ORIGINAL

0000038320

BEFORE THE ARIZONA CORPORATION C

COMMISSIONERS

307

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY WATER DISTRICT	DOCKET NO. W-01303A-05-0405

The Utilities Division ("Staff") hereby provides notice of filing of Staff's Direct Testimony of Staff Witnesses Alexander Ibhade Igwe, Darron Carlson, James J. Dorf, Dennis Rogers and John A. Chelus.

RESPECTFULLY SUBMITTED this 17th day of January 2006.

Diane M. Targovnik
Attorney, Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007
(602) 542-3402

RECEIVED
2006 JAN 17 P 2:43
AZ CORP COMMISSION
DOCUMENT CONTROL

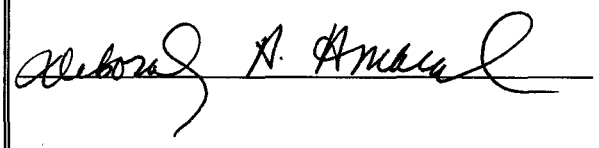
Original and thirteen (13) copies of the foregoing were filed this 17th day of January 2006 with:

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

Copy of the foregoing mailed this
19th day of January 2006 to:

Craig A. Marks
Arizona-American Water Company
101 Corporate Center
19820 North 7th Street, Suite 220
Phoenix, AZ 85007

Scott S. Wakefield
RUCO
1110 West Washington Street, Suite 220
Phoenix, AZ 85007



Original

DIRECT

TESTIMONY

OF

ALEXANDER I. IGWE

DARRON W. CARLSON

JAMES J. DORF

DENNIS ROGERS

JOHN A. CHELUS

DOCKET NO. W-01303A-05-0405

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC. FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES INI ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE AT ITS PARADISE VALLEY WATER DISTRICT.

January 16, 2006

IGWE

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
JEFF HATCH-MILLER - Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC. FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE AT ITS PARADISE VALLEY WATER DISTRICT.	)	DOCKET NO. W-01303A-05-0405

DIRECT

TESTIMONY

OF

ALEXANDER IBHADE IGWE, CPA

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

JANUARY 16, 2006

TABLE OF CONTENTS

SCHEDULES

EXECUTIVE SUMMARY
ARIZONA-AMERICAN WATER COMPANY, INC
PARADISE VALLEY WATER DISTRICT
DOCKET NO. W-01303A-05-0405

Arizona-American Water Company, Inc. ("Company") is the largest, investor-owned water utility in the state of Arizona. It serves approximately 131,000 various types of customers throughout the state. The Paradise Valley Water District serves approximately 4,737 metered customers of various classes, of which more than 93 percent are residential customers in Paradise Valley, Scottsdale, and some unincorporated areas of Maricopa County.

The Company requested a $277,980 or 5.48 percent increase in revenue that allows for annual revenue of $5,348,660 or a 7.84 percent rate of return on an original cost rate base ("OCRB") of $11,651,216. The Company also requested an arsenic cost recovery mechanism ("ACRM") to recover its costs for arsenic treatment in the Paradise Valley District.

Staff recommends a $199,020 or 3.92 percent increase in revenue that allows for annual revenue of $5,269,700 or a 7.24 percent rate of return on an OCRB of $14,165,666. Staff recommends approval of an ACRM as described by Staff.

INTRODUCTION

Q. Please state your name and business address.

A. My name is Alexander Ibhade Igwe. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

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

A. I am employed by the Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission") as a Public Utilities Analyst V.

Q. Briefly summarize your educational and professional qualifications related to your responsibility in the field of utility regulation.

A. I hold a Bachelor of Science degree in Accounting from the University of Benin, Nigeria and a Master of Information Systems Management degree from Keller Graduate School of Management of Devry University. I am a Certified Public Accountant and a member of the American Institute of Certified Public Accountants. I have attended training classes and courses regarding regulatory audits, rate-making, and other utility related matters. In addition, in my seven years working for the Utilities Division of the Commission, I have prepared Staff Reports and prefiled testimonies and presented oral testimonies in water, gas and electric utility rate and finance proceedings before this Commission.

PURPOSE OF TESTIMONY

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

A. I am presenting Staff's analysis and recommendations for test year operating revenues and expenses, revenue requirement and arsenic cost recovery mechanism ("ACRM") regarding Arizona-American Water Company, Inc.'s ("AAWC" or "Company") filings for its Paradise Valley Water District.

Q. What are Staff's adjusted test year and the Company's reported test year results?

A. Staff's adjusted test year results show Revenue of $5,070,680 and Expenses of $4,167,995 for an Operating Income of $902,685 on an Original Cost Rate Base ("OCRB") of $14,165,666 for a 6.37 percent rate of return. The Company's test year results, as filed, show Revenue of $5,070,680 and Expenses of $4,327,912 for an Operating Income of $742,768 on an OCRB of $11,651,216 for a 6.38 percent rate of return.

SUMMARY OF ADJUSTMENTS

Q. Please summarize the adjustments addressed in this testimony.

A. Staff's analysis addresses the following adjustments:

Purchased Water Expense

Adjustment #1 decreases operating expense by $38,660 to eliminate purchased water expense that is no longer necessary for the provision of service.

Purchased Power Expense

Adjustment #2 removes $15,381 of purchased power expense relating to the Company's accrual for costs it did not incur during the test year.

Temporary Employee

Adjustment #3 decreases operating expense by $32,389 to eliminate the cost of temporary employment services replaced by a permanent employee in the test year. This adjustment corrects for double counting of salaries and wages relating to the referenced position.

Materials and Supplies Inventory

Adjustment #4 eliminates $11,184 of materials and supplies inventory written-off to reflect depletion in value. The Company's proposal does not constitute cost of service and provides no future benefits to ratepayers.

Rate Case Expense

Adjustment #5 reflects Staff's estimation of appropriate rate case expense necessary to process this instant rate case. It reduces operating income by $24,713 to reflect Staff's estimation of rate case expense.

Miscellaneous Allocated Corporate Expenses

Adjustment #6 reflects Staff's removal of this entire account in the amount of $145,648 and reduces operating expense by this same amount. The Company made no attempt to segregate corporate expenses from direct expenses of other operating districts leaving this account unusable for ratemaking purposes.

Depreciation Expense

Adjustment #7 corrects for errors in the Company's calculation of depreciation expense and reflects the impact of Staff's recommendation to capitalize $3,018,867 of Public Safety plant. This adjustment increases operating income by $62,593 to reflect the results of Staff's recalculation of depreciation expense.

Property Taxes

Adjustment #8 decreases operating expense by $1,898 to reflect Staff's recalculation of property taxes based on its recommended revenues.

Income Taxes

Adjustment #9 increases operating expense by $47,363 to reflect Staff's recalculation of income taxes based on its adjusted taxable income.

REVENUE REQUIREMENTS

Q. Please summarize the results of Staff's analysis of the Company's application and state Staff's recommended revenue requirement.

A. As shown on Schedule AII-1, Staff recommends $5,269,700 of revenue requirement. Staff's recommended revenue requirement represents an increase of $199,020 to the adjusted test year revenues of $5,070,680. Staff's recommended revenue requirement is $78,960 less than the Company's proposal of $5,348,660.

REVENUES

Q. Please summarize Staff's recommendation regarding the Company's test year revenues.

A. Staff recommends adoption of the Company adjusted test year revenues.

OPERATING INCOME

Q. How is Staff's testimony on operating income organized?

A. Staff's testimony on operating income separately analyzes each issue for which an adjustment is recommended. For example, each adjustment relating to an account group, such as operations, is separately analyzed and discussed for purposes of clarity.

EXPENSES

Operating Expense Adjustment No. 1 – Purchased Water Expense

Q. What is the Company proposing for purchased water expense in this proceeding?

A. The Company proposes to recover $38,660 of purchased water expense relating to write-offs and amortization of Central Arizona Project ("CAP") costs in cost of service.

Q. Did the Company provide any explanation for requesting recovery of $38,660 of purchased water expense in this proceeding?

A. No.

Q. Please comment on the Company's proposal to recover $38,660 of purchased water expense as cost of service.

A. Staff's audit of the Company's general ledger indicates that its proposed purchased water expense consists of $33,925 of write-offs and $4,735 of amortization of CAP costs, for a total of $38,660. The Company's proposal to write-off $33,925 of historic costs is inconsistent with sound rate making principles because such write-offs are not representative of future cost of service. In addition, write-offs are neither recurring nor provide future benefits to ratepayers. Also, the Company's proposal to recover amortization of CAP costs through cost of service is inconsistent with its CAP surcharge which allows it to separately recover all CAP related costs outside of base rates.

Q. What is Staff's recommendation regarding the Company's proposal to include $38,660 of purchased water expenses as cost of service in this proceeding?

A. As shown on Schedule AII-5, Staff recommends denial of the Company's proposal to include $38,660 of purchased water expenses in cost of service.

Operating Expense Adjustment No. 2 – Purchased Power Expense

Q. What is the Company's proposal regarding inclusion of accruals relating to purchased power expense in cost of service?

A. The Company proposes to include $15,381 of accruals for purchased power expense in this proceeding. The Company's accrual relates to its estimate of future costs of purchased power expense that was reported in its 2004 general ledger.

Q. Did the Company provide any explanation for its proposal to include accruals in cost of service?

A. No.

Q. What was Staff's analysis regarding the Company's proposal to include $15,381 of accruals for purchased power expense in cost of service?

A. Staff reviewed the Company's general ledger to determine if the Company incurred actual costs relating to its accrual for purchased power expense during the test year. In addition, during Staff's on-site audit, Staff interviewed Company witness Stacey Fulter who indicated that is the general practice of the Company to make estimates for future costs prior to the close of each year's accounting records. The Company contends that such accruals are usually trued-up to reflect actual costs incurred during the pertinent year. In this instance, the Company did not provide any evidence that it incurred an additional $15,381 for purchased power expense during the test year. Although Staff's analysis shows that the Company revised its accrual for purchased power expense subsequent to the test year, the reversal was not reflected in its filing. As a result, Staff has determined that the Company's accrual of $15,381 for additional purchase power expense is not representative of test year costs.

Q. What is Staff's recommendation regarding the Company's proposal to include $15,381 of accrual in cost of service?

A. As shown on Schedule AII-6, Staff recommends denial of the Company's proposal to include $15,381 of purchased power accruals in cost of service.

Operating Expense Adjustment No. 3 – Contract Service (Temporary Employee)

Q. Please describe AAWC's proposal regarding the costs of contract service for temporary employees.

A. AAWC proposes to include $32,389, the costs of test year contract service for a temporary employee, in cost of service.

Q. Did the Company provide any justification for its proposal to recover $32,389 of contract service for temporary employees in cost of service?

A. No.

Q. Please comment on the Company's proposal to recover $32,389 of contract service for temporary employees as a component of cost of service.

A. Staff's audit of the Company's financial record indicates that it incurred $32,389 of contract service for temporary employees during the test year. Further inquiry revealed that the Company has filled the temporary position with a permanent employee. The permanent employee's salary is included in the Company's adjusted payroll expenses for the test year. Therefore, Staff finds that the Company's proposal to include $32,389 of contract service for temporary employee in cost of service, results in double counting.

Q. What is Staff's recommendation regarding contract service for temporary employees?

A. As shown on Schedule AII-7, Staff recommends removal of $32,389 of contract service for temporary employee from cost of service. Staff's recommendation eliminates double counting of related employee costs.

Operating Expense Adjustment No. 4 – Materials & Supplies Inventory

Q. Is AAWC proposing to write-off a portion of its material and supplies inventory?

A. Yes. The Company proposes to write-off $33,552 of materials and supplies inventory to cost of service.

Q. Did the Company provide any explanation for its proposal to write-off a portion of materials and supplies inventory to cost of service?

A. Yes. The Company states that its pro forma adjustment reflects an allocation of the costs of materials and supplies inventory written-off during the test year. In the Company's response to Residential Utility Consumer Office's ("RUCO") data request 3-08, it states that the write-off results from depletion in the balance of materials and supplies inventory centrally warehoused at the Sun City Water District. As shown on the Company's Schedule C-2, adjustments B9 and B10, it is proposing to amortize the write-off over three years, at $11,184 per year.

Q. Does Staff agree with the Company's proposal to write-off materials and supplies inventory to cost of service?

A. No. Staff disagrees with the Company's premise for requesting recognition of the costs of materials and supplies inventory written-off in cost of service. In general, write-offs do not constitute cost of service because they are non-recurring and provide no future benefit

to ratepayers. In this instant case, the Company did not provide any cogent explanation for why its proposed write-off will be a necessary cost of service, on a going forward basis. As a result, Staff finds that the Company's proposal is inconsistent with sound principles of ratemaking.

Q. What is Staff's recommendation regarding the Company's proposal to include the write-off relating to materials and supplies inventory in cost of service?

A. As shown on Schedule AII-8, Staff recommends denial of the Company's proposal to recover $11,184 of materials and supplies inventory write-off in cost of service.

Operating Expense Adjustment No. 5 – Rate Case Expense

Q. What is the Company's proposed rate case expense in this proceeding?

A. The Company proposes a total of $282,841 of rate case expense, amortized over three years at $94,280 per year.

Q. Please describe the Company's proposed rate case expense.

A. The Company's proposal is comprised of $167,473 of internal cost, $79,383 of consultant fees for cost of capital analysis, $14,985 for cost of service analysis and rate design as well as $21,000 for other miscellaneous costs. According to the Company's expert witness, Ms. Fulter, at page 3, lines 25 - 27 of Direct Testimony, the Company is proposing to share the cost of capital analysis expense, estimated at $158,767, on a 50/50 basis between its investors and ratepayers. The Company contends that its proposal for equal sharing of the consultant fees relating to cost of capital analysis reflects its assumption that the analysis benefits both ratepayers and investors.

Q. Has the Company revised its estimated rate case expense in this proceeding?

A. Yes. In the Company's response to Staff's audit question number 1, it provided a new estimate for rate case expense, totaling $301,832. The Company's revision reflects actual costs incurred as of the date of its response as well as estimates of future costs of processing this proceeding. While some of the Company's original estimates have been adjusted downward to reflect actual cost incurred to date, other components have been revised upward. For example, the Company seeks full recovery of the $158,267 estimated for cost of capital analysis. The Company's request for full recovery of cost of capital analysis expense is contrary to its original assertion that a 50/50 sharing of the cost between ratepayers and investors is necessary to reflect mutual benefit to both parties. Because the Company did not provide a revised schedule to reflect its proposed changes to rate case expense, there is no change to its requested operating income.

Q. Please comment on the Company's proposed rate case expense in this proceeding.

A. In general, the Company's revised estimates for rate case expense seem reasonable. However, the Company's original proposal to share the cost of capital analysis expense, on a 50/50 basis, between its ratepayers and investors, is more appropriate than its later request for full recovery. Staff finds that the Company's proposal to incur $158,267 for cost of capital analysis is significantly higher than normal and would unduly burden ratepayers. While Staff recognizes the Company's right to engage the services of the best consultants, it appears reasonable to share the related costs when the Company's cost of capital witness, the Brattle Group, primarily argues for a higher than normal cost of equity.

Also, Staff's analysis indicates that the Company has significantly revised its costs estimate for cost of service analysis and rate design, from a total of $14,985 to $42,677, an

increase of $27,692 or 185 percent over its original proposal. Further analysis of the Company's actual costs incurred to date, indicates that it has paid its Consultant, Mr. Kozoman, approximately $15,000 for cost of service analysis and rate design. Therefore, the Company is projecting to incur an additional $27,667 for rate design and administrative hearing costs during the remainder of this proceeding. Staff's analysis shows that the Company's projection does not correlate with the anticipated level of future participation by Mr. Kozoman. Staff's conclusion is driven by the fact that the Company's expert witness has completed the majority of his assigned responsibilities, such as compilation of billing determinants and the related proof of revenue, cost of service analysis and rate design. Although Staff anticipates that Mr. Kozoman may be required to perform additional analysis relating to rate design and provide oral testimony, we find the Company's estimate of $27,667 to be excessive. Based on Mr. Kozoman's billing rate, Staff estimates that the Company may incur an additional $13,677 for rate design and oral testimony during the remainder of this proceeding.

Q. How did Staff organize its proposed adjustment to rate case expense?

A. As shown on Schedule AII-9, Staff's recommended rate case expense is adjusted against the amount reflected in the Company's proposed operating income. Staff's recommendation results in an aggregate decrease of $74,141 or $24,714 over the next three years. This comparison is necessary in order to compare "apples to apples".

Q. What is Staff's recommendation for rate case expense?

A. Staff recommends $208,700 of total rate case expense, a decrease of $74,141 to the Company's original proposal of $282,741. Because Staff agrees with the Company's assertion that it is appropriate to amortize rate case expense over three years, Staff

recommends an annual rate case expense of $69,567, $24,714 less than $94,280 reflected in the Company's requested operating income.

Operating Expense Adjustment No. 6 – Miscellaneous Allocated Corporate Expenses

Q. Please describe the Company's proposal regarding miscellaneous allocated corporate expenses?

A. The Company proposes to include $145,648 of miscellaneous allocated corporate expenses in cost of service.

Q. What was Staff's analysis regarding the Company's inclusion of this account in its cost of service?

A. In reviewing the RUCO data requests and the Company's responses, Staff took notice of the responses to RUCO 9.03 data request. RUCO had questioned the necessity of a number of entries in this account and whether or not they were prudent. After reviewing the account and the invoices the Company had included in its response, Staff noted that the Company made no attempt to segregate miscellaneous corporate expenses from miscellaneous direct expenses that should have been allocated to specific operating districts.

Staff questioned Mr. Joel Reiker of the Company, via telephone, about this account and was told that this is just a miscellaneous account and the Company does not believe it is necessary to do any more than allocate the entire account according to its "4-factor" allocation method.

Q. What is the "4-factor" allocation method?

A. The "4-factor allocation method is the general methodology that the Company utilizes to allocate corporate expenses to its various operation districts. This methodology was used and accepted in the Company's last series of rate cases under Docket No. WS-01303A-02-0867, et al. and earlier rate cases, as well. The Company's work papers contain a breakdown of this methodology.

Q. Did the Company allocate this account according to its "4-factor" allocation method?

A. Yes, it did. The adjusted total of the account was $1,793,696 and the Paradise Valley district portion was 8.12 percent or $145,648.

Q. If the allocation is correct, what is wrong with the amount?

A. The amount includes many items that should not be allocated but should be charged to a specific operating district. In other words, this account is not just corporate miscellaneous expenses but also includes a myriad of other miscellaneous expenses that should have been charged directly to its various operating districts. The Company failed to properly account for these expenses and Staff believes that this account is inappropriate for the purposes of allocation and rate making.

Q. Did Staff attempt to remove certain items and/or otherwise correct the account?

A. No. In the Company's response to RUCO 9.03, it provided some invoices but did not provide enough to enable Staff to make any adjustments or otherwise correct the account. When Staff questioned Mr. Reiker during the telephone conversation, he stated that the Company had already supplied all the necessary information to substantiate the account in its response to RUCO data request 9.03.

Q. What is Staff's recommendation regarding the Company's proposal to include $145,648 of miscellaneous allocated corporate expenses in cost of service?

A. As shown on Schedule AII-10, Staff recommends removal of the entire account in the amount of $145,648 of miscellaneous allocated corporate expenses.

Operating Expense Adjustment No. 7 – Depreciation Expense

Q. Please describe the Company's proposal regarding depreciation expense.

A. The Company proposes $720,578 of depreciation expenses, consisting of $1,203,214 of depreciation on Utility Plant in Service "UPIS", $3,165 of depreciation of common plant allocation, $32,634 of amortization of comprehensive planning studies, $6,570 of amortization of Mummy Mountain Acquisition cost, less $525,004 of amortization of Contribution in Aid of Construction "CIAC".

Q. Did the Company demonstrate how it calculated its proposed depreciation expense?

A. Yes. The Company states that its proposed depreciation expense relating to UPIS is calculated by applying the Commission approved depreciation rate for each account class to the corresponding account balance at the end of the test year. The Company utilized a similar method for determining its proposed amortization of CIAC. As it relates to common plant, the Company's allocation of corporate plant is based on customer count at the end of the test year. The Company indicates that it calculated depreciation expense on common plant allocation by multiplying the amount relating to each account class by the corresponding depreciation rate. Finally, the Company is proposing to amortize comprehensive planning studies costs and Mummy Mountain acquisition costs based on Commission approved rates.

Q. Please comment on the Company's methodology for calculating depreciation expense.

A. The Company's methodology for calculating its proposed depreciation expense is appropriate and consistent with sound rate making principles. However, Staff's analysis revealed some arithmetic errors in the Company's calculations. For example, the Company did not apply depreciation rates to certain sub-accounts of structures and improvement. Second, the Company did not correctly calculate its reported depreciation expense on common plant allocation. Finally, Staff has determined that the Company had a zero balance on its comprehensive studies planning account at the end of the test year. Consequently, the Company's proposal to recognize $32,634 for amortization of comprehensive planning studies costs is erroneous.

Q. Did Staff recalculate the Company's proposed depreciation expense?

A. Yes. As shown on schedule AII-11, Staff has recalculated the Company's depreciation expense on UPIS and common plant allocation to correct for errors in its proposal. In addition, Staff calculated depreciation expense on $2,788,803 of new transmission and distribution mains as well as $230,064 of new fire hydrants, to reflect the impact of Staff's recommendation to capitalize the Company's completed and in-service Public Safety plant. Staff's calculation of depreciation expense on Public Safety plant increases total depreciation expense by $70,089. Also, Staff recommends denial of the Company's proposal to recognize $32,634 of amortization of comprehensive planning studies costs in cost of service. Staff finds that amortization of costs relating to comprehensive planning studies is inappropriate since the account had a zero balance at the end of test year.

Q. What is Staff's recommendation for depreciation expense?

A. Staff recommends $783,171 of total depreciation expense, $62,593 over the Company's proposal of $720,758.

Operating Expense Adjustment No. 8 – Property Taxes

Q. What is the Company proposing regarding property taxes?

A. The Company proposes $213,241 of property taxes, $14,879 less than its actual test year expense of $228,120.

Q. Did the Company adapt ADOR's centrally valued methodology similar to the utilized by Staff for determination of property taxes?

A. Yes. The Company's calculation is based on the methodology developed by Staff and used as an acceptable adaptation for determining property tax expense. Staff agrees with the Company's description of the methodology.

Q. Please comment on the computation of property taxes using the ADOR methodology.

A. The ADOR methodology begins with the calculation of the average revenue for three historical years. The calculated average revenue is a major component used in the determination of property taxes under the ADOR methodology. Since the ADOR calculates property taxes solely on historical revenues, its method fails to capture the effects of new rates established by the Commission until after those rates are implemented. Using only historical revenues to calculate property taxes used in cost of service will cause a mismatch between the property taxes used in ratemaking and actual bills as the revenues generated by new rates become historical and incorporated into ADOR's calculation of property tax bills.

Staff has developed an adaptation of the ADOR's methodology by utilizing two historical years and Staff's recommended revenues for calculating the three-year average revenue. Staff's inclusion of its recommended revenues in the calculation of a three-year average, recognizes that the ADOR will calculate future property taxes based on the revenue derived from Commission approved rates in this proceeding. Except for the above modification, Staff has utilized the ADOR's prescribed methodology for calculating its recommended property taxes. As stated previously, the Company employed Staff's adaptation of the ADOR methodology in calculating its proposed property taxes. Therefore, any variance between the Company's proposal and Staff's recommended property taxes results from difference in both parties estimation of future revenues.

Q. Please provide a detailed explanation of Staff's computation of test year property taxes.

A. As shown on Schedule AII-12, Staff utilized its adaptation of the ADOR methodology in the determination of property taxes. Staff derived a three-year average by multiplying the Company's reported test year revenues by 2 and adding Staff recommended revenues, for a total of $15,411,060. Then, Staff divided the result by 3 to yield a three year average of $5,137,020. The three-year average of $5,137,020 was multiplied by a factor of two, resulting in an income value indicator of $10,274,040. Staff calculated the full cash assessed valued of $10,274,040 by deducting $8,933, the net book value of licensed vehicles from the income value indicator. Finally, Staff's recommended property taxes of $211,343 results from multiplying the full cash assessed value of $10,265,107 by an assessment ratio of 25 percent and the Company's composite property tax rate of 8.2354 percent.

Q. What is Staff's recommendation for property taxes?

A. As shown on Schedule AII-12, Staff recommends $211,343 of property taxes, $1,898 less than the Company's proposal of $213,241.

Operating Expense Adjustment No. 9 - Income Taxes

Q. What is the Company proposing for test year incomes taxes?

A. The Company's reports an adjusted test year state income tax of $38,940 and federal income tax of $176,765, for a total of $215,705.

Q. Did the Company provide a schedule depicting its computation of income taxes?

A. Yes. Schedule C-3, page 1, of the Company's filing shows the federal tax rate as 31.63 percent, state tax rate as 6.97 percent and the applicable total tax rate of 38.60 percent.

Q. Does Staff agree with the Company's suggested tax rate of 38.6 percent as the applicable federal and state tax rates?

A. Yes. As shown on Schedule AII-2, line 17, Staff has confirmed that the Company's combined federal and state income tax rate is approximately 38.60 percent.

Q. Did Staff prepare any schedule showing the computation of income taxes?

A. Yes. Staff's computation of income taxes is shown on Schedule AII-2.

Q. What is Staff's recommendation for test year income taxes?

A. As shown on Schedules AII-2, Staff recommends $263,068 of test year income taxes, consisting of $47,490 of state income tax and $215,578 of federal income tax. Staff's recommendation is consistent with Staff's adjusted test year taxable income.

ARSENIC COST RECOVERY MECHANISM

Q. Please describe the Company's proposal regarding the Arsenic Cost Recovery Mechanism ("ACRM") for its Paradise Valley Water District.

A. The Company is requesting that the Commission approve an ACRM for its Paradise Valley Water District as well as an interim Accounting Order authorizing it to defer all capital costs relating to arsenic-removal facilities placed in service prior to the effective date of an ACRM surcharge. The Company claims that upon approval of an ACRM in this proceeding, it will make a series of filings for specific ACRM surcharges to recover its capital costs and recoverable operating and maintenance expenses.

Q. Has the Company separately filed a request for an interim accounting order to defer arsenic costs?

A. No, it has not.

Q. What does Staff recommend regarding an interim accounting order to defer arsenic costs?

A. Staff recommends approval of an accounting order to allow the Company to defer only depreciation expense on arsenic-removal facilities once placed in service until the effective date of a Decision in this proceeding.

Q. Does this recommendation allow the Company to begin deferring depreciation expense immediately?

A. No, it does not. Only the Commission itself can authorize an accounting order. At this stage, if the Company wishes to obtain an interim accounting order prior to a Decision in this case, it should petition the Hearing Division to request bifurcation of this issue from the rate case and to accelerate consideration of the accounting order issue.

Q. Did the Company provide any explanation for requesting an ACRM in this proceeding?

A Yes. The Company claims that its request for an ACRM is predicated on United States Environmental Protection Agency's ("EPA") new arsenic contamination standard. The new EPA standard requires public water utility companies to reduce the maximum arsenic contamination level in drinking water from 50 parts per billion ("ppb") to 10 ppb, by January 23, 2006. The Company states that in order to comply with the new arsenic contamination level, it has budgeted approximately $19 million of capital investment in new arsenic remediation facilities. The Company estimates that its new arsenic remediation facilities will be completed and placed in service prior to the January 23, 2006 deadline for complying with the new arsenic contamination standard. The Company states that its request for an ACRM is necessary for recovery of the capital cost of arsenic remediation facilities as well as the related operating and maintenance costs.

Q. What is the purpose of an ACRM?

A. In general, an ACRM provides a methodology for recovering certain defined costs related to arsenic treatment as well as to establish a mechanism for recovery of arsenic related costs from customers. Recovery of arsenic related costs through an ACRM surcharge terminates upon inclusion of arsenic related plant in rate base.

Q. Please describe AAWC's proposed ACRM.

A. According to the Company, its proposal for an ACRM is identical to the filing in Docket No. WS-1303A-05-0280, et al. The Company's witness, Mr. David P Stephenson[1], describes the ACRM as follows:

[1] Direct testimony of David P. Stephenson, at page 15 & 16.

1. The ACRM is to be based solely on actual costs and eligible for recovery, which are depreciation, gross return, and recoverable operations and maintenance expense ("O&M").
2. Actual rate recovery via the ACRM commences after new arsenic facilities are in service and are in compliance with the new US EPA standard for arsenic.
3. Establishment of deadlines for filing the next rate case, without limit of Arizona-American's ability to file as per existing Commission orders.
4. An ACRM rate design composed of 50/50 split between monthly minimum charge and volumetric charges. The volumetric charges will be based on the same inclining block as will be approved in this Decision.
5. A financial presentation composed of ten standard schedules.
6. Recoverable O&M costs include only media replacement or regeneration, media replacement or regeneration service, and waste disposal.
7. A deferral for future recovery of up to 12 months of recoverable O&M, without return, commencing with the in-service of facility(s).
8. Two step-rate increases.
9. No true-up of the ACRM for over or under collection.
10. Gross return included in the ACRM based on the return authorized in this proceeding.

Q. How does the Company propose to finance its new arsenic facilities?

A. The Company indicates that its new arsenic facilities will be financed through a combination of equity and debt. It proposes to obtain the debt component of the total cost of arsenic remediation facilities from American Water Capital Corporation ("AWCC"), a subsidiary of its parent, American Water Works. The Company projects that it can borrow from AWCC at an interest rate 70 basis points above the prevailing treasury rate.

Q. Please comment on the Company's proposal for ACRM.

A. Staff's analysis indicates that the Company's proposal is similar to the ACRM approved for Arizona Water Company in Decision No. 66400. Also, the Company's proposal is not materially different from the ACRM approved for its other districts in Decision No. 68310.

Q. Please summarize Staff's recommendations.

A. Staff recommends the following:

1. Authorization of an ACRM.
2. The Company should file by July 1st of each year, subsequent to any year that it has ACRM collections, a report with Docket Control showing its ending capital structure (equity, long-term debt, and short-term debt) by month for the prior year.
3. The Earnings Test schedule filed in support of the ACRM should incorporate adjustments conforming to Decision No. 67093. For example, the acquisition adjustment should be removed from rate base and the amortization of the adjustment should be removed from the income statement. The actual period results, adjustments, and adjusted period should be clearly shown on each Earnings Test Schedule. The earnings test places a cap on the ACRM surcharge based on the existing rate of return.
4. Microsoft Excel or compatible electronic versions of the filings and all work papers be concurrently provided to Staff with all ACRM filings.
5. The Company should file the schedules discussed in its application. In addition, Staff reserves the right for further discovery as it deems necessary related to the ACRM filings.
6. Rate design volumetric charges must be applied equally to all usage tiers.

7. The Company should file an application for a permanent rate increase no later than September 30, 2008.

Q. Are the schedules and information that AAWC proposes to be filed for its ACRM the same as those required in Decision No. 66400 for the Arizona Water ACRM?

A. Yes. Staff reviewed the schedules required per Decision No. 66400[2] and found that they are the same as those proposed by AAWC. The schedules and information that Arizona-American proposes to file are as follows:

1. Balance Sheet – The most recent balance sheet for the total Company at the time of filing the ACRM request.
2. Income Statement – The most recent income statement for the total Company and for the Paradise Valley District.
3. Earnings Test – An earnings test calculation for the Paradise Valley District.
4. Rate Review Filing – A rate review calculation for the Paradise Valley District.
5. Arsenic Compliance Revenue Requirement – An arsenic compliance revenue requirement calculation for the Paradise Valley District that is based upon arsenic plant and recoverable arsenic operating expenses.
6. Surcharge Calculation – A detailed calculation of the surcharge.
7. Rate Base Schedule – A schedule showing the elements and the calculation of the rate base.
8. CWIP Ledger – A ledger showing the transactions recorded in the construction work in progress account.

[2] At page 14, beginning at line 9.

Q. What ACRM filing requirements is Staff recommending?

A. Staff recommends that the Company's ACRM filings include hard copies of the ten schedules. In addition to the hard copy filings, Staff recommends that Microsoft Excel or compatible electronic versions of the filings and all work papers be concurrently provided to Staff. Further, Staff reserves the right for further discovery as it deems necessary related to the ACRM filings.

Q. What is Staff's recommendation regarding the ACRM?

A. Staff recommends approval of the ACRM reflecting Staff's recommendations.

Q. Does this conclude your testimony?

A. Yes, it does.

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-1

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	[A] COMPANY FAIR VALUE	[B] STAFF ORIGINAL COST
1	Adjusted Rate Base	$ 11,651,216	$ 14,165,666
2	Adjusted Operating Income/(Loss)	$ 742,769	$ 902,685
3	Current Rate of Return (L2 / L1)	6.38%	6.37%
4	Required Rate of Return	7.84%	7.24%
5	Required Operating Income (L4 x L1)	$ 913,455	$ 1,024,886
6	Operating Income Deficiency/(Excess) (L5 - L2)	$ 170,686	$ 122,201
7	Gross Revenue Conversion Factor	1.62860	1.62863
8	Required Revenue Increase/(Decrease) (L7 x L6)	$ 277,980	**$ 199,020**
9	Adjusted Test Year Revenue	$ 5,070,680	$ 5,070,680
10	Proposed Annual Revenue (L8 + L9)	$ 5,348,660	$ 5,269,700
11	Required Increase/Decrease in Revenue (%)	5.48%	3.92%

References:
Column [A]: Company Schedules A-1, A-2, & D-1
Columns [B]: Staff Schedules AII-2, AII-3, & DRR-1

Rate of Return:

5.4%	63.3%	3.42%	DEBT
10.4%	36.7%	3.82%	EQUITY
		7.24%	

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-2

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	[A]	[B]	[C]	[D]
	Calculation of Gross Revenue Conversion Factor:				
1	Billings	100.0000%			
2	Uncollectible Factor (Line 11)	0.0000%			
3	Revenues (L1 - L2)	100.0000%			
4	Combined Federal and State Tax Rate (Line 17)	38.5989%			
5	Subtotal (L3 - L4)	61.4011%			
6	Revenue Conversion Factor (L1 / L5)	**1.628635**			
	Calculation of Uncollectible Factor:				
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	38.5989%			
9	One Minus Combined Income Tax Rate (L7 - L8)	61.4011%			
10	Uncollectible Rate	0.0000%			
11	Uncollectible Factor (L9 x L10)	0.0000%			
	Calculation of Effective Tax Rate:				
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 40)	34.0000%			
16	Effective Federal Income Tax Rate (L14 x L15)	31.6309%			
17	Combined Federal and State Income Tax Rate (L13 + L16)	38.5989%			
18	Required Operating Income (Schedule DWC-1, Col. [B], Line 5)	$ 1,024,886			
19	Adjusted Test Year Operating Income (Loss) (Sch. AII-1, Col. [C], Line 28)	$ 902,685			
20	Required Increase in Operating Income (L18 - L19)	$ 122,201			
21	Income Taxes on Recommended Revenue (Col. [D], L39)	$ 339,887			
22	Income Taxes on Test Year Revenue (Col. [B], L39)	$ 263,068			
23	Required Increase in Revenue to Provide for Income Taxes (L21 - L22)	$ 76,820			
24	Recommended Revenue Requirement (Schedule xxx)	$ 5,269,700			
25	Uncollectible Rate (Line 10)	0.0000%			
26	Uncollectible Expense on Recommended Revenue (L24 x L25)	$ -			
27	Adjusted Test Year Uncollectible Expense	$ -			
28	Required Increase in Revenue to Provide for Uncollectible Exp. (L26 - L27)	$ -	$ -		
29	Total Required Increase in Revenue (L20 + L23 + L28)		$ 199,020		

	Calculation of Income Tax:	Test Year		STAFF Recommended	
30	Revenue (Schedule AII-1, Col. [C], Line 5 & Sch. xxx)	$ 5,070,680		$ 5,269,700	
31	Operating Expenses Excluding Income Taxes	$ 3,904,927		$ 3,904,927	
32	Synchronized Interest (L43)	$ 484,211		$ 484,211	
33	Arizona Taxable Income (L30 - L31 - L32)	$ 681,543		$ 880,563	
34	Arizona State Income Tax Rate	6.9680%		6.9680%	
35	Arizona Income Tax (L33 x L34)		$ 47,490		$ 61,358
36	Federal Taxable Income (L33 - L35)	$ 634,053		$ 819,205	
37	Federal Income Tax Rate	34.0000%		34.0000%	
38	Federal Income Tax (L36 x L37)		$ 215,578		$ 278,530
39	Combined Federal and State Income Tax (L35 + L38)		$ 263,068		$ 339,887
40	Applicable Federal Income Tax Rate (Col. [D], L38 - Col. [B], L38) / (Col. [C], L36 - Col. [A], L36)				34.0000%
	Calculation of Interest Synchronization:				
41	Rate Base (Schedule DWC-3, Col. [C], Line 17)	$ 14,165,666			
42	Weighted Average Cost of Debt	3.42%			
43	Synchronized Interest (L41 x L42)	$ 484,211			

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-3

OPERATING INCOME STATEMENT - TEST YEAR AND STAFF PROPOSED

LINE NO.	DESCRIPTION	[A] COMPANY TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	*REVENUES:*					
2	Operating Revenue	$ 5,070,680	$ -	$ 5,070,680	$ 199,020	$ 5,269,700
5	Total Operating Revenues	$ 5,070,680	$ -	$ 5,070,680	$ 199,020	$ 5,269,700
6						
7	*OPERATING EXPENSES:*					
8	Operations	$ 2,826,742	$ (267,975)	$ 2,558,767	$ -	$ 2,558,767
9	Maintenance	296,930	$ -	$ 296,930	$ -	$ 296,930
10	Depreciation Expense	720,578	$ 62,593	$ 783,171	$ -	$ 783,171
11		3,844,250	$ (205,382)	$ 3,638,868	$ -	$ 3,638,867
12	TAXES					
13	Property Taxes	213,241	$ (1,898)	$ 211,343	$ -	$ 211,343
14	Payroll	54,716	$ -	$ 54,716	$ -	$ 54,716
15	State Income	38,940	$ 8,550	$ 47,490	$ 13,868	$ 61,358
16	Federal Income	176,765	$ 38,813	$ 215,578	$ 62,952	$ 278,530
17	Total Taxes	483,662	$ 45,465	$ 529,127	$ 76,819	$ 605,947
30						
31	Total Operating Expenses	$ 4,327,912	$ (159,917)	$ 4,167,995	$ 76,819	$ 4,244,814
32	Operating Income (Loss)	$ 742,768	$ 159,917	$ 902,685	$ 122,201	$ 1,024,886

References:
Column [A]: Company Schedule C-1
Column [B]: Schedule AII-4
Column [C]: Column [A] + Column [B]
Column [D]: Schedules AII-1 & AII-2
Column [E]: Column [C] + Column [D]

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-4

SUMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ #1	[C] ADJ #2	[D] ADJ #3	[E] ADJ #4	[F] ADJ #5	[G] ADJ #6	[H] ADJ #7	[I] ADJ #8	[J] ADJ #9	[K] STAFF ADJUSTED
1	*REVENUES:*											
2	Operating Revenue	$ 5,070,680										$ 5,070,680
3	Total Operating Revenues	5,070,680										5,070,680
4												
5	*OPERATING EXPENSES:*											
6	Operations	2,826,742	(38,660)	(15,381)	(32,389)	(11,184)	(24,713)	(145,648)				2,558,767
7	Maintenance	296,930										296,930
8	Depreciation Expense	720,578							$ 62,593			$ 783,171
9		3,844,250	(38,660)	(15,381)	(32,389)	(11,184)	(24,713)	(145,648)	62,593	-		3,638,868
10	TAXES	-										
11	Property Taxes	213,241								(1,898)		211,343
12	Payroll	54,716										54,716
13	State Income	38,940									8,550	47,490
14	Federal Income	176,765									38,813	215,578
15	Total Taxes	483,662	-	-	-	-	-	-	-	(1,898)	47,363	529,127
16												-
17	Total Operating Expenses	4,327,912	(38,660)	(15,381)	(32,389)	(11,184)	(24,713)	(145,648)	62,593	(1,898)	47,363	4,167,995
18												
19	Operating Income (Loss)	742,768										902,685
20												
21												
22												

23	ADJ #	DESCRIPTION	REFERENCES:
24	1	Purchased Water (Outside) Account	Schedule AII-5
25	2	Purchased Power - Source of Supply	Schedule AII-6
26	3	Contract Service - Temporary Employee Operation (T&D)	Schedule AII-7
27	4	Materials and Supplies Inventory	Schedule AII-8
28	5	Rate Case Expense	Schedule AII-9
29	6	Miscellaneous Allocated Corporate Expenses	Schedule AII-10
30	7	Drepreciation Expense	Schedule AII-11
31	8	Property Taxes	Schedule AII-12
32	9	Income Taxes	Schedule AII-2

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-5

OPERATING INCOME ADJUSTMENT #1 - PURCHASED WATER EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Purchased Water (Outside) Account 510100.11	$ 38,660	$ (38,660)	$ -
2	Total	**$ 38,660**	**$ (38,660)**	**$ -**

REFERENCES:

Column [A]: Company, Schedule C-1, Page 1
Company, Schedule E-2, Page 1
Company Workpaper, Page 028

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, AII

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-6

OPERATING INCOME ADJUSTMENT #2 - PURCHASED POWER EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Purchased Power - Source of Supply - Account # 515100.11	$ 15,381	$ (15,381)	$ -
2	Total	**$ 15,381**	**$ (15,381)**	**$ -**

REFERENCES:
Column [A]: Company, Schedule C-2, Page 1
Company, Schedule E-2, Page 1
Company Workpaper, Page 028

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, All
General Legder - Account 515100.11

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-7

OPERATING ADJUSTMENT #3 - CONTRACT SERVICE (TEMPORARY EMPLOYEE)

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Contract Service - Temporary Employee Operation TD Account # 535001.14	$ 32,389	$ (32,389)	$ -
2	Total	**$ 32,389**	**$ (32,389)**	**$ -**
5				

REFERENCES:

Column [A]: Company, Schedule C-1, Page 1
Company, Schedule E-2, Page 1
Company Workpaper, Page 029

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, AII
General Legder - Account 535001.14

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-8

OPERATING INCOME ADJUSTMENT #4 - MATERIALS AND SUPPLIES INVENTORY

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Materials and Supplies Inventory	$ 11,184	$ (11,184)	$ -
2	Total	**$ 11,184**	**$ (11,184)**	**$ -**

REFERENCES:

Column [A]: Company, Schedule C-1, Page 1
Company, Schedule C-2, Page 1 of 2

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, AII
Company's Response to Data Request - RUCO 3-08(a)
Company's Response to Data Request - RUCO 5-11

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-9

OPERATING INCOME ADJUSTMENT #5 - RATE CASE EXPENSE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Rate Case Expense	$ 94,280	$ (24,713)	$ 69,567
2	Total	**$ 94,280**	**$ (24,713)**	**$ 69,567**

Calculation of Rate Case Expense			
Description	Company Proposed	Staff Adjustment	Staff Recommended
Jim Harrison - Consultant	$ 14,500	$ (5,212)	$ 9,288
Legal Fees	$ 36,000	$ (36,000)	$ -
Shared Service Center (SSC)	$ 72,949	$ (50,262)	$ 22,687
SSC Expense	$ 4,100	$ (850)	$ 3,250
Company labor	$ 39,594	$ 17,965	$ 57,559
Company expenses	$ 14,830	$ (9,975)	$ 4,855
Cost of Capital/Brattle Group	$ 79,383	$ (249)	$ 79,134
Witness Training	$ 6,500	$ (3,250)	$ 3,250
Cost of service	$ 4,995	$ 13,461	$ 18,456
Rate Design	$ 9,990	$ 231	$ 10,221
Miscellaneous Expenses			
Total	$ 282,841	$ (74,141)	$ 208,700
Three Year Average	$ 94,280	$ (24,714)	$ 69,567

REFERENCES:
Column [A]: Company, Schedule C-1, page 1
Company, Schedule C-2, page 3

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, All
Company Response to Audit Question No. 1

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-10

OPERATING INCOME ADJUSTMENT #6 - MISCELLANEOUS ALLOCATED CORPORATE EXPENSES

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Miscellaneous Allocated Corporate Expenses	$ 145,648	$ (145,648)	$ -
2	Total	145,648	(145,648)	-

REFERENCES:

Column [A]: Company, Schedule C-1, Page 1
Company, Schedule E-2, Page 1
Company Workpaper, Page 098

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, AII
Company's Response to Data Request - RUCO 9.03

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-11

OPERATING INCOME ADJUSTMENT #7 - DEPRECIATION EXPENSE

LINE NO.	DESCRIPTION	ORIGINAL COST	RATE		EXPENSE
1	Property Held For Future Use	138,682.25	0.00%	$	-
2	301000 Organization	15,349.83	0.00%	$	-
3	303200 Land & Land Rights SS	-	0.00%	$	-
4	303300 Land & Land Rights P	-	0.00%	$	-
5	303400 Land & Land Rights WT	-	0.00%	$	-
6	303500 Land & Land Rights TD	8,324.25	0.00%	$	-
7	303600 Land & Land Rights AG	-	0.00%	$	-
8	304100 Struct & Imp SS	7,953.49	14.59%	$	1,160
9	304200 Struct & Imp P	69,130.88	3.99%	$	2,758
10	304300 Struck & Imp WT	3,038,847.79	2.00%	$	60,777
11	304400 Struct & Imp TD	23,863.77	1.50%	$	358
12	304500 Struct & Imp AG	15,172.89	4.63%	$	703
13	304600	-	4.63%	$	-
14	304700 Struct & Imp Store, Shop, Gar	93,284.70	4.63%	$	4,319
15	304800 Struct & Imp Misc	149,284.17	4.63%	$	6,912
16	307000 Wells & Springs	1,252,562.73	2.48%	$	31,064
17	311200 Pump Equip Electric	3,337,081.01	4.39%	$	146,498
18	311300 Pump Equip Diesel	59,421.23	4.39%	$	2,609
19	320100 WT Equip Non-Media	5,825,148.50	7.06%	$	411,255
20	330000 Dist Reservoirs & Standpipes	912,618.67	3.15%	$	28,747
21	331100 TD Mains 4 inch & Less	706,251.66	4.17%	$	29,451
22	331200 TD mains 6 inch to 8 inch	3,974,977.39	2.52%	$	100,169
23	331300 TD Mains 10 inch to 16 inch	8,274,227.29	2.34%	$	193,617
24	333000 Services	2,178,856.88	4.72%	$	102,842
25	334100 Meters	328,579.41	7.21%	$	23,691
26	334200 Meter Installations	103,798.95	1.51%	$	1,567
27	335000 Hydrants	976,968.39	2.10%	$	20,516
28	339600 Other P/E CPS	-	0.00%	$	-
29	340100 Office Furniture & Equip	43,930.67	4.04%	$	1,775
30	340200 Comp & Periph Equip	98,019.42	15.89%	$	15,575
31	340300 Computer Software	134,173.75	37.71%	$	50,597
32	340500 Other Office Equipment	25,223.99	7.13%	$	1,798
33	341100 Trans Equip Lt Duty Trks	2,882.41	28.05%	$	809
34	341300 Trans Equip Autos	19,307.08	7.80%	$	1,506
35	341400 Trans Equip Other	13,605.63	0.93%	$	127
36	343000 Tools, Shop, Garage Equip	83,290.90	3.61%	$	3,007
37	345000 Power Operated Equipment	147,065.93	4.64%	$	6,824
38	346001	-	0.00%	$	-
39	346100 Comm Equip Non-Telephone	284,555.82	9.76%	$	27,773
40	346300 Comm Equip Other	81,330.95	7.91%	$	6,433
41	Total	32,423,772.68		$	1,285,236
42	Corporate Allocation			$	16,368
43	Amortization of Mummy Mountain Acquisition Costs			$	6,570
44	Less: Amortization of CIAC			$	(525,004)
45					
46					
47	Staff Recommended Depreciation Expense			$	783,171
48	Company Proposed Depreciation Expense			$	720,578
49	Staff Adjustment			$	62,593

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule AII-12

OPERATING INCOME ADJUSTMENT #8 - PROPERTY TAXES

LINE NO.	DESCRIPTION	AMOUNT
1	Staff Adjusted Test Year Revenues	$ 5,070,680
2	Weight Factor	2
3	Subtotal (Line 1 x Line 2)	$ 10,141,360
4	Staff Recommended Revenue	$ 5,269,700
5	Subtotal (Line 4 + Line 5)	$ 15,411,060
6	Number of Years	3
7	Three Year Average (Line 5 / Line 6)	$ 5,137,020
8	Department of Revenue Multiplier	2
9	Revenue Base Value (Line 7 x Line 8)	$ 10,274,040
10	Plus: 10% of CWIP - 2001	$ -
11	Less: Net Book Value of Licensed Vehicles	$ 8,933
12	Full Cash Value (Line 9 + Line 10 - Line 11)	$ 10,265,107
13	Assessment Ratio	25%
14	Assessment Value (Line 12 x Line 13)	$ 2,566,277
15	Composite Property Tax Rate	8.23540%
16	Staff Recommended Property Tax Expense	$ 211,343
17	Company Proposed Property Tax Expense	$ 213,241
18	Staff Adjustment	$ (1,898)

CARLSON

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
JEFF HATCH-MILLER - Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC. FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE AT ITS PARADISE VALLEY WATER DISTRICT.	)	DOCKET NO. W-01303A-05-0405

DIRECT

TESTIMONY

OF

DARRON W. CARLSON

PUBLIC UTILITIES ANALYST MANAGER

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

JANUARY 16, 2006

TABLE OF CONTENTS

SCHEDULES

EXECUTIV E SUMMARY
ARIZONA-AMERICAN WATER COMPANY, INC
PARADISE VALLEY WATER DISTRICT
DOCKET NO. W-01303A-05-0405

Arizona-American Water Company, Inc. ("Company") is the largest, investor-owned water utility in the state of Arizona. It serves approximately 131,000 customers of various types throughout the state. The Paradise Valley Water District serves approximately 4,737 metered customers of various classes, of which more than 93 percent are residential customers in Paradise Valley, Scottsdale, and some unincorporated areas of Maricopa County.

Staff generally concurs with the Company's rate design. Staff adjusted a few of the commodity charges to reflect the difference in Staff's recommended revenue requirement. The Company's proposed rates would increase the bill for a typical residential customer using the median of 11,500 gallons per month from $16.81 to $18.35 for an increase of $1.54 or 9.16 percent. Staff's recommended rates would increase the bill for a typical residential customer using the median of 11,500 gallons per month from $16.81 to $17.66 for an increase of $0.85 or 5.06 percent.

The Company proposed a new service charge mechanism to recover costs of investments in Public Fire Safety ("PFS") plant additions. Staff recommends denial of the Company's proposal for a service charge mechanism to recover costs of investments in PFS plant additions. The Arizona Corporation Commission ("Commission") recently approved an Accounting Order that allows the Company to accrue a post-in-service allowance for funds used during construction ("AFUDC") on PFS plant investments until the related plant is placed in rate base and rates are established on that rate base. This precludes the need for a service charge as the Company will be compensated for the time value of its investment until the PFS plant is placed in rates.

Additionally, the Company proposed a new high-block usage surcharge that will create funds to be treated as contributions-in-aid-of-construction ("CIAC"). Staff recommends approval of the Company's proposed high-block usage surcharge but including Staff's more definitive description of the surcharge. Staff also recommends that the funds collected be used (as CIAC) to offset the PFS investments and minimize AFUDC accruals.

INTRODUCTION

Q. Please state your name and business address.

A. My name is Darron W. Carlson. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

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

A. I am employed by the Utilities Division ("Staff") of the Arizona Corporation Commission ("Commission") as a Public Utilities Analyst Manager.

Q. Briefly summarize your educational and professional qualifications related to your responsibility in the field of utility regulation.

A. I hold a Bachelor of Arts Degree in both Accounting and Business Management from Northeastern Illinois University in Chicago, Illinois. I have participated in a number of seminars and workshops related to utility ratemaking, cost of capital, and similar issues, sponsored by the National Association of Regulatory Commissioners ("NARUC"), Duke University, Florida State University, Michigan State University, New Mexico State University, and others. I have led or actively participated in over 125 cases before this Commission in my fourteen years in various positions with the Utilities Division of the Commission.

PURPOSE OF TESTIMONY

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

A. First, I am adopting the direct testimony and schedules of Staff witness, Mr. Alexander I. Igwe. Mr. Igwe recently left the employment of the Utilities Division and, as his supervisor, I am replacing him as the lead Staff witness in this proceeding. Second, I am presenting Staff's analysis and recommendations for the rate design regarding Arizona-

American Water Company, Inc.'s ("AAWC" or "Company") rate filing for its Paradise Valley Water District.

RATE DESIGN

Q. Did Staff prepare a schedule depicting the present rates, the Company's proposed rates, and Staff's recommended rates?

A. Yes. Schedule DWC-1 reflects a full summary of the present rates, the Company's proposed rates, and Staff's recommended rates.

Q. Please summarize the rate design.

A. The Company's Paradise Valley District currently has a conservation-type rate design, in that it has no gallons included in its base rates and has three-tier inverted block commodity rates. Its Mummy Mountain acquisition does carry 1,000 gallons included in the minimum and only a single-tier commodity rate but the Company is changing this situation (and Staff concurs) by consolidating the rate designs and eliminating the Mummy Mountain, non-conservation rates.

The Company's proposed rates and Staff's recommended rates are quite similar in this case because it is a continuation of the rate design policies previously ordered by this Commission. Staff has adopted and recommends very similar rates and identical tier levels to those proposed by the Company. The difference in the actual commodity rates is caused by Staff's adjustment to a lower revenue requirement.

The Company did not request any increases in its miscellaneous service charges and Staff concurs. The Company did not itemize, but requested increases in the Service Line and

Meter Installation Charge. Staff set the increase at the mid-point of the Staff recommended range for each meter size.

Q. Has the Company requested any other new rates or charges that are not included in its current tariff?

A. Yes. The Company has requested two new tariff items that are not included in its current tariff.

First, the Company has proposed a service charge mechanism to recover the costs of investments in Public Fire Safety ("PFS") plant additions. Please refer to the direct testimony of Staff witness, Mr. James Dorf, for a discussion of the PFS plant investments themselves. As to the service charge, Staff recommends denial of the Company's proposal for a service charge mechanism to recover these costs because the Commission recently approved an Accounting Order that allows the Company to accrue a post-in-service allowance for funds used during construction ("AFUDC") on PFS plant investments until the related plant is placed in rate base and rates are established on that rate base. Staff believes that this precludes the need for a service charge as the Company will be compensated for the time value of its investment through post-in-service AFUDC until the plant is placed in rate base and reflected in rates.

Second, the Company has proposed a high-block usage surcharge. This surcharge is being proposed because, in the past, the Paradise Valley Water District's water usage patterns have demonstrated tendencies of being in-elastic regardless of price signals that the Company and this Commission have sent. The Company's proposed surcharge, as worded, appears confusing, so Staff has reworded and simplified the surcharge. The Company proposed that the surcharge per unit of water (1,000 gallons) consumed in the

high-block up to the last 5 percent of usage be charged an additional $2.00 and the surcharge per unit of water (1,000 gallons) consumed in the last 5 percent of the high-block be charged an additional $5.00. Staff has clarified/simplified this to a residential surcharge rate of $2.15 per 1,000 gallons for all usage in the third tier and a commercial surcharge rate of $2.15 per 1, 000gallons for all usage in the second tier. Of course, this is in addition to the normal tier charge. Staff estimates that this surcharge could produce approximately $1.7 million per year.

Further, the Company proposes that the funds collected through this surcharge be considered contributions-in-aid-of-construction ("CIAC"). Staff concurs with the Company that the funds should be classified as CIAC but further, Staff recommends that the funds collected be used directly to offset the PFS investments and minimize the post-in-service AFUDC accruals.

Q. Has Staff prepared a typical bill analysis to reflect the effects of the proposed and recommended rate changes?

A. Yes. Schedule DWC-2 is a typical bill analysis for a residential 5/8" meter customer. Note that the Company's proposed rates would increase the bill for a residential customer using the median of 11,500 gallons per month from $16.81 to $18.35 for an increase of $1.54 or an increase of 9.16 percent. Staff's recommended rates would increase the bill for a residential customer using the median of 11,500 gallons per month from $16.81 to $17.66 for an increase of $0.85 or an increase of 5.06 percent.

Also note that at the bottom of Schedule DWC-2, the last 7 line items reflect the potential effect of the high-block usage surcharge.

Q. Does this conclude Staff's testimony?

A. Yes, it does.

RATE DESIGN

Monthly Usage Charge	Present Rates	Company Proposed Rates	Staff Recommended Rates
5/8" x 3/4" Meter	$ 8.41	$ 9.26	$ 9.26
5/8" x 3/4" Meter - Mummy Mountain	9.00	9.26	9.26
3/4" Meter	8.74	9.62	9.62
1" Meter	14.01	15.42	15.42
1" Meter - Mummy Mountain	9.75	15.42	15.42
1½" Meter	28.02	30.83	30.83
1½" Meter - Mummy Mountain	14.00	30.83	30.83
2" Meter	44.83	49.32	49.32
2" Meter - Mummy Mountain	25.75	49.32	49.32
3" Meter	84.06	92.47	92.47
4" Meter	140.10	154.11	154.11
6" Meter	280.20	308.22	308.22
Paradise Valley Country Club	12,817.00	14,784.00	See Below
Fire Hydrants	5.00	5.00	5.00

Commodity Rates						
Residential - All Meter Sizes	Paradise Valley	Mummy Mountain	Paradise Valley	Mummy Mountain	Paradise Valley	Mummy Mountain
Gallons Included in Minimum	-	1,000		-		-
Excess of Minimum - per 1,000 Gallons						
All Gallons	N/A	$ 1.74	N/A	N/A	N/A	N/A
From 1 to 25,000 Gallons	$ 0.73	N/A	$ 0.79	$ 0.79	$ 0.73	$ 0.73
From 25,001 to 80,000 Gallons	1.68	N/A	1.75	1.75	1.69	1.69
Over 80,000 Gallons	2.17	N/A	2.25	2.25	2.20	2.20
Commercial - All Meter Sizes						
Gallons Included in Minimum		-		-		-
Excess of Minimum - per 1,000 Gallons						
From 1 to 400,000 Gallons		$ 1.17		$ 1.26		$ 1.26
Over 400,000 Gallons		1.46		1.57		1.57
Turf Facility Customers						
Gallons Included in Minimum		-		-		-
Excess of Minimum - per 1,000 Gallons						
All Gallons		$ 0.90		$ 1.00		$ 1.00
Paradise Valley Country Club (Contract Rate)						
Gallons Included in Minimum		-		-		-
Mininum Charge Based Upon Applicable Meter Size						x
Excess of Minimum - per 1,000 Gallons						
All Gallons Included In Monthly Charge				x		
All Gallons @ Turf Rate Less 15 Percent						x
All Applicable Surcharges Less 15 Percent						x
Other General Metered						
Gallons Included in Minimum		-		-		-
Excess of Minimum - per 1,000 Gallons						
All Gallons		$ 1.32		$ 1.46		$ 1.46
Fire Hydrant Irrig./Const.						
Gallons Included in Minimum		-		-		-
Excess of Minimum - per 1,000 Gallons						
All Gallons		All		All		All
Resale Customers						
All Gallons		$ 1.18		$ 1.46		$ 1.46

Service Line and Meter Installation Charges	Total	Total	Total
5/8" x 3/4" Meter	$ 330	$ 480	$ 480
3/4" Meter	360	560	560
1" Meter	411	650	650
1½" Meter	550	895	895
2" Meter	604	1,555	1,555
3" Meter	1,062	2,235	2,235
4" Meter	1,806	3,440	3,440
6" Meter	3,872	6,195	6,195

Service Charges			
Establishment	$ 20.00	$ 20.00	$ 20.00
Establishment (After Hours)	40.00	40.00	40.00
Reconnection (Deliquent)	30.00	30.00	30.00
Reconnection (Deliquent and After Hours)	60.00	60.00	60.00
Meter Test, if meter is correct	15.00	15.00	15.00
Deposit	*	*	*
Deposit Interest	*	*	*
Re-Establishment (With-in 12 Months)	**	**	**
NSF Check	12.00	12.00	12.00
Deferred Payment, Per Month	1.50%	1.50%	1.50%
Meter Re-Read	10.00	10.00	10.00
Late Charge per month	1.50%	1.50%	1.50%
Monthly Service Charge for Fire Sprinkler			
4" or Smaller	***	***	***
6"	***	***	***
8"	***	***	***
10"	***	***	***
Larger than 10"	***	***	***

* Per Commission Rules (R14-2-403.B)
** Months off system times the minimum (R14-2-403.D)
*** 1.00% of monthly minimum for a comparable sized meter connection, but no less than $5.00 per month. The service charge for fire sprinklers is only applicable for service lines seperate and distinct from the primary water service line.

CAP Surcharge

	Per Customer
Residential Customers:	
In excess of 45,000 gallons	$ 0.0769 per 1,000 gallons
All Non-Residential Customers except Sale for Resale Customers:	
For all usage	$ 0.0769 per 1,000 gallons

CAP Expense Recovery Surcharge

	Per Customer
For all customers	$ 1.01 per Year

High Block Usage Surcharge Treated as Contributions in Aid of Construction

	Per Customer
Residential Customers:	
All residential customers with usage in the third tier will pay a surcharge on their third tier usage.	
All usage in the third tier, in addition to normal third tier charge	$ 2.15 per 1,000 gallons
Commercial Customers:	
All commercial customers with usage in the second tier will pay a surcharge on their second tier usage.	
All usage in the second tier, in addition to normal second tier charge	$ 2.15 per 1,000 gallons

Arizona-American Water Company/Paradise Valley Water District
Docket No. W-01303A-05-0405
Test Year Ended December 31, 2004

Schedule DWC-2

Typical Bill Analysis
General Service 5/8-Inch Meter

Company Proposed	Gallons	Present Rates	Proposed Rates	Dollar Increase	Percent Increase
Average Usage	22,193	$ 24.61	$ 26.79	$ 2.18	8.86%
Median Usage	11,500	16.81	18.35	$ 1.54	9.16%
Staff Recommended					
Average Usage	22,193	$ 24.61	$ 25.46	$ 0.85	3.45%
Median Usage	11,500	16.81	17.66	$ 0.85	5.06%

Present & Proposed Rates (Without Taxes)
General Service 5/8-Inch Meter
(Includes only the High Block Surcharge)

Gallons Consumption	Present Rates	Company Proposed Rates	% Increase	Staff Recommended Rates	% Increase
-	$ 8.41	$ 9.26	10.11%	$ 9.26	10.11%
1,000	9.14	10.05	9.96%	9.99	9.30%
2,000	9.87	10.84	9.83%	10.72	8.61%
3,000	10.60	11.63	9.72%	11.45	8.02%
4,000	11.33	12.42	9.62%	12.18	7.50%
5,000	12.06	13.21	9.54%	12.91	7.05%
6,000	12.79	14.00	9.46%	13.64	6.65%
7,000	13.52	14.79	9.39%	14.37	6.29%
8,000	14.25	15.58	9.33%	15.10	5.96%
9,000	14.98	16.37	9.28%	15.83	5.67%
10,000	15.71	17.16	9.23%	16.56	5.41%
11,000	16.44	17.95	9.18%	17.29	5.17%
12,000	17.17	18.74	9.14%	18.02	4.95%
13,000	17.90	19.53	9.11%	18.75	4.75%
14,000	18.63	20.32	9.07%	19.48	4.56%
15,000	19.36	21.11	9.04%	20.21	4.39%
16,000	20.09	21.90	9.01%	20.94	4.23%
17,000	20.82	22.69	8.98%	21.67	4.08%
18,000	21.55	23.48	8.96%	22.40	3.94%
19,000	22.28	24.27	8.93%	23.13	3.82%
20,000	23.01	25.06	8.91%	23.86	3.69%
25,000	26.66	29.01	8.81%	27.51	3.19%
30,000	35.06	37.76	7.70%	35.96	2.57%
35,000	43.46	46.51	7.02%	44.41	2.19%
40,000	51.86	55.26	6.56%	52.86	1.93%
45,000	60.26	64.01	6.22%	61.31	1.74%
50,000	68.66	72.76	5.97%	69.76	1.60%
75,000	110.66	116.51	5.29%	112.01	1.22%
100,000	162.46	213.26	31.27%	207.46	27.70%
150,000	270.96	433.26	59.90%	424.96	56.83%
200,000	379.46	653.26	72.16%	642.46	69.31%
250,000	487.96	873.26	78.96%	859.96	76.24%
300,000	596.46	1,093.26	83.29%	1,077.46	80.64%
350,000	704.96	1,313.26	86.29%	1,294.96	83.69%
400,000	813.46	1,533.26	88.49%	1,512.46	85.93%

DORF

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
JEFF HATCH-MILLER - Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC. FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE AT ITS PARADISE VALLEY WATER DISTRICT.	)	DOCKET NO. W-01303A-05-0405

DIRECT

TESTIMONY

OF

JAMES J. DORF

CHIEF ACCOUNTANT

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

JANUARY 16, 2006

TABLE OF CONTENTS

SCHEDULES

EXHIBIT

EXECUTIVE SUMMARY
ARIZONA-AMERICAN WATER COMPANY, INC
PARADISE VALLEY WATER DISTRICT
DOCKET NO. W-01303A-05-0405

The direct testimony of Staff witness James J. Dorf addresses the following issues:

Rate Base

1. Plant Held for Future Use – Staff is recommending an adjustment to decrease test year Plant In-Service by $138,682 for property not currently used and useful.

2. Plant for Public Fire Safety – Staff is recommending an adjustment to increase Plant In-Service by $3,018,867 to provide rate base treatment for the Company's plant expenditures related to its fire safety program that was treated as Construction Work in Progress by the Company.

3. Accumulated Depreciation – Staff is recommending an adjustment to increase the Company's test year Accumulated Depreciation by $107,315 for errors in applying the half-year convention depreciation methodology.

4. Working Capital - Deferred Maintenance – Staff is recommending an adjustment to eliminate $90,286 of maintenance costs that were deferred inappropriately.

5. Working Capital – Cash Working Capital Allowance – Staff is recommending an adjustment to eliminate the Company's calculation of $168,133 for a positive Cash Working Capital Allowance. Staff discovered errors in the Company's calculations and notes that most Class A companies yield a negative, rather than a positive, cash working capital allowance.

Gain on Sale of Land

Staff recommends a shorter amortization period for a surcredit related to the sharing of a gain of $481,680.84 on the sale of land.

INTRODUCTION

Q. Please state your name and business address.

A. My name is James J. Dorf. I am the Chief Accountant employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as the Chief Accountant.

A. I am responsible for supervising the examination and verification of financial and statistical information included in utility rate applications, developing revenue requirements, designing rates, preparing written reports and/or testimonies and related schedules that present Staff's recommendations to the Commission. I am also responsible for testifying at formal hearings on these matters.

Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Science degree in Accounting from Northern Michigan University and a Master of Science degree in Business Administration from Northern Illinois University. I am also a Certified Public Accountant. My qualifications and professional experience are summarized on Exhibit 1.

PURPOSE OF TESTIMONY

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

A. I am presenting Staff's analysis and recommendations for Rate Base and the rate treatment for a gain on the sale of land regarding Arizona-American Water Company, Inc.'s ("AAWC" or "Company") rate application for its Paradise Valley Water District.

SUMMARY OF ADJUSTMENTS

Q. Please summarize the adjustments addressed in this testimony.

Rate Base

1. Plant Held for Future Use - An adjustment to decrease test year Plant In-Service by $138,682 for property not currently used and useful.
2. Plant for Public Fire Safety - An adjustment to increase Plant In-Service by $3,018,867 to provide rate base treatment for the Company's plant expenditures related to its public fire safety program that was treated as Construction Work in Progress by the Company.
3. Accumulated Depreciation – An adjustment to increase the Company's test year Accumulated Depreciation by $107,315 for errors in applying the half-year convention depreciation methodology.
4. Working Capital - Deferred Maintenance – An adjustment to eliminate $90,286 of maintenance costs that were deferred inappropriately.
5. Working Capital – Cash Working Capital Allowance – An adjustment to eliminate the Company's calculation of $168,133 for a positive Cash Working Capital Allowance. Staff discovered errors in the Company's calculations and notes that most Class A companies yield a negative, rather than a positive, cash working capital allowance.

Gain on Sale of Land

Staff proposes a shorter amortization period of three years for a surcredit related to the sharing of a gain of $481,680.84 on the sale of land.

RATE BASE REVIEW

Q. Please comment on the Staff's review of the Company's rate base.

A. Staff conducted an on-site visit at the Company's local office and reviewed invoices and other documents related to plant additions and retirements since the last general rate application. Based upon that review, Staff is recommending five adjustments to the Company's adjusted test year rate base.

The Company did not prepare a Reconstruction Cost New less Depreciation ("RCND") study and will use Original Cost Rate Base ("OCRB") for its fair value determination.

Q. Did the Company propose any adjustments to its test year plant balance?

A. Yes, it did. The Company included an allocation of capital cost totaling $73,781 related to its corporate and district office and the related accumulated depreciation of $30,033. Staff has reviewed the adjustment and finds it reasonable.

The Company also made an adjustment to exclude $3,646,198 of construction work in progress. Although Staff concurs that construction work in progress should be excluded, Staff has made an adjustment for fire flow construction which was in service in 2005. This is discussed in more detail below.

STAFF RECOMMENDED RATE BASE ADJUSTMENTS

Q. Please describe Rate Base Adjustment #1 for Plant Held for Future Use.

A. The Company has pumping and other miscellaneous equipment at well #17 that is not currently being used to provide water service to its customers. The equipment has not been used for several years. The Company cites the Commission's 1995 Decision No. 59079 as its basis for including the amount in rate base.

The National Association of Regulatory Utility Commissioners' (NARUC") Uniform System of Accounts ("USOA") requires that plant owned and held for future use shall be "held for such service in the future under a definite plan."[1] The Company has evidently not used this equipment in over ten years. The Company has not informed Staff of any definitive plan to use this equipment and it should, therefore, not be included in rate base. Staff is, therefore, excluding $138,682 (Schedule JJD-3) from rate base.

Q. Please describe Rate Base Adjustment #2 regarding Plant for Public Fire Safety.

A. In Commission Decision No. 68303, the Company received a Public Safety/Fire Flows Accounting Order authorizing the deferral of capital costs incurred by the Paradise Valley system for public safety fire flow. The Company had incurred $3,018,867 for the fire flow project as of December 31, 2004. The Company has indicated that this first phase of the project was placed in service during 2005. Staff is recommending that the costs incurred to date be included in rate base at this time rather than deferring the costs for later recovery pursuant to the accounting order (Schedule JJD-4).

Staff witness Alexander Igwe is sponsoring an adjustment to depreciation expense related to the inclusion of these assets in rate base.

The entire fire flow project is expected to cost approximately $16 million and be completed by 2009. Including approximately $3 million in rate base now will help to minimize the cost deferral to future periods of the facilities placed in service during 2005.

[1] NARUC Uniform System of Accounts instruction for Account 103, Plant Held for Future Use.

Q. Does Staff typically recommend that plant placed in service after the end of the test year be included in rate base?

A. No, it does not. Staff is recommending inclusion of the fire flow project to encourage improvement in public fire safety and minimize the deferral of costs to future periods. Additionally, the project is revenue neutral and does not materially reduce operating expenses.

Q. Please describe Rate Base Adjustment #3 for Accumulated Depreciation.

A. Staff performed its own calculation of depreciation expense for each of the years since the Company's last rate case (July 1, 1998 through and including December 31, 2004). The calculation indicated that the Company's proposed Accumulated Depreciation total of $9,913,869 was substantially understated.

The Company reviewed Staff's calculation and made revisions to properly reflect retirements and disposals. The Company and Staff are now in agreement with a revised total for Accumulated Depreciation of $10,021,184 (Schedule JJD-5). An adjustment to test year Accumulated Depreciation of $107,315 has been recorded as Rate Base Adjustment #3.

Q. Please describe Rate Base Adjustment #4 for Working Capital –Deferred Maintenance.

A. In determining the Company's proposed working capital allowance of $350,946, it included $92,226 for Programmed Maintenance. The Company indicated that the balance was for tank painting expenses. The Company stated that "if a maintenance item is costly,

the Company will defer these costs and amortize them over the life of the expected benefit."[2]

The USOA only permits painting costs to be capitalized if it is "Painting, first cost."[3] The second and subsequent painting, whether "costly" or not should be expensed, not deferred. Staff is, therefore, recommending elimination of $92,226 from the Working Capital Allowance (Schedule JJD-6).

Q. Please describe Rate Base Adjustment #5 for Working Capital – Cash Working Capital Allowance.

A. The Company included, in its Working Capital calculation, $168,133 as a Cash Working Capital Allowance. Staff has typically found that most sophisticated utilities will have a negative rather than a positive Cash Working Capital Allowance. In reviewing the Company's supporting calculations, one of the largest components of it its cash working capital was property taxes.[4] The Company calculated property taxes to have positive increase in its allowance. Property taxes in Arizona, as a component of a utility's cost of service, are typically collected anywhere from 175 to 200 days before payment is due. Thus, property taxes should always have a negative effect on the cash working capital.

Because of this and other errors, Staff is recommending elimination of the Company's Cash Working Capital Allowance of $168,133 (Schedule JJD-7).

[2] Response to RUCO Data Request 2-11.
[3] USOA, Account 304, Structures and Improvements.
[4] Company Workpapers, page 148, line 18.

STAFF RECOMMENDED ORIGINAL COST RATE BASE

Q. Based upon the above adjustments, what is Staff recommending as the Company's Original Cost Rate Base.

A. As indicated on Schedule JJD-1, Staff is recommending an OCRB of $14,165,666.

GAIN ON SALE OF LAND

Q. Please describe the Company's proposed surcredit for a gain on the sale of land.

A. The Company sold a parcel of land in 2004 which was previously used as an operations/customer center on Casa Blanca Road. The property was no longer used and useful as operations had been moved to another location.

The sale price was $900,000 and after deducting transaction expenses and taxes, a net of tax gain of $481,680.84 was realized.

Q. What disposition has the Company proposed with respect to this gain?

A. The Company is proposing to share this gain 50/50 between the Company and ratepayers.

Q. Is this typically what is done when utility plant is sold for a gain?

A. Yes it is. Unless there are unusual circumstances, gains are typically shared between shareholders and the ratepayers.

Q. How is the Company proposing to share half of the gain with ratepayers?

A. The Company will utilize a monthly fixed cost surcredit based on meter size, and the surcredit shall be spread over five years. The ratepayer's share of the gain is $240,840.42.

Q. Does Staff agree with the Company's proposal?

A. Staff agrees with all but one aspect of the proposal. Staff is recommending that the amortization period be reduced to three years, similar to the time period selected by Staff for amortization of rate case expense. Since the Company may be filing a rate application in that time frame, Staff will be able evaluate the status of any remaining amounts to be refunded, if any.

Staff recommends that the Company recalculate the surcredit with an amortization period of three years.

Q. Does this conclude your testimony?

A. Yes, it does.

WITNESS QUALIFICATIONS FOR JAMES J. DORF
1200 West Washington Street, Phoenix, Arizona 85007

EDUCATION:

Master of Science in Business Administration, specialization in Accounting, Northern Illinois University

Bachelor of Science, Accounting, Northern Michigan University

Certified Public Accountant

EXPERIENCE:

Chief Accountant, Financial & Regulatory Analysis Section, Utilities Division, Arizona Corporation Commission, 2004 to present.

Adjunct Professor of Accounting, Western International University, 2002 to 2004. Introductory & Cost Accounting. On-line Cost Accounting.

Chief Financial Officer/Vice President, Great Lakes Gas Transmission Company, 1978 to 2001. Complete financial, regulatory, and tax compliance responsibilities for a $2 billion interstate natural gas pipeline system. Issued over $750 million in privately placed Senior Notes. Responsible for preparing numerous general rate and purchased gas adjustment filings before the Federal Regulatory Energy Commission.

Audit Supervisor, KPMG Peat Marwick, CPA's, 1973 to 1978. Supervisory responsibility for audits of manufacturing, insurance, contracting, governmental and other entities. Computer audit specialist. Income tax return preparation and compliance.

Appeared as expert witness or submitted written testimony in rate proceedings before the Federal Energy Regulatory Commission, on tax policy and regulatory accounting issues before legislative bodies and tax litigation in Minnesota and Michigan.

Member, American Institute of Certified Public Accountants.
Member, National Association of Regulatory Utility Commissioners, Staff Subcommittee on Accounting and Finance.
Past member of the American Gas Association Accounting Committee.
Past member of the Interstate Natural Gas Association of America Accounting and Tax Committees.

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-1

RATE BASE - ORIGINAL COST

LINE NO.		[A] COMPANY AS FILED	[B] STAFF ADJUSTMENTS		[C] STAFF AS ADJUSTED
1	Plant in Service	$ 29,478,687	$ 2,880,184	A	$ 32,358,872
2	Regulatory Asset - AFUDC Debt	$ 950			$ 950
3	Less: Accumulated Depreciation	9,913,869	107,315	B	10,021,184
4	Net Plant in Service	$ 19,565,769	$ 2,772,869		$ 22,338,638
	DEDUCTION				
7	Net Contributions in Aid of Construction (CIAC)	6,486,559	-		6,486,559
8	Advances in Aid of Construction (AIAC)	635,912	-		635,912
9	Customer Deposits	3,500	-		3,500
10	Meter Advances	-	-		-
11	Deferred Income Tax Credits	1,139,528	-		1,139,528
12	Total Deduction	8,265,499			8,265,499
	ADDITIONS				
13	Working Capital	350,946	(258,419)	C	92,527
14	Prepayments	-	-		-
15	Supplies Inventory	-	-		
16	Total Additions	350,946	(258,419)		92,527
17	Original Cost Rate Base	$ 11,651,216	$ 2,514,450		$ 14,165,666

Adjustments:
A. Per plant adjustments on Schedule JJD-3 and JJD-4
B. Per accumulated depreciation adjustment on Schedule JJD-5
C. Per working capital adjustments on Schedule JJD-6 and JJD-7

References:
Column [A]: Company Schedule B-1
Column [B]: Staff Schedule JJD-2
Column [C]: Column [A] + Column [B]

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-2

SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] Plant-not used ADJ #1	[C] Plant-Fire Safety ADJ #2	[D] Accum. Depreciat. ADJ #3	[E] Work. Capital ADJ #4	[F] Work.Capital ADJ #5	[I] STAFF ADJUSTED
		PLANT IN SERVICE:							
1	300000	Property Held For Future Use	$ 138,682	$ (138,682)					$ -
2	301000	Organization	15,350						15,350
6	303500	Land & Land Rights TD	8,324						8,324
8	304100	Structures & Improvements SS	7,953						7,953
9	304200	Structures & Improvements P	69,131						69,131
10	304300	Struct & Imp WT	3,038,848						3,038,848
11	304400	Struct & Imp TD	23,864						23,864
12	304500	Struct & Imp AG	20,130						20,130
14	304700	Struct & Imp Store,Shop,Gar	93,285						93,285
15	304800	Struct & Imp Misc	149,284						149,284
16	307000	Wells & Springs	1,252,563						1,252,563
17	311200	Pump Equip Electric	3,337,081						3,337,081
18	311300	Pump Equip Diesel	59,421						59,421
20	320100	WT Equip Non-Media	5,825,149						5,825,149
13	330000	Dist Reservoirs & Standpipes	912,619						912,619
14	331100	TD Mains 4in & Less	706,252						706,252
15	331200	TD Mains 6in to 8in	3,974,977		2,788,803				6,763,780
16	331300	TD Mains 10in to 16in	5,485,424						5,485,424
17	333000	Services	2,178,857						2,178,857
18	334100	Meters	328,579						328,579
19	334200	Meter Installations	103,799						103,799
20	335000	Hydrants	746,904		230,064				976,968
21	340100	Office Furniture & Equip	63,617						63,617
22	340200	Comp & Periph Equip	99,216						99,216
23	340300	Computer Software	164,275						164,275
42	340500	Other Office Equipment	25,224						25,224
43	341100	Trans Equip Lt Duty Trks	14,087						14,087
44	341300	Trans Equip Autos	19,307						19,307
45	341400	Trans Equip Other	13,606						13,606
46	343000	Tools,Shop,Garage Equip	83,867						83,867
47	345000	Power Operated Equipment	147,066						147,066
49	346100	Comm Equip Non-Telephone	290,493						290,493
50	346300	Comm Equip Other	81,454						81,454
54			29,478,687	(138,682)	3,018,867	-	-	-	32,358,872
60		AFUDC Debt	950	-	-	-	-	-	950
61		Total Plant in Service	$ 29,479,637	$ (138,682)	$ 3,018,867	$ -	$ -	$ -	$ 32,359,822
62		Less: Accumulated Depreciation	9,913,869			107,315			10,021,184
63		Net Plant in Service (L59 - L 60)	$ 19,565,768	$ (138,682)	$ 3,018,867	$ (107,315)			$ 22,338,638
64									
65		DEDUCTIONS:							
68		Net Contribution in Aid of Construction	6,486,559						6,486,559
69		Advances in Aid of Construction (AIAC)	635,912	-	-	-	-	-	635,912
70		Customer Deposits	3,500	-	-	-	-	-	3,500
71		Meter Advances	-	-	-	-	-	-	-
72		Deferred Income Tax Credits	1,139,528	-	-	-	-	-	1,139,528
73		Total Deductions	$ 8,265,499						8,265,499
74		ADDITIONS:							
75		Cash Working Capital Allowance	350,946	-	-	-	(90,286)	(168,133)	92,527
76		Prepayments	-	-	-	-	-	-	-
77		Supplies Inventory	-	-	-	-	-	-	-
		Total Additions	$ 350,946				(90,286)	(168,133)	92,527
82		Original Cost Rate Base	$ 11,651,215	$ (138,682)	$ 3,018,867	$ (107,315)	$ (90,286)	$ (168,133)	$ 14,165,666

ADJ #		References:
1	Plant Held For Future Use	Schedule JJD-3
2	Plant for Public Fire Safety	Schedule JJD-4
3	Accumulated Depreciation	Schedule JJD-5
4	Working Capital	Schedule JJD-6
5	Working Capital	Schedule JJD-7

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-3

RATE BASE ADJUSTMENT #1 - PLANT HELD FOR FUTURE USE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Plant Held for Future Use	$ 138,682	$ (138,682)	$ -
2	Total	**$ 138,682**	**$ (138,682)**	**$ -**

REFERENCES:

Column [A]: Company, Schedule B-1, Page 1
Company Workpaper, Page 141

Column [B]: Column [C] - Column [A]

Column [C]: Testimony

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-4

RATE BASE ADJUSTMENT #2 - PLANT FOR PUBLIC FIRE SAFETY

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Public Safety Plant - Fire Hydrants	$ -	$ 230,064	$ 230,064
2	Public Safety Plant - Transmission & Distribution Mains	-	2,788,803	2,788,803
3	Total	$ -	$ 3,018,867	$ 3,018,867

REFERENCES:

Column [A]: Company, Schedule PSS-1

Column [B]: Column [C] - Column [A]

Column [C]: Testimony, All
Company Response to Staff Data Request STF 4.1

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-5

RATE BASE ADJUSTMENT #3 - ACCUMULATED DEPRECIATION

CALCULATION OF ACCUMULATED DEPRECIATION

Summary of Accumulated Depreciation

Description	Year	Depreciation	Retirement/ Disposal	Net
Accumulated Depreciation Per Decision No. 61831		3,297,629.00		3,297,629
Accumulated Depreciation for second half of 1998		468,302.41	(41,996.06)	426,306
Accumulated Depreciation	for 1999	1,015,660.06	(341,849.14)	673,811
Accumulated Depreciation	for 2000	1,104,087.99	(14,544.58)	1,089,543
Accumulated Depreciation	for 2001	1,131,952.13	(72,436.77)	1,059,515
Accumulated Depreciation	for 2002	1,179,383.33	(7,630.85)	1,171,752
Accumulated Depreciation	for 2003	1,216,545.82	(28,600.00)	1,187,946
Accumulated Depreciation	for 2004	1,221,495.15	(123,182.97)	1,098,312
Common Plant Allocation		16,368.38		16,368
Total Staff Recommended		10,651,424.27	(630,967.60)	10,021,184
Company Proposed				9,913,869
Staff Adjustment				**$ 107,315**

REFERENCES:

Mr. Joel Reiker's (of Arizona-American Water Company) recalculation of Staff's work-paper on accumulated depreciation.

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-6

RATE BASE ADJUSTMENT #4 - WORKING CAPITAL - DEFERRED MAINTENANCE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	DDA-Program Maintenance	$ 90,226	$ (90,226)	$ -
2	Total	**$ 90,226**	**$ (90,226)**	**$ -**

REFERENCES:

Column [A]: Company, Schedule B-5
Company Workpaper, Page 146

Column [B]: Column [C] - Column [A]

Column [C]: Testimony

ARIZONA-AMERICAN WATER COMPANY, INC. - PARADISE VALLEY DISTRICT
Docket No. WS-01303A-05-0405
Test Year Ended December 31, 2004

Schedule JJD-7

RATE BASE ADJUSTMENT #5 - WORKING CAPITAL - CASH WORKING CAPITAL ALLOWANCE

LINE NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] STAFF ADJUSTMENT	[C] STAFF PROPOSED
1	Cash Working Capital Allowance	$ 168,133	$ (168,133)	$ -
2	Total	**$ 168,133**	**$ (168,133)**	**$ -**

REFERENCES:

Column [A]: Company, Schedule B-5
Company Workpaper, Page 148

Column [B]: Column [C] -Column [A]

Column [C]: Testimony

ROGERS

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF ARIZONA AMERICAN WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY WATER DISTRICT	DOCKET NO. W-01303A-05-0405

DIRECT

TESTIMONY

OF

DENNIS ROGERS

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

JANUARY 16, 2006

TABLE OF CONTENTS

SCHEDULES

EXECUTIVE SUMMARY

The direct testimony of Staff witness Dennis Rogers addresses the following issues:

Capital Structure – Staff recommends that the Commission adopt a capital structure for Paradise Valley ("Applicant") for this proceeding consisting of 63.3 percent debt and 36.7 percent equity.

Cost of Equity – Staff recommends that the Commission adopt a 10.4 percent return on equity ("ROE") for Paradise Valley. Staff's estimated ROE for the Applicant is based on cost of equity estimates for the sample companies ranging from 9.6 percent for the discounted cash flow method ("DCF") to 10.0 percent for the capital asset pricing model ("CAPM"). Staff's ROE recommendation includes a 0.6 percent upward adjustment attributable to the Applicant's greater leverage than the sample companies. Staff advises the Applicant not to expect Staff to recommend similar upward ROE adjustments due to financial risk in subsequent rate cases. Instead, the Applicant is advised to maintain greater equity in its capital structure.

Staff recommends requiring Paradise Valley to attain, and thereafter maintain, a capital structure (equity, long-term debt and short-term debt) with equity representing 40 to 60 percent of total capital prior to its next rate filing.

Overall Rate of Return – Staff recommends that the Commission adopt an overall rate of return ("ROR") of 7.2 percent.

Dr. Kolbe's Testimony – The Commission should reject the Company proposed 12.0 percent ROE because the empirical capital asset pricing model ("ECAPM") used to derive it is erroneously based on a market value capital structure instead of book value capital structure. The Company's DCF, upon which it did not rely on for its ROE estimate, is skewed because of the sole use of analysts' projections.

I. INTRODUCTION

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

A. My name is Dennis Rogers. I am a Public Utilities Analyst employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Briefly describe your responsibilities as a Public Utilities Analyst.

A. In my position as a Public Utilities Analyst, I perform regulatory audits of rate base and operating income components and perform studies to estimate the cost of capital component in rate filings to determine the overall revenue requirement. I also analyze requests for financing authorization and for issuance of Certificates of Convenience and Necessity ("CC&N").

Q. Please describe your educational background and professional experience.

A. I am a graduate of Arizona State University, receiving a Bachelor of Business Administration with an accounting emphasis. I began employment as a Staff Public Utilities Analyst in 2001. Since that time, I have provided Staff's analysis and recommendations to the Commission through Staff Reports and testimonies at hearings concerning rate base, operating income, revenue requirements, rate design and other matters associated with rate cases and CC&N's. I have also attended numerous schools and seminars related to regulatory and business issues.

Q. What is the scope of your testimony in this case?

A. I provide Staff's recommended rate of return in this case. I discuss the appropriate rate of return ("ROR") for establishing the revenue requirement for Paradise Valley Water Company ("Paradise Valley" or "Applicant").

SUMMARY OF TESTIMONY AND RECOMMENDATIONS

Q. Briefly summarize how Staff's cost of capital testimony is organized.

A. Staff's cost of capital testimony is presented in nine sections. Section I is this introduction. Section II discusses the concept of weighted average cost of capital ("WACC"). Section III presents the concept of capital structure and presents Staff's recommended capital structure for Paradise Valley in this proceeding. Section IV discusses the concepts of return on equity ("ROE") and risk. Section V presents the methods employed by Staff to estimate Paradise Valley's ROE. Section VI presents the findings of Staff's ROE analysis. Section VII presents Staff's final cost of equity estimates for Paradise Valley. Section VIII presents Staff's ROR recommendation. Finally, section IX presents Staff's comments on the direct testimony of the Applicant's witnesses, A. Lawrence Kolbe and Michael J. Vilbert.

Q. Have you prepared any exhibits to accompany your testimony?

A. Yes. I prepared eight schedules (DRR-1 to DRR-8) that support Staff's cost of capital analysis.

Q. What is Staff's recommended rate of return for Paradise Valley?

A. Staff recommends a 7.2 percent overall ROR. Staff's ROR is based on cost of equity estimates for Paradise Valley that range from 10.2 percent to 10.6 percent (inclusive of a

0.6 percent upward financial risk adjustment). Staff's recommended 7.2 percent ROR is calculated in Schedule DRR-1.

PARADISE VALLEY'S PROPOSED OVERALL RATE OF RETURN

Q. Briefly summarize the Applicant's proposed capital structure, cost of debt, return on equity and overall rate of return for this proceeding.

A. Table 1 summarizes the Applicant's proposed capital structure, cost of debt, return on equity and overall rate of return in this proceeding:

Table 1

	Weight	Cost	Weighted Cost
Long-term Debt	63.3%	5.4%	3.4%
Common Equity	36.7%	12.0%	4.4%
Cost of Capital/ROR			**7.8%**

Paradise Valley is proposing an overall rate of return of 7.8 percent.

II. THE WEIGHTED AVERAGE COST OF CAPITAL

Q. Please define the cost of capital concept.

A. The cost of capital is the opportunity cost represented by anticipated returns or earnings that are foregone by choosing one investment over others with equivalent risk.

Q. What is the overall cost of capital?

A. The overall cost of capital is equal to the weighted average cost of capital ("WACC").

Q. How is the WACC calculated?

A. The WACC is calculated by adding the weighted expected returns of a firm's securities. Equation 1 that follows presents the WACC as a mathematical expression.

Equation 1.

$$WACC = \sum_{i=1}^{n} W_i * r_i$$

In this equation, W_i is the weight given to the i^{th} security (the proportion of the i^{th} security relative to the portfolio) and r_i is the expected return on the i^{th} security.

Q. Can you provide an example demonstrating application of Equation 1?

A. Yes. For purposes of this example, assume that an entity has a capital structure composed of 60 percent debt and 40 percent equity. Also, assume that the embedded cost of debt is 7.5 percent and the expected return on equity, i.e. the cost of equity, is 10.0 percent. Calculation of the WACC is as follows:

$$WACC = (60\% * 7.5\%) + (40\% * 10.0\%)$$

$$WACC = 4.50\% + 4.00\%$$

$$WACC = 8.50\%$$

The weighted average cost of capital in this example is 8.50 percent. The entity in this example would need to earn an overall rate of return of 8.50 percent to cover its cost of capital.

III. CAPITAL STRUCTURE

Background

Q. Please explain the capital structure concept.

A. The capital structure of a firm is the relative proportions of short-term debt, long-term debt (including capital leases), preferred stock and common stock that are used to finance the firm's assets.

Q. How is the capital structure expressed?

A. The capital structure of a company is expressed as the percentage of each component of the capital structure (capital leases, short-term debt, long-term debt, preferred stock and common stock) relative to the total capital (the total sum of all the components of the capital structure).

The capital structure for an entity that is financed by $20,000 of capital leases, $40,000 of long-term debt, $5,000 of preferred stock and $35,000 of common stock is shown is Table 2.

Table 2

Component			%
Capital Leases	$20,000	($15,000/$100,000)	20.0%
Long-Term Debt	$40,000	($80,000/$100,000)	40.0%
Preferred Stock	$5,000	($5,000/$100,000)	5.0%
Common Stock	$35,000	($35,000/$100,000)	35.0%
Total	$100,000		100%

The capital structure in this example is composed of 20.0 percent capital leases, 40.0 percent long-term debt, 5.0 percent preferred stock and 35.0 percent common stock.

Q. Does Staff's testimony explain the relationship between capital structure the cost of equity capital?

A. Yes. The relationship between capital structure and the cost of equity capital is discussed in Section IV of this testimony.

Paradise Valley's Capital Structure

Q. What capital structure does the Paradise Valley propose?

A. The Applicant proposes a capital structure composed of 63.3 percent debt and 36.7 percent common equity.

Q. Is the Applicant's proposed capital structure the same capital structure recommended by Staff?

A. Yes, it is.

Q. How does Paradise Valley's capital structure compare to capital structures of publicly traded water utilities?

A. The Applicant's capital structure is composed of 63.3 percent debt and 36.7 percent equity. Schedule DRR-3 shows the capital structures of six publicly traded water companies ("sample water companies") as of October 2005. The average capital structure for the sample water utilities is comprised of approximately 50.9 percent debt and 49.1 percent equity.

IV. RETURN ON EQUITY

Background

Q. Please define the term cost of equity capital.

A. The cost of equity capital is determined by the market. It is the rate of return that investors expect to earn on their equity investment in an entity given its risk. In other words, the cost of equity to an entity is the investors' expected rate of return on other investments of similar risk.

Q. Is there any relationship between interest rates and the cost of equity capital?

A. Yes. The cost of equity moves in the same direction as interest rates. This relationship is integral to the capital asset pricing model ("CAPM") formula. The CAPM is a market based model used for estimating the cost of equity capital that is discussed in Section V of this testimony. Thus, a comparison of current interest rates to historical interest rates provides insight for how the current cost of equity capital might be compared to the cost of equity capital historically.

Q. What has been the general trend of interest rates in recent years?

A. A chronological chart of interest rates is a good tool to show interest rate history and identify trends. Chart 1 graphs intermediate U.S. treasury rates from November 1999 to November 2005.

Chart 1: Average Yield on 5-, 7-, & 10-Year Treasuries

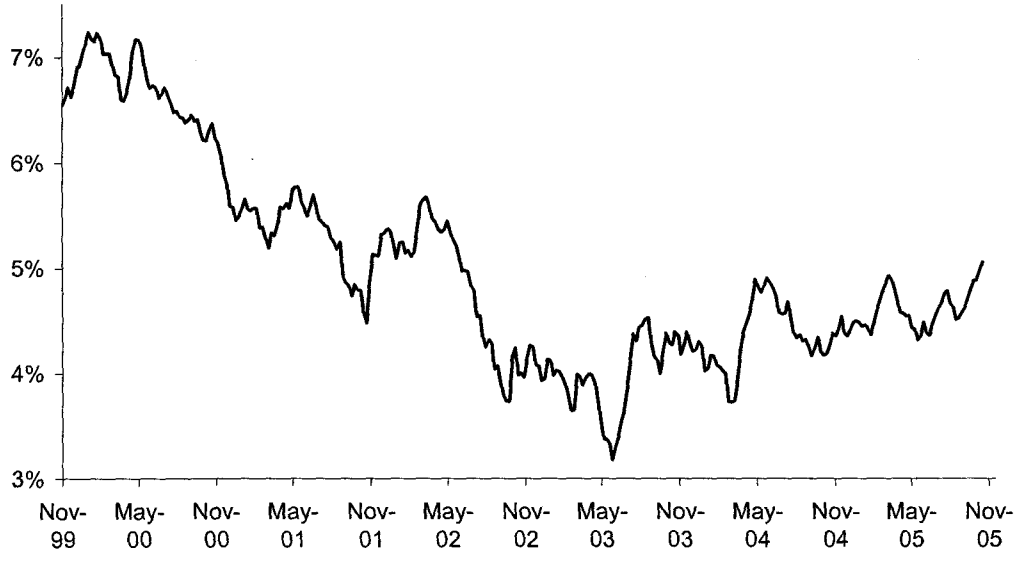
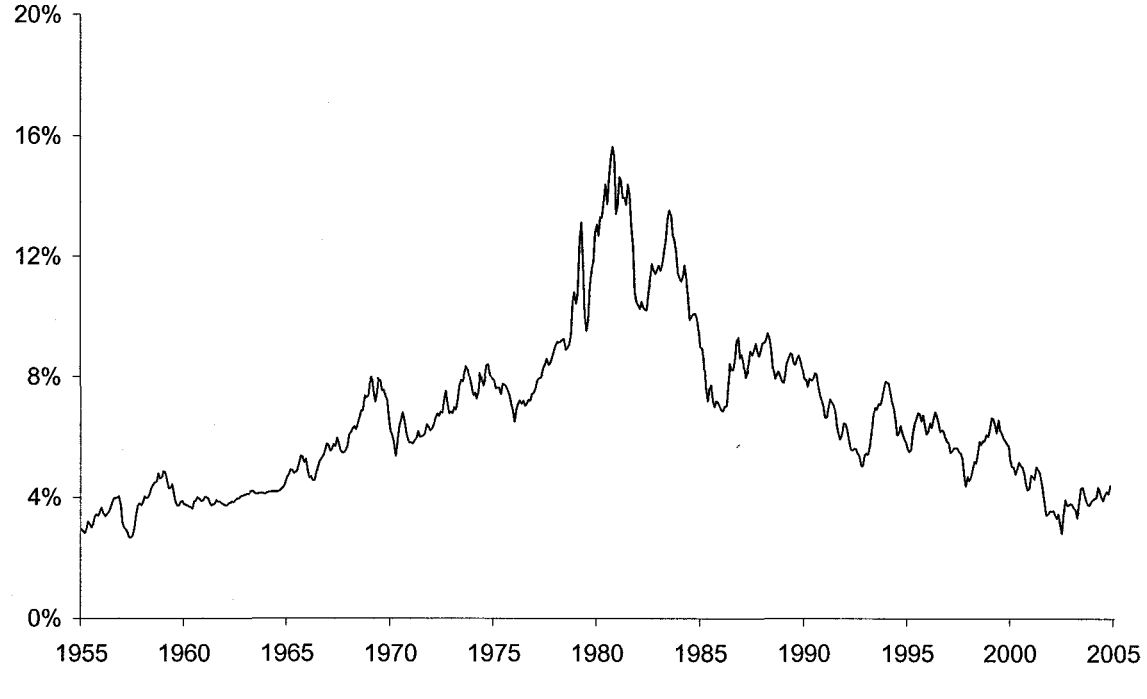


Chart 1 shows that intermediate interest rates trended downward from the end of 1999 to mid-2003 and have remained low despite a slight upward trend in the past two years.

Q. Where are current interest rates compared to a longer term history of interest rates and what does it suggest for capital costs?

A. Chart 2 shows that interest rates have trended downward for more than 20 years. It also shows that interest rates over the past 40 years have been consistently higher than currently. The inference from the relationship between interest rates and the cost of equity capital is that current capital costs are low in comparison to historical capital costs.

Chart 2: History of 5- and 10-Year Treasury Yields



Source: Federal Reserve

Q. Do actual returns represent the cost of equity?

A. No. The cost of equity represents investors' *expected* returns not realized returns.

Q. What have historical returns been for average risk securities?

A. Jeremy Siegel, a Wharton School finance professor, found that the average arithmetic and compound annual returns on U.S. equities have been 9.7 percent and 8.3 percent, respectively, using 199 years of data through 2001.[1]

[1] Siegel, Jeremy J. *Stocks for the Long Run*, third edition. McGraw-Hill, New York. 2002. p.13.

Q. Is information available that leads to an understanding of the relationship between the equity returns required for a regulated water utility versus the market?

A. Yes. A comparison of betas, a component of the CAPM discussed in Section V, for the water utility industry and the market provide insight into this relationship. The average beta (0.71)[2] for a water utility is lower than the theoretical average beta for all stocks (1.0). According to the CAPM formula, the cost of equity capital moves in the same direction as beta. Since the beta for the water utility industry is lower than the beta for the market, the implication is that the required return on equity for a regulated water utility is below the average required return on the market.

Risk

Q. Please define risk.

A. Risk, as it relates to an investment, is generally recognized as the variability or uncertainty of the returns on the investment. Risk is often separated into two components. Those components are market risk (systematic risk) and non-market risk (unique risk).

Q. What is market risk?

A. Market risk or systematic risk is the risk that changes in the stock market as a whole will cause changes in the stock price of a particular entity. Market risk is related to the economy-wide perils that affect all business such as inflation, interest rates, and general business cycles. Market risk affects all stocks and it cannot be eliminated by diversification, i.e. it is non-diversifiable. However, the impact on each entity is not necessarily the same. Accordingly, market risk is the only risk that affects the cost of

[2] See Schedule DRR-6

equity. Market risk is measured by beta. Beta reflects both the business risk and financial risk of an entity.

Q. What is non-market risk?

A. Non-market (unique risk) is risk related an individual entity. There is no correlation among entities for unique risk; accordingly, it can be eliminated through diversification. That is, investors can eliminate unique risk by holding a diversified investment portfolio. Unique risk is not measured by beta. Since unique or firm-specific risk can be eliminated through diversification, it does not affect the cost of equity capital.

Q. What additional return can investors expect to account for unique risk?

A. Nothing. Investors who hold diversified portfolios can eliminate unique risk, and therefore do not require any related additional return. Since investors who choose to be less than fully diversified must compete in the market with fully diversified investors, the former cannot expect to be compensated for unique risk.

Q. How are the business and financial risks reflected by beta defined?

A. Business risk is that risk which is associated with the fluctuation in earnings due to the basic nature of an entity's business. Financial risk is that risk which affects shareholders due to a firm's use of fixed obligation (i.e., debt) financing.

Q. Is the cost of equity affected by both business and financial risk?

A. Yes.

Q. What is the relationship between the capital structure of a firm and its financial risk?

A. As previously discussed, the relative proportions of short-term debt, long-term debt (including capital leases), preferred stock and common stock used to finance an entity's assets represent its capital structure. Financial risk increases as an entity includes a greater proportion of fixed obligation financing in its capital structure (i.e., become more leveraged). An increase in financial risk is reflected in the market risk measured by beta resulting in an increase in an entity's cost of equity.

Q. How does Paradise Valley's financial risk compare to the sample water companies' financial risk?

A. Paradise Valley's capital structure is composed of 63.3 percent debt and 36.7 percent equity. The debt in Paradise Valley's capital structure causes its shareholders to bear some financial risk. Schedule DRR-3 shows the capital structures of six publicly traded water companies ("sample water companies") as of October 2005, as well as Paradise Valley's capital structure. As of October 2005, the sample water utilities were capitalized with approximately 50.9 percent debt and 49.1 percent equity, while Paradise Valley's capital structure consists of 63.3 percent debt and 36.7 percent equity. Thus, Paradise Valley's shareholders bear more financial risk than the shareholders of the sample companies.

V. ESTIMATING THE COST OF EQUITY

Introduction

Q. Did Staff directly estimate the cost of equity for the Applicant?

A. No. Staff did not directly estimate Paradise Valley's cost of equity for two reasons. First, Paradise Valley's stock is not publicly traded; therefore, its cost of equity cannot be

estimated because the required information is not available to perform the analysis. Second, Staff using an average of a representative sample group reduces the potential for random fluctuations resulting in a more reliable estimate.

Q. What companies did Staff select as proxies or comparables for Paradise Valley?

A. Staff selected six publicly traded water utilities shown in Schedule DRR-3. Staff chose these six entities because they derive most of their earnings from regulated operations, and they are currently analyzed by *The Value Line Investment Survey Small and Mid Cap Edition* ("*Value Line Small Cap*") and *The Value Line Investment Survey* ("*Value Line*") making the necessary information available for a cost of capital estimation for Paradise Valley.

Q. What models did Staff implement to estimate Paradise Valley's cost of equity?

A. The cost of equity is determined by the market; therefore, Staff used two market-based models to estimate the cost of equity for Paradise Valley: the discounted cash flow ("DCF") model and the CAPM.

Q. Explain why Staff chose the DCF and CAPM market-based models?

A. Staff chose to use the DCF and CAPM models because they are widely recognized as appropriate models and have been used extensively to estimate the cost of equity. A description of the DCF model and then the CAPM model begins immediately below.

Discounted Cash Flow Model Analysis

Q. Please provide a brief summary of the theory upon which the DCF method of estimating the cost of equity is based.

A. The theory underlying the DCF method of estimating the cost of capital is that the cost of equity is that discount rate which equates the current market price to all future cash flows expected by investors. That is, the cost of equity is the rate that future expected cash flows (primarily dividends) must be discounted to equal a given market price.

In the 1960s, Professor Myron Gordon pioneered the use of the DCF method to estimate the cost of capital for a public utility. The DCF model has become widely used due to its theoretical merit and its simplicity.

Q. How is the DCF model applied?

A. The DCF model is applied via a mathematical formula where the current market price, the expected dividend, and projected dividend growth rate are inputs, while the discount rate (cost of equity) is the result. The formula can be applied to a sample of companies that exhibit similar risk to the entity whose cost of equity is being estimated and the results averaged to arrive at an estimate of the cost of equity for the subject entity.

Q. Did Staff apply more than one version of the DCF Model?

A. Yes. Staff applied two versions of the DCF model: the constant-growth DCF Model and the multi-stage or non-constant growth DCF. The constant-growth DCF Model assumes that an entity will grow indefinitely at the same rate. Alternately, the non-constant growth DCF model does not assume one constant, indefinite dividend grow rate.

The Constant-Growth DCF

Q. What is the mathematical formula used in Staff's constant-growth DCF analysis?

A. The constant-growth DCF formula used in Staff's analysis is:

Equation 2 :

$$K = \frac{D_1}{P_0} + g$$

where : K = the cost of equity
D_1 = the expected annual dividend
P_0 = the current stock price
g = the expected infinite annual growth rate of dividends

Equation 2 assumes that the entity has a constant earnings retention rate and that its earnings are expected to grow at a constant rate. According to Equation 2, a stock with a current market price of $10 per share, an expected annual dividend of $0.50 per share and an expected dividend growth rate of 4.0 percent per year has a cost of equity to the entity of 9.0 percent reflected by the sum of the dividend yield ($0.50 / $10 = 5.0 percent) and the 4.0 percent annual dividend growth rate.

Q. How did Staff calculate the dividend yield component (D_1/P_0) of the constant-growth DCF formula?

A. Staff calculated the yield component of the DCF formula by dividing the expected annual dividend[3] (D_1) by the spot stock price (P_0) after the close of the market on November 2, 2005, as reported by *MSN money*.

[3] Value Line Summary & Index. 10-28-05

Q. Why did Staff use the spot stock price rather than a historical average stock price to calculate the dividend yield component of the DCF formula?

A. Use of the current market stock price (spot stock price) is consistent with finance theory, i.e., the efficient market hypothesis. This hypothesis asserts that the current stock price reflects information investors use to form expectations of future returns. Use of a historical average of stock prices illogically discounts the most recent information in favor of less recent information. The latter is stale and is representative of underlying conditions that may have changed.

Q. How did Staff estimate the dividend growth (g) component of the constant-growth DCF model represented by Equation 2?

A. The dividend growth component for Staff's constant-growth DCF model is the average of six different estimation methods as shown in Schedule DRR-7. Staff computed both historical and projected growth estimates on dividend-per-share ("DPS")[4], earnings-per-share ("EPS")[5] and sustainable growth bases.

Q. Why did Staff examine EPS growth to estimate the dividend growth component of the constant-growth DCF model?

A. Staff examined EPS growth (both historical and projected) because dividends are dependent on earnings. Dividend distribution in excess of earnings results in capital contraction. Continued capital contraction is not sustainable in the long run, and it is inconsistent with the constant-growth DCF model. Therefore, EPS growth is an appropriate consideration for estimating expected dividend growth.

---

[4] Derived from information provided by *Value Line*

[5] Derived from information provided by *Value Line*

Q. How did Staff estimate historical DPS growth?

A. Staff estimated historical DPS growth by calculating the average rate of growth in DPS of the sample water companies from 1994 to 2004. The results of that calculation are shown in Schedule DRR-4. Staff calculated an average historical DPS growth rate of 2.6 percent for the sample water utilities for the period 1994 to 2004.

Q. How did Staff estimate the projected DPS growth?

A. Staff calculated an average of the projected DPS growth rates for the sample water utilities from *Value Line*. The average projected DPS growth rate is 4.7 percent as shown in Schedule DRR-4.

Q. How did Staff calculate the historical EPS growth rate?

A. Staff estimated historical EPS growth by calculating the average rate of growth in EPS of the sample water companies from 1994 to 2004. The results of that calculation are shown in Schedule DRR-4. Staff calculated an average historical EPS growth rate of 3.5 percent for the sample water utilities for the period 1994 to 2004.

Q. How did Staff estimate the projected EPS growth?

A. Staff calculated an average of the projected EPS growth rates for the sample water utilities from *Value Line*. The average projected EPS growth rate is 14.1 percent as shown in Schedule DRR-4. It is important to take into account that Analysts' projections of the future earnings are usually high[6] and vary widely.

---

[6] See Clayman, Michelle R. and Robin A. Schwartz. "Falling in Love Again – Analysts' Estimates and Reality," Financial Analysts Journal, September-October 1994, pg. 68. Dreman, David N. and Michael A. Berry. "Analysts Forecasting Errors and Their Implications for Security Analysts", Financial Analysts Journal, May-June 1995, 30-41.

Q. How did Staff calculate its historical and projected sustainable growth rates?

A. Staff's historical and projected sustainable growth rates were calculated by adding their respective retention growth rate terms (br) to their respective stock financing growth rate terms (vs) as shown in Schedule DRR-5.

Q. What is retention growth?

A. Retention growth is the growth in dividends due to the retention of earnings. Viewed differently, an entity cannot expect to grow dividends if it does not retain any earnings. Retention growth is dependent on the percentage of earnings retained (retention ratio) and the value of earnings. Mathematically, the retention growth rate is the product of the retention ratio and the book/accounting return on equity.

Q. What is the formula for the retention growth rate?

A. The retention growth rate formula is:

Equation 3 :

$$\text{Retention Growth Rate} = br$$

where : b = the retention ratio (1 – dividend payout ratio)
r = the accounting/book return on common equity

Q. How did Staff calculate the average historical retention growth rate (br) for the sample water utilities?

A. First, Staff calculated the retention rate for each of the sample water companies from 1995 to 2004. Then Staff calculated the mean of those results. The historical average retention (br) growth for the sample water utilities is 3.1 percent as shown in Schedule DRR-5.

Q. How did Staff determine projected retention growth rate (br) for the sample water utilities?

A. Staff used the retention growth projections for the sample water utilities for the period 2008 to 2010 from *Value Line.* The projected average retention growth rate is 6.4 percent as shown in Schedule DRR-5.

Q. When can retention growth provide a reasonable estimate of future dividend growth?

A. The retention growth rate is a reasonable estimate of future dividend growth when the retention ratio is reasonably constant and the entity's market price to book value ("market-to-book ratio") is expected to be 1.0. The average retention ratio has been reasonably constant in recent years. However, the market-to-book ratio for the sample water utilities is 2.6, notably higher than 1.0, as shown in Schedule DRR-6.

Q. Is there any financial implication of a market-to-book ratio greater than 1.0?

A. Yes. A market-to-book ratio greater than 1.0 implies that investors expect an entity to earn an accounting/book return on its equity that exceeds its cost of equity. The relationship between required returns and expected cash flows is readily observed in the fixed securities market. For example, assume an entity contemplating issuance of bonds with a face value of $10 million at either 6 percent or 8 percent, and thus, paying annual interest of $600,000 or $800,000, respectively. Regardless of investors' required return on similar bonds, investors will be willing to pay more for the bonds if issued at 8 percent than if the bonds are issued at 6 percent. For example, if the current interest rate required by investors is 6 percent, then they would bid $10 million for the 6 percent bonds and more than $10 million for the 8 percent bonds. Similarly, if equity investors require an 8

percent return and expect an entity to earn accounting/book returns of 12 percent, the market will bid up the price of the entity's stock to provide the required return of 8 percent.

Q. How has Staff generally recognized a market-to-book ratio exceeding 1.0 in its cost of equity analyses in recent years?

A. First, Staff has assumed that investors expect the market-to-book ratio to remain greater than 1.0. Given that assumption, Staff has added a stock financing growth rate (vs) term to the retention ratio (br) term to calculate its historical and projected sustainable growth rates.

Q. Do the historical and projected sustainable growth rates Staff uses to develop its DCF cost of equity in this case continue to include a stock financing growth rate term?

A. Yes.

Q. What is stock financing growth?

A. Stock financing growth is the growth in an entity's dividends due to the sale of stock by that entity. Stock financing growth is a concept derived by Myron Gordon and discussed in his book *The Cost of Capital to a Public Utility.*[7] Stock financing growth is the product of the fraction of the funds raised from the sale of stock that accrues to existing shareholders (v) and the fraction resulting from dividing the funds raised from the sale of stock by the existing common equity (s).

[7] Gordon, Myron J. *The Cost of Capital to a Public Utility.* MSU Public Utilities Studies, Michigan, 1974. pp 31-35.

Q. What is the mathematical formula for the stock financing growth rate?

A. The mathematical formula for stock financing growth is:

Equation 4 :

$$\text{Stock Financing Growth} = vs$$

where : v = Fraction of the funds raised from the sale of stock that accrues to existing shareholders

s = Funds raised from the sale of stock as a fraction of the existing common equity

Q. How is the variable *v* presented above calculated?

A. Variable v is calculated as follows:

Equation 5 :

$$v = 1 - \left(\frac{book\ value}{market\ value} \right)$$

For example, assume that a share of stock has a $40 book value and is selling for $50. Then, to find the value of v, the formula is applied:

$$v = 1 - \left(\frac{40}{50} \right)$$

In this example, v is equal to 0.20.

Q. How is the variable *s* presented above calculated?

A. Variable s is calculated as follows:

Equation 6:

$$s = \frac{\text{Funds raised from the issuance of stock}}{\text{Total existing common equity before the issuance}}$$

For example, assume that an entity has $100 in existing equity, and it sells $10 of stock. Then, to find the value of *s*, the formula is applied:

$$s = \left(\frac{10}{100}\right)$$

In this example, *s* is equal to 10.0 percent.

Q. What is the *vs* term when the market-to-book ratio is equal to 1.0?

A. A market-to-book ratio equal to 1.0 reflects that investors expect an entity to earn a book/accounting return on their equity investment equal to the cost of equity. When the market-to-book ratio is equal to 1.0, none of the funds raised from the sale of stock by the entity accrues to the benefit of existing shareholders, i.e., the term *v* is equal to zero (0.0). Consequently, the *vs* term is also equal to zero (0.0). When stock financing growth is zero, dividend growth depends solely on the *br* term.

Q. What is the affect of the *vs* term when the market-to-book ratio is greater than 1.0?

A. A market-to-book ratio greater than 1.0 reflects that investors expect an entity to earn a book/accounting return on their equity investment greater than the cost of equity. Equation 5 shows that when the market-to-book ratio is greater than 1.0 the *v* term is also greater than zero. The excess by which new shares are issued and sold over book value per share of outstanding stock is a contribution that accrues to existing stockholders in the form of a higher book value. The resulting higher book value leads to higher expected earnings and dividends. Continued growth from the *vs* term is dependent upon the continued issuance and sale of additional shares at a price that exceeds book value per share.

Q. What *vs* estimate did Staff calculate from its analysis of the sample water utilities?

A. Staff estimated an average stock financing growth of 2.8 percent for the sample water utilities as shown in Schedule DRR-5.

Q. What would occur if an entity had a market-to-book ratio greater than 1.0 due to investors expecting earnings to exceed the cost of equity capital and the entity subsequently experienced newly authorized rates equal to its cost of equity capital?

A. There would be downward pressure on the entity's stock price to reflect the change in future expected cash flows because, in theory, the market-to-book ratio should decline to 1.0.

Q. What is implied by Staff's continued use of the *vs* term in the historical and projected sustainable growth rates Staff uses to develop its DCF cost of equity is this case?

A. The implication is that Staff expects the market-to-book ratio to continue to exceed 1.0, and that the water utilities will continue to issue and sell stock at prices exceeding book value to provide benefits to existing shareholders. If the authorized ROEs for water utilities are established at the cost of equity capital, the market-to-book ratio should decline to 1.0. If that occurs, the stock financing term would no longer be necessary. If investors expect the average market-to-book ratio of the sample water utilities to fall to 1.0 due to authorized ROEs equaling the cost of equity capital, then Staff's inclusion of the *vs* term in its constant-growth DCF analysis might result in an over estimate of its sustainable dividend growth rate and the resulting DCF ROE estimate.

Q. What are Staff's historical and projected sustainable growth rates?

A. Staff's estimated historical sustainable growth rate is 6.0 percent based on an analysis of earnings retention for the sample water companies. Staff's projected sustainable growth rate is 10.2 percent based on retention growth projected by *Value Line.* Schedule DRR-5 presents Staff's estimates of the sustainable growth rate.

Q. What is Staff's expected infinite annual growth rate in dividends?

A. Staff averaged historical and projected dividends per share ("DPS"), earnings per share ("EPS"), and sustainable growth estimates to calculate the expected infinite annual growth rate in dividends. Schedule DRR-7 presents the calculation of the expected infinite annual growth rate in dividends. Staff's estimate is 6.9 percent.

Q. What is Staff's constant-growth DCF estimate?

A. Staff's constant-growth DCF estimate is 9.7 percent, which is shown in Schedule DRR-2.

The Multi-Stage DCF

Q. Why did Staff implement the multi-stage DCF model to estimate Paradise Valley's cost of equity?

A. As previously stated, Staff used the multi-stage DCF model to consider the assumption that dividends may not grow at a constant rate. Staff's multi-stage DCF model incorporates two growth rates: a near term growth rate and a long-term growth rate.

Q. What is the mathematical formula for the multi-stage DCF?

A. The multi-stage DCF formula is shown in the following equation:

Equation 7 :

$$P_0 = \sum_{t=1}^{n} \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n}\left[\frac{1}{(1+K)}\right]^n$$

Where : P_0 = current stock price
D_t = dividends expected during stage 1
K = cost of equity
n = years of non – constant growth
D_n = dividend expected in year n
g_n = constant rate of growth expected after year n

As mentioned above, Staff incorporated two growth rates. This assumes that investors expect dividends to grow at a one rate in the near-term ("Stage -1 growth") and another rate in the long-term ("Stage-2 growth").

Q. What steps did Staff take to implement its multi-stage DCF cost of equity model?

A. First, Staff projected a stream of dividends for each of the sample water utilities using near-term and long-term growth rates. Second, Staff calculated the rate (cost of equity) which equates the present value of the forecasted stream of dividends to the current stock price for each of the sample water utilities. Then, Staff calculated an average of the individual sample company cost of equity estimates.

Q. How did Staff calculate near-term (stage-1) growth?

A. Staff projected four years of dividends for each of the sample water utilities. Projections for the first twelve months, to the extent available, were from *Value Line.* The dividend projections for the remainder of stage 1 reflect the average dividend growth rate calculated in Staff's constant growth DCF analysis, or 6.9 percent, as shown in Schedule DRR-7.

Q. How did Staff estimate long-term (stage-2) growth?

A. Staff used the arithmetic average rate of growth in gross domestic product ("GDP") from 1929 to 2004[8]. Using the GDP growth rate assumes that the water utility industry is expected to grow at the same rate as the overall economy.

Q. What is the historical GDP growth rate that Staff used to estimate stage-2 growth?

A. Staff used 6.8 percent to estimate the stage-2 growth rate.

Q. What is Staff's multi-stage DCF estimate?

A. Staff's multi-stage DCF estimate is 9.4 percent as shown in Schedule DRR-8.

Q. What is Staff's overall DCF estimate?

A. Staff's overall DCF estimate is 9.6 percent. Staff calculated the overall DCF estimate by averaging the constant growth DCF (9.7%) and multi-stage DCF (9.4%) estimates as shown in Schedule DRR-2.

[8] www.bea.doc.gov

Capital Asset Pricing Model

Q. Please describe the capital asset pricing model.

A. The Capital Asset Pricing Model is concerned with the determination of the prices of capital assets in a competitive market. The CAPM model describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the expected rate of return which investors expect a security to earn so that its market return is comparable with the market returns earned by other securities of similar risk.[9] The CAPM model assumes that investors require a return that is commensurate with the level of risk associated with a particular security. The model also assumes that investors will sufficiently diversify their investments to eliminate any non-systematic or unique risk.[10] In 1990, Professors Harry Markowitz, William Sharpe, and Merton Miller earned the Nobel Prize in Economic Sciences for their contribution to the development of the CAPM.

Q. What sample did Staff use to compute the CAPM to estimate Paradise Valley's cost of equity?

A. Staff used the same sample water utilities for its CAPM computation that it used for its DCF analysis.

Q. What is the mathematical formula for the CAPM?

A. The mathematical formula for the CAPM is:

[9] David C. Purcell; Cost of Capital – A Practitioner's Guide Pg. 6-1.

[10] The CAPM makes the following assumptions: 1. single holding period 2. perfect and competitive securities market 3. no transaction costs 4. no restrictions on short selling or borrowing 5. the existence of a risk-free rate 6. homogeneous expectations.

Equation 8:

$$K = R_f + \beta (R_m - R_f)$$

where:

R_f	=	risk free rate
R_m	=	return on market
β	=	beta
$R_m - R_f$	=	market risk premium
K	=	expected return

The equation shows that the expected return (K) on a risky asset is equal to the risk-free interest rate ($\mathbf{R_f}$) plus the product of the market risk premium ("Rp") ($\mathbf{R_m - R_f}$) multiplied by beta (β) where beta represents the riskiness of the investment relative to the market.

Q. What did Staff use as an estimate for the risk-free rate of interest in its historical market risk premium CAPM method?

A. Staff calculated an estimate of the risk-free rate of interest by averaging three (five-, seven-, and ten-year) intermediate-term U.S. Treasury securities' spot rates as published in the November 2, 2005, edition of The Wall Street Journal. Staff's estimated risk-free rate for use in its historical market risk premium CAPM method is 4.6 percent[11] as shown in Schedule DRR-2.

[11] Average yield on 5-, 7-, and 10-year Treasury notes according to the November 2, 2005, edition of *The Wall Street Journal*: 4.49%, 4.56%, and 4.67%, respectively.

Q. What did Staff use as an estimate for the risk-free rate of interest in its current market risk premium CAPM method?

A. Staff used the spot rate on 30-year U.S. Treasury notes as published in the November 2, 2005 edition of *The Wall Street Journal.*

Q. Why do U.S Treasury security spot rates provide an appropriate representation of the risk-free rate?

A. U.S. Treasury spot rates represent a good estimate of a risk free rate because they have virtually no chance of default and are backed by the U.S. Government. In addition, they are verifiable, objective and readily available.

Q. What does beta measure?

A. Beta measures the systematic risk of a particular entity's stock relative to the market's beta which is 1.0. Systematic risk is the only risk that cannot be diversified away; therefore it is the only risk that is relevant when estimating an entity's required return. Since the market's beta is 1.0, a security with a beta higher than 1.0 is riskier than the market and a security with a beta lower than 1.0 is less risky than the market.

Q. How did Staff estimate a proxy for Paradise Valley's beta?

A. Staff averaged the *Value Line* betas of the sample water utilities and used this average as a proxy for Paradise Valley's beta. Schedule DRR-6 shows the *Value Line* betas for each of the sample water utilities. Staff's estimated beta for Paradise Valley is 0.71.

Q. What is a descriptive explanation for the expected market risk premium (Rm – Rf)?

A. Descriptively, the expected market risk premium is the expected return on all common stocks minus the risk free rate. It is the additional amount of return over the risk-free rate that investors expect to receive from investing in the market (or an average-risk security). Staff used two approaches to calculate the market risk premium: the historical market risk premium approach and the current market risk premium approach.

Q. What is the historical market risk premium estimate approach used by Staff?

A. The historical market risk premium estimate approach assumes that if the long-run average market risk premium is used consistently to estimate the expected market risk premium, it should, on average, yield the correct premium. In this approach Staff assumed that the average historical market risk premium estimate is a reasonable estimate of the expected market risk premium.

Q. How did Staff calculate the historical market risk premium?

A. Staff calculated the historical market risk premium by averaging the historical arithmetic differences between the S&P 500 and the intermediate-term government bond income returns published in the Ibbotson Associates' *Stocks, Bonds, Bills, and Inflation 2005 Yearbook* for the period 1926-2004. Ibbotson Associates calculated the historical risk premium by averaging the historical arithmetic differences between the S&P 500 and the intermediate-term government bond income returns. Staff's historical market risk premium estimate is 7.2 percent as shown in Schedule DRR-2.

Q. How did Staff calculate the current market risk premium estimate?

A. Staff first derived a DCF ROE of 12.37 (1.7 + 10.67[12]) percent using the expected dividend yield (1.7 percent over the next twelve months) and the annual per share growth rate (10.67 percent) that *Value Line* projects for all dividend-paying stocks under its review (November 4, 2005) as inputs. Then, Staff used the DCF-derived ROE (12.37 percent), the current long-term risk-free rate (4.80 percent 30-year Treasury note) and the market's average beta of 1.0 as inputs into equation 8 to solve for the implied current market risk premium of 7.57 percent. [13]

Q. What is the range of Staff's expected market risk premium estimates?

A. Staff's market risk premium estimates range from 7.2 percent to 7.6 percent.

Q. What is Staff's overall CAPM estimate?

A. Staff's overall CAPM estimate is 10.0 percent. Staff's overall CAPM estimate is the average of the historical market risk premium CAPM (9.7 percent) and the current market risk premium CAPM (10.2 percent) estimates as shown in Schedule DRR-2.

VI. SUMMARY OF STAFF'S COST OF EQUITY ANALYSIS

Q. What is the result of Staff's constant-growth DCF analysis to estimate of the cost of equity to the sample water utilities?

A. Schedule DRR-2 shows the result of Staff's constant-growth DCF analysis. The result of Staff's constant-growth DCF analysis is as follows:

[12] The three to five year price appreciation is 50%. $1.50^{0.25} - 1 = 10.67\%$
[13] $12.37\% = 4.80\% + (1)(7.57\%)$

k = 2.8% + 6.9%

k = **9.7%**

Staff's constant-growth DCF estimate of the cost of equity to the sample water utilities is 9.7 percent.

Q. What is the result of Staff's multi-stage DCF analysis to estimate of the cost of equity for the sample utilities?

A. Schedule DRR-8 shows the result of Staff's multi-stage DCF analysis. The result of Staff's multi-stage DCF analysis is:

Company	**Equity Cost Estimate (k)**
American States Water	9.4%
California Water	9.6%
Aqua America	8.5%
Connecticut Water	9.9%
Middlesex Water	9.9%
SJW Corp	8.9%
Average	**9.4%**

Staff's multi-stage DCF estimate of the cost of equity for the sample water utilities is 9.4 percent.

Q. What is Staff's overall DCF estimate of the cost of equity for the sample utilities?

A. Staff's overall DCF estimate of the cost of equity for the sample utilities is 9.6 percent. Staff's overall DCF estimate was calculated by averaging Staff's constant growth DCF and Staff's multi-stage DCF estimates as shown in Schedule DRR-2.

Q. What is the result of Staff's historical market risk premium CAPM analysis to estimate of the cost of equity for the sample utilities?

A. Schedule DRR-2 shows the result of Staff's CAPM analysis using the historical risk premium estimate. The result is as follows:

$k = 4.6\% + 0.71 * 7.2\%$

$k = 9.7\%$

Staff's CAPM estimate (using the historical market risk premium) of the cost of equity to the sample water utilities is 9.7 percent.

Q. What is the result of Staff's current market risk premium CAPM analysis to estimate the cost of equity for the sample utilities?

A. Schedule DRR-2 shows the result of Staff's CAPM Analysis using the current market risk premium estimate. The result is:

$k = 4.8\% + 0.71 * 7.6\%$

$k = 10.2\%$

Staff's CAPM estimate (using the current market risk premium) of the cost of equity to the sample water utilities is 10.2 percent.

Q. What is Staff's overall CAPM estimate of the cost of equity for the sample utilities?

A. Staff's overall CAPM estimate for the sample utilities is 10.0 percent. Staff's overall CAPM estimate is the average of the historical market risk premium CAPM (9.7 percent) and the current market risk premium CAPM (10.2 percent) estimates as shown in Schedule DRR-2.

Q. Please summarize the results of Staff's cost of equity analysis for the sample utilities.

A. The following table shows the results of Staff's cost of equity analysis:

Table 2

Method	Estimate
Average DCF Estimate	9.6%
Average CAPM Estimate	10.0%
Overall Average	**9.8%**

Staff's average estimate of the cost of equity to the sample water utilities is 9.8 percent.

VII. FINAL COST OF EQUITY ESTIMATES FOR PARADISE VALLEY

Q. Does Paradise Valley's capital structure affect its cost of equity?

A. Yes, it does. An entity's financial risk increases with increased leverage placing upward pressure on its cost of equity. The sample water utilities capital structure is composed of 49.1 percent equity and 50.9 percent debt as shown on Staff Schedule DRR-3. Paradise Valley's capital structure is composed of 36.7 percent equity and 63.3 percent debt. Since Paradise Valley's capital structure is more highly leveraged than the sample water utilities capital structure, its stockholders bear additional financial risk, and its cost of equity is higher than that of the water sample utilities.

Q. Has Staff quantified the effect of Paradise Valley's capital structure on its cost of equity?

A. Yes. Staff used the methodology developed by Professor Robert Hamada of the University of Chicago, which incorporates capital structure theory with the CAPM, to estimate the effect of Paradise Valley's capital structure on its cost of equity. Staff calculated a financial risk adjustment for Paradise Valley's of positive 60 basis points.

Staff estimated a 10.4 percent cost of equity for Paradise Valley by addition of the financial risk adjustment to Staff's average estimate of the cost of equity to the sample water utilities.

The calculation is as follows:

Equation 7:

Adjusted ROE = Overall average estimated ROE + Financial risk adjustment

Adjusted ROE for Paradise Valley = 9.8% + 0.6%

Adjusted ROE for Paradise Valley = 10.4%

Q. What is Staff's ROE recommendation for Paradise Valley?

A. Staff recommends an ROE of 10.4 percent for the Applicant based on cost of equity estimates for the sample companies ranging from 9.6 percent (DCF) to 10.0 percent (CAPM) and a 60 basis point upward adjustment for the relatively greater financial risk in Paradise Valley's capital structure compared to the sample companies.

Q. Should Staff continue to recommend an upward adjustment for financial risk for future Paradise Valley rate cases?

A. No. Staff recommends that the Company be required to obtain a minimum 40 percent equity position prior to filing its next rate case. Staff is aware that the Company was ordered by the Commission to file a plan by December 31, 2005 describing a plan to maintain a capital structure between 40 and 60 percent.[14]

[14] Arizona Corporation Commission Opinion and Order, November 14, 2005, Decision No. 68310, Page 15.

VIII. RATE OF RETURN RECOMMENDATION

Q. What is Staff's overall rate of return recommendation for Paradise Valley?

A. Staff recommends a 7.2 percent ROR for the Applicant as shown in Schedule DRR-1 and the following table:

Table 3

	Weight	Cost	Weighted Cost
Long-term Debt	63.3%	5.4%	3.4%
Common Equity	36.7%	10.4%	3.8%
Cost of Capital/ROR			**7.2%**

IX. STAFF'S RESPONSE TO PARADISE VALLEY'S COST OF CAPITAL WITNESSES

DIRECT TESTIMONY OF DR. KOLBE

Q. How does Staff respond to Dr. Kolbe's assertion that "THE MARKET-TO-BOOK RATIO TEST CANNOT BE RIGHT"?

A. The market anomalies discussed in Dr. Kolbe's testimony to support his assertion do not invalidate fundamental financial concepts, but only show that markets are imperfect. Fundamental to pricing of securities is that they are priced to recognize the present value of expected future cash flows. The relationship of securities to expected cash flows is readily observable in the bond markets where bonds issued with stated interest rate greater (lower) than the market rate sell at premiums (discounts). The same principle applies to stocks. Accordingly, a market-to-book ratio for a stock exceeding 1.0 reflects that investors expect future cash flows to exceed the cost of equity capital. The cost of equity is determined by the market; it is independent of the cost of equity authorized by the Commission in setting rates.

Q. How does Staff respond to Dr. Kolbe's assertion "The market-value capital structure is the relevant quantity for analyzing the cost of equity evidence, not book value."?

A. Use of a market value capital structure to estimate the cost of equity is predicated on the underlying erroneous logic that the Commission is obligated to maintain stock prices and perpetuate an ongoing rising spiral between revenues and stock prices. As previously discussed, expected returns in excess of the cost of equity cause market values to exceed book values. Increasing revenues, in turn, increases market values resulting a perpetual upward cycle. Use of a market value capital structure overstates the ROR when the market-to-book ration exceeds 1.0. The following example that assumes a 3.0 market-to-book ratio demonstrates that use of a market value capital structure increases the ROR:

Table 4

Market Value Capital Structure						Book Value Capital Structure			
	Dollars	Percent	Cost	WACC		Dollars	Percent	Cost	WACC
Equity	$150	75%	10%	7.5%		$50	50%	10%	5.0%
Debt	$50	25%	8%	2.0%		$50	50%	8%	4.0%
ROR/WACC				9.5%					9.0%

In this example, use of a market value capital structure increased the ROR from 9.0 percent to 9.5 percent.

Q. How does Staff respond to Dr. Kolbe's assessment that, for the reasons given by Mr. Stephenson, because Paradise Valley has been unable to achieve its authorized rate of return on equity, and to prevent takings, "Fair treatment of investors in such a case requires either changes to the regulatory mechanism so the company does expect to earn its allowed rate of return on average, or an allowed rate of return set enough above the cost of capital to make up for the expected shortfall between the cost of capital and the rate of return the company actually expects to earn?"[15]

A. The Company's position erroneously places its inability to earn the authorized return on the regulatory process. If the regulatory process were at fault, virtually all Arizona utilities would fail to generate authorized returns. The continuous requests by investors for new certificates of convenience and necessity ("CC&N") shows that investors do not support the Company's assertion about the Arizona regulatory process. The Company has not shown that the cause of its under-earnings is the regulatory process. The authorized return affords the Company an opportunity to earn its authorized ROE, not guarantee it. Staff does not support any adjustment to increase the cost of equity related to the regulatory process.

DIRECT TESTIMONY OF DR. VILBERT

Q. How does Staff respond to Dr. Vilbert's use of Market Value Cost of Equity in his sample companies?

A. As mentioned previously, determination of cost of equity based on market value is inappropriate and overstates the cost of equity when the market value exceeds the book value.

[15] Id. Pg. 25 of 53.

Q. How does Staff respond to Dr. Vilbert's sole reliance on securities analysts' forecasts in developing growth rates for his discounted cash flow ("DCF") model?

A. Numerous studies show that using a combination of growth projections is superior to the sole reliance on analysts' forecasts.[16] The Commission has previously recognized that analysts' forecasts are overstated.[17] Therefore, Staff used a more balanced approach that included a combination of analysts' forecasts and historic growth in its DCF model.

Q. How does Staff respond to Dr. Vilbert's criticism of Staff using historical growth rates of earnings and dividends as well as forecasts of earnings and dividend growth rates to estimate the growth rate for the DCF model stating, "Finally, averaging wildly different growth rate estimates in the hopes of having the extremes cancel out call into question whether the DCF model is applicable at this time".

A. Dr. Vilbert uses only projected earnings per share when he performs his analysis. In fact, Staff's analysis, as shown in Schedule DRR-7, shows that it is only the estimated growth rate based on projected earnings per share that is wildly different. That is, the growth estimates for historical dividends, projected dividends and historical earnings per share are 2.6 percent, 4.7 percent and 3.5 percent, respectively, a fairly close knit group. On the contrary, Staff's growth estimate based on the projected earnings per share method preferred by Dr. Vilbert is 14.1 percent[18], a wide variance from the other three estimates.

[16] Conroy, Robert and Robert Harris. "Consensus Forecasts of Corporate Earnings: Analysts' Forecasts and Time Series Methods," Management Science, Vol. 33 No. 6, June 1987, 725-738. Newbold, Paul, J. Kenton Zumwalt, and Srinivasan Kannan. "Combining Forecasts to Improve Earnings Per Share Prediction-An Examination of Electric Utilities," International Journal of Forecasting, 3, 1987, 229-238.

[17] Arizona Corporation Commission Opinion and Order, Arizona Water Company, March 19, 2004, Decision No. 66849, Page 22.

[18] Dr. Vilbert's estimate is 8.3% (MJV-5).

CONCLUSION

Q. Please summarize Staff's recommendations.

A. Staff recommends that the Commission adopt a capital structure for Paradise Valley in this proceeding composed of 63.3 percent debt and 36.7 percent equity.

Staff also recommends that the Commission to adopt a 7.2 percent ROR for the Applicant, which is based on Staff's cost of equity estimates that range from 9.4 percent to 10.2 percent plus a 60 basis point upward adjustment for financial risk.

Staff also recommends that Paradise Valley take whatever action(s) necessary to achieve a consistent minimum of 40 percent equity prior to filing its next rate case. Staff is aware that the Company was ordered by the Commission to file a plan by December 31, 2005 describing a plan to maintain a capital structure between 40 and 60 percent.[19]

Q. Does this conclude your direct testimony?

A. Yes, it does.

[19] Arizona Corporation Commission Opinion and Order, November 14, 2005, Decision No. 68310, Page 15.

Paradise Valley
Capital Structure
And Weighted Average Cost of Capital
Staff Recommended and Company Proposed

[A]	[B]	[C]	[D]
Description	Weight (%)	Cost	Weighted Cost
Staff Recommended Structure			
Debt	63.3%	5.4%	3.4%
Common Equity	36.7%	10.4%	3.8%
Weighted Average Cost of Capital/ROR			**7.2%**
Company Proposed Structure			
Debt	63.3%	5.4%	3.4%
Common Equity	36.7%	12.0%	4.4%
Weighted Average Cost of Capital/ROR			**7.8%**

[D] : [B] x [C]

Supporting Schedule: DRR-3

Docket No. W-01303A-05-0405

Paradise Valley
Final Cost of Equity Estimates
Sample Water Utilities

Schedule DRR-2

[A]	[B]		[C]		[D]		[E]
DCF Method			D_1/P_0 [1]	+	g [2]	=	**k**
Constant Growth DCF Estimate			2.8%	+	6.9%	=	9.7%
Multi-Stage DCF Estimate						=	9.4%
Average of DCF Estimates							**9.6%**
CAPM Method	**Rf**	+	β [5]	x	**(Rp)**	=	**k**
Historical Market Risk Premium [3]	4.6%	+	0.71	x	**7.2%** [6]	=	9.7%
Current Market Risk Premium [4]	4.8%	+	0.71	x	7.6% [7]	=	10.2%
Average of CAPM Estimates							**10.0%**
					Average		**9.8%**
					Capital Structure Adjustment		0.6%
					Total		**10.4%**

1 MSN Money and Value Line

2 DRR-7

3 Wall Street Journal (Rf) 5, 7, and 10 year Treasury rates

4 Wall Street Journal (Rf) 30 Year Treasury bond rate

5 Value Line

6 Historical Market Risk Premium (Rp) from Ibbotson Associates SBBI 2005 Yearbook

7 Testimony

Paradise Valley
Average Capital Structure of Sample Water Utilities

[A]	[B]	[C]	[D]
Company	Debt	Common Equity	Total
American States Water	50.6%	49.4%	100.0%
California Water	47.1%	52.9%	100.0%
Aqua America	55.8%	44.2%	100.0%
Connecticut Water	44.0%	56.0%	100.0%
Middlesex Water	61.2%	38.8%	100.0%
SJW Corp	46.6%	53.4%	100.0%
Average Sample Water Utilities	**50.9%**	**49.1%**	**100.0%**
Paradise Valley	**63.3%**	**36.7%**	**100.0%**

Sources:
Sample Water Companies from Value Line
Paradise Valley from Company application Schedule D-1

Paradise Valley
Growth in Earnings and Dividends
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]
Company	Dividends Per Share 1994 to 2004 DPS[1]	Dividends Per Share Projected DPS[1]	Earnings Per Share 1994 to 2004 EPS[1]	Earnings Per Share Projected EPS[1]
American States Water	1.1%	1.9%	1.0%	18.9%
California Water	1.3%	2.3%	1.8%	10.2%
Aqua America	5.8%	9.7%	9.3%	13.3%
Connecticut Water	1.4%	No Projection	2.3%	No Projection
Middlesex Water	2.3%	No Projection	0.9%	No Projection
SJW Corp	3.8%	No Projection	5.5%	No Projection
Average Sample Water Utilities	**2.6%**	**4.7%**	**3.5%**	**14.1%**

1 Value Line

Paradise Valley
Sustainable Growth
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]
Company	Retention Growth **1995 to 2004** br	Retention Growth Projected br	Stock Financing Growth vs	Sustainable Growth **1995 to 2004** br + vs	Sustainable Growth Projected br + vs
American States Water	2.5%	6.7%	1.4%	3.9%	8.1%
California Water	2.5%	4.8%	2.7%	5.2%	7.4%
Aqua America	4.4%	7.6%	7.4%	11.8%	15.0%
Connecticut Water	3.0%	No Projection	0.5%	3.5%	No Projection
Middlesex Water	1.4%	No Projection	4.9%	6.3%	No Projection
SJW Corp	5.0%	No Projection	0.0%	5.0%	No Projection
Average Sample Water Utilities	**3.1%**	**6.4%**	**2.8%**	**6.0%**	**10.2%**

[B]: Value Line
[C]: Value Line
[D]: Value Line and MSN Money
[E]: [B]+[D]
[F]: [C]+[D]

Paradise Valley
Selected Financial Data of Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]
Company	Symbol	Spot Price 11/2/2005	Book Value	Mkt To Book	*Value Line* Beta β	Raw Beta β *raw*
American States Water	AWR	**31.99**	15.23	2.1	**0.70**	0.52
California Water	CWT	**36.91**	16.02	2.3	**0.75**	0.60
Aqua America	WTR	**33.75**	8.33	4.1	**0.80**	0.67
Connecticut Water	CTWS	**25.50**	11.20	2.3	**0.70**	0.52
Middlesex Water	MSEX	**21.24**	8.20	2.6	**0.70**	0.52
SJW Corp	SJW	**49.25**	19.82	2.5	**0.60**	0.37
Average				**2.6**	**0.71**	**0.53**

[C]: Msn Money

[D]: Value Line

[E]: [C] / [D]

[F]: Value Line

[G]: -0.35 + [F] / 0.67

Paradise Valley
Calculation of Expected Infinite Annual Growth in Dividends
Sample Water Utilities

[A]	[B]
Description	g
DPS Growth - Historical[1]	2.6%
DPS Growth - Projected[1]	4.7%
EPS Growth - Historical[1]	3.5%
EPS Growth - Projected[1]	14.1%
Sustainable Growth - Historical[2]	6.0%
Sustainable Growth - Projected[2]	10.2%
Average	**6.9%**

1 Schedule DRR-4

2 Schedule DRR-5

Paradise Valley
Multi-Stage DCF Estimates
Sample Water Utilities

[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		1	2				
Company	Current Mkt. Price (P_o)[1] 11/2/2005	Projected Dividends[2] (Stage 1 growth) (D_t) d_1	d_2	d_3	d_4	Stage 2 growth[3] (g_n)	Equity Cost Estimate (K)[4]
American States Water	32.0	0.96	0.98	0.99	1.01	6.8%	9.4%
California Water	36.9	1.20	1.22	1.25	1.28	6.8%	9.6%
Aqua America	33.8	0.58	0.63	0.67	0.72	6.8%	8.5%
Connecticut Water	25.5	0.87	0.90	0.93	0.97	6.8%	9.9%
Middlesex Water	21.2	0.72	0.75	0.77	0.80	6.8%	9.9%
SJW Corp	49.3	1.13	1.17	1.21	1.26	6.8%	8.9%

Average **9.4%**

$$P_0 = \sum_{t=1}^{n} \frac{D_t}{(1+K)^t} + \frac{D_n(1+g_n)}{K-g_n}\left[\frac{1}{(1+K)}\right]^n$$

Where : P_0 = current stock price
D_t = dividends expected during stage 1
K = cost of equity
n = years of non – constant growth
D_n = dividend expected in year n
g_n = constant rate of growth expected after year n

CHELUS

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF ARIZONA-AMERICAN WATER COMPANY, INC., AN ARIZONA CORPORATION, FOR A DETERMINATION OF THE CURRENT FAIR VALUE OF ITS UTILITY PLANT AND PROPERTY AND FOR INCREASES IN ITS RATES AND CHARGES BASED THEREON FOR UTILITY SERVICE BY ITS PARADISE VALLEY DISTRICT	)	DOCKET NO. W-01303A-05-0405

DIRECT TESTIMONY

OF

JOHN A. CHELUS

UTILITIES ENGINEER

UTILITIES DIVISION

Arizona Corporation Commission

January 16, 2006

TABLE OF CONTENTS

SCHEDULES

SUMMARY OF DIRECT TESTIMONY
OF JOHN A. CHELUS
ARIZONA-AMERICAN WATER COMPANY, INC.
PARADISE VALLEY DISTRICT
DOCKET NO. W-01303A-05-0405

CONCLUSIONS

1. The Paradise Valley Water District has a non-account water loss of 9.89 percent. This level is acceptable in this rate proceeding. (See Section C, Page 6 of Schedule JAC-1)

2. The most recent lab analysis for the Paradise Valley Water District indicates that six of the seven wells have Arsenic levels at or above 10 ppb. The Company is currently constructing arsenic removal equipment to achieve the new arsenic level of 10 parts per billon. (See Section E, Page 7 of Schedule JAC-1)

3. The Paradise Valley Water District is located within the Phoenix Active Management Area ("AMA") and is in compliance with the AMA's reporting and conservation requirements.

4. The Paradise Valley Water District has no outstanding Arizona Corporation Commission compliance issues.

5. The Paradise Valley Water District has a Curtailment Tariff on File with the Utilities Division.

6. Based on data submitted by the Maricopa County Environmental Services Department (MCESD), MCESD has determined that the Paradise Valley Water District is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

RECOMMENDATIONS

1. It is recommended that the Paradise Valley Water District continue to use depreciation rates as delineated in Exhibit 4 of Schedule JAC-1.

2. The findings of the field audit support the use, without adjustment, of the total post test year plant of $3,018,867 as delineated in the table in Section J.3, Page 7. However, this "used and useful" determination does not imply a specific treatment for rate base or rate making purposes. The direct testimony of Mr. Darron Carlson will discuss the post test year rate base and rate making treatment in this case.

3. Staff recommends the use of the Company's Cost of Service Study in this proceeding.

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is John A. Chelus. My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

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

A. I am employed by the Arizona Corporation Commission ("Commission") as a Utilities Engineer - Water/Wastewater for the Utilities Division

Q. How long have you been employed by the Commission?

A. I have been employed by the Commission since September 1990.

Q. What are your responsibilities as a Utilities Engineer - Water/Wastewater?

A. I inspect, investigate, and evaluate water and wastewater systems; obtain data, prepare investigative reports; suggest corrective action and provide technical recommendations on water and wastewater system deficiencies; and provide written and oral testimony on rate and other cases before the Commission.

Q. How many companies have you analyzed for the Utilities Division?

A. I have analyzed approximately 200 companies in various capacities for the Utilities Division.

Q. Have you previously testified before this Commission?

A. Yes, I have.

Q. What is your educational background?

A. I graduated from the Rochester Institute of Technology in 1976 with a Bachelors Degree in Civil Engineering and from Oklahoma State University in 1978 with a Masters Degree in Environmental Engineering.

Q. Briefly describe your pertinent work experience.

A. I worked for the Dallas Water Utilities as an engineer in the Wastewater Division, and then in the Engineering Design Division from 1978 to 1981. I moved to Grand Junction, Colorado and worked for Multi Mineral Corporation as a research engineer until 1982. After this I worked for Westwater Engineering Consultants as a design engineer. In 1983, I was employed by Sauter Construction as a construction engineer for the construction of the Ute Water Treatment facilities in Palisade, Colorado. In 1984 and 1985, I was employed by the City of Grand Junction as a Grade IV wastewater operator at their 12 million gallon per day activated sludge treatment facility. In 1986, I moved to Phoenix and began working for the Arizona Department of Environmental Quality ("ADEQ"), Office of Water Quality, as a design review engineer, and then as a field engineer. I stayed at ADEQ until transferring to the Commission in 1990.

II. PURPOSE OF TESTIMONY

Q. What was your assignment in this rate proceeding?

A. My assignment was to provide engineering evaluations of the Arizona-American Water Company, Inc. ("Az-Am") – Paradise Valley District operations.

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

A. To present the Utilities Division Staff's ("Staff") engineering evaluations of the Az-Am – Paradise Valley Water District operations. Those findings are contained in Staff's

Engineering Report which I have prepared for this proceeding. The report is included as Schedules JAC-1 in this direct testimony.

ENGINEERING REPORTS

Q. Would you briefly describe what was involved in preparing the Engineering Reports for the water operations in this rate proceeding?

A. After reviewing Az-Am's Paradise Valley Water District rate application, I physically inspected the water system to evaluate its operations and to determine which plant items were or were not used and useful. I contacted the Maricopa County Environmental Services Department ("MCESD"), Arizona Department of Water Resources ("ADWR") and the Commission's Compliance Section Unit to determine if the Az-Am Paradise Valley District was in compliance with ADEQ, MCESD, ADWR and Commission regulations. I obtained information from Az-Am regarding water usage, water testing, growth, depreciation rates and post-test year plant and analyzed that information. Based on this data, I prepared Staff's Engineering Report.

Q. Does Schedule JAC-1 accurately describe the Az-Am Paradise Valley District as you found it during your investigation?

A. Yes, to the best of my knowledge.

CONCLUSIONS AND RECOMMENDATIONS

Q. Based on your investigation and evaluation, does Staff have any recommendations?

A. Yes.

Q. Please summarize Staff's findings and recommendations for the Paradise Valley Water District contained in Engineering Report JAC-1.

A. Based on Staff's engineering evaluations of the Az-Am – Paradise Valley District operations, Staff concludes and recommends that:

Paradise Valley Water District

CONCLUSIONS

1. The Paradise Valley Water District has a non-account water loss of 9.89 percent. This level is acceptable in this rate proceeding. (See Section C, Page 6 of Schedule JAC-1)

2. The most recent lab analysis for the Paradise Valley Water District indicates that six of the seven wells have Arsenic levels at or above 10 ppb. The Company is currently constructing arsenic removal equipment to achieve the new arsenic level of 10 parts per billon. (See Section E, Page 7 of Schedule JAC-1)

3. The Paradise Valley Water District is located within the Phoenix Active Management Area ("AMA") and is in compliance with the AMA's reporting and conservation requirements.

4. The Paradise Valley Water District has no outstanding Arizona Corporation Commission compliance issues.

5. The Paradise Valley Water District has a Curtailment Tariff on File with the Utilities Division.

6. Based on data submitted by the Maricopa County Environmental Services Department (MCESD), MCESD has determined that the Paradise Valley Water District is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

RECOMMENDATIONS

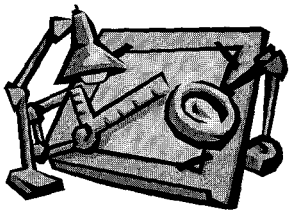
1. It is recommended that the Paradise Valley Water District continue to use depreciation rates as delineated in Exhibit 4 of Schedule JAC-1.

2. The findings of the field audit support the use, without adjustment, of the total post test year plant of $3,018,867 as delineated in the table in Section J.3, Page 7. However, this "used and useful" determination does not imply a specific treatment for rate base or rate making purposes. The direct testimony of Mr. Darron Carlson will discuss the post test year rate base and rate making treatment in this case.

3. Staff recommends the use of the Company's Cost of Service Study in this proceeding.

Q. Does this conclude your direct testimony?

A. Yes, it does.



Engineering Report for Arizona-American Paradise Valley District (Rates)

Docket No. W-1303A-05-0405

By John A. Chelus

January 16, 2006

TABLE OF CONTENTS

EXHIBITS

A. LOCATION OF COMPANY

Arizona-American Paradise Valley District ("Paradise Valley or Company") is located in Maricopa County. It serves approximately half of the Town of Paradise Valley and portions of the City of Scottsdale. The remainder of the Town of Paradise Valley is served by the City of Phoenix and Berneil Water Company. Exhibit 1 describes the location of the Company within Maricopa County, and Exhibit 2 describes the certificated area of the water company within Maricopa County.

B. DESCRIPTION OF THE WATER SYSTEM

Water is supplied from six Company wells located on the eastern edge of the service area. A seventh well, PCX-1 is operated through an agreement with the owner of the well, Salt River Project ("SRP"). The Company treats the water from PCX-1 at its Miller Road Treatment Facility ("MRTF"). All costs for PCX-1 are paid by Motorola. The Company's wells range in depth from 1,000 to 1,740 feet and have flow rates from 1,900 to 2,500 gallons per minute ("GPM"). The distribution system, which covers about 8.5 square miles, consists of approximately 116 miles of mains ranging in size from two to 24-inches in diameter. The system has nine pressure zones due to the varying elevations in the service area. The combined capacity of the thirteen ground storage tanks is 2.174 million gallons. Chlorination for disinfection is the only form of chemical addition. Fire protection is provided by 530 hydrants.

Water from Well No. 16 is treated with chlorine and pumped directly into the distribution system. Well Nos. 11, 12 and 17 pump to the Miller Road Booster Station ("MRBS"). Water is chlorinated and stored at this site. Distribution pumps deliver the water to the distribution system. Water from Well Nos. 14, 15 and PCX-1 is pumped to the MRTF located adjacent to Well No. 15 before being delivered to the distribution system. This facility consists of packed column aeration stripping towers for trichloroethylene ("TCE") removal and chlorine addition for disinfection. Water is pumped from here into the distribution system.

At present, water from both the PCX-1 and Well No. 15 is flowing through the stripping towers. When TCE is detected in Well No. 14, it will also be pumped through the stripping towers to remove TCE.

The MRBS is equipped with a series of storage tanks which allow sand and other sediment to settle out of the well supplies before being pumped into the distribution system. The MRBS is also used to blend water from Well No. 17 with water from Wells No. 11 and 12 so that the level of water with excess nitrate falls below the Maximum Contaminant Level ("MCL")

The Company is in the process of upgrading its distribution and pumping system to meet new requirements for fire flow in the areas that it serves. The Company is also building an arsenic removal facility that will be used to meet the new 10 microgram per liter (10µg/l) Environmental Protection Agency ("EPA") standard.

The plant facilities were visited on October 6, 2005, by John A. Chelus, Utilities Engineer, in the accompaniment of Rob Antoniak, Community Relations Manager, Steve Lutringer, Network Supervisor, and Richard Moore, Production Superintendent. Richard Barnes, Construction Superintendent, provided a tour of the arsenic removal facilities. The following details the physical plant of the Company.

Wells

	Well No. 11	**Well No. 12**	**Well No. 14**
ADWR Number	55-624805	55-624806	55-624807
Location Number	A(2-4)11dcb	A(2-4)11dbc	A(2-4)11dcc
Year Drilled	1959	1962	1964/65
Pump Horsepower	Turbine 300	Turbine 300	Submersible 400
Well Yield (gpm)	1,800	1,800	2,100
Casing Size	20"-16"	24"-20"	20"-8"
Casing Depth	1,396	1,301	1,743
Static Water Level	334 ft.	395 ft.	343 ft.
Meter Size	*MRBS	20" Sparling	10 " Sensus

* Flow measured at Miller Road Booster Station

	Well No. 15	**Well No. 16**	**Well No. 17**	**PCX-1**
ADWR Number	55-624808	55-624809	55-537967	---------
Location No.	A(2-4)14abc	A(2-4)11dbb	A(2-4)bdd	--------
Year Drilled	1968/69	1980	1993	1996
Pump HP	Submersible 400	Turbine 600	Submersible 600	Submersible 600
Well Yield	2,100	2,200	1,500	2,300
Casing Size	20"-18"-16"	18"	20"	20"-16"
Casing Depth	1,430	1,500	1,100	1,245
Meter Size	10" Sensus	12" Sparling	8" Sparling	----------

Distribution Pumps

Location	Quantity	Horsepower
Miller Road Treatment Facility	3	300

Pressure Tanks

Location	Quantity	Size (Gallons)
Glenn Drive	1	500
Clearwater No. 3 (Highcliff Drive)	1	500

Storage Tanks

Location	Capacity (Gallons)	Pressure Zone
Clearwater Hills #3	22,148	Clearwater Hills 3

Club Estates	31,600	Club Estates
Stone Canyon	94,476	Stone Canyon
Racquet Club	102,313	Stone Canyon
Clearwater Hills #1	102,787	Clearwater Hills #1
Clearwater Hills #2	103,249	Clearwater hills #1
Miller Road #1	151,524	Main
Miller Road Sand Trap	192,228	Main
60th Street	203,407	Main
Miller Road #2	358,837	Main
Country Club #2	360,880	Country Club
Miller Road Treatment Facility	485,000	
Country Club #1	508,800	Country Club
Total Capacity (Gallons)	2,717,249	

Booster Pumps

Location	Quantity	Horsepower
Glenn Drive	3	1-1/2
Clearwater Hills #3 (Highcliff)	2	3
Clearwater Hills #2 (Silvercrest)	2	10
Club Estates	2	10
Country Club	4	30
Stone Canyon	2	40
Clear Water Hills #1	3	60
Miller Road	2	100
Miller Road	1	150
Miller Road	1	300
Las Brisas	3	7.5,15,30
Total	25	

Meters

Size	Quantity
5/8 x ¾ "	2,432
¾"	17
1"	1,974
1 ½"	32
2 "	257
Comp. 3"	13
Comp. 4"	1
Comp. 6"	5
Total	4,731

Distribution Mains

Size	Material	Length (feet)
2"	Various	8,599
2 ½ "	Various	1,149
3"	Various	392
4"	Various	107,326
6"	Various	273,679
8"	Various	127,071
10"	Various	3,018
12"	Various	54,446
16"	Various	28,344
20"	Various	409
24"	Various	10,200
	Total	614,633

Fire Hydrants

Quantity	530

Other Plant Facilities and Equipment

Description	Location
Paradise Valley Country Club Lake Manifold	Desert Fairways Drive & Arroyo Road

TREATMENT EQUIPMENT:

Air Stripping Facility for TCE removal
Sodium Hypochlorite disinfection

C. WATER USE

Water Sold & Non-Account Water

The Company provided water production and water consumption data for the 2004 test year. Because of the way water production and consumption data is collected and processed, there is a lag of one month in billing between production and consumption numbers that makes it difficult to do a monthly analysis of water usage. An analysis based on a quarterly or yearly average is more accurate. Based on the information provided by the Company, water use for the year 2004 totaled 3,165,233,000 gallons. During the same period, the Company reported producing 3,512,659,000 gallons. This resulted in a water loss of 9.89%. This 9.89% is acceptable to Staff.

System Analysis

The water system's current well capacity of 14,800 GPM and storage capacity of 2,207,000 gallons is adequate to serve the 4,700 connections. This does not mean that the Company should not add additional wells and storage to the system in the future, if necessary, to allow for improved reliability, aquifer recovery and maintenance down time.

D. GROWTH

The Company reported that the Paradise Valley District averaged 4,675 customers during the 2004 test year. This compares with an average of 4,685 customers per month in 2002. This indicates that there has been no net growth over the two year time period.

E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) COMPLIANCE

Compliance

Based on data submitted by Maricopa County Environmental Services Department ("MCESD"), MCESD has determined that the Paradise Valley Water District, PWS # 04-07-056, is currently delivering water that meets the water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.

Arsenic

The U.S. Environmental Protection Agency has reduced the arsenic maximum contaminant level ("MCL") in drinking water from 50 parts per billion ("ppb") to 10 ppb. The date for compliance with the new MCL is January 23, 2006.

The most recent lab analysis for the Paradise Valley Water District wells is shown in the following table. Six of the seven wells have Arsenic levels at or above 10 ppb.

Well ID	Arsenic Concentration µg/l
11	18
12	13
14	12
15	14
16	18
17	10
PCX-1	9

The Company completed an arsenic evaluation of all wells, performed cost analysis studies, and determined that a centralized treatment facility using ferric chloride coagulation/filtration ("CF") would be the most cost effective alternative. The treatment facility is under construction on an 11.5 acre site currently being used for the Miller Road booster station and a number of the Paradise Valley wells.

It is estimated that the arsenic removal facility will be on-line by the fall of 2006. The cost of the facilities is estimated to be approximately $17.44 million which excludes engineering, permits, and allowance for funds used during construction ("AFUDC")

Paradise Valley Water District is requesting approval of an arsenic recovery mechanism ("ACRM") as a way to pay for the capital improvements and operating costs associated with arsenic removal.

F. ARIZONA DEPARTMENT OF WATER RESOURCES (ADWR) COMPLIANCE

The Paradise Valley Water District is within the Phoenix Active Management Area (AMA), and consequently is subject to reporting and conservation rules (GPCD requirements). The Phoenix AMA reported that the Paradise Valley Water District is in total compliance with the ADWR reporting and conservation rules.

G. ARIZONA CORPORATION COMMISSION COMPLIANCE

A check with the Utilities Division Compliance Section showed no outstanding compliance issues for the Paradise Valley Water District.

H. RECONSTRUCTION COST NEW ("RCN") EVALUATION

The Company did not perform an RCN evaluation in this case.

I. DEPRECIATION RATES

The Paradise Valley Water District is using depreciation rates which it has developed. These depreciation rates are delineated in Exhibit 6.

J. OTHER ISSUES

1. Curtailment Plan Tariff

Arizona American has an approved curtailment tariff on file which applies to all service areas, including the Paradise Valley Water District.

2. Cost of Service

The Company performed a cost of service study using the commodity demand method. It followed the same methodology used by Commission Staff in previous rate cases. Staff's plant in service and expenses are relatively close in magnitude with the Company's, and the differences should not materially affect the outcome of the cost of service study.

It should also be emphasized that a cost of service study is only one of many factors considered in rate design and revenue requirements. For Paradise Valley Water District, conservation requirements may contribute more significantly to rate design. Staff recommends the use of the Company's Cost of Service Study.

3. Paradise Valley Fire Flow Improvement Program – Post Test Year Plant

The Paradise Valley Water District has been cooperating with the Town of Paradise Valley in upgrading its water distribution and pumping system in order to provide improved fire flow and add more hydrants. The Company filed a request for approval of a public safety surcharge ("PSS") in this proceeding.

During the inspection of the Paradise Valley Water District on October 6, 2005, Staff requested the Company to identify any improvements which have been completed relating to the Paradise Valley Fire flow Improvement Project. The Company took Staff to the areas where the transmission and distribution mains have been installed and put in operation after the test year. Several new fire hydrants were pointed out. It was not practical to visit all of the new hydrants that have been installed.

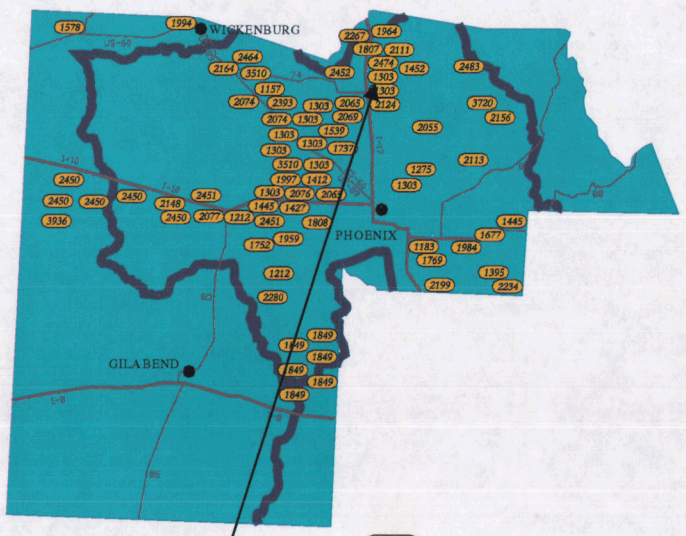
The findings of the field audit support the use, without adjustment, of the total post test year plant shown in the table below of $3,018,867. However, this "used and useful" determination does not imply a specific treatment for rate base or rate making purposes. The direct testimony of Mr. Darron Carlson will discuss the post test year rate base and rate making treatment in this case.

Post Test Year Plant Related to Fire Flow Improvement Project

Account	Project Description	Additions	Retirements	Net Additions
331.3	Jackrabbit/Invergordon Main	$2,050,115	$6,662	$2,043,453
331.3	McDonald Main Extension	747,570	2,221	745,350
335	Fire Hydrants	235,204	5,140	230,064
	Totals	**$3,032,889**	**$14,023**	**$3,018,867**

Exhibit 1

MARICOPA COUNTY



1997	ADAMAN MUTUAL WATER COMPANY
1578	AGUILA WATER SERVICES, INC.
2077	ALLENVILLE WATER COMPANY, INC.
1303	ARIZONA-AMERICAN WATER COMPANY
1445	ARIZONA WATER COMPANY
2074	BEARDSLEY WATER COMPANY, INC.
1275	BERNEIL WATER COMPANY
1964	BLACK CANYON RETREAT WATER COMPANY
1994	CABALLEROS WATER COMPANY, INC.
1452	CAVE CREEK WATER COMPANY
2113	CHAPARRAL CITY WATER COMPANY
2393	CHAPARRAL WATER COMPANY
3510	CIRCLE CITY WATER COMPANY L.L.C.
1752	CLEARWATER UTILITIES COMPANY, INC.
1984	DAIRYLAND WATER CORPORATION
2124	DESERT HILLS WATER COMPANY, INC.
3936	EAGLETAIL WATER COMPANY LC
1959	GRANDVIEW WATER COMPANY, INC.
2234	H2O, INC.
2055	JAMES P. PAUL WATER COMPANY
1769	KYRENE WATER COMPANY
2452	LAKE PLEASANT WATER COMPANY
1427	LITCHFIELD PARK SERVICE COMPANY
2267	MCADAMS WATER COMPANY
1849	MOBILE WATER COMPANY
2164	MORRISTOWN WATER COMPANY
1737	NEW RIVER UTILITY COMPANY
2199	PIMA UTILITY COMPANY
2464	PUESTA DEL SOL WATER COMPANY
1395	QUEEN CREEK WATER COMPANY
1808	RIGBY WATER COMPANY
2156	RIO VERDE UTILITIES, INC.
1539	ROSE VALLEY WATER COMPANY
2111	SABROSA WATER COMPANY
1183	SENDE VISTA WATER COMPANY, INC.
2474	SHANGRI-LA ASSOCIATES, INC.
2280	SOUTH RAINBOW VALLEY WATER COOPERATIVE
2069	SUNRISE WATER COMPANY, INC.
2076	TIERRA BUENA WATER COMPANY
2483	TONTO HILLS UTILITY COMPANY
1677	TURNER RANCHES WATER & SANITATION COMPANY
1212	VALENCIA WATER COMPANY
1412	VALLEY UTILITIES WATER COMPANY, INC.
2148	VALLEY VIEW WATER COMPANY, INC.
2451	WATER UTILITY OF GREATER BUCKEYE, INC.
2450	WATER UTILITY OF GREATER TONOPAH, INC.
3720	WATER UTILITY OF NORTHERN SCOTTSDALE, INC.
1157	WEST END WATER COMPANY
2065	WILHOIT WATER COMPANY, INC.
1807	WRANGLERS ROOST WATER COMPANY

Exhibit 2
Arizona American - Paradise Valley Water District

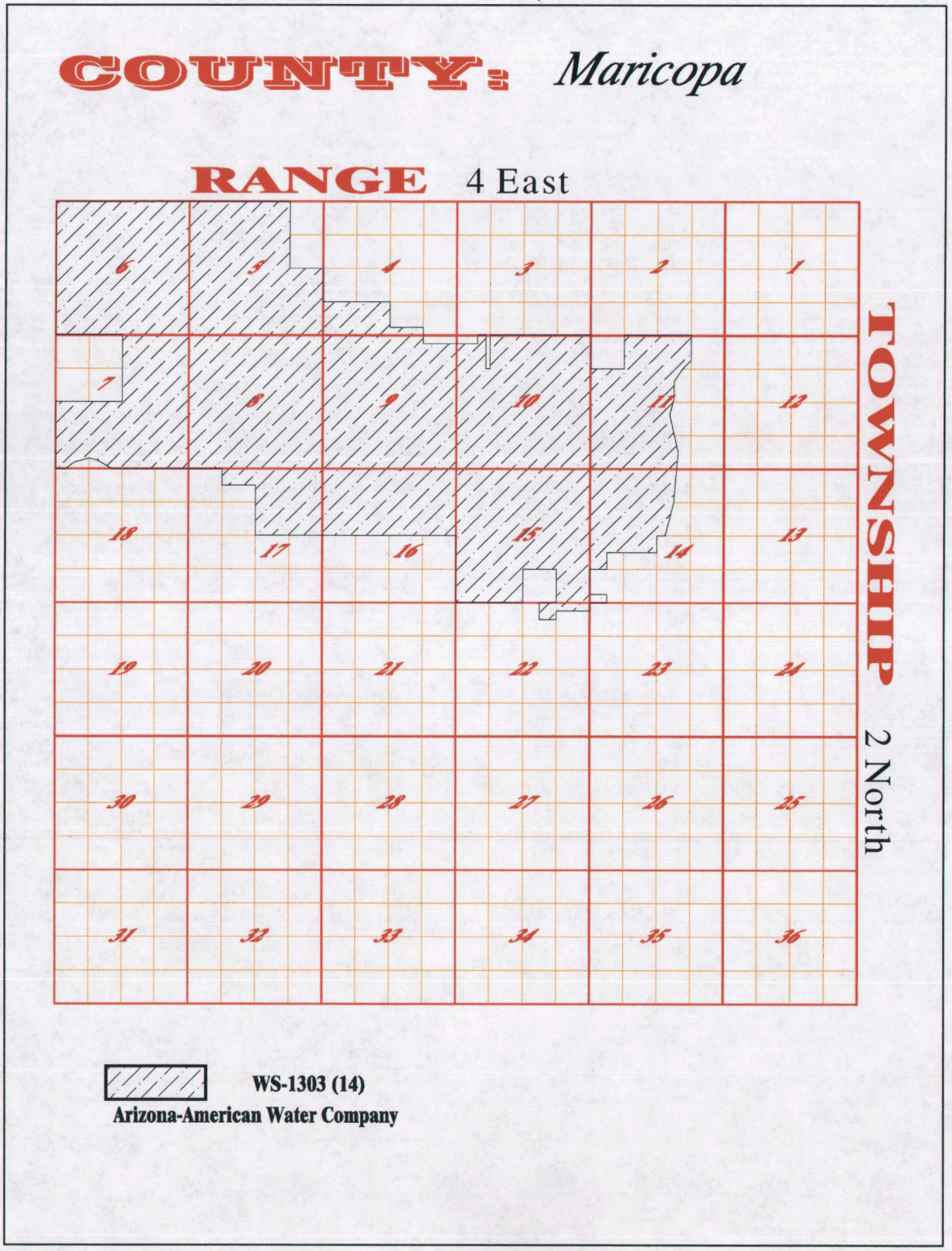
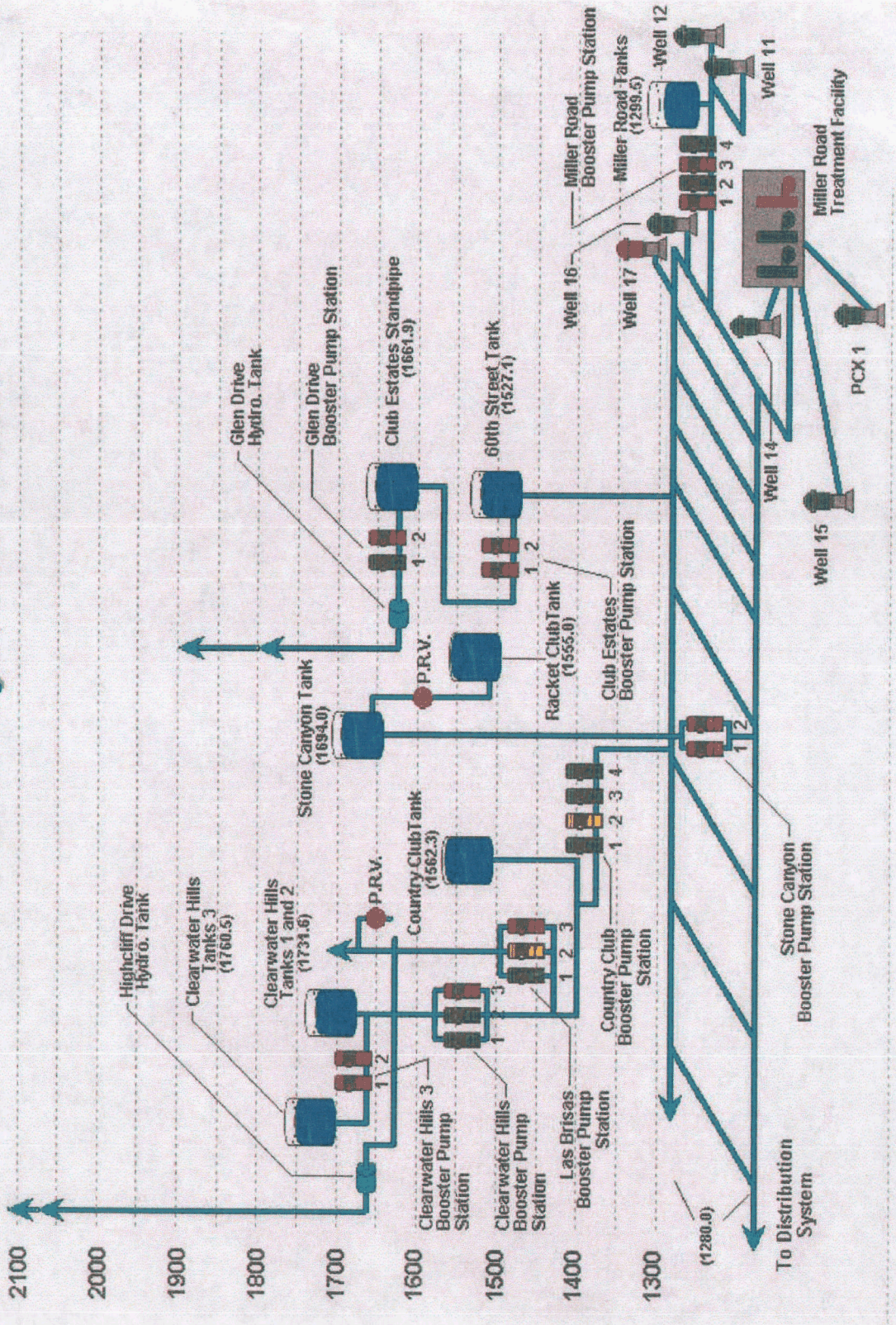


Exhibit 3



Paradise Valley Water District – Plant Schematic

Exhibit 4. Depreciation Rates for Paradise Valley Water District

NARUC Account Number	Plant Description	Depreciation Rate
304.1	SS Structures and Improvements	14.59%
304.2	Pumping Structures and Improvements	3.99%
304.3	WT Structures and Improvements	2.00%
304.4	Grit Removal Equipment	1.50%
307	Wells and Springs	2.48%
311.2	Electric Pumping Equipment	4.39%
311.3	Diesel Pumping Equipment	4.39%
320	Water Treatment Equipment	7.06%
330	Dist. Reservoirs and Standpipes	3.15%
331.1	Transmission & Distribution Mains 4" & less	4.17%
331.2	Transmission & Distribution Mains 6"-8"	2.52%
331.3	Transmission & Distribution Mains 10" or more	2.34%
333	Services	4.72%
334	Meters	7.21%
334	Meter Installations	1.51%
335	Hydrants	2.10%
340.1	Office Furniture	4.04%
340.2	Computers and Peripherals	15.89%
340.3	Computer Software	37.71%
340.5	Other Office Equipment	7.13%
341.1	Transportation Equipment – Light Trucks	28.05%
341.3	Transportation Equipment – Automobiles	7.80%
341.4	Transportation Equipment – Others	0.93%
343	Tools, Shop, and Garage Equipment	3.61%
345	Power Operated Equipment	4.64%
346	Communication Equipment	9.76%
346.3	Communication Equipment – Other	7.91%
	Allocated Plant/Corporate	4.29%