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BEFORE THE ARIZONA CORPORATION COMMISSION

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

IN THE MATTER OF THE APPLICATION OF
 ARIZONA WATER COMPANY, AN ARIZONA
 CORPORATION, FOR ADJUSTMENTS TO ITS
 RATES AND CHARGES FOR UTILITY SERVICE
 FURNISHED BY ITS EASTERN GROUP AND FOR
 CERTAIN RELATED APPROVAL

DOCKET NO. W-01445A-02-0619

STAFF'S CLOSING BRIEF

NON-CONFIDENTIAL VERSION

Arizona Corporation Commission
DOCKETED

OCT 31 2003

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1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

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STAFF'S CLOSING BRIEF

15 **I. INTRODUCTION.**

16 Pursuant to Judge Nodes' instructions, Staff's Closing Brief addresses all issues in dispute. In
17 Staff's view, these issues are: (1) Staff's proposed ratemaking treatment relating to the "PCG"
18 settlement, which grants the benefits of the settlement to the ratepayers of Miami, who suffered the
19 harm and paid for fixing it; (2) Arizona Water Company's ("Company" or "AWC") attempt to
20 change the CAP amortization rate authorized by this Commission; (3) the calculation of a working
21 capital allowance, which includes Staff's proposal to properly reflect recent changes to the way the
22 Arizona Department of Revenue ("ADOR") calculates utility property tax; (4) the Company's
23 exorbitant request for rate case expense, which is substantially above the amounts allowed in the
24 Company's prior rate cases; (5) the Company's request for numerous adjustors which would be
25 unprecedented for a water company in this state and which would violate accepted ratemaking
26 principles governing adjustors; (6) the Company's refusal to match the level of Accumulated
27 Depreciation with its adjustments to plant, thereby artificially inflating rate base; (7) the Company's
28 premature proposal to partially consolidate the rates for Apache Junction and Superior before these
systems are actually interconnected; (8) Staff's proposed three-tiered rate design, which is consistent
with the recent practice of this Commission, the goal of water conservation, and sound, long-accepted

1 economic theory regarding marginal costs; (9) the Company's attempt to artificially inflate the cost of
2 equity by adding an unjustified and unprecedented risk premium, by failing to account for its low
3 risk, and by manipulating its sample of companies; (10) Staff's proposal to use the Company's actual,
4 going-forward cost of debt as the cost of debt in this case; (11) Staff's proposal to monitor and reduce
5 water loss, which is consistent with sound engineering practice and the Company's own prior
6 practice; (12) Staff's proposed amendments to the NP-260 tariff, which were based on the unjust
7 situation revealed by the *SLV Properties v. Arizona Water* case. Additionally, methods for revenue
8 annualization and CIAC amortization are in dispute.

9 ***** START CONFIDENTIAL *****

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2 **III. THERE IS NO REASON TO CHANGE THE CURRENT CAP AMORTIZATION**
3 **RATE.**

4 The Company seeks to dramatically shorten the currently authorized amortization period for
5 CAP M&I charges from 44 years to 3 years. (Tr. at 419). Company witness Hubbard testified that
6 the Company currently uses a 44 year amortization period for its pre-1991 CAP M&I charges. *Id.* at
7 442. This amortization period was mandated by the Commission in the Company's 1992 rate case.
8 *Id.* at 448-49. The 44 year period was based on the then-remaining life of the Company's CAP sub-
9 contract. (Ex. S-26). The Company proposes a much shorter period for CAP M&I charges incurred
10 from 1991. The Company denies that there is a "future benefit" to the CAP M&I payments. (Tr. at
11 442). Ms. Hubbard based her conclusion on her interpretation of the Company's CAP sub-contract
12 but she was unable to "interpret all of the clauses to that contract" including the key clause. *Id.* at
13 445-48. Mr. Kennedy clarified that under the terms of Company's CAP sub-contract, the Company
14 will lose its future access to CAP M&I water if it does not pay the CAP M&I charges. (Tr. at 519-20;
15 *see also* Ex. S-28 at 22). Access to future CAP M&I water is obviously a future benefit. Mr.
16 Ludders testified that under Generally Accepted Accounting Principals ("GAAP") these charges
17 should be amortized over the life of the sub-contract because (1) deferred charges should be
18 amortized over the estimated benefit period and because (2) that is the currently authorized
19 amortization period. (Tr. at 1033-34; Ludders' Surrebuttal, Ex. S-46 at 4-5). Staff's approach is
20 consistent with both GAAP and the Commission's 1992 rate order, and should be adopted.

21 **IV. STAFF'S PROPOSED WORKING CAPITAL ALLOWANCE SHOULD BE**
22 **ADOPTED.**

23 Staff's working capital allowance was calculated using the leading reference book on the
24 subject by Mr. Dablestein. (Tr. at 1103). In contrast, the Company's witness Ms. Hubbard testified
25 that she did not use Mr. Dablestein's book even though she had a copy and recognizes Mr. Dablestein
26 as an authority on lead/lag studies. *Id.* at 438-39. Further, Ms. Hubbard testified that she had never
27 preformed a lead/lag study before and her only training was a seminar taught by Mr. Dablestein. *Id.*
28 at 496-98.

1 One of the principal areas of dispute was the treatment of deferred expenses and deferred
2 taxes in the lead/lag studies. Ms. Hubbard testified that she excluded deferred expenses and deferred
3 taxes from expense days but included them in revenue days. *Id.* at 438. Mr. Ludders testified that it
4 is “improper to include the depreciation expense and deferred tax figures in the revenue side of the
5 equation but remove them from the expense side” and that this causes a mismatch resulting in an
6 inflated amount of working capital. (Ludders’ Surrebuttal, Ex. S-46 at 4).

7 Another area of dispute was the proper number of lag days to attribute to property taxes.
8 Staff’s calculation is visually demonstrated on Exhibit S-48. (Tr. at 960-62). As Mr. Ludders
9 explained, the appropriate starting point is the time that the Company receives its valuation notice,
10 rather than the time that the Company receives its tax bill. Mr. Ludders used the analogy of a credit
11 card: you owe when you charge an item, even before you get the bill. *Id.* at 1012. Further, Staff’s
12 approach is consistent with the way the Company accounts for property taxes. As Mr. Ludders
13 demonstrated, the Company accrues property taxes on its books once it receives a valuation notice.
14 *Id.* at 963-64, 1016-17. Staff acknowledges that the Commission accepted the Company’s figure of
15 212 days in the recent Northern Group rate case. But, as Mr. Ludders testified, the Commission
16 likely assumed that the new Arizona Department of Revenue valuation methodology did not go into
17 effect until 2001 (after the test year in the Northern Group case). *Id.* at 1025-26. Further, Mr.
18 Ludders testified that Staff’s understanding of the ramifications of the new valuation methodology
19 has greatly increased since the Northern Group case, based in part on numerous conversations with
20 ADOR in the intervening time. *Id.* at 1104.

21 **V. RATE CASE EXPENSE.**

22 **A. The Company’s exorbitant rate case expense should be limited.**

23 Ms. Hubbard testified that the Company’s estimated rate case expense has “steadily
24 increased” over the course of this case, and currently stands at a hefty \$329,550. The Company’s rate
25 case expense in its 1990 rate case was a mere \$52,053.² And the Company’s rate case expense for its
26 recent Northern Group rate case was only \$217,000. *Id.* at 463. The Company has failed to justify
27

28 ² Not including non-recurring computer programming costs and adjusted for inflation. (Tr. at 1048).

1 the large increase in expense over the expenses in prior, comparable cases. The Company admits that
2 rate case expense is not a “blank check” and must be reviewed for prudence. *Id.* at 460. The
3 Company made heavy use of outside lawyers and consultants on this case when it had internal
4 resources it could have used to instead. For example, the Company’s in-house lawyer, Mr. Geake,
5 has been listed as a signatory on the Company’s pleadings, and he attended the entire hearing in this
6 case. But the Company did not make greater use of Mr. Geake, even though the Company’s
7 President Mr. Garfield admitted that Mr. Geake was experienced, skillful and qualified. *Id.* at 87-88.
8 Likewise, the Company retained an expensive, out-of-state cost of capital expert (Dr. Zepp) rather
9 than using Mr. Kennedy, who performed the Company’s 1992 cost of capital study. *Id.* at 460. Staff
10 is not suggesting that all – or even a majority – of these outside expenses be disallowed. But the
11 Commission should recognize that the Company could have used its considerable internal resources
12 to partially reduce the need for outside services. The Company also admits that some of the
13 increased costs are due to using Federal Express to send documents to Dr. Zepp rather than scanning
14 and then emailing the documents to him. *Id.* at 472. And some of the costs relate to the Company’s
15 fruitless opposition to Staff’s Motion to Continue *Id.* at 499-500, which would not have been
16 necessary if the Company had timely and completely responded to data requests regarding PCG
17 matters. As Mr. Ludders testified, the rate increases resulting from a rate case benefit the Company’s
18 shareholders, and the shareholders should bear some part of the costs of the rate case. *Id.* at 1049-50.

19 **B. The Company’s proposed rate case amortization period is inconsistent with both**
20 **its past practice and its stated intentions for the future.**

21 Ms. Hubbard acknowledges that the rate case expense amortization period should match the
22 period of time between rate cases. *Id.* at 464. But the Company’s proposed three year amortization
23 period matches neither the Company’s past intervals between rate cases nor its stated intent as to
24 when its next rate case will be filed. Prior to this case, the Company had rate cases that included the
25 Eastern Group in 1992 and 1986. *Id.* at 465. The interval between these two cases, and the interval
26 between the 1992 case and this one exceed Staff’s proposed five year amortization period. The
27 Company projects that its next rate case will be filed in 2007 using a 2006 test year – five years after
28 the 2001 test year in this case. *Id.* at 493, 499. Ms. Hubbard admits that the intervals between cases

1 – whether past or future – is no less than Staff’s proposed 5 years. *Id.* at 466. The Company’s
2 proposed three year amortization period is unsupported by any evidence and should be rejected.

3 **VI. THE COMPANY’S REQUEST FOR NUMEROUS ADJUSTOR MECHANISMS**
4 **VIOLATES RATEMAKING PRINCIPLES AND SHOULD BE REJECTED.**

5 The Company requests the approval of four adjustor mechanisms: a Purchased Water
6 Adjustor Mechanism (“PWAM”); a Purchased Power Adjustor Mechanism (“PPAM”); a MAP
7 adjustor; and an Arsenic Cost Recovery Mechanism (“ACRM”). (Tr. at 498-99). Ms. Hubbard is
8 unaware of any other water company in Arizona with so many adjustors. *Id.* at 499. Ms. Hubbard
9 agrees that not all expenses should have an adjustor mechanism. *Id.* at 452-53. But she has not
10 articulated any standard to determine which expenses should have adjustors and which should not.
11 Indeed, Ms. Hubbard is so indiscriminate in this regard that she recommends approval of a postage
12 stamp adjustor to guard against increases in the price of stamps. *Id.* at 459. This is plainly absurd.
13 As Mr. Ludders notes, expenses go up and down all the time because of price changes – this is simply
14 a normal risk of doing business. *Id.* at 1064-65.

15 Mr. Ludders articulates a carefully-designed and well-thought out standard for judging
16 proposed adjustors that is consistent with this Commission’s prior practice and ratemaking theory.
17 Mr. Ludders explains that adjustors should only be allowed when expenses are “. . . for the largest
18 single cost item and are highly volatile.” (Ludders’ Surrebuttal, Ex. S-46 at 7; Tr. at 1060). As Mr.
19 Ludders explains, the PWAM and PPAM fail this test. Arizona Water is the only water company in
20 Arizona that still has a PPAM, and its power costs are neither substantial nor volatile. (Ludders’
21 Direct, Ex. S-44 at 10; Ludders’ Surrebuttal, Ex. S-46 at 7; Tr. at 1101).

22 The Company’s PWAM only applies to its Superior and San Manuel systems. Purchased
23 water is an insignificant expense in Superior. (Tr. at 1061). The Company’s San Manuel system
24 purchases all of its water from the BHP mine. (Garfield Rebuttal, Ex. A-2 at 29). Mr. Garfield stated
25 that the Company previously explored purchasing BHP’s wells and thus securing its water supply in
26 San Manuel. (Tr. at 84-87). But Mr. Garfield stated that the Company has never made an offer to
27 buy the BHP wells and the Company has had no discussions with BHP in the last six months. *Id.*
28 Further, Mr. Garfield agreed that with the PWAM in place, the Company has less incentive to buy the

1 wells because it can simply pass any price increases along to its customers. *Id.* The Commission
2 should remove this perverse disincentive and encourage the Company to obtain a secure water supply
3 for San Manuel. Further, Mr. Ludders testified that he contacted authorities at BHP who assured him
4 that no price increases are planned for the next two years. *Id.* at 1062-63. Therefore, the Company's
5 San Manuel purchased water expense is not volatile, and an adjustor is thus inappropriate.

6 **VII. THE COMPANY'S PROPOSED LEVEL OF ACCUMULATED DEPRECIATION**
7 **DOES NOT MATCH ITS PLANT ADJUSTMENTS.**

8 Because the Company included a full year of post test year plant (to the end of 2002), Staff
9 updated the level to accumulated depreciation to the end of 2002.³ *Id.* at 985-86. This accounts for
10 the lion's share of the difference between the Company and Staff. (Tr. at 960; *see also* Ex. S-47 at
11 line 8). As Mr. Ludders explains, rate base is a measurement at a point in time. (Tr. at 986-87). If
12 post-test year plant is included, related accounts should be updated to match. *Id.* In other words, it
13 violates the matching principle to measure plant at one point in time but measure accumulated
14 depreciation at another point in time. *Id.* The Company recognized this when it recorded retirements
15 related to the post-test year plant through the end of 2002. *Id.* at 436-47.

16 **VIII. RATE DESIGN.**

17 **A. Rate Consolidation between Apache Junction and Superior is not warranted at**
18 **this time because the systems are not yet interconnected.**

19 The Company proposes that the Commission authorize a two-step rate consolidation between
20 Apache Junction and Superior, with the first step occurring in this case. Mr. Ludders testified that
21 when systems are not interconnected and have different costs of service, rate consolidation is
22 inappropriate and would result in "cross-subsidization among systems and results in unfair rates."
23 (Ludders Direct, Ex. S-44 at 34). The Company admits that the cost of service of these systems is
24 different and that no cost of service study has been done. (Tr. at 526, 529-30). Further, the Apache
25 Junction and Superior systems are not interconnected at this time. (Hammon Direct, Ex. S-51 at 11-

26
27 ³ Staff's reluctant acceptance of post-test year plant in this case does not reflect a change in Staff's
28 long-held view that post-test year plant is inappropriate. Indeed, the matching problems discussed
above demonstrate some of the difficulties that occur when post-test year plant is included.

1 12). The Company vaguely claims that savings will result from consolidation, but admits that any
2 savings “cannot be specifically identified and quantified.” (Tr. at 525-26).

3 **B. Staff’s proposed three-tiered rate design should be adopted.**

4 Staff proposes a three-tiered inverted block rate design to promote conservation and the
5 efficient use of a scarce and vital resource. Mr. Garfield admitted that water conservation is
6 important in Arizona and that water providers should play “some role” in conservation. *Id.* at 91-93.
7 Mr. Kennedy agreed, stating that conservation is an appropriate goal of rate design. *Id.* at 536-37.
8 The Company also agrees that inverted block rates are an appropriate part of a conservation plan. *Id.*
9 at 342. Other water companies use inverted block rates, including Arizona’s largest water company,
10 Arizona-American. *Id.* at 99-100, 103, 309. Further, many municipal providers, such as Mesa,
11 Scottsdale and Tucson use inverted block rates. *Id.* at 102-103. Mr. Garfield agreed that “there are
12 circumstances where it is appropriate for inverted rates.” *Id.* at 309.

13 Mr. Garfield states that the Company’s main concern was the lack of a cost of service study.
14 *Id.* at 310. But Mr. Kennedy agreed that in some circumstances it is appropriate to modify rates
15 without a cost of service study. *Id.* at 528. Further, Mr. Garfield was unaware of any circumstance
16 where the Commission has previously required a cost of service study before implementing inverted
17 block rates. *Id.* at 344. Cost of service studies, while valuable, are time-consuming and expensive.
18 The Commission should not forsake an important conservation tool simply because a company
19 chooses not to perform a cost of service study. Moreover, imposing a requirement for a cost of
20 service study would allow companies to evade inverted block rates by never filing a cost of service
21 study.

22 The Company also suggested that there are technical flaws in Staff’s three-tiered inverted
23 block rate design. But the Company never proposed an alternate inverted block plan. Instead, the
24 Company insists on its outdated single-tier pricing structure. The Company’s strenuous objection to
25 inverted block rates in this case and in the recent Northern Group rate case suggest that the
26 Company’s lukewarm support for conservation and inverted block rates is disingenuous.

27 Staff’s first tier is 20% less than the second tier. (Thornton Direct, Ex. S-40 at 2). Staff’s
28 witness Mr. Thornton explained that this modestly lower rate ensures “widely available, affordable

1 access to a minimum volume of... a commodity that is central to life and sanitation.” (Tr. at 934-35).
2 Staff’s third tier is 20% higher than the second tier to reflect the marginal costs imposed by heavy
3 water users. (Thornton Direct, Ex. S-40 at 9). As Mr. Thornton explained, it is appropriate to send a
4 price signal to heavy water users to reflect the costs they impose on a system. (Tr. at 896). Mr.
5 Thornton testified that taking marginal costs into consideration results in a “more efficient rate
6 structure that results in conservation of resources in the provision of water.” *Id.* at 883. The
7 Company objects that Staff’s rate design will not produce immediate reductions in water use. Mr.
8 Thornton explained that using marginal costs sends a proper price signal that is likely to result in
9 conservation in the long-term. (Thornton Direct, Ex. S-40 at 6). Mr. Garfield agreed that water
10 conservation is a long-term problem. (Tr. at 93-94). A long-term problem demands a long-term
11 solution.

12 Much ado was made about the various estimates Mr. Thornton employed in his incremental
13 cost model. Mr. Thornton stated that his model required only “rough estimates”. *Id.* at 936. Mr.
14 Olea testified that the estimates were based on his considerable engineering experience. *Id.* at 1111-
15 1121. Although the Company objects to using engineering estimates, the Company employed
16 engineering estimates in Mr. Kennedy’s avoided cost calculations. (Tr. at 540-41).

17 **IX. STAFF’S RECOMMENDED RATE OF RETURN OF 8.6 REPRESENTS A FAIR**
18 **RATE OF RETURN TO AWC AND SHOULD BE ADOPTED.**

19 Staff’s recommended 8.6% rate of return is based on reasonable recommendations of capital
20 structure, the actual cost of debt, and an objective theoretically sound estimation of AWC’s Cost of
21 Equity. Staff’s recommendation is “reasonably sufficient to assure confidence in the financial
22 soundness of the utility, and should be adequate, under efficient and economic management, to
23 maintain and support its credit and enable it to raise the money necessary for the proper discharge of
24 its public duties.” *Bluefield Waterworks & Improvement Co. v. Public Service Commission of West*
25 *Virginia et al.*, 262 U.S. 679, 693, 43 S.Ct. 675, 679 (1923). Staff’s Capital Asset Pricing Method
26 analysis results in a recommendation that is “commensurate with returns on investments in other
27 enterprises having corresponding risks.” *Federal Power Comm’n v. Hope Natural Gas Co.*, 320 U.S.
28 591, 603, 64 S.Ct. 281, 288 (1944). AWC’s piling on of risk premia through its risk premium

1 analysis and risk premium additions goes too far. The Commission must ensure the Company has an
2 opportunity to earn a fair return on its investment to public service and that its consumers receive
3 service at a reasonable rate. AWC's risk premium proposals will provide windfall gains to its
4 investors at the expense of its customers, and should be rejected.

5 **A. Staff's recommended capital structure represents the most recent information**
6 **available and should be adopted.**

7 Staff's proposed capital structure reflects the Company's actual capital structure as of
8 December 31, 2002. (Reiker Direct, Ex. S-38 at 3). The Company's proposed capital structure
9 reflects the Company's capital structure of the Company as of December 31, 2001. *Id.* The
10 Company has not opposed Staff's proposed capital structure. Because Staff's recommended capital
11 structure of 28.2% long-term debt, 5.6 % short-term debt and 66.1% common equity reflects the most
12 recent actual information available and has not been rebutted by the Company, it should be adopted.

13 **B. Staff's recommended cost of debt is based on actual costs going forward and**
14 **should be adopted.**

15 Staff and the Company agree that the cost of long-term debt should be set at 8.46%. *Id.* at 4.
16 Staff sets the short-term debt cost at 4% based on actual short-term loan agreements between the
17 Company and the Bank of America. *Id.* Under the agreement the Company borrows at prime minus
18 .25%. *Id.* at 4-5. The bank reference rate as of January 1, 2003 is 4.25%. *Id.* at 5. Staff sets the
19 short-term debt cost at prime (4.25%) minus .25%, or 4%.

20 The Company argues short-term debt cost should be set at 7.37% based on its short-term debt
21 cost during 2001. *Id.* at 4. The Company's historical approach should be rejected. Staff's proposed
22 4% cost of short-term debt is based on actual costs going-forward and should be adopted.

23 **C. Staff's estimated cost of equity objectively applies sound economic principle and**
24 **theory and should be adopted.**

25 Staff objectively applied two accepted methods, the Discounted Cash Flow ("DCF") and
26 Capital Asset Pricing Method ("CAPM"), to arrive at a 9.0% cost of equity recommendation. *Id.* at
27 9. Because shares of the Company's stock are not publicly traded, publicly traded utilities were used
28 as proxies. *Id.* at 9. Staff applied the DCF and CAPM to all six water companies currently followed
by *The Value Line* and *The Value Line Investment Survey Small and Mid Cap Edition*. *Id.* at 10,

1 schedule JMR-1. Staff also included 10 gas companies as proxies in its analysis.

2 AWC improperly excluded two sample companies, Connecticut Water and Middlesex Water,
3 from its analysis. AWC excluded the companies arguing changes in the companies' stock prices
4 indicated an imminent merger or acquisition of the companies. (Zepp Direct, Ex. A-4 at 9-10). Staff
5 demonstrates the company's stock price changes do not demonstrate that a merger or acquisition is
6 looming. (Reiker Direct, Ex. S-38 at 33, chart 3). AWC presents no additional evidence to support
7 its merger and acquisition theory. *Id.* at 33; Tr. at 167-68. Further, Dr. Zepp admits that neither
8 company has merged or been acquired since the time of AWC's filing of its testimony. (Tr. at 168).
9 Staff correctly includes all six publicly traded water utilities in its sample.

10 **1. Staff's DCF calculation is based on proper variables and results in a**
11 **reasonable estimation of AWC's equity cost.**

12 Staff applied the DCF constant growth and non-constant or multi-stage growth models to the
13 six sample water companies and ten sample gas companies. (Reiker Direct, Ex. S-38 at 11). The
14 DCF method is based on the theory that the market price of a stock is equal to the present value of all
15 future dividends. *Id.* at 10. Staff's equity cost estimate under the constant-growth model is 8.5%
16 (3.47% + 4.98%). *Id.* at 19. Staff's equity cost estimate under the multi-stage model is 9.6% (3.47%
17 + 4.98%). *Id.* at 20.

18 The DCF formula requires three variables: 1) the expected annual dividend; 2) the current
19 stock price, and; 3) the expected infinite annual growth rate of dividends. (Reiker Direct, Ex. S-38 at
20 11). The objective calculation of each variable's value is key to arriving at a reasonable estimation of
21 equity cost. The manipulation of any one of these variables will skew the resulting estimation. As
22 demonstrated below, the variables used by Staff were proper and reasonable and the resulting
23 estimates should be adopted by the Commission.

24 Staff properly used the spot market price to determine the current stock price. The efficient
25 market hypothesis demands use of the spot price. *Id.* at 12. The efficient market hypothesis states
26 that the current stock price includes investors' expectations of future returns and is the best indicator
27 of those expectations. *Id.* Because the spot market price reflects investors' expectations concerning
28 future growth it takes into account all the variables considered by the prospective investor and is the

1 best indicator of price. AWC's DCF estimate, based on three and twelve month averages, is
2 inconsistent with the efficient market hypothesis. As stated in the *Public Utilities Fortnightly*, use of
3 such averages "leads us away from rather than toward the actual future yield." *Id.* at 36.⁴ The use of
4 an estimate leading away from actual future yield necessarily decreases the accuracy of a DCF
5 estimate and should not be adopted. Further, in Decision 64727, dated April 17, 2002, the
6 Commission approved the use of spot market data in estimating the cost of equity. *Id.* at 37.⁵ Using
7 the proxy companies' spot market price, Staff's calculation of the dividend yield component is 3.47%
8 and is a more accurate estimate of dividend yield than one using averages. *Id.* at 19.

9 In its growth variable determination, Staff examines historical and projected growth in
10 dividends per share, growth in earnings per share, and intrinsic growth in arriving at its growth
11 variable. *Id.* at 12. Staff's analysis results in the following future growth indicators for the proxy
12 companies: average historical growth of 2.5 %; projected growth over the next five years of 2.9% as
13 reported by *Value Line*; historical earnings per share growth rate of 3.2%, and; intrinsic growth rate
14 of 7.8%. *Id.* at 12, 13, 18, schedules JMR-2, JMR-3. Staff's calculation of the expected dividend
15 growth rate is 4.98%, making Staff's equity cost estimate under the constant-growth model 8.5%
16 (3.47% + 4.98%). *Id.* at 19.

17 AWC's infinite growth estimate inappropriately averaged the near-term growth forecast for
18 the entire water utility industry instead of averaging the available near-term growth forecasts for each
19 of the sample firms. (Zepp Direct, Ex. A-4 at table 15; Reiker Direct, Ex. S-38 at 37). The inclusion
20 of the entire industry in the average creates a mismatch between the expected dividend growth rate
21 and the expected dividend yield resulting in an inaccurate cost of equity estimate. (Reiker Direct, Ex.
22 S-38 at 38, Figure 1).

23 Further, AWC erroneously relies solely on near-term earnings and sustainable growth
24 forecasts. Sole reliance on analyst's forecasts incorrectly assumes investors rely only on such
25 forecasts and do not take past earnings into account when making investment decisions. *Id.* at 39. In
26

27 ⁴ Quoting Kihm, Steven G. in "The Superiority of Spot Yields in Estimating Cost of Capital." *Public*
28 *Utilities Fortnightly*, February 1, 1996, pp. 42-45.

⁵ Citing to Application of Black Mountain Gas Company, Docket No. G-03703A-01-0263.

1 addition, analyst's forecasts are known to be overly optimistic resulting in inflated growth predictions
2 and ultimately in an inflated cost of equity estimate. *Id.* at 39, 41-44. By relying solely on these
3 forecasts, AWC ignores the dividend per share growth and past earnings per share growth that its
4 own expert has previously testified he would consider in determining estimated growth. *Id.* at 45.⁶
5 Staff's approach to determining estimated growth provides a much more objective and accurate
6 estimate than does AWC's sole reliance on analyst's overly optimistic forecasts.

7 The multi-stage DCF model takes into account that investors expect some non-constant near
8 term growth (termed stage-1 growth in the model). *Id.* at 19. Investors also expect long-term
9 constant growth (stage-2 growth). *Id.* The estimate resulting from Staff's application of the multi-
10 stage DCF is 9.6%. *Id.* at 20, schedule JMR-6.

11 **2. Staff's CAPM calculation is based on proper variables and results in a**
12 **reasonable estimation of AWC's equity cost.**

13 The work of Nobel Prize winning economists, the CAPM is the best-known model of risk and
14 return. (Reiker Direct, Ex. S-38 at 21).⁷ The model states that the expected return on a risky asset is
15 equal to the sum of the prevailing risk-free interest rate and the market risk premium adjusted for the
16 riskiness of the investment relative to the market. *Id.* at 21. Like the DCF model, the CAPM requires
17 the input of proper variables to arrive at a reasonable estimate of a company's equity cost. The
18 variables involved are the risk free rate, the expected return on the market, the risk variable or "beta,"
19 and the expected market risk premium. *Id.* at 22.

20 Staff properly based its prevailing risk-free rate estimate on the average of intermediate-term
21 U.S. Treasury securities' spot rates as published in *The Wall Street Journal*. *Id.* These published
22 rates as determined by the capital markets are verifiable, readily available, and most importantly are
23 objective as compared to forecasted rates. *Id.*

24 Staff derived an appropriate beta from the average of the *Value Line* betas for the six proxy
25 water utilities. *Id.* at 23. The average *Value Line* beta computed to .59 for the proxy water

26 _____
27 ⁶ Citing to Dr. Zepp's testimony before the Public Utility Commission of Oregon. Docket UM 903,
28 p. 9 at 19-25 and p. 10 at 1-3.

⁷ Citing Brealey, Richard, Stewart C. Myers. *Principles of Corporate Finance*. 1988, McGraw-Hill,
New York, p. 165.

1 companies. *Id.*, schedule JMR-5.

2 The expected market risk premium represents the additional return an investor expects for
3 investing in an average or higher risk security over the investors expected return for investing in a
4 risk free security. *Id.* Staff calculated both a historical market risk premium and a current market
5 risk premium to determine its market risk premium estimate range. *Id.* Staff's historical analysis
6 results in a risk premium of 7.4%, and its current analysis in a risk premium of 13.1%. *Id.* at 23-24.

7 Staff's CAPM analysis results in an equity cost estimate for AWC of 9.4%. *Id.* at 25,
8 schedule JMR-7.

9 **3. AWC's risk premium method to estimate its cost of equity is**
10 **fundamentally flawed and should be rejected.**

11 AWC's risk premium method's reliance on forecasts of the Baa corporate bond rate renders
12 its estimate unreliable. *Id.* at 46. These forecasts are historically inaccurate and therefore not a
13 reliable basis from which to determine risk premium. *Id.* at 46-47. This fundamental flaw negates
14 the accuracy of AWC's risk premium analysis overall and AWC's three risk premium studies. *Id.* at
15 46, 50-53. AWC's studies are further impaired by their reliance on sample companies that are not
16 shown to be comparable in risk to AWC itself. *Id.* at 50. Additionally, corporate bond yields cannot
17 be used to imply meaningful equity risk premiums. Because a corporate bond contains some default
18 risk which is diversifiable, the investors expected rate of return is lower than the bond's yield to
19 maturity. As a result, only the yield to maturity on a default free government bond is an estimate of a
20 required rate of return, similar to the cost of equity. *Id.* at 49.

21 AWC's first two risk premium studies are further flawed by their assumption that authorized
22 returns on equity are equal to equity costs. (Reiker Direct, Ex. S-38 at 48; Reiker Surrebuttal, Ex. S-
23 39 at 2). If the Company's argument were accepted, regulatory commissions would continually rely
24 on returns of equity granted by other commissions and the market would never update the allowed
25 return on equity to account for changing market conditions. Such circular reasoning is clearly wrong.

26 Instead of relying on this flawed method of determining risk, the Commission should instead
27 rely on the demonstrably more widely accepted and accurate CAPM method which includes a risk
28 variable. (Reiker Direct, Ex. S-38 at 47). The CAPM was developed by Nobel Prize winning

1 economists and is the most popular method of estimating cost of equity among Chief Financial
2 Officers. *Id.* at 47-48. AWC's risk premium analysis should be rejected and Staff's proven CAPM
3 method adopted.

4 4. **Staff's estimate of cost of equity using the sample water companies**
5 **requires a downward adjustment to account for AWC's lower risk capital**
6 **structure.**

7 To arrive at its estimated equity cost for AWC Staff first averages the results of its constant
8 growth and multi-stage DCF analysis for a result of 9.0%. *Id.* at 25, table 7. Staff then averages the
9 results of its historical and current market risk premium CAPM analysis arriving at a result of 9.4%.
10 *Id.* Finally, Staff averages the DCF and CAPM results for a final estimate of 9.2%. *Id.* A
11 downward adjustment to account for AWC's strong equity capital structure is then required.

12 Financial risk is shareholder risk associated with the level of a firm's debt financing. *Id.* at 8.
13 The less reliance on debt financing, the lower the financial risk. *Id.* A lower return on equity should
14 be applied to AWC than to the proxy water and gas companies. AWC's capital structure consists of
15 approximately 70% common equity. *Id.*, schedule JMR-1. The proxy water companies used by Staff
16 had an average common equity component of their overall structure of 49.7%. *Id.* The proxy water
17 companies have greater financial risk than AWC and a lesser risk premium should be applied to
18 AWC than to the proxy water companies.

19 Staff used the same DCF and CAPM methods described above for the proxy water companies
20 to analyze the sample gas companies. The average of Staff's DCF and CAPM estimates of the equity
21 cost to the companies is 10.3%. (Reiker Direct, Ex. S-38 at 26, schedules 12-18). AWC argues that
22 the sample gas and water utilities share approximately the same risk level. (Zepp Direct, Ex. A-4 at
23 11, 35). But standard corporate finance principles show that the sample gas companies are more
24 risky in terms of market risk. (Reiker Direct, Ex. S-38 at 34). The average betas, based on these
25 principles, for the sample water companies is .59, while the average beta for the sample gas
26 companies is .69. *Id.* at 26. Based on Staff's CAPM analysis, the cost of equity to the sample gas
27 companies is approximately 100 basis points higher than the cost of equity to the sample water
28 companies. *Id.* Therefore, the cost of equity result for the sample gas companies must be adjusted
downward to accurately estimate the cost of equity to a water company such as AWC. Gas companies

1 are riskier than the sample water companies and therefore Staff's estimate of equity cost to the
2 sample gas companies requires a downward adjustment. *Id.* at 9. Staff therefore adjusts the result of
3 its averaging of its DCF and CAPM analyses downward from 9.2% to 9.0%. *Id.* at 26.

4 5. **AWC's argument for a 100 to 150 point risk addition is unsupported by**
5 **evidence, has been properly rejected by the Commission in the past, and**
6 **should be rejected here.**

7 AWC gives five reasons that a risk premium should increase its cost of equity. *Id.* at 55.
8 None of these reasons are supported by evidence, and some have been previously rejected by this
9 Commission. The factors which AWC argues merit a risk premium are: 1) bond placement; 2) use of
10 historical test year; 3) Environmental Protection Agency ("EPA") requirements; 4) potential
11 disallowances, and 5) size. *Id.* Each is factor is without merit.

12 AWC's "bond placement risk premium" argument should be rejected as the evidence shows
13 that on April 12, 2001 the company placed \$15 million of newly authorized general mortgage bonds
14 with Pacific Life & Annuity Company. (Reiker Direct, Ex. S-38 at 55; Zepp Direct, Ex. A-4 at 12).
15 This placement shows that AWC's claim that lenders are no longer interested in purchasing bonds in
16 amounts of less than \$20 million is exaggerated at best. (Reiker Direct, Ex. S-38 at 55). AWC's
17 issuance and sale itself disproves its claims and its requested risk premium should be rejected.

18 Relying on *Duquesne Light*, AWC seeks a risk premium because Arizona uses a historical test
19 year and the Company has limited ability to make post test year adjustments. (Reiker Direct, Ex. S-
20 38 at 56; Zepp Direct, Ex. A-4 at 13). However, as the Supreme Court found in *Duquesne Light* it
21 has not been shown that rate orders issued under a regime utilizing a historical test year "fail to give a
22 reasonable return on equity given the risks." *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 315
23 (1989). The Commission has never accepted a risk premium based on its definition of the test year,
24 and should not do so here.

25 New EPA standards lower acceptable arsenic levels. AWC seeks a risk premium associated
26 with its compliance with the new standards. (Zepp Direct, Ex. A-4 at 14-18). AWC's future
27 compliance will cause AWC to seek to add to its rate base as it expands and brings itself into
28 compliance, but does not equate to higher risk. (Reiker Direct, Ex. S-38 at 57). The Commission has

1 rejected this argument in prior AWC water rates case and should do so here. *Id.* at 57.⁸

2 AWC requests a risk premium to account for potential disallowances of plant into its rate
3 base. (Reiker Direct, Ex. S-38 at 58; Zepp Direct, Ex. A-4 at 13). However, the Company fails to
4 show how potential disallowances cause it to be more risky than the sample water companies.
5 (Reiker Direct, Ex. S-38 at 58). The potential for disallowance is a fact of life for all regulated
6 utilities and no risk premium should be applied in calculating the Company's cost of equity.

7 Relying on a study conducted by its own expert witness AWC argues, as it has in past rate
8 cases, that its smaller size relative to other publicly traded water utilities warrants a risk premium. *Id.*
9 at 59. Studies cited by Staff, including the "Wong Study" disprove the conclusions of the study of
10 Dr. Zepp's study. *Id.* at 59-64. The Commission, consistent with its past decisions, should recognize
11 that the firm size phenomenon does not exist for regulated utilities. *Id.* at 59.⁹

12 The Commission should reject the Company's proposed 100 – 150 basis point risk addition
13 because all of its purported risk factors, to the extent they are risks at all, are unique. The market
14 does not price the unique risk of securities. *Id.* at 57. Investors do not require additional return to
15 compensate for unique risk because unique risk is diversifiable. (Reiker Surrebuttal, Ex. S-39 at 27 –
16 28). This concept is known as Modern Portfolio Theory, or MPT. MPT is a widely accepted concept
17 that gained added fame in 1990 when the Nobel Prize in Economic Sciences was awarded to Harry
18 Markowitz, Merton Miller, and William Sharpe for their work on the concept. *Id.* at 28.

19 X. ENGINEERING ISSUES.

20 A. Staff's water loss plan should be adopted.

21 Staff proposed that the Company be required to audit its water losses for its systems with
22 greater than 10% water loss and file a plan with the Commission regarding the steps the Company
23 would take to reduce water loss, where feasible. (Hammon Direct, Ex. S-52 at 4-6). While the
24 Company challenges the 10% figure, the Company itself used 10% as a "red flag" for high water loss
25

26 _____
27 ⁸ Citing Application of Arizona Water Company, an Arizona Corporation, for Adjustments to its rates
28 and charges for Utility Service Furnished by its Northern Group and for Certain Related Approvals
("northern Case"), Docket No. W-01445A-00-0962, Decision No. 64282, Dec. 28, 2002.

⁹ Citing to the Northern Case and to the Application of Black Mountain Gas.

1 in the past. (Tr. at 90-91). Moreover, the Company already produces internal water loss reports that
2 could be used as the starting point for the reports requested by Staff. *Id.*

3 **B. Staff's revisions to the NP-260 tariff should be adopted.**

4 The Company's NP-260 tariff governs sales of non-potable CAP irrigation water. (Hammond
5 Direct, Ex. S-52 at 14-16). Staff proposes amendments to the Company's NP-260 tariff to rectify
6 problems that became apparent in the SLV Properties v. Arizona Water complaint. *Id.* Staff has a
7 number of concerns with this tariff, including:

- 8 (1) it allows the Company to collect depreciation expense on contributed property;
- 9 (2) the fixed meter charge allows recovery of items the Company recovers elsewhere;
- 10 (3) the calculation of administrative costs is unsupported; and
- 11 (4) the customer's rights are "ill defined and unprotected during unusual maintenance
12 episodes"

13 *Id.* Staff's proposed revisions remedy these problems and should be adopted.

14 **C. The Company has accepted Staff's proposed requirement for a curtailment
15 plan.**

16 Mr. Garfield testified that the Company no longer opposes Staff's proposal that the
17 Commission require the Company file a curtailment tariff. (Tr. at 82-83) Accordingly, this issue is
18 no longer in dispute.

19 **XI. OTHER ISSUES.**

20 **A. Revenue Annualization.**

21 Staff noted in pre-filed testimony that the Company's proposed revenue annualization results
22 in a mismatch because it measures expenses by using total expenses and measures revenue by
23 looking at just the 5/8 inch meters. (Ludders Direct, Ex. S-44 at 9-10). Rather than simply using
24 total revenue, the Company tried to correct this error by attempting to calculate expenses relating to
25 the 5/8 inch meters. (Hubbard Rejoinder, Ex. A-13 at 11). This attempted allocation of expenses to
26 5/8 inch meters was not based on a cost of service study. (Tr. at 450). Mr. Ludders testified that a
27 cost of service study is the appropriate way of allocating costs to meter sizes. *Id.* at 1056-58. Mr.
28 Ludders noted the Company's calculation does not cure the mismatch created by the Company's

1 original calculation. *Id.* In the absence of a cost of service study, Mr. Ludders testified that Staff's
2 calculation is more appropriate. *Id.*

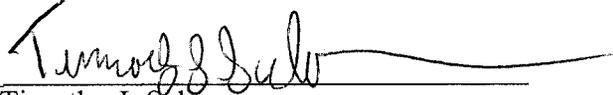
3 **B. CIAC Amortization.**

4 Staff calculated the CIAC Amortization rate by dividing the total depreciation expense by the
5 total depreciable plant. (Ludders Surrebuttal, Ex. S-46 at 11). Staff's calculation is consistent with
6 the methodology used in the company's 1992 rate case and its recent Northern Group rate case. *Id.*;
7 Tr. at 1038.

8 **XII. CONCLUSION.**

9 Staff's proposals reflect sound ratemaking principles. Accordingly, Staff's requests that its
10 positions be adopted.

11 **RESPECTFULLY SUBMITTED** this 31st day of October 2003.

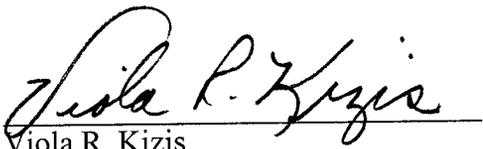
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