3.5 miles north of Sun City. Only about one foot of water-level change is projected in the Sun City and Sun City West areas after recharging 100,000 acre-feet/year for 20 years.

CONCERNS

Groundwater depletion has necessitated the deepening of existing wells and the drilling of new deep wells to provide the large volumes of water needed for municipal and irrigation use. Today, the cost of drilling and equipping a new large-capacity well in the northern part of the western Salt River Valley can approach \$500,000. Groundwater depletion has also resulted in increased pumping levels (the depths from which water must be lifted by the pumps) and corresponding large increases in the cost of pumping groundwater.

In some areas, new deep wells have encountered water of poor chemical quality and relatively high temperatures that present operational problems. Large fluoride concentrations have been measured in water samples from some of the newer deep wells.

LAND SUBSIDENCE AND EARTH FISSURE HAZARDS

Groundwater depletion has caused the aquifer system to compact and aquifer compaction has produced large areas of land subsidence in the west Salt River Valley. Land subsidence is the permanent lowering or the sinking of the land surface that results from fluid withdrawal or subsurface mining activities. Land subsidence is a natural geologic process, which has been accelerated by the depletion of the alluvial aquifer in the western Salt River Valley. Rates of land subsidence usually range from a few thousandths to a few tenths of a foot per year and land subsidence is often unrecognized until serious problems occur.

Land subsidence and resultant systems of earth fissures present serious environmental and geologic hazards that have caused many millions of dollars of damage to engineering structures including buildings, streets, roads, highways, railroads, water wells, canals, aqueducts and flood control structures in the west Salt River Valley. Differential or uneven land subsidence has caused changes in the slope of sanitary sewer lines and storm drains, has disrupted underground utilities, and has damaged public and private property.

Earth fissures, locally known as "earth cracks", occur on the edges of subsiding areas and may form long earth fissure zones. Earth fissures often transect natural drainage patterns and can capture large volumes of surface flow. Surface runoff, captured by earth fissures, causes rapid erosion along the sides of the fissures to produce fissure gullies. Fissure gullies can be more than 15 feet deep, 30 to 40 feet wide and as much as two miles long. Large open fissures pose serious safety hazards to people and to domestic animals. Earth fissures extend to large depths below the gullies and can provide vertical pathways for rapid downward movement of toxic contaminants toward the water table (Schumann and Genualdi, 1986).

Figure 8 shows land subsidence, earth fissures and wells damaged by land subsidence in the western Salt River Valley (Schumann, 1996). Areas of maximum land subsidence generally correspond to areas of maximum water-level decline (see Figures 2 and 8). Slightly more than 18 feet of land subsidence occurred between 1957 and 1991 at the intersection of Olive Avenue and Reems Road, which is located about four miles southwest of Sun City.

BENEFITS OF UTILIZATION OF CAP WATER TO WATER LOCAL GOLF COURSES

1. It is estimated that the infrastructure necessary to deliver CAP water to the golf courses could be constructed within only one to two years. Only a minimum level of treatment would be necessary to use CAP water on the golf courses.
2. Discontinuing pumping of groundwater would have a very positive and immediate effect on local groundwater conditions. Water levels and pumping levels in nearby wells would rise and the cost of pumping water would be reduced in the local area.
3. Discontinuing pumping of groundwater for golf course watering in Sun City and Sun City West will reduce the stress on the alluvial aquifer system and thereby help reduce the potential for land subsidence and earth fissure hazards.
4. Wells now being used to provide water for golf courses could be utilized to provide emergency water supplies for municipal use or turf irrigation during periods of drought or outages in the CAP system.
5. The proposed infrastructure could facilitate the use of CAP water for municipal use at some time in the future. The CAP water would require only the same level of treatment as water from other surface water sources.
6. The hydrologic benefits of utilization of CAP water would be nearly immediate as opposed to the 20 years projected for benefits from the proposed remote recharge project.

RECOMMENDATIONS

1. Utilization of CAP water to water golf courses in the Sun City and Sun City West is suggested. Pumping groundwater to water those golf courses should be discontinued.
2. The prompt utilization of CAP water on golf courses in City City and Sun City West will provide benefits to the local citizens in a relatively short period of time. Recharging the CAP water at a remote site may not provide benefits to some of the citizens within their lifetime.

REFERENCES CITED

- Eaton, G.P., Peterson, D.L., Schumann, H.H., 1972, Geophysical, geological, and geochemical reconnaissance of the Luke Salt Body, central Arizona: U.S. Geological Survey Professional Paper 753, 28p.
- Schumann, Herbert H., and Genualdi, Robert B., 1988, Land subsidence, earth fissures, and water-level change in southern Arizona: Arizona Bureau of Geology and Mineral Technology Map Report 23, 1 sheet.
- Schumann, Herbert H., 1996, Land subsidence and earth fissures in the west Salt River Valley, Maricopa County, Arizona: Proceedings of the 9th Annual Symposium of the Arizona Hydrological Society, Prescott, AZ, Sept. 12-14, 1996, 5p.

LIST OF FIGURES

Figure

1. Map showing measured water levels in the Salt River Valley 1900.
2. Map showing changes in water levels in the Salt River Valley 1900 to 1983.
3. Map showing water levels in the Middle Alluvial Unit in the Salt River Valley.
4. Map showing simulated water level elevations in the Salt River Valley 2025.
5. Map showing simulated water level changes in the Salt River Valley 1983 to 2025.
6. Hydrograph of water levels in well (A-3-1)4baa
7. Map showing projected 1 foot groundwater level rise contour.
8. Map showing land subsidence in the west Salt River Valley 1957 to 1991.

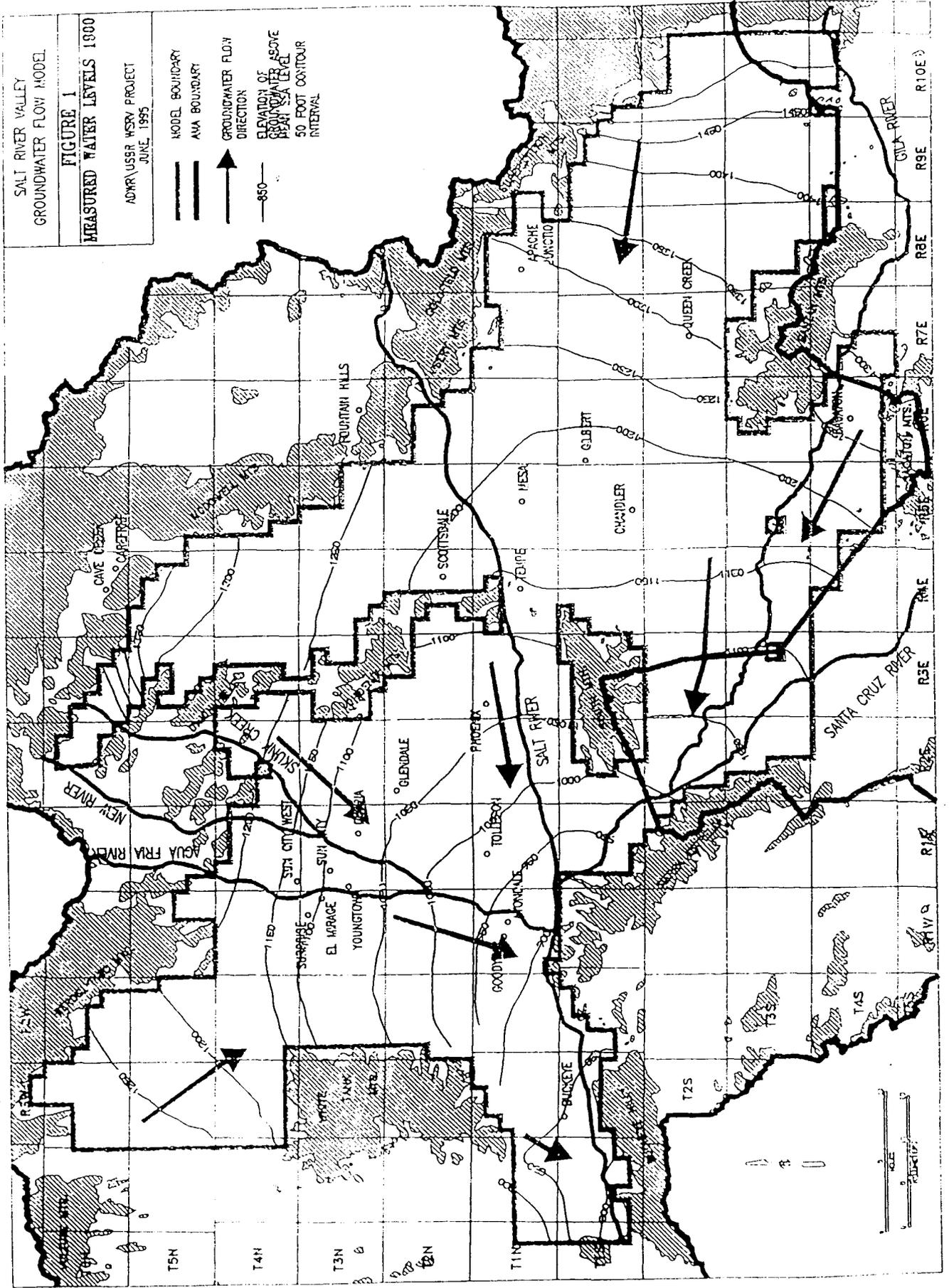


Figure 1. Map showing measured water levels in the Salt River Valley 1900.

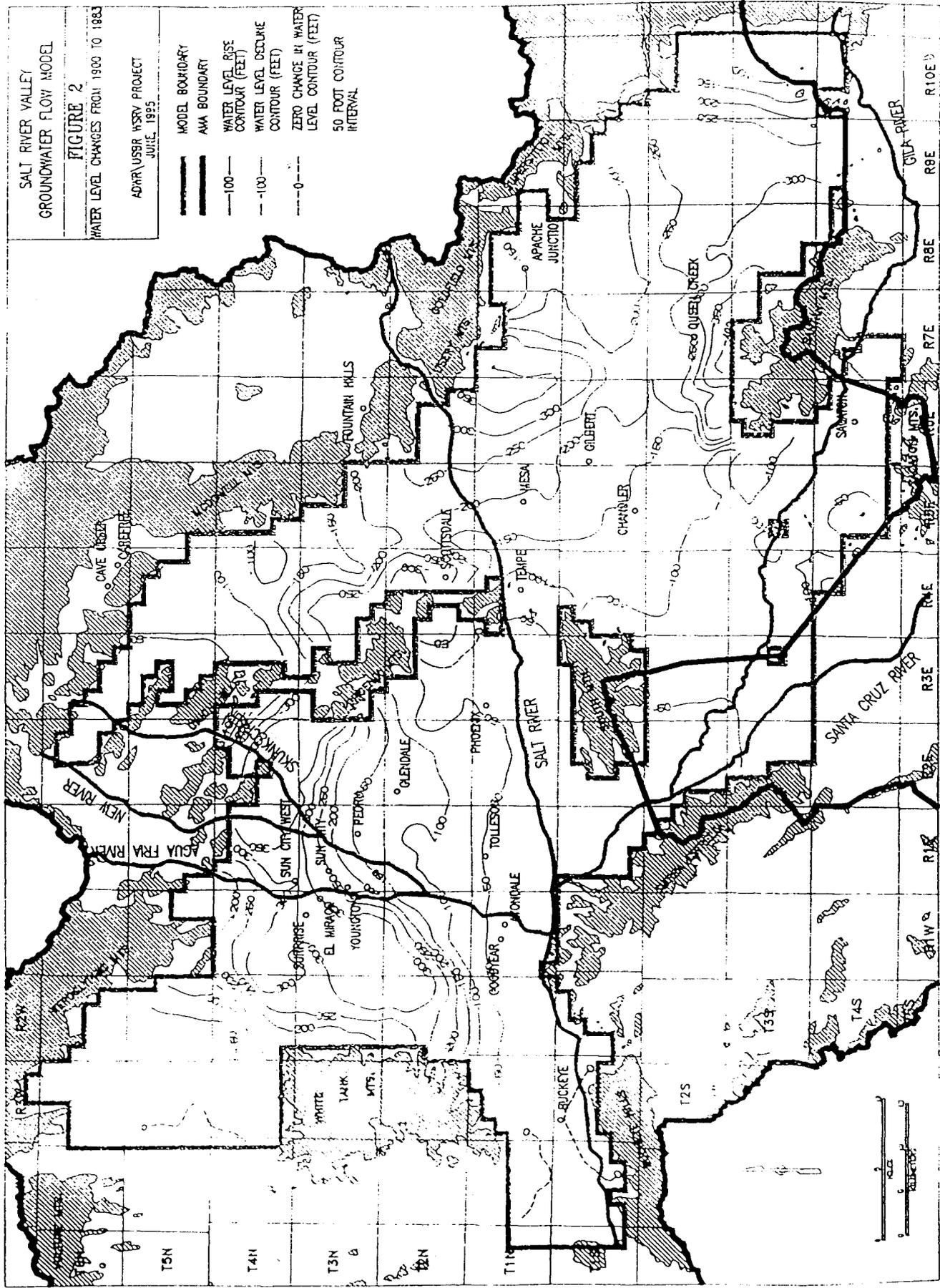


Figure 2. Map showing changes in water levels in the Salt River Valley between 1900 to 1983.

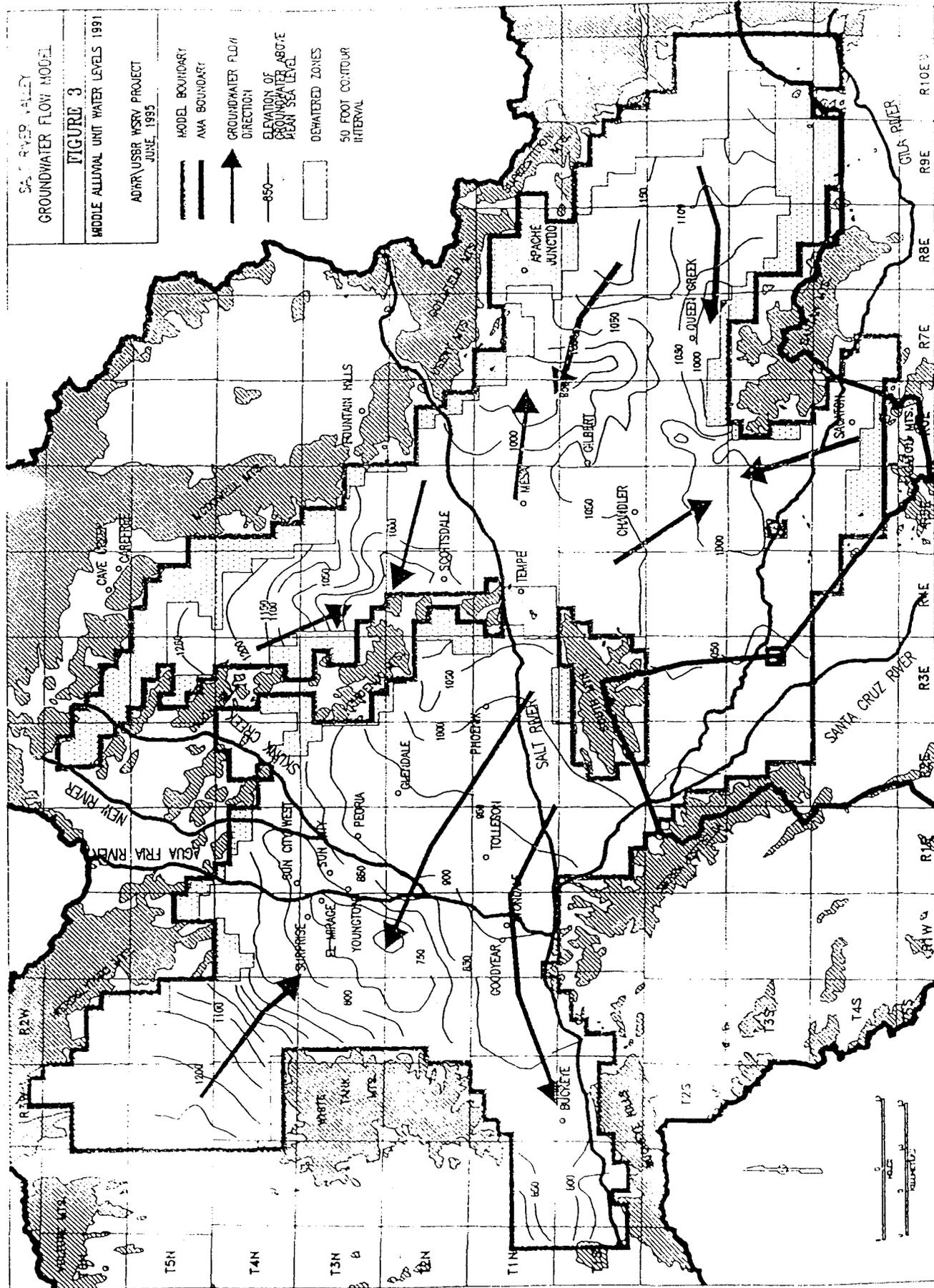


Figure 3. Map showing 1991 water levels in the Middle Alluvial Unit in the Salt River Valley.

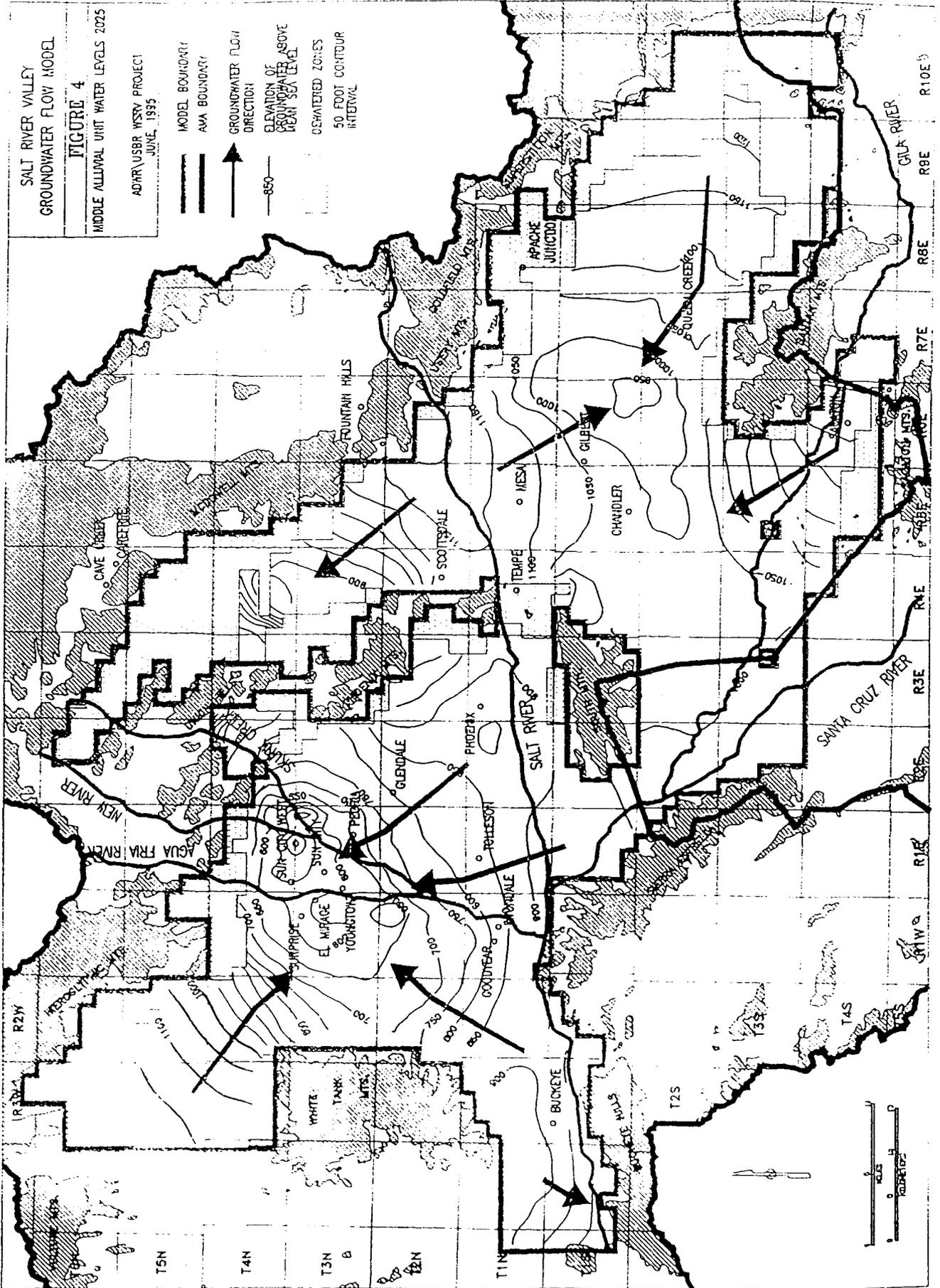


Figure 4. Map showing simulated water level elevations in the Salt River Valley 2025.

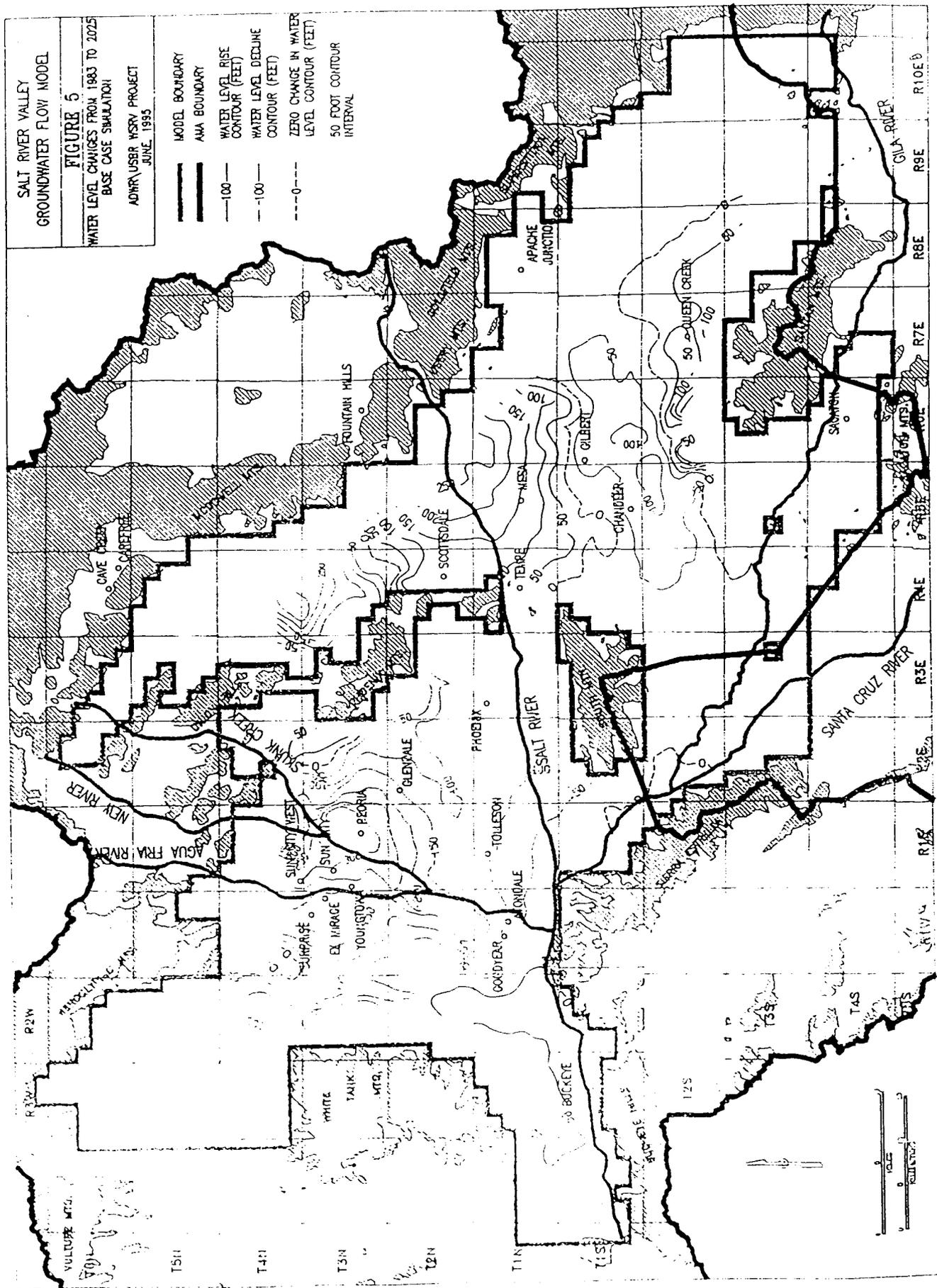


Figure 5. Map showing simulated water level changes in the Salt River Valley 1983 to 2025.

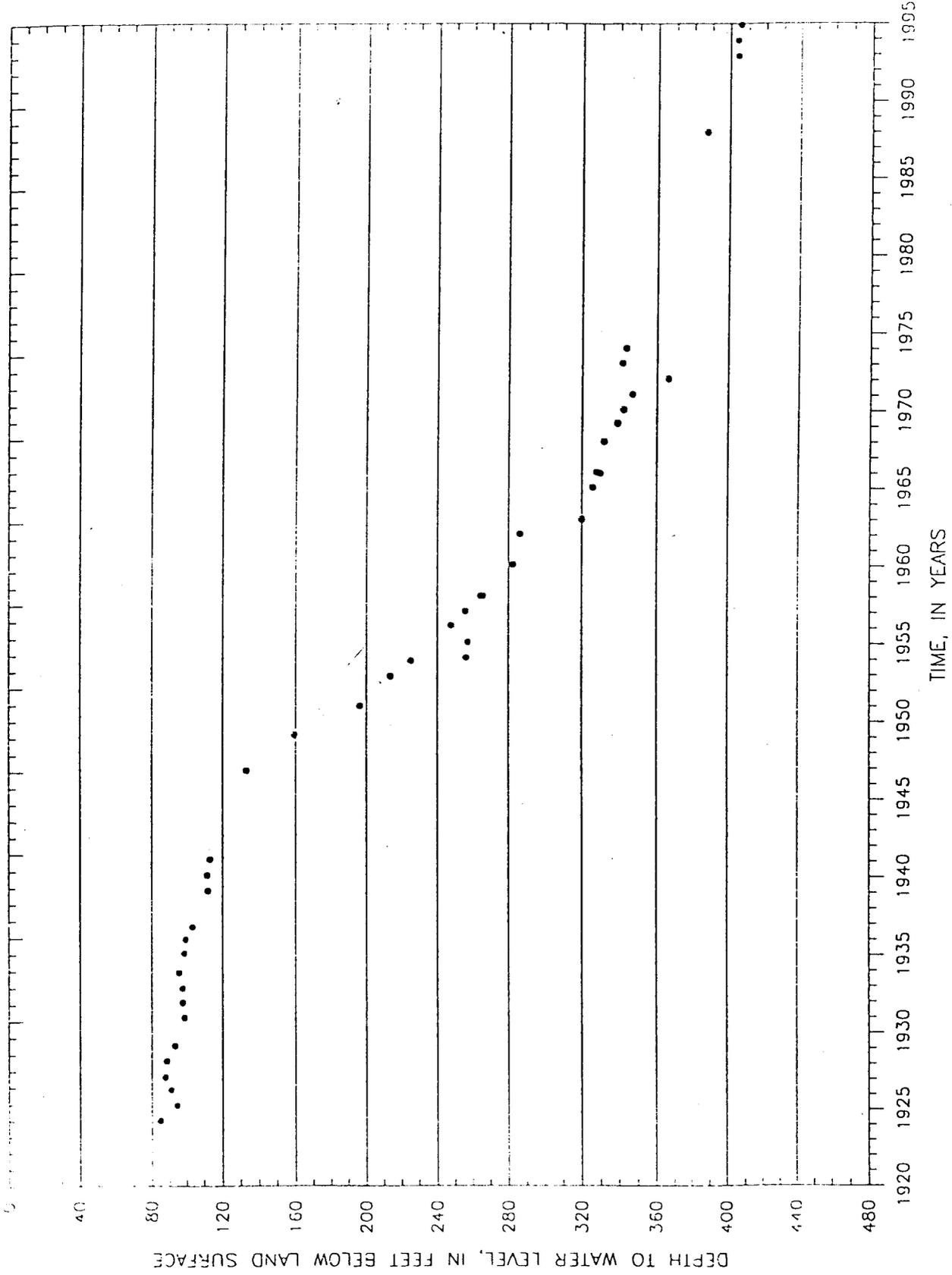


FIGURE 6. HYDROGRAPH OF WATER LEVELS IN WELL (A-3-1)4baa

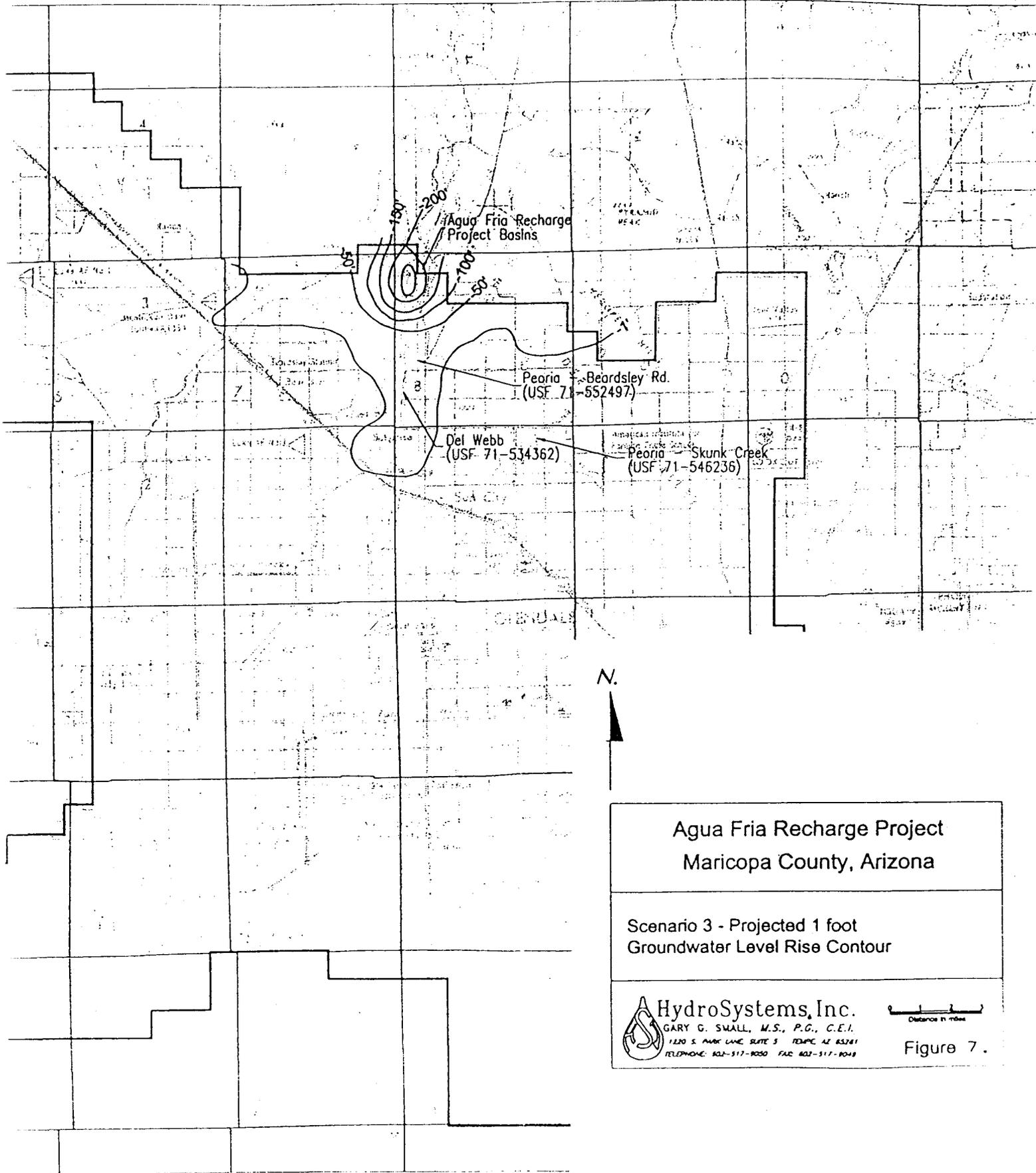
R.2W.

R.1W.

R.1E.

R.2E.

R.3E.



Agua Fria Recharge Project
Maricopa County, Arizona

Scenario 3 - Projected 1 foot
Groundwater Level Rise Contour

 HydroSystems, Inc.
GARY G. SMALL, M.S., P.G., C.E.I.
1120 S. PARK LANE SUITE 5 TOLSON, AZ 85261
TELEPHONE: 602-517-9050 FAX: 602-517-9049

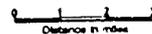

Distance in miles

Figure 7.

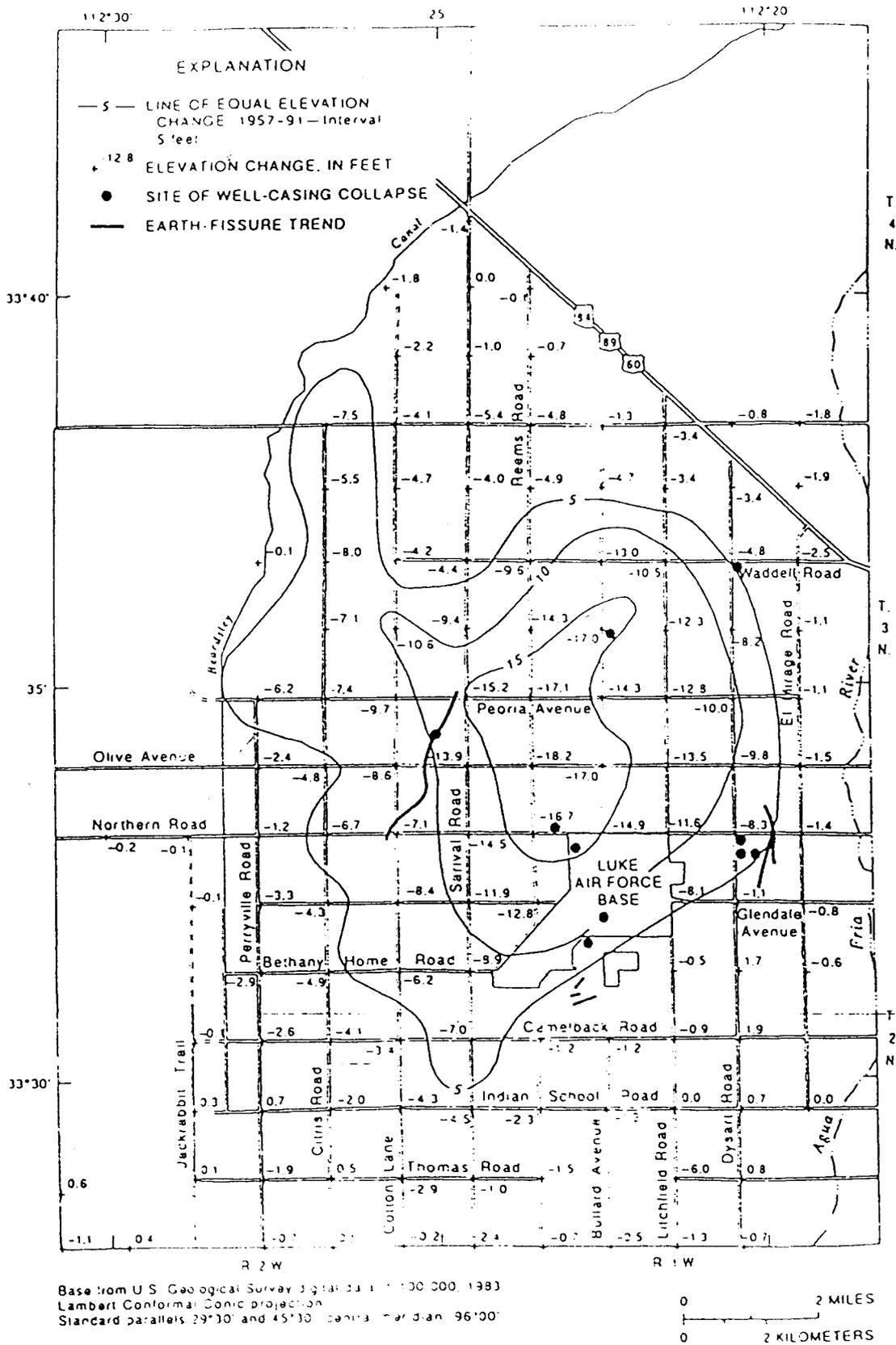


Figure 8. Map Showing Land Subsidence In The West Salt River Valley.

March, 1999

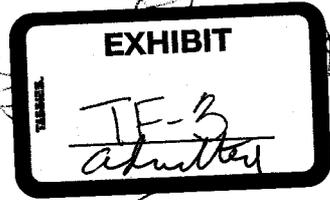
HERBERT H. SCHUMANN

(Short Bio.)

Herbert H. Schumann was born and raised in northern Arizona. He received a B. S. Degree in 1961 and an M. S. Degree in 1967 from the University of Arizona in Tucson. He served more than 30 years as a Hydrologist with the United States Geological Survey (USGS) and was the Senior Ground-water Hydrologist for the Phoenix Office when he retired in January 1996. He now heads his own private consulting firm, located in Tempe, Arizona, which specializes in hydrogeology and water resources investigations in Arizona.

To date, he has authored or co-authored some 50 technical publications and water-resources reports. He has testified as a Federal Expert Witness in hydrology during water rights hearings and serves as a technical advisor to local, State and Federal agencies. He is a frequent guest speaker on Arizona water issues including land subsidence and earth fissure hazards.

Exhibit ~~A-2~~
TF-3



1 BEYER, McMAHON & LaRUE
10448 W. Coggins, Suite C
2 Sun City, Arizona 85351
623/977-9898
3 William G. Beyer, #004171

4
5 **BEFORE THE ARIZONA CORPORATION COMMISSION**

6 **CARL J. KUNASEK**
7 **COMMISSIONER-CHAIRMAN**
8 **JAMES M. IRVIN**
9 **COMMISSIONER**
WILLIAM A. MUNDELL
COMMISSIONER

10 IN THE MATTER OF THE JOINT)
11 APPLICATION OF SUN CITY WATER)
12 COMPANY AND SUN CITY WEST)
13 UTILITIES COMPANY FOR)
14 APPROVAL OF CENTRAL ARIZONA)
15 PROJECT WATER UTILIZATION)
16 PLAN AND FOR AN ACCOUNTING)
17 ORDER AUTHORIZING A)
18 GROUNDWATER SAVINGS FEE AND)
19 RECOVER OF DEFERRED CENTRAL)
20 ARIZONA PROJECT EXPENSES.)

DOCKET NO. W-01656A-98-0577
SW-02334A-98-0577

**STATEMENT OF CAP TASK FORCE
AS INTERVENOR**

17 **STATEMENT OF THE CAP TASK FORCE**

18 **General Background**

19 In 1997, Citizens Utility acting through its subsidiaries, Sun City Water
20 Company and Sun City West Utilities Company, (hereinafter "Citizens") filed a rate
21 application with the Corporation Commission to recover its sunk costs of retaining an
22 allocation of CAP water for Youngtown, Sun City and Sun City West (hereinafter, the
23 "Retirement Communities"). A number of organizations in the Retirement
24 Communities opposed that application, largely on the basis that the utility had done
25 nothing to make that CAP water allocation "used and useful" to the ratepayers.

26 Subsequently, the Commission issued an order in which it in effect deferred a
27 decision on the matter pending certain planning work to be done by Citizens as

1 regards how it would propose to make beneficial use of the CAP water which would
2 be obtained as part of its allocation for Sun City and Sun City West.

3 Citizens, in recognition of the very strong public feelings expressed by
4 ratepayers in the Retirement Communities regarding beneficial use of CAP water as
5 a prerequisite to any reimbursement to the utility, decided that to respond to the
6 ruling of the Commission, the prudent thing for it to do was to seek out a consensus
7 from the Youngtown, Sun City and Sun City West communities regarding how best to
8 make use of its CAP water allocation. Accordingly, Citizens approached all the major
9 organizations in Youngtown, Sun City and Sun City West and asked them to
10 participate in a "CAP Task Force" to review all the issues associated with the use of
11 CAP water and to come up a plan that would have the backing of the communities'
12 leadership with regard to how CAP water could best be put to beneficial use in the
13 community. All of the organizations in Youngtown, Sun City and Sun City West
14 responded to that call, and a list of the original participants is attached as Exhibit A.

15 (1)

16 It is important to recognize that going into the Task Force study process, a
17 number of the participants were not "sold" on the idea of using CAP water at all, and
18 one of the threshold considerations of the Task Force was a determination as to
19 whether CAP water use was even desirable for use in the Retirement Communities.

20 The CAP Task Force met regularly over a period of three months, and
21 listened to various water and hydrogeological experts from which it sought expert
22 testimony on the issues surrounding the use of CAP water. All the task force
23 meetings were open to the public and notices of the meetings were advertised.

24 _____
25 (1) One of those organizations, the Sun City Taxpayers Association ("SCTA"), dropped its participation just
26 prior to the groups' reaching a consensus, and never signed off on the recommendations of the Task
27 Force.

1 Public input on the topics under discussion was sought in each meeting. The Task
2 Force, based on all the information which it had gathered, then formulated six
3 potential plans for making use of CAP water. It sought further input from
4 governmental officials, engineers, attorneys, and other people who were
5 knowledgeable on CAP water matters in order to better define the pro's and con's of
6 each of the options. The Task Force then held public forums and sought, through
7 the media and other communications channels, to reach out to obtain public opinion
8 on the options that were being considered.

9 The CAP Task Force identified the continued overdraft of its underground
10 aquifer as a major problem facing the Retirement Communities, and quantified the
11 serious problems in subsidence and water quality degradation that would result from
12 that excessive groundwater pumping unless some effective remedial action were
13 taken.

14 The Department of Water Resources has repeatedly documented the
15 continuing drop in the water table in the general area of the Retirement Communities.
16 The amount of this drop in any given year will depend to some extent on the amount
17 of natural recharge. But the rate of the drop over time has been strongly affected by
18 the simple fact that the Retirement Communities are taking out of the aquifer more
19 water than is coming back in. And a similar overdraft situation which has occurred
20 among neighboring communities has worsened the rate of drop of the aquifer table.
21 Estimates vary on just how fast the rate of the drop really is, but ten feet per year
22 seems to be a consensus figure. The ADWR takes the longer view that whatever the
23 rate is, current practices will result in a drop in the groundwater table within twenty
24 years of about three hundred feet. And such a drop would immeasurably compound
25 the problems of subsidence and poor water quality for the Retirement Communities.

26 The subsidence of the land directly to the South and West of the Retirement
27 Communities was documented in the report of the CAP Task Force and in reports

1 from ADWR in great detail. Drops in land level, earth fissures and cracks, and
2 damage to existing infrastructure (e.g. roads and water, sewer and gas lines) in the
3 area emanating out from the Luke cone of depression have all been well
4 documented. The latest County map of subsidence in the West Valley is attached as
5 a reference as Exhibit F. It shows that the subsidence threat to the Retirement
6 Communities is both real and immanent. It is the Intervenor's position that direct
7 recharge into the underground aquifer of the threatened communities is the only
8 approach which will have a chance of combatting this creeping subsidence
9 phenomenon.

10 The Retirement Communities currently enjoy relatively good water in the sense
11 that the underground water currently being pumped is comparatively free of dissolved
12 minerals. But it is well known that as the depth from which water is pumped
13 increases, the quality of the water begins to degenerate. This is because the deeper
14 the groundwater, the more likely it is to contain dissolved minerals of various kinds.
15 Those minerals create "hard" water, which is also generally bad tasting. It also
16 results in greater levels of mineral deposits in pipes, hot water heaters and other
17 water infrastructure, leading to higher maintenance costs. It is also believed that the
18 health effects of such hard water would be materially negative as compared to the
19 present quality of water available to the residents of the Retirement Communities.
20 And here again, the only remedy for protecting the quality of the existing water supply
21 is to reduce the current level of excess groundwater pumping.

22 The studies and deliberations of the CAP Task Force concluded that concerns
23 regarding the falling water table could no longer be ignored, and that the twin threats
24 of subsidence and water quality degradation were on the threshold of making serious
25 and substantial impacts on the quality of life of the residents of the Retirement
26 Communities.

27 Finally, the Task Force went through an evaluation process to determine the

1 best approach to the use of CAP water for the Sun City and Sun City West
2 communities, and found that it was able to reach a very clear consensus on its
3 recommendations as to what should be done. The recommendations of the Task
4 Force were threefold, as follows:

5 1. Citizens should retain the CAP allocation for the Retirement Communities,
6 provided that it were put to beneficial use in the manner recommended by the Task
7 Force.

8 2. The one option that was acceptable for using CAP water was to transport it
9 for use on the golf courses of the Retirement Communities. That would allow the golf
10 courses to stop pumping an equivalent amount of groundwater.

11 3. In the short-term, while the infrastructure to deliver the CAP water to the
12 golf courses was being built, an arrangement between Citizens and the Maricopa
13 Water District to use the CAP allotment in a groundwater savings project would be
14 acceptable.

15 On October 1, 1998, Citizens filed with the Corporation Commission a copy of
16 the findings and recommendations of the Task Force and requested approval of the
17 Commission of those recommendations.

18 Subsequently, one Commissioner informally indicated his concern that
19 Citizens, in making its application to have the recommendations of the CAP Task
20 Force accepted by the Commission, might not be expressing the majority views of the
21 Retirement Communities' residents on the issues involved. As a result, the
22 organizations (with the sole exception of SCTA) who had originally supported the
23 formation of the CAP Task Force and who had adopted its recommendations, elected
24 to sponsor this intervention in the case by the "CAP Task Force", whose members
25 are a sub-set of the panel who made up the original CAP Task Force.

26 This statement by the CAP Task Force is intended to confirm the support of
27 the Retirement Communities behind the recommendations of the Task Force, and to

1 present evidence of that community support. This statement is also intended to
2 clarify certain questions which have informally arisen with Commission staff regarding
3 various aspects of the recommendations.

4 Further, since various alternate suggestions regarding CAP water use have
5 been informally raised, this statement is also intended to re-express that the CAP
6 Task Force would definitely be opposed to certain alternate strategies regarding CAP
7 water.

8 Lastly, while the CAP Task Force respects that Citizens would intend to act
9 with the utmost of good faith in implementing the recommendations of the CAP Water
10 Task Force, we request that certain safeguards be put into the final order of the
11 Commission should it decide to approve the use of CAP water by Citizens according
12 to the recommendations proposed by the Task Force. Those safeguards are
13 discussed in detail in Section 6 below.

14 15 **2. Recommendation of this Intervenor**

16 This recommendation of the CAP Task Force has two essential elements.
17 First, it endorses the value of using CAP water in both Sun City and Sun City West
18 as a way of reducing groundwater pumping. Second, it makes clear that there is
19 really only one feasible way of achieving a reduction in the current groundwater
20 overdraft, and that was to bring the CAP water to the golf courses and have them
21 curtail an equivalent amount of pumping.

22 The original CAP Task Force report detailed the reasons why CAP water was
23 essential to the Retirement Communities. Subsidence and water quality concerns
24 were the two major reasons for the recommendation of the Task Force, but there
25 were a number of other reasons as well.

26 However, it is important to note that the recommendation to use CAP water
27 was inextricably tied to a reduction in groundwater pumping. That is, the one real

1 | water issue in the Retirement Communities is the current overdrafting of groundwater.
2 | The effects of the overdrafting of groundwater pumping in the aquifer which serves
3 | the Retirement Communities have been exacerbated by the huge increase in
4 | groundwater pumping by the high-growth communities immediately adjacent to the
5 | Retirement Communities (e.g. Peoria, Surprise). But the Task Force recognized the
6 | one essential and inescapable fact that the Retirement Communities themselves are
7 | currently pumping substantially more in acre feet of water per year than natural
8 | recharge is replenishing. And that overdraft is their responsibility.

9 | If the Retirement Communities are to escape the worst effects of their overdraft
10 | in groundwater pumping, then CAP water must be used in a manner which clearly
11 | and directly reduces the current amount of groundwater pumping.

12 | That simple and essential linkage between the use of CAP water and
13 | groundwater pumping may seem obvious, but it is essential to understanding the
14 | position put forth in this Statement by the CAP Task Force. Accordingly, the CAP
15 | Task Force wanted, for the record, to reiterate that linkage as being the key reason
16 | for its recommendation.

17 | This linkage between CAP water and groundwater overdraft is also seen in the
18 | challenge which the Phoenix Active Management Area (PAMA) has posed to the
19 | Retirement Communities (and many other communities) to achieve safe yield. Each
20 | successive version of the PAMA Management Plan has emphasized that the day is
21 | rapidly coming when the PAMA will begin to enforce its legal mandate to bring a halt
22 | to groundwater overdrafting. The Retirement Communities have been forewarned for
23 | years now that fines and other legal penalties are in the immediate offing unless
24 | substantial action is not taken to remedy the overdrafting. If the Retirement
25 | Communities were to fail to use the available CAP allocation to directly address the
26 | overdrafting of its groundwater, it would be a clear negative signal to the regulatory
27 | authorities that punitive action would have to be considered.

1 And it is our belief that the negative effects of the enforcement actions which
2 could be taken by the regulatory authorities under the current law would be a far
3 worse situation than the costs of bringing CAP water to the local area golf courses to
4 reduce groundwater pumping.

5 Based on the above, the CAP Task Force urges the Commission to consider
6 this essential linkage between the use of CAP water and the need to directly reduce
7 groundwater pumping beneath the Retirement Communities.

8
9 **3. Why Recharge of CAP Water at a Remote Site is NOT Acceptable.**

10 The concept of recharging CAP water is currently in use in many areas of the
11 Valley. For example, it is possible under Arizona law to obtain "recharge Credits" for
12 recharging surface water such as CAP water into the groundwater table, and those
13 credits (often referred to as "paper water") can then be used by a developer to meet
14 the code's requirements for an assured water supply. Many developments around
15 the valley currently use this stratagem as a way of assuring that they have provided
16 subsequent buyers with an assured water supply. It has been suggested that such a
17 recharge would be an appropriate use of the Sun Cities' CAP water allotment.

18 The Task Force strongly disagrees with the use of such a "Paper water"
19 stratagem.

20 Several possible sites for such a recharge of CAP water have been suggested,
21 all of them remote from the Retirement Communities' boundaries. However, any
22 such remote recharge will not directly benefit the underground aquifer of the
23 Retirement Communities. The threat to the Retirement Communities aquifer is from a
24 spreading cone of subsidence and from the degradation of water quality which will
25 result from the continued lowering of the groundwater table. Putting water into a
26 remote recharge site fails to help either of those concerns because such remotely-
27 recharged water will not reach the geographic area of the Retirement Communities

1 within the lifetime of anyone currently living there. More importantly, it would arrive
2 too late to counter the current trends of subsidence and a dropping water table.

3 Moreover, at the present time, there is no legal structure which would allow the
4 Retirement Communities to get "credit" for discharge into any recharge site, let alone
5 a site which is remote from the actual community boundaries.

6 It has also been argued that remote recharge could be done at a location close
7 to the CAP canal delivery point, and therefore would not require much of an
8 investment in infrastructure to get the water to the recharge site. It could therefore be
9 a less expensive alternative than delivering the water to the golf courses.

10 Unfortunately, this "less expensive" argument is fatally flawed since the remote
11 recharge process would fail to protect the Retirement Communities local aquifer from
12 the twin concerns of subsidence and a falling water table.

13 Several remote recharge sites were considered by the CAP Task Force in its
14 deliberations, and those sites are shown, just for discussion purposes, on Exhibit C
15 attached hereto. Several theories have been advanced as to why the use of such a
16 remote site should be viewed as acceptable. But the one key theoretical aspect of all
17 such arguments is the claim that if CAP water is recharged anywhere in the same
18 general underground water basin then the Retirement Communities will also be
19 benefitted. Unfortunately, that theoretical proposition doesn't comport with the
20 hydrogeological facts of life in the Northwest Valley.

21 To understand why that theoretical solution to recharging CAP water is
22 untenable, consider the following:

23 1. The hydrogeology of the Northwest valley is extremely complex, and
24 absolutely cannot be considered as one homogeneous underground storage pool.
25 This point was made in great detail in the studies done by Dr. Dapples in reports
26 previously placed on file with the Commission. A listing of the study work done by
27 Dr. Dapples is listed on Exhibit D attached hereto. Dr. Dapples' work is supported by

1 the work of Dr. Herbert Schumann, and a monograph by him on the issues at hand is
2 attached as Exhibit E. The key conclusion that can be drawn from Dr. Dapples' work
3 is that the only way to assure that recharged water will benefit the aquifer beneath
4 the Retirement Communities is to do the recharge right in that area and not in some
5 remote location. A secondary conclusion from Dr. Dapples' work is that there is still a
6 great deal about the hydrogeology of the Northwest valley which has never been
7 studied, and the unknowns greatly exceed what can be stated with certainty.

8 Therefore, any claim that recharging CAP water in locations which are remote from
9 the Retirement Communities would provide any benefit to the aquifer beneath those
10 Communities is without any technical or factual foundation and amounts to no more
11 than speculation.

12 2. It is clear that if a gallon of CAP water is dumped on the ground at a
13 remote recharge site will take an extremely long time for that gallon of water to reach
14 the geographic area of the Retirement Communities. That gallon of water has to
15 seep downward to reach the underground aquifer and then travel horizontally to reach
16 the Retirement Communities. The rate at which such travel would progress is a
17 function of the soils involved and other underground geologic features, but can be
18 measured in feet per year, even under the best of conditions. Since the nearest
19 proposed recharge sites are from five to ten miles away from the heart of the
20 Retirement Communities' aquifers, the transmission time from a remote recharge site
21 to where the water would be of direct benefit would take place over centuries.

22 3. There is some technical basis for arguing that simply looking at what
23 happens to a gallon of real water that is recharged doesn't tell the whole story
24 regarding underground transmission rates. There is, for example, the understanding
25 that, in certain circumstances, the recharge of water to the aquifer will create a
26 pressure cone which extends outward from the recharge point and serves to
27 accelerate the rate of underground transmission. However, no studies have been

1 done regarding how such a pressure cone could develop in the Northwest valley
2 geology, and there is really nothing but technical speculation available regarding just
3 how such a pressure cone could develop and how it would benefit the Retirement
4 Communities. More importantly, those who have speculated on the possible effect of
5 such a pressure cone only postulate increases in an underground transmission rate
6 of less than an order of magnitude greater than natural recharge, and hence we are
7 still talking (at best) about underground propagation in the order of decades. And
8 that time constant would mean that irreparable harm would have occurred to the
9 Retirement Communities long before remotely-recharged CAP water could be of any
10 benefit to them.

11 4. There has also been speculation that the use of a remote recharge site
12 which discharged CAP water directly into the Agua Fria water channel could improve
13 underground transmission rates to the benefit of the Retirement Communities. Here
14 again, no firm studies or technical information is available which would give any
15 sense of certainty as to what will happen if CAP water is recharged into the Agua
16 Fria. At least one expert has noted that the likely flow of any such water will be into
17 the depressed areas which presently exist in the underground water table of the
18 Northwest Valley such as the Luke depression area. Such a flow effectively by-
19 passes the Retirement Communities' aquifer and, while beneficial to the region as a
20 whole, would be of little direct benefit to the Retirement Communities on anything
21 less than a geologic time scale.

22 The above comments and conclusions are based on the testimony presented
23 to the CAP Task Force by the technical experts, which it had make presentations to
24 it. Subsequently, the Task Force had this technical area studied by Herbert
25 Schumann of Herbert H. Schumann and Associates and he is in the process of
26 finishing a monograph on the subject of underground transmission rates which the
27 Task Force will ask leave of the Commission to submit as additional testimony on or

1 before September 18, 1999.

2 The Task Force has, based on the above analysis, concluded that there is
3 really only one effective way to make use of CAP water in a manner that will directly
4 benefit the Retirement Communities and that is to turn off the current pumping of
5 groundwater to the maximum extent possible, and replace that pumping with CAP
6 water delivered directly to the golf courses that are currently doing the pumping. Any
7 other of the approaches to the use of CAP water which have been considered simply
8 do not allow the Retirement Communities to deal with the triple problems of
9 subsidence, falling groundwater tables and regulatory demands to achieve safe yield.

10
11 **4. Are the Infrastructure Cost Estimates Reasonable?**

12 Part of the information considered by the CAP Task Force in making its
13 recommendations was the estimated costs of the infrastructure which would be
14 needed to bring CAP water to the golf courses in both Sun City and Sun City West.
15 An independent engineering consultant (Brown and Caldwell) was retained to study
16 the costs of that infrastructure, and they gave the Task Force a detailed study of the
17 work involved in completing that infrastructure, along with preliminary cost estimates.

18 Task Force members whose professional background included extensive
19 experience in cost estimation for construction projects spent considerable time in
20 reviewing those cost estimates. Their work resulted in a refined and revised estimate
21 on the part of Brown and Caldwell, which were then reviewed and approved by the
22 Task Force at large.

23 Subsequent to Citizens' filing of the CAP Task Force report with the
24 Corporation Commission, there were informal questions raised by staff members as
25 to the accuracy of the Brown and Caldwell cost estimates. In response to those
26 questions, the Sun City Home Owners Association, supported by a grant from the
27 Arizona Department of Water Resources, contracted with a separate, independent

1 engineering firm (Entranco) to review the Brown and Caldwell estimates and make
2 their own assessment of the projected infrastructure costs.

3 A copy of the Entranco engineering report is attached as Exhibit B. The
4 Entranco study confirms that the estimates made in the Brown and Caldwell report
5 are reasonable, and that the necessary infrastructure can be completed for the
6 approximate costs used by the CAP Task Force in its deliberations.

7 Accordingly, the CAP Task Force feels that its recommendation regarding the
8 use of CAP water on the golf courses is supported by the Entranco study, and
9 confirms its support of that option.

10
11 **5. Evidence of Community Support for Putting CAP Water to Use on the Golf**
12 **Courses.**

13 In the course of coming to its conclusions and recommendations, the CAP
14 Task Force kept all of its deliberations completely open to the public, and public input
15 was invited at each meeting. Before an conclusion was reached, "Public Forums"
16 were held in which the public was given access to the kind of information which had
17 been made available to the Task Force, and further comment was invited. The intent
18 of the Task Force was not only to seek public input but also to start a process of
19 public education on the water issues facing the Retirement Communities.

20 The Task Force, upon reaching its conclusions, published a report on all its
21 findings and included a 32-page summary statement of its recommendations. This
22 was given a wide circulation in the community.

23 Newspaper coverage of the conclusions of the Task Force was encouraged,
24 and a number of articles appeared in the local media which discussed the
25 conclusions of the Task Force. Copies of many of those articles are available for
26 review by the Commission should they request.

27 The Task Force, in conjunction with the local organizations with governance

1 responsibility for the Retirement Communities then sponsored a substantial number of
2 talks, presentations and other community outreach programs to get as wide an
3 audience as possible to review the conclusions of the Task Force. A complete listing
4 of all the various presentations which have been made is available upon request.

5 Throughout this public education process, it became clear to participating Task
6 Force members that the general public in the Retirement Communities, once they
7 came to grips with the facts behind the water situation in their communities, was
8 giving their overwhelming support to the recommendation of the Task Force. This
9 support was by no means unanimous, but the level of support was so strong that the
10 Task Force determined to try to measure just how deep that support was.

11 Accordingly, two different informal polls were taken to get a sense of the depth of that
12 support. The results of those polls show an overwhelming level of support (80%) for
13 the use of CAP water on the golf courses in lieu of groundwater pumping. No claim
14 is made for the scientific accuracy of those polling materials, but they do provide a
15 clear and unmistakable expression of public support for the plan to put CAP water to
16 work in the only effective means possible. A complete report of that polling work is
17 available upon request.

18 In pursuing its course of public education on the use of CAP water, the Task
19 Force members have also observed another very real phenomenon: as soon as
20 people became aware of the nature of the water problems facing them, then they had
21 no problem understanding and being willing to commit to the complete solution to
22 those problems. The strength of those public expressions of support has been the
23 basis for much of the perspective presented in this Statement.

24 25 **6. Safeguards Requested from the Commission.**

26 The CAP Task Force, as an intervenor, supports the request being made by
27 Citizens Utility regarding approval from the Commission to recover its costs for the

1 CAP water allocation which it has maintained. However, there are two important
2 safeguards which the Intervenor believes should be a specific part of any Order
3 granted by the Commission to Citizens, as follows:

4 **(A) CAP Water Must Be Brought to the Golf Courses and Used There in**
5 **Lieu of Groundwater Pumping.**

6 The entire thrust of this Intervenor's argument has been to make it clear that
7 the only acceptable use of the Citizens CAP allotment is to use it in a manner which
8 will directly benefit the Retirement Communities. The only arrangement which has
9 been shown to directly improve the underground water table which serves the
10 Retirement Communities is to use the water on the golf courses of Sun City and Sun
11 City West so that they can stop their groundwater pumping. Only by stopping
12 groundwater pumping do you directly improve the Retirement Communities' aquifer.

13 It is therefore essential that the Commission's order require a commitment
14 from Citizens Utility to build the infrastructure necessary to bring the CAP water to the
15 golf courses of Sun City and Sun City West. Any other resolution of the use of CAP
16 water would be unacceptable.

17 **(B) Limited Time Frame to Complete the Necessary Infrastructure.**

18 The Task Force is concerned that the utility could drag out the completion of
19 the infrastructure required to deliver the CAP water to the golf courses, and asks that
20 the utility be given a firm deadline for completion of that infrastructure of no more
21 than 42 months from the date of the Commission's Order. The Order should also
22 contain a firm penalty, in the form of rebates to its customers, in the event that
23 deadline is missed, regardless of the reason.

24
25 **7. Conclusion**

26 The CAP Task Force has endorsed the use of CAP water in the Retirement
27 Communities as a much-needed way to help address the challenge of their falling

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2627 North Third Street, Suite 3
27 Phoenix, Arizona 85004-1103

By: _____

LIST OF EXHIBITS

- A. List of CAP Water Task Force Participants
- B. Entranco Report
- C. Location of Remote Recharge Sites
- D. Listing of Dr. Dapples' Papers
- E. Schumann White Paper
- F. County Map of Subsidence

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EXHIBIT B
ENTRANCO REPORT

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1 EXHIBIT D

2 LISTING OF PAPERS BY
3 E.C. DAPPLES

4 GEOLOGY OF GROUNDWATERS IN THE WEST SALT RIVER VALLEY SUB-BASIN
5 VOLUME 1 - NO. 1, MAY 1988

6 GEOLOGY OF GROUNDWATERS IN THE WEST SALT RIVER VALLEY SUB-BASIN
7 VOLUME 1 - NO. 2, JANUARY 1990

8 GEOLOGY OF GROUNDWATERS IN THE WEST SALT RIVER VALLEY SUB-BASIN
9 VOLUME 1 - NO. 3, NOVEMBER 1993

10 GEOLOGY OF GROUNDWATERS IN THE WEST SALT RIVER VALLEY SUB-BASIN
11 VOLUME 1 - NO. 4, DECEMBER 1994

12 COMPOSITION OF SURFACE WATERS OF THE WATERSHEDS OF THE SALT
13 AND GILA RIVERS INFLUENCING THE WEST SALT RIVER VALLEY
14 VOLUME II - NO. 1, MAY 1997

15 Copies available from:

16 Sun City Home Owners Association
17 10401 West Coggins Drive
18 Sun City, Arizona 85351
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4

5 **BEFORE THE ARIZONA CORPORATION COMMISSION**

6 CARL J. KUNASEK
7 CHAIRMAN
8 JAMES M. IRVIN
COMMISSIONER
9 WILLIAM A. MUNDELL
COMMISSIONER

10 IN THE MATTER OF THE JOINT)
APPLICATION OF SUN CITY WATER)
11 COMPANY AND SUN CITY WEST)
UTILITIES COMPANY FOR)
12 APPROVAL OF CENTRAL ARIZONA)
PROJECT WATER UTILIZATION)
13 PLAN AND FOR AN ACCOUNTING)
ORDER AUTHORIZING A)
14 GROUNDWATER SAVINGS FEE AND)
RECOVER OF DEFERRED CENTRAL)
15 ARIZONA PROJECT EXPENSES.)
_____)

DOCKET NO. W-01656A-98-0577
SW-02334A-98-0577

**NOTICE OF FILING
REBUTTAL TESTIMONY**

16
17 The CAP Task Force hereby provides Notice of Filing Rebuttal Testimony for
18 Carole Hubbs and Dess Chappelle in the above-referenced docket.

19 **Respectfully submitted** this September 30, 1999.

20
21 **BEYER, McMAHON & LaRUE**

22
23
24 _____
William G. Beyer, Esq.
25
26
27

1 **AN ORIGINAL AND TEN COPIES**

2 of the foregoing mailed this
3 30th day of September, 1999
4 to:

5 Docket Control
6 Arizona Corporation Commission
7 1200 W. Washington
8 Phoenix, Arizona 85007

9 **COPIES** of the foregoing mailed/
10 hand delivered this 10th day of
11 September, 1999 to the following:

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15 By: _____

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REBUTTAL TESTIMONY OF DESS CHAPPELEAR
CAP TASK FORCE
W-01656A-98-0577
SW-02334A-98-0577

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Q: Please state your name and address.

A: Dess Chappellear, and I live at 13837 W. Oak Glenn Drive, Sun City West, Arizona 85375.

Q: Please state your employment background.

A: I am currently retired, but I spent over 38 years in water resources development with the Department of the Interior, Bureau of Reclamation. My most recent assignment was Assistant Project Manger of the Central Arizona Project.

Q: Please state your professional qualifications.

A: I was a professional engineer, now retired, and my qualifications are indicated on the attached exhibit.

Q: Have you been involved in the CAP Task Force?

A: Yes. I was a member of the CAP Task Force referred to in the basic pleadings filed by Citizens Utilities Company, and actively participated in all of the hearings and deliberations of that group.

Q: Have you reviewed the Statement of the CAP Task Force which has been submitted to the Commission as a part of this Docket?

A: Yes.

Q: In your view, is that Statement an accurate summary of the position of the CAP Task Force?

A: Yes. I would, however, recommend that the two "safeguards" which were suggested be put in any Order crafted by the Commission (see Section 6, page 14 of the Statement) should be expanded to include a fixed time limit be placed on the life of the contract for the short-term arrangement between Citizens and MWD. As has been pointed out by several commentators, that

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3 arrangement offers virtually no real benefits to the Retirement Communities,
4 and should only last for the 42 month deadline established for the construction
5 of the pipeline infrastructure required for the long-term solution to the use of
6 CAP water.

7 Q: For purposes of your testimony today, will you adopt that Statement as your
8 own testimony?

9 A: Yes.

10 Q: What is the purpose of your testimony today?

11 A: To supplement the Statement of the CAP Task Force in response to testimony
12 which has been provided by certain other parties to this proceeding.

13 Q: Have you read the testimony provided by Mary Elaine Charlesworth
14 representing the Sun City Taxpayers Association ("SCTA")?

15 A: Yes I have.

16 Q: Are there elements of that testimony with which you would disagree, and if so,
17 what?

18 A: Yes, I disagree with much of that testimony, but perhaps the area which is
19 most contrary to my views would be her statements on page 6 to the effect
20 that CAP water is not critical to Sun City. It is disappointing to see that after
21 all the years of experience and fact finding which has taken place regarding
22 the groundwater situation in the Sun Cities, that SCTA still does not recognize
23 that the Sun Cities are over-drafting their water table and that serious and
24 immediate consequences are flowing from that situation. As was repeated
25 several times for emphasis in the Statement by the CAP Task Force, the
26 current over-drafting of the groundwater aquifer in the area of the retirement
27 communities is inescapably leading to subsidence and water quality problems.

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3 Further, the current regulatory environment has made it clear that such
4 overdrafting will no longer be tolerated. As a result, we cannot agree that CAP
5 water is not needed in the Sun Cities.

6 Q: Have you reviewed the testimony of Claudio Fernandez of the Corporation
7 Commission staff, and do you have any comment on his testimony?

8 A: Yes. Although I respect the conclusions reached by Mr. Fernandez, I was
9 disappointed to see an apparent failure to recognize that the use of CAP water
10 on the golf courses is the only approach which will directly affect a benefit to
11 the ratepayers of the Sun Cities and Youngtown. We take particular exception
12 to the conclusions which Mr. Fernandez seemed to reach in support of a
13 possible, future Agua Fria recharge program as described on page 8 of his
14 testimony. As was confirmed in the investigations of the CAP Task Force,
15 discharge at remote sites north of the retirement communities may well benefit
16 the Northwest Valley region as a whole, it will offer no real benefit to the
17 retirement communities, at least not for many decades to come. The major
18 reason for this is the extremely low propagation rates of underground water. A
19 secondary reason is the potential for water recharged in the Agua Fria river
20 bed to flow into the low spots of the Northwest valley aquifer, such as the Luke
21 cone of depression, and thus not be of any real benefit to the Sun Cities
22 residents.

23 Q: Have the issues of subsidence and the remote recharge plans been of
24 continuing interest to the CAP Task Force?

25 A: Yes they have. Even though the materials presented to the CAP Task Force
26 during its deliberations appeared conclusive regarding the fact that any remote
27 recharge plan which could be considered did not really provide a direct benefit

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3 to the ratepayers of the retirement communities, it was felt that a more
4 definitive analysis of that issue could be helpful in explaining the issue to the
5 communities. As a result, all the governance organizations of the retirement
6 communities (Rec Centers, HOA, PORA, Youngtown) asked Mr. Herb
7 Schumann, a recognized expert in hydrogeology, to review the issue and
8 provide us with a further analysis. Mr. Schumann did so, and his most recent
9 study paper on this matter is attached as Exhibit A and included in my
10 testimony, along with a summary of Mr. Schumann's qualifications.

11 We believe that Mr. Schumann's analysis should be helpful to the Commission
12 in recognizing that remote recharge plans simply do not benefit the retirement
13 communities who would have to pay for the CAP water to implement them.

14 Q: Was there a special reason why the CAP Task Force submitted a statement as
15 compared to the usual Q & A format used to provide testimony to the
16 Commission?

17 A: Yes, there were several reasons the use of a Statement seemed important to
18 us. At the prior Commission hearing on this matter, the Commission members
19 in effect challenged the people of the retirement communities to come together
20 and work out what they felt was best for their communities with respect to how
21 CAP water should be put to beneficial use and then report that
22 recommendation back to the Commission. The responsible leadership of Sun
23 City, Sun City West and Youngtown did just that in the form of the work of the
24 CAP Task Force study team. The Task Force team reported the results of its
25 study to the Boards of Directors of the Sun City Homeowners Association
26 (HOA), the Recreation Centers of Sun City, the Property Owners and
27 Residents Association of Sun City West, the Recreation Centers of Sun City

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3 West, and the city council of the Town of Youngtown, all of whom constitute
4 the governance organizations of the retirement communities. Those
5 organizations accepted and endorsed the findings and conclusions of the CAP
6 Task Force. As a result, it was felt that testimony by some one person was
7 inadequate to convey that the retirement communities as a group had
8 responded to the Commission's earlier challenge, and that it was a group
9 statement being made to the Commission.

10 Further, it was felt that the most important service which the CAP Task Force
11 could perform for the Commission was to convey the sense of why the
12 combined organizations of the retirement communities had come to the
13 conclusion which they had. The Statement of the CAP Task Force was thus
14 intended as an explanation of the logic and reasoning which had been the
15 basis for the recommendation which the retirement communities are making to
16 the Commission. A statement format was used since we were trying to
17 convey not just the facts which had guided the Task Force, but their reasoning
18 from those facts.

19 In addition, various members of the Corporation Commission had
20 recommended that the governance organizations should make a special effort
21 to make sure that the recommendations of the CAP Task Force had been
22 communicated, on a broad basis, to as many of the residents of the retirement
23 communities as possible. The Commissioners' concern was that they wanted
24 whatever recommendation that was brought forward to truly reflect the will of
25 the majority of the people in those communities. Thus, the Statement was also
26 a communication back to the Commission explaining that the governance
27 organization of the retirement communities had indeed met that burden through

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seminars, public forums, publications and the like, and felt they were on a sound basis in stating that the recommendations of the CAP Task Force met with a strong and positive level of support from within the communities who would have to pay the costs of implementing the recommendations.

However, I have included, by reference in this rebuttal testimony, the Statement previously submitted by the CAP Task Force, and stand ready to answer any questions on it.

Q: Does this conclude your testimony?

A: Yes.

Dess Chappellear

Date: _____