TRUCKEE MEADOWS WATER AUTHORITY
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Addendum No. 1
REQUEST FOR PROPOSAL (RFP)
ACTUARIAL SERVICES
TMWA Bid/RFP No.: 2018-010

December 22, 2017

The following information, clarifications, changes and modifications are by reference incorporated into the bid documents for the above referenced project. Any work item or contract provision not changed or modified will remain in full force and effect. The bid date and time and construction schedule remain the same.

QUESTIONS AND RESPONSES

Question No. 1: **May we have a copy of the most recent OPEB actuarial valuation prepared for TMWA**?
Response to Question No. 1: Most recent Actuarial Valuations have been posted in PDF format to the website.

Question No. 2: **PEBP retirees:** Does TMWA currently have any retirees or former employees for which it is invoiced by PEBP to provide a monthly subsidy?
Response to Question No. 2: No

Question No. 3: What plans are available to retirees (medical/Rx, dental, vision, life insurance, other)?

Response to Question No. 3: Please refer to the two (2) Actuarial Valuations attached hereto.

Question No. 4: It is our understanding of NRS provisions that all employees who retire from a NV public agency – regardless of age and service – must be eligible to continue the coverage in retirement. To the extent that these retirees do not meet eligibility requirements to qualify for subsidized coverage, the retiree should be permitted to continue coverage at their expense. *Does TMWA allow retirees who do not meet the eligibility requirements for subsidized coverage to self-pay for their coverage by paying 100% of the monthly premiums*?

Response to Question No. 4 Yes, but these seems irrelevant to the valuation.

Question No. 5: Does TMWA participate in self-funded plans or fully insured plans? Are the plans individually underwritten for TMWA only or does TMWA participate in plans pooled with another NV agency?

Response to Question No. 5: TMWA's plans are single-employer defined benefit plans administered through qualified trusts. They are self-funded, and not pooled with another agency. The funds in the trust are legally restricted to provide TMWA employees postemployment benefits, and are directly accessible for that purpose.

Question No. 6: Item 42.10 of the RFP refers to a cost fee schedule. We did not see this form provided. Is this something we can develop according to our own format?

Response to Question No. 6: Please develop a cost fee schedule in your own format.

QUESTION CUT OFF DATE: DECEMBER 21, 2017

END OF ADDENDUM NO. 1

February 6, 2017

Postretirement Benefit Valuation Report Under GASB 45 as of July 1, 2016
Expense Development for Fiscal Year Ending June 30, 2017
Truckee Meadows Water Authority Section 115 Trust Covering Washoe County Transferees

Prepared by William Bush,
FSA

Contents `

Report Highlights

This report has been prepared for the Truckee Meadows Water Authority ("
TMWA") to:

- Present results of the valuation of TMWA's retiree medical (health) and life insurance plans as of July 1, 2016 for obligations attributable to employees who transferred employment from Washoe County on December 31,
- Provide annual required contribution amounts under GASB Statement No. 45 for the fiscal year ending June 30, 2017
- Provide reporting information for financial statements, government agencies and other interested parties pursuant to GASB requirements

Summary of GASB Statement No. 45

In June, 2004 the Governmental Accounting Standards Board (GASB) issued Statement No. 45: *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, which establishes new accounting standards for Postretirement Benefits Other Than Pensions (OPEB).

The requirements apply to any state or local government employer that provides OPEB. The primary type of OPEB covered by the statement will be postretirement health benefits. OPEB may also include life insurance, legal benefits, and other benefits.

The new standard requires accrual accounting. In general, GASB followed the standards already in place for governmental pension plans in Statement No. 27.

The standard does not require funding of OPEB expense, but any differences between the annual expense and the amount funded in a year are recorded in the employer's financial statement as an increase (or decrease) in the net OPEB obligation. The funded status of the actuarial accrued liability is shown as part of Required Supplementary Information.

Reasons for Updated Valuation as of July 1, 2016

The normal valuation cycle is once every two years under GASB 45. The valuation helps to guide Trustees in considering funding and investment policies by comparing the values of actuarial obligations to Trust assets.

Retiree Premium Rates and Implicit Subsidy

TMWA pays a portion of the rates set by the City of Reno Health Plan Trust. The GASB 45 implementation guide related to implicit subsidy indicates the following:

- **HHP- HMO:** Is fully insured and community rated, with blended active and pre-65 retiree rates. Actuary believes that HHP would offer the same premium rate to TMWA, even if only non-Medicare eligible retirees were covered because the average age of actives is 51.5. HHP covers a much larger enrollment. This conclusion is based on Q/A 66 and 67 of Implementation Guide to GASB 45.

Report Highlights

• **Reno Health Plan PPO**: Is self-funded, community rated for all three participating employers. Active and pre-65 rates are blended. QA 68 of the Implementation Guide indicates that the decision to value implicit subsidy is a judgment call. The example in QA 68 implies that an employer, such as TMWA, who has 8% or more of the total enrollment in agent multiple-employer plan would need to value the implicit subsidy. An analysis of active vs. pre-65 retiree claims over a recent 3-year period indicates that pre-65 PPO claims are about 30% higher than the blended City of Reno PPO rates.

• **Enrollment:** There are no retirees yet, so assumed elections as to future spouse coverage and selection of PPO vs HMO is based on TMWA retiree enrollment.

There is no implicit subsidy for those who enroll in the HMO or another plan, only for those in the PPO under age 65. There is no mechanism, at this point, for the Trust to pay the implicit subsidy to the Reno Health Plan PPO. Accordingly, it is likely that the reserves held for the implicit subsidy will never be debited. There is a similar issue related to retiree life insurance, where a blended rate is charged for both actives and retirees. This valuation conforms to the GASB 45 approach of valuing the life insurance obligation based on age specific term insurance rates. However, if the obligation is relieved by paying the materially lower “blended rate” for life insurance, then the obligation is being measured at a much higher cost than will be relieved by payment of blended rate premiums.

Funding Methods

Calculations have been performed under the Projected Unit Credit (PUC) method. The PUC actuarial method determines a Normal (or current service) cost, which represents the cost of benefits earned in the current year, and an actuarial accrued liability, which represents the cost of benefits earned in prior years. It is the method mandated by FASB for determining the cost of pension and postretirement benefits by private sector companies. It is the method used by TMWA prior to GASB 45 and is one of six permissible cost allocation methods under GASB 45.

The unfunded actuarial accrued liability is amortized over a remaining period of 28 years as a level dollar amount.

Discount Rate and Other Assumptions

The investment return assumption (or discount rate) is selected as the estimated long-term investment return on the investments that are expected to be used to finance the payment of benefits. For a funded plan, the considerations in selecting this rate are like selecting the funding interest rate for a pension plan. For an unfunded plan, the discount rate should be determined with reference to the expected return on TMWA’s general assets, which are assumed to be invested as a mixture of cash and very short-term fixed interest instruments, such as money market funds. If the plan is partially funded, a blended discount rate is used. Because the Plan is virtually fully funded and will be fully funded over the long term by contributing ARC, we use an expected rate based on the

Report Highlights

Trust portfolio, which has a high equity allocation. The 6% assumption used in the first valuation (as of the January 1, 2015 transfer date) has been maintained for the 2016 valuation.

There are no changes to demographic assumptions from those used in the prior valuation.

The assumed growth in health care costs is also key. We continued to assume 5% growth in health plan costs. There was a 20% increase in every health plan rate effective January 1, 2016, which is believed to have been a one time “catch up” aberration given that rates had been kept essentially flat over several years prior to 2016. There was a 5% increase in medical premiums on January 1, 2017, with no change to dental or vision rates, which increases have been reflected in this valuation.

The unexpected 20% rate increase primarily affected the Tier 1 benefits, as Tier 2 Plan obligations are defined in dollars, not health plan benefits (except for the relatively small pre-65 PPO implicit subsidy). Assumptions and plan provisions are summarized at the end of the report.

Asset Values

As of July 1, 2016, the asset market value was $695,940 compared to $546,873 in the prior valuation as of January 1, 2015, producing a funded status of 48%.

Expense/Contribution Calculation

The annual expense recognized under GASB 45 is called the “annual required contribution” or ARC, even though there is no requirement to fund this amount. The ARC depends on the actuarial cost method selected and typically consists of the normal cost plus amortization of the unfunded actuarial accrued liability (UAAL). The half year ARC for 2015 of $75,589 grew to a full year cost of $103,441 for 2016. The reasons for this improvement are summarized on the bottom of page 6.

Certification

We have prepared this valuation of the TMWA's postretirement medical program as of July 1, 2016, to enable the Truckee Meadows Water Authority to comply with the accounting requirements under Statement of Governmental Accounting Standards No. 45 and to compute ARC for the year ending June 30, 2017.

The valuation is based on participant and cost data provided by the TMWA and summarized in this report without further audit. This data was not verified by the actuary. We have reviewed the data for internal consistency, reasonableness and reconciliation to the prior census. Based on that review, we have no reason to doubt its substantial accuracy. The valuation is also based on the substantive plan as described by TMWA as set forth in the Plan document, and as summarized in this report. TMWA is solely responsible for the validity and completeness of this information.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions selected by the TMWA based upon our recommendations are a reasonable estimate of the future experience of the plan. To the extent that actual experience differs from the assumptions, or to the extent that plan provisions as actually administered are different than those summarized herein, the results presented in this report will differ. The projections included in this report are based on the data, methods and assumptions described in this report. Actual experience could differ from these assumptions and may produce results that differ materially from the projections shown in this report.

The calculations reported herein are based on our understanding of the provisions of GASB No. 45. Actuarial computations under Statements of Governmental Accounting Standards are for purposes of fulfilling governmental employer accounting requirements. Computations for other purposes may differ from the results shown in this report.
I am available to answer questions, or provide explanations or further detail, as needed. The undersigned credentialed actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Bill Bush

William D. Bush, FSA	**February 6, 2017** **Date**

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Valuation Results

Calculation of Annual Required Contribution (ARC) and Annual Expense under the Project Unit Credit (PUC) Method

		Half Year ARC January 1, 2015		Full Year ARC July 1, 2016
1. Actuarial Accrued Liability		**$1,357,972**		**$1,453,919**
2. Actuarial Value of assets		546,873		695,940
3. Unfunded Actuarial Accrued Liability		**$811,099**		**$757,979**
4. Funded Percentage of Actuarial Liability		**40%**		**48%**
5. Normal Cost		**$45,592**		**$73,759**
6. Actuarial Required Contribution				
a. Amortization factor based on 30 years	**6.85%**		**7.037%**	
b. Amortization-Unfunded Actuarial Liability		**$27,795**		**$26,670**
c. Normal Cost		**$45,592**		**$73,759**
d. Provisions for Annual Trust Expenses		**$0**		**$0**
e. Interest on amortization and normal cost		**$2,202**		**$3,013**
f. Annual Required Contribution		**$75,589**		**$103,441**
7. Reasons for improvement				
a. Number of actives decreased		**25**		**22**
b. Reduced assumed pre 65 PPO implicit subsidy		**60%**		**30%**
c. Net effect of 20% premium bump, compared to much lower than assumed Tier 2 subsidy growth				

Participant Data

Distribution of Active Participants – July 1, 2016

Benefits	Number	Average Age	Average Service
Tier 1	5	54.2	21.7
Tier 2	17	50.6	14.3
All	22	51.5	16.0

There are no retirees.

Actuarial Basis

Valuation Procedures

Actuarial cost method: Liabilities shown in this report are computed using the projected unit credit method. The Normal Cost represents the present value of accruals allocated to the current fiscal year, while the Actuarial Accrued Liability represents the value of accruals attributable to prior years of service (both TMWA and WC service).

Financial and census data: We have used financial data and participant data as supplied by the plan sponsor. This information would not customarily be verified by a plan's actuary. We have reviewed the information for internal consistency and for consistency with prior census information. We have no reason to doubt its accuracy.

Participants included: This closed group of TMWA employees were former WC employees, for whom assets were transferred from a WC trust to a Section 115 trust sponsored by TMWA dedicated to funding retiree medical and life insurance.

Funding policy: The Truckee Meadows Water Authority is expected to fund the ARC in future years, but there is no absolute commitment to do so.

Discount rate: GASB requires that the discount rate be the long-term expected-yield rate on current and expected future plan/trust assets. Plans pre-funded on a full actuarial basis are generally expected to have a higher long term yield due to presumed exposure to equity investments. Pay as you go plans are to be discounted based on the yields at which the entity's surplus cash is invested, generally at a very low rate. Partially funded plans are discounted at a blended rate. GASB has created a strong accounting incentive to fully prefund to enable use of a larger discount rate and TMWA has indicated their intent to prefund the ARC. We used 6%.

Actuarial Value of Assets: GASB requires the use of a market-related asset value. This valuation measures assets at fair market value.

Actuarial Basis *(continued)*

Actuarial Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan.

Discount rate	6.0% per annum appropriate for a funded plan		
Health care cost trend rates	Years	Pre-65 Annual Rates of Increase	Post 65 Annual Rates of Increase
	All Years starting 1-1-2018	5.0%	5.0%
Monthly per capita claims cost (premium for Med, Dental, Vision)		1-1-2017 Rates	
	Family Tier	The Reno PPO	HHP- HMO
Pre-Medicare	Retiree Only	$ 800.12	$ 831.56
	Retiree and Spouse	1,394.56	1,448.45
	Retiree and Child (ren)	1,322.87	1,374.25
	Retiree and Family	1,776.99	1,816.09
Post-Medicare	Retiree Only	629.37	608.99
	Retiree & Spouse (1 Medicare)	1,282.04	1,411.40
	Retiree & Spouse (2 Medicare)	1,106.29	1,058.99
Retiree elections	Retirees: Current Tier and Plan Actives: Assume 75% elect coverage in PPO, 25% in HHP - prior to 65, assume 75% elect retiree and spouse coverage, 25% elect retiree only - after 65, assume 60% elect retiree and spouse coverage, 40% elect retiree only.		
Retiree contributions	Tier 1 retirees cost sharing is based on service. Even an employee with 20 years must pay full cost for dependent coverage, as well as the vision and dental components The explicit TMWA subsidy for Tier 2 retirees are defined dollar amounts based on service and whether Medicare eligible. Retirees pay the balance of cost.		
Retiree contribution increases and increases in Tier 2 subsidies	Retiree contributions are assumed to increase in line with health care cost trend rates for both Tier 1 and Tier 2, even though Tier 2 promises dollars. This is a carryover from WC actuarial valuation where there has been some history for increasing Tier 2 subsidies to mitigate otherwise large increases in retiree contributions. The WC actuary assumed the Tier 2 subsidies would grow with trend. This differs from the fact pattern and assumption in the TMWA valuation of no growth in fixed dollar subsidies. That said, this Tier 2 subsidy growth assumption may be overly conservative based on current actuary's review of recent changes.		
Aging/Implicit Subsidy	None assumed for HHP as it is a fully insured HMO. Reno PPO rates post 65 retirees separately from pre-65. Pre-65 PPO premiums are blended with actives; costs are assumed to be 30% higher than PPO premiums for pre-65 retirees.		
Post Retirement Mortality	RP-2014 Mortality Table recently released by SOA, healthy annuitants blended 50/50 unisex. Life expectancy at age 65 is 21.0 years.		
	Age	Male	Female
Sample probability of	50	0.34%	0.34%
Death in next year	60	0.65%	0.65%
	70	1.48%	1.48%

Actuarial Basis *(continued)*

Actuarial Assumptions *(continued)*

	80	3.98%	3.98%
	90	12.15%	12.15%

Turnover Prior to Age 55	Probability of leaving TMWA is 5% per year of employment. None assumed after age 55 until assumed retirement age.
Assumed Retirement Age	Algorithm assumes employee will retire after 20 years of service: - but no earlier than age 60 - but no later than age 66, This assumption is designed to assume everyone will wait to retire with some benefit (10 years) and will generally wait to have at least 20 years to maximize the health plan contribution. Average assumed retirement ages in current valuation are:
Administrative expenses	Assumed to be fully included in medical premium rates. Carrier retention is assumed to be 10% of life insurance death benefits.
Medicare	100% of retirees are assumed to elect Medicare on attaining age 65.
Salary growth rate	3.0% per annum used to project life insurance coverage at retirement

	Tier 1	Tier 2
Assumed average retirement age	60.2	61.5

Per Capita Healthcare Costs/Premiums and Implicit Subsidy

TWMA retirees are eligible to elect the Reno PPO or the HHP insured HMO. The HHP rates retirees separately from actives and charge fully insured premiums accordingly. The PPO rates post 65 retirees separately. A claim analysis study performed several years ago, based on 3 years of data, indicates that pre-65 retirees incur claims that are about 30% higher than the blended premiums charged to TMWA by the City of Reno PPO. This compares favorably to the approximately 60% assumed implicit subsidy in the WC actuarial valuation.

Healthcare Cost Trend Rates

The assumed trend is based on macroeconomic principles, reflecting nominal gross domestic product growth rates, and the excess of national health expenditures over other goods and services, and an adjustment for an assumed impact of population growth. Trend impacts:

Tier 1 medical only benefit for single coverage, and

Tier 2 dollar subsidies as they are assumed to grow with trend.

There is also a minor effect on the pre-65 implicit subsidy in the PPO because it is assumed that this subsidy will also grow with trend.

Actuarial Basis *(continued)*

Summary of Plan Provisions – Medical (Health)

Eligibility	Closed group of Employees who transferred from Washoe County (WC), who retire after age 55 with at least 10 years of service. General TMWA policy is to provide TMWA health plans and premiums, but apply the employer subsidies provided by WC
Service	TWMA service plus Predecessor WC service
Tier 1 Hired pre 7-1-1997	<u>Benefit tied to service if fewer than 20 years, but all 5 will surpass 20 years</u> Eligible retirees can elect to participate in Health Plans offered by TMWA to actives. TMWA will pay for single medical coverage, while the retiree must pay for dental and vision as well as for dependent coverage
Tier 2 Hired after 6-30-1997, before 2010	<u>Benefit pro rata to service if < 20 years, but 15 of 17 are projected to surpass 20</u> <u>Prior to Age 65: Recent history of maximum WC monthly subsidy for 20 years:</u> 1/18 to 12/18: \$615.15 7/16 to 12/17: \$595.15 7/15 to 06/17: \$585.15 7/14 to 06/15: \$635.53 7/11 to 06/12: \$575.13 <u>On or After 65: Recent history of maximum WC monthly subsidy for 20 years:</u> 1/18 to 12/18: \$250 7/16 to 12/17: \$230 7/15 to 06/17: \$220 7/14 to 06/15: \$220 7/11 to 06/12: \$200 As compared to the prior valuation which used the 7/14 to 6/15 subsidies, the pre 65 subsidy decreased compared to assumed 5% increases, while the post 65 subsidy increased in line with the 5% assumed annual growth
Death Benefits	No Spouse: No continuation beyond COBRA rights Surviving spouse: No continuation beyond COBRA rights

Summary of Plan Provisions – Life Insurance

Eligibility	MPAT and IBEW employees who “retire” under the Nevada PERS retirement system
Death Benefit	Employee coverage is 1 x annual salary at no cost to the employee. • Retiree coverage amount is same as employee coverage on retirement date • Retiree coverage reduced by 50% at age 70 • Reduced to \$2,000 at age 75

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

Actuarial Cost Method. Sometimes called “funding method,” a technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Annual OPEB Cost. An accrual-basis measure of the periodic cost of an employer’s participation in a defined benefit OPEB Plan

Annual Required Contribution. The Normal Cost plus amortization of the Unfunded Actuarial Accrued Liability.

Net OPEB Obligation. The cumulative difference since the effective date of GASB 45, between annual OPEB cost and the employer’s contributions to the plan.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use.

OPEB liabilities. The amount recognized by an employer for contributions to an OPEB plan less then OPEB expense/expenditures.

Unfunded Actuarial Accrued Liability. The excess of the present value of prospective benefits, as of the date of a valuation, over the sum of (1) the value of the assets and (2) the present value of future normal costs determined by any actuarial cost methods. For methods that define an accrued liability, this amount equals the excess of the accrued liability over assets.

January 18, 2017

Postretirement Benefit Valuation Report Under GASB 45 as of July 1, 2016
Expense Development for Fiscal Year Ending June 30, 2017
Truckee Meadows Water Authority

Prepared by William Bush, FSA

Contents

Report Highlights

Calculation Details

This report has been prepared for the Truckee Meadows Water Authority ("TMWA") to:

- Present results of the valuation of TMWA's retiree medical (health) and life insurance plans as of July 1, 2016. This report excludes obligations attributable to employees who transferred employment from Washoe County on December 31, 2014 (those obligations are reported under a separate actuarial report),
- Provide annual required contribution amounts under GASB Statement No. 45 for the fiscal year ending June 30, 2017
- Provide reporting information for financial statements, government agencies and other interested parties pursuant to GASB requirements

Summary of GASB Statement No. 45

In June, 2004 the Governmental Accounting Standards Board (GASB) issued Statement No. 45: *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, which establishes new accounting standards for Postretirement Benefits Other Than Pensions (OPEB).

The requirements apply to any state or local government employer that provides OPEB. The primary type of OPEB covered by the statement will be postretirement health benefits. OPEB may also include life insurance, legal benefits, and other benefits.

The new standard requires accrual accounting. In general, GASB followed the standards already in place for governmental pension plans in Statement No. 27.

The standard does not require funding of OPEB expense, but any differences between the annual expense and the amount funded in a year are recorded in the employer's financial statement as an increase (or decrease) in the net OPEB obligation. The funded status of the actuarial accrued liability is shown as part of Required Supplementary Information.

For TMWA, the effective date for GASB 45 was the fiscal year ending June 30, 2008.

Reasons for Updated Valuation as of July 1, 2016

The normal valuation cycle is once every two years under GASB 45. The valuation helps to guide Trustees in considering funding and investment policies by comparing the values of actuarial obligations to Trust assets.

Retiree Premium Rates and Implicit Subsidy

TMWA pays a portion of the rates set by the City of Reno Health Plan Trust. The GASB 45 implementation guide related to implicit subsidy indicates the following:

Report Highlights *(continued)*

Calliculation Details *(continued)*

• **HHP- HMO:** Is fully insured and community rated, with blended active and pre-65 retiree rates. Actuary believes that HHP would offer the same premium rate to TMWA, even if only non-Medicare eligible retirees were covered because TMWA average age of actives is almost 50 and has few pre-65 retirees in HHP. HHP covers a much larger enrollment. This conclusion is based on Q/A 66 and 67 of Implementation Guide to GASB 45.

• **Reno Health Plan PPO**: Is self-funded, community rated for all three participating employers. Active and pre-65 rates are blended. QA 68 of the Implementation Guide indicates that the decision to value implicit subsidy is a judgment call. The example in QA 68 implies that an employer, such as TMWA, who has 8% or more of the total enrollment in agent multiple-employer plan would need to value the implicit subsidy. An analysis of active vs. pre-65 retiree claims over a recent 3-year period indicates that pre-65 PPO claims are about 30% higher than the blended City of Reno PPO rates.

• **Enrollment:** There are now 31 retirees; 16 enrolled in the PPO, 7 in the HMO and 8 (including 1 deferred enrollee) enrolled in other plans using their account to pay premiums. Fourteen of 18 (or 78%) of Pre-1998 IBEW retirees, where spouse coverage is material to the valuation, cover a spouse.

There is no implicit subsidy for those who enroll in the HMO or another plan, only for those in the PPO under age 65. There is no mechanism, at this point, for the Trust to pay the implicit subsidy to the Reno Health Plan PPO. Accordingly, it is likely that the reserves held for the implicit subsidy will never be debited. There is a similar issue related to retiree life insurance, where a blended rate is charged for both actives and retirees. This valuation conforms to the GASB 45 approach of valuing the life insurance obligation based on age specific term insurance rates. However, if the obligation is relieved by paying the materially lower “blended rate” for life insurance, then the obligation is being measured at a much higher cost than will be relieved by payment of blended rate premiums.

Funding Methods

Calculations have been performed under the Projected Unit Credit (PUC) method. The PUC actuarial method determines a Normal (or current service) cost, which represents the cost of benefits earned in the current year, and an actuarial accrued liability, which represents the cost of benefits earned in prior years. It is the method mandated by FASB for determining the cost of pension and postretirement benefits by private sector companies. It is the method used by TMWA prior to GASB 45 and is one of six permissible cost allocation methods under GASB 45.

The unfunded actuarial accrued liability is amortized over a period of 30 years as a level dollar amount starting with the 2008 year. Because of the change in valuation date, we used a 22-year remaining period as of July 1, 2016, and 24 years as of July 1, 2014. This methodology provides a stable and moderate annual contribution to achieve full funding in a systematic manner.

Report Highlights *(continued)*

Calculation Details *(continued)*

Discount Rate and Other Assumptions

The investment return assumption (or discount rate) is selected as the estimated long-term investment return on the investments that are expected to be used to finance the payment of benefits. For a funded plan, the considerations in selecting this rate are like selecting the funding interest rate for a pension plan. For an unfunded plan, the discount rate should be determined with reference to the expected return on TMWA's general assets, which are assumed to be invested as a mixture of cash and very short-term fixed interest instruments, such as money market funds. If the plan is partially funded, a blended discount rate is used. Because the Plan is virtually fully funded and will be fully funded over the long term by contributing ARC, we use an expected rate based on the Trust portfolio, which has a high equity allocation. We reduced the discount rate to 6% in the 2014 valuation from the 6.5% discount rate used in the 2012 valuation to reflect the low interest rate environment. This 6% assumption has been maintained for the 2016 valuation.

There are no changes to demographic assumptions from those used in the 2014 valuation.

The assumed growth in health care costs is another key assumption. We continued to assume 5% growth in health plan costs. There was a 20% increase in every health plan rate effective January 1, 2016, which is believed to have been a one time "catch up" aberration given that rates had been kept essentially flat over several years prior to 2016. There was a 5% increase in medical premiums on January 1, 2017, with no change to dental or vision rates, which increases have been reflected in this valuation.

The unexpected 20% rate increase primarily affected the pre-1998 BU obligation, as the other Plan obligations are defined in dollars, not health plan benefits (except for the relatively small pre-65 PPO implicit subsidy). All assumptions and plan provisions are summarized at the end of the report.

Asset Values

As of July 1, 2016, the RBIF market value was $8,948,929 compared to $8,443,923 in the prior valuation as of July 1, 2014. The funded status has declined to 86% as of July 1, 2016 partly because actual investment return was below the assumed 6%, but mostly because the 20% increase in health plan rates was way higher than the 5% per annum assumed increase. For convenience, all assets were allocated to medical to determine expense. This allocation has no effect on the overall cost of the combined ARC.

Report Highlights *(continued)*

Calculation Details *(continued)*

Expense/Contribution Calculation

The basic annual expense recognized under GASB 45 is called the "annual required contribution" or ARC, even though there is no requirement to fund this amount. The ARC depends on the actuarial cost method selected and typically consists of the normal cost plus amortization of the unfunded actuarial accrued liability (UAAL, or the excess of the past service liability over the actuarial value of assets).

The ARC associated with the post-retirement medical benefits program, calculated in accordance with GASB 45 for the fiscal years ending June 30, 2017 and June 30, 2015, are summarized below. The current annual expected pay-as-you-go cost for benefits provided by TMWA is approximately $250,000 for retiree medical and $26,300 for retiree life insurance, using age adjusted premium rates, or a total of $276,300. For comparison, the blended pay-as-you-go life insurance premium is about 25% of the age adjusted retiree life premium. There is negligible difference between implicit and explicit (or blended rate) health care pay-as-you-go health care premiums.

The difference between the amounts required to be recognized and the amounts funded (including benefits paid from general assets) are accumulated as the "net OPEB obligation." The annual OPEB cost related to the ARC must be reported in the employer's financial statements as an expense item.

Annual Required Contribution	Fiscal 2014-15	Fiscal 2016-17
Medical	**173,508**	**361,528**
Life Insurance	**70,921**	**83,535**
Total ARC	**$ 244,429**	**$ 445,063**

Certification

We have prepared this valuation of the TMWA's postretirement medical program as of July 1, 2016, to enable the Truckee Meadows Water Authority to comply with the accounting requirements under Statement of Governmental Accounting Standards No. 45 and to compute ARC for the year ending June 30, 2017.

The valuation is based on participant and cost data provided by the TMWA and summarized in this report without further audit. This data was not verified by the actuary. We have reviewed the data for internal consistency, reasonableness and reconciliation to the prior census. Based on that review, we have no reason to doubt its substantial accuracy. The valuation is also based on the substantive plan as described by TMWA as set forth in the Plan document, and as summarized in this report. TMWA is solely responsible for the validity and completeness of this information.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions selected by the TMWA based upon our recommendations are a reasonable estimate of the future experience of the plan. To the extent that actual experience differs from the assumptions, or to the extent that plan provisions as actually administered are different than those summarized herein, the results presented in this report will differ. The projections included in this report are based on the data, methods and assumptions described in this report. Actual experience could differ from these assumptions and may produce results that differ materially from the projections shown in this report.

The calculations reported herein are based on our understanding of the provisions of GASB No. 45. Actuarial computations under Statements of Governmental Accounting Standards are for purposes of fulfilling governmental employer accounting requirements. Computations for other purposes may differ from the results shown in this report.
I am available to answer questions, or provide explanations or further detail, as needed.
The undersigned credentialed actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Bill Bush

	January 18, 2017
William D. Bush, FSA	**Date**

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Valuation Results

Calculation of Annual Required Contribution (ARC) and Annual Expense under the Project Unit Credit (PUC) Method

	Actuarial Valuation Dates Medical Discounted @ 6%		Actuarial Valuation Dates Life Insurance Discounted @ 6%	
	July 1, 2014	July 1,2016	July 1, 2014	July 1, 2016
Benefit Obligations and Normal Cost				
1. Actuarial Accrued Liability				
a. Retired employees – IBEW	$ 1,752,785	$ $3,134,004	$ 81,634	$ 80,000
b. Retired employees - MPAT	203,698	215,837	69,075	113,044
c. Active employees – IBEW Pre 1998	4,462,397	4,853,210	**	**
d. Active employees – IBEW Post 1997	245,484	391,315	199,638	208,412
e. Active employees - MPAT	982,179	1,180,298	199,120	231,448
f. Total	$ 7,646,542	$ 9,774,665	$ 549,467	$ 632,904
2. Actuarial value of assets	8,443,923	* 8,948,929		
3. Unfunded Actuarial Accrued Liability	$ (797,381)	$ 825,736	$ 549,467	$ 632,904
4. Normal cost				
a. Active employees – IBEW Pre 1998	$ 117,541	$ 141,060	$ **	$ **
b. Active employees – IBEW Post 1997	25,061	36,858	11,063	11,635
c. Active employees – MPAT	66,872	84,303	14,541	17,586
d. Total	$ 209,474	$ 262,221	$ 25,604	$ 29,221

****Rows 1c &4b for Retiree life includes all IBEW. Also, some life obligations for BU retirees are included in the MPAT retirees**

ARC for Fiscal Year Ending June 30

	2015 - Medical	2017 -Medical	2015-Life Insurance	2017-Life Insurance
Level Dollar Amortization of Principal and Interest	6% Discount Rate	6%Discount Rate	6% Discount Rate	6% Discount Rate
1. Amortization factor based on 30 years*	.07517	.07835	.07517	.07835
2. Amortization of UAAL over 30 years	$ (59,398)	$ 64,692	$ 41,303	$ 49,585
3. Normal cost	209,474	262,221	25,604	29,221
4. Provision for Annual Trust Expenses	15,000	15,000		
5. Interest on 2. and 3.	8,972	19,615	4,014	4,729
6. Annual Required Contribution (ARC) (2. + 3. + 4. +5.)	$ **173,508**	$ **361,528**	$ **70,921**	$ **83,535**
* Amortization over remaining years since 2008				
Benefit Cash Flow				
1. Projected first year cash flow - TMWA	$ **158,000**	$ **250,000**	$ **20,000**	$ **26,300**

Valuation Results *(continued)*

Reconciliation of Actuarial Accrued Liability (AAL) Between Valuation Dates

	Medical	Life Insurance	Total
1. **Total Actuarial Accrued Liability as of July 1, 2014**	7,646,542	549,467	8,196,010
2. **Plus Normal Cost as of July 1, 2014**	215,351	25,604	240,455
3. **Less TMWA premiums**	(190,000)	(22,000)	(212,000)
4. **Plus 6% interest on AAL +NC - .5 Premiums**	466,014	33,844	499,858
5. **Expected Actuarial Accrued Liability as of July 1, 2015**	8,137,907	586,916	8,724,823
6. **Plus Normal Cost as of July 1, 2015**	215,351	25,604	240,455
7. **Less TMWA premiums**	(220,900)	(26,300)	(247,200)
8. **Plus 6% interest on AAL +NC - .5 Premiums**	494,568	35,962	530,530
9. **Expected Actuarial Accrued Liability as of July 1, 2016**	8,626,926	622,182	9,249,108
10. **Loss due to unfavorable experience, mostly due to 20% increase in health plan premium rates**	1,147,739	10,722	1,158,461
11. **Loss due to changing assumptions**	0	0	0
12. **Actuarial Accrued Liability as of July 1, 2016**	9,774,665	632,904	10,407,569

Participant Data

The remainder of the report includes information supporting the results presented in the previous section.

- **Participant data** presents and describes the participant data used in the valuation.

- **Actuarial basis** describes the plan provisions, as well as the methods and assumptions used to value the plan. The valuation is based on the premise that the plan is ongoing.

Distribution of Active Participants – July 1, 2016

	Years	**Of**	**Service**		
Group/Age	0–10	10–19	19-29	30+	**Total**
MPAT Under 30	5				5
MPAT 30–39	15	2			17
MPAT 40-49	11	9	2		22
MPAT 50–59	13	12	4	4	33
MPAT Over 60	1	4	1	2	8
Total MPAT	**45**	**27**	**7**	**6**	**85**
IBEW Under 30	7				7
IBEW 30–39	18	4			22
IBEW 40-49	10	15	1		26
IBEW 50–59	4	8	6	9	27
IBEW Over 60	0	2	1	3	6
Total IBEW	**39**	**29**	**8**	**12**	**88**
Total	**84**	**56**	**15**	**18**	**173**

Averages for Active Participants – July 1, 2016

		Average	
	Number	**Age**	**Service**
MPAT	85	47.5	10.9
IBEW pre-1998 hires	23	55.3	28.9
IBEW post 1997 hires	65	41.8	8.3
IBEW all hire dates	88	45.4	13.7

Participant Data *(continued)*

Retirees – July 1, 2016

	Number	Average Age
IBEW		
Single Retirees	4	
Retirees with spouse/Dependent	14	
Total IBEW Retirees	18	67
MPAT Retirees with Healthcare	13	66
Total retirees	31	67

Actuarial Basis

Valuation Procedures

Actuarial cost method: Liabilities shown in this report are computed using the projected unit credit method. The Normal Cost represents the present value of accruals allocated to the current fiscal year, while the Actuarial Accrued Liability represents the value of accruals attributable to prior years of service (both TMWA and SPR service).

Financial and census data: We have used financial data and participant data as supplied by the plan sponsor. This information would not customarily be verified by a plan's actuary. We have reviewed the information for internal consistency and for consistency with prior census information. We have no reason to doubt its accuracy.

Participants included: The plan sponsor provides us with data on all employees as of the valuation date. Many TMWA employees were former SPR employees, for whom assets were transferred from an SPR VEBA to a trust sponsored by TMWA dedicated to funding retiree medical. The initial hire date with SPR is the hire date for these employees for purposes of computing service toward retiree medical benefits. Other former SPR employees, retired from SPR, did not elect to have assets and obligations transferred to TMWA. The presumption is that these few remaining employees will not become eligible for TMWA retiree medical based solely on TMWA service or will not elect TMWA coverage because the incremental TMWA COB provision would be perceived to have less value than the required retiree contributions.

Funding policy: The postretirement medical plan's benefits will be funded by accounts in a Nevada PERS sponsored RBIF dedicated to providing benefits, thus meeting the definition of Plan Assets under GASB 45. The Truckee Meadows Water Authority is expected to fund the ARC in future years, but there is no absolute commitment to do so.

Discount rate: GASB requires that the discount rate be the long-term expected-yield rate on current and expected future plan/trust assets. Plans pre-funded on a full actuarial basis are generally expected to have a higher long term yield due to presumed exposure to equity investments. Pay as you go plans are to be discounted based on the yields at which the entity's surplus cash is invested, generally at a very low rate. Partially funded plans are discounted at a blended rate. GASB has created a strong accounting incentive to fully prefund to enable use of a larger discount rate and TMWA has indicated their intent to prefund the ARC. We used 6%.

Actuarial Value of Assets: GASB requires the use of a market-related asset value. This valuation measures assets at fair market value.

Actuarial Basis *(continued)*

Development of Healthcare Assumptions

The following assumptions were used in valuing the liabilities and benefits under the plan.

Discount rate	6.0% per annum appropriate for a fully funded plan		
Health care cost trend rates	Years	Pre-65 Annual Rates of Increase	Post 65 Annual Rates of Increase
	All Years starting 1-1-2018	5.0%	5.0%
Monthly per capita claims cost (premium)		1-1-2017 Rates	
	Family Tier	The Reno PPO	HHP- HMO
Pre-Medicare	Retiree Only	$ 800.12	$ 831.56
	Retiree and Spouse	1,394.56	1,448.45
	Retiree and Child (ren)	1,322.87	1,374.25
	Retiree and Family	1,776.99	1,816.09
Post-Medicare	Retiree Only	629.37	608.99
	Retiree & Spouse (1 Medicare)	1,282.04	1,411.40
	Retiree & Spouse (2 Medicare)	1,106.29	1,058.99
Retiree elections	Retirees: Current Tier and Plan Actives: Assume 75% elect coverage in PPO, 25% in HHP - prior to 65, assume 75% elect retiree and spouse coverage, 25% elect retiree only - after 65, assume 60% elect retiree and spouse coverage, 40% elect retiree only.		
Retiree contributions	IBEW pre-1998 hires cost sharing is based on service. The explicit TMWA subsidy for Post-1997 IBEW and for MPAT are defined dollar amounts based on service. Retirees pay the balance of cost. IBEW post 1997 account is assumed to be used to pay benefits over the first 4 years of retirement only. MPAT is a lifetime cost sharing.		
Retiree contribution increases	Retiree contributions are assumed to increase in line with health care cost trend rates for IBEW pre-1998 hires. All other retirees bear the entire cost of premium increases, except for the pre-65 PPO implicit subsidy.		
Aging/Implicit Subsidy	None assumed for HHP as it is a fully insured HMO. Reno PPO rates post 65 retirees separately from pre-65. Pre-65 PPO premiums are blended with actives; costs are assumed to be 30% higher than PPO premiums for pre-65 retirees.		
Post Retirement Mortality	RP-2014 Mortality Table recently released by SOA, healthy annuitants blended 50/50 unisex. Life expectancy at age 65 is 21.0 years.		
	Age	Male	Female
Sample probability of Death in next year	50	0.34%	0.34%
	60	0.65%	0.65%
	70	1.48%	1.48%
	80	3.98%	3.98%
	90	12.15%	12.15%
Turnover Prior to Age 55	Probability of leaving TMWA is 5% per year of employment. None thereafter until assumed retirement age.		

Actuarial Basis *(continued)*

Development of Healthcare Assumptions *(continued)*

Assumed Retirement Age	Algorithm assumes employee will retire after 20 years of service: - but no earlier than age 60 - but no later than age 66, unless employee has less than 10 years of service (in this case assumed to retire when he reaches 10 years) This assumption is designed to assume everyone will wait to retire with some benefit (10 years) and will generally wait to have at least 20 years to maximize the health plan contribution. Average assumed retirement ages in current valuation are: IBEW Pre 1998: 60.5; IBEW Post 1997: 62.5; MPAT: 63.1
Administrative expenses	Assumed to be fully included in medical premium rates, except for $15,000 of estimated annual expenses paid from Trust. Carrier retention is assumed to be 10% of life insurance death benefits.
Medicare	100% of retirees are assumed to elect Medicare on attaining age 65.
Salary growth rate	3.0% per annum used to project life insurance coverage at retirement

IBEW Pre 1998	IBEW Post 1997	MPAT
60.5	62.5	63.1

Per Capita Healthcare Costs/Premiums

TWMA retirees are eligible to elect the Reno PPO or the HHP insured HMO. The HHP rates retirees separately from actives and charge fully insured premiums accordingly. The PPO rates post 65 retirees separately. A claim analysis study performed several years ago, based on 3 years of data, indicates that pre-65 retirees incur claims that are about 30% higher than the blended premiums charged to TMWA by the City of Reno PPO.

Healthcare Cost Trend Rates

The assumed trend is based on macroeconomic principles, reflecting nominal gross domestic product growth rates, and the excess of national health expenditures over other goods and services, and an adjustment for an assumed impact of population growth. Trend only impacts the: (i) IBEW pre-1998 hires because other employees only receive a benefit expressed in dollars and (ii) other groups only to the extent of the pre-65 implicit subsidy in the PPO. This latter amount is a relatively small obligation.

Actuarial Basis *(continued)*

Summary of Plan Provisions – Medical (Health)

Eligibility	Employees who retire after age 55 with at least 10 years of service
Service	TWMA service. Predecessor SPR service recognized if employee elected to have assets transfer from SPR VEBA to TMWA dedicated trust
IBEW Pre-1998 Hires	<u>Prior to Age 65</u> Eligible retirees can elect to participate in Health Plans offered by TMWA to actives. TMWA will pay a percentage of the cost (including dependant coverage) if retiree pays balance. Retiree share is 20% plus 4% for each year of service less than 20. For example, retiree with: • 20+ years would pay 20% – TMWA pays 80% (some set at 85%) • 15 years would pay 40% of the premium – TMWA pays 60% <u>On or After 65</u> Eligible retirees can elect to participate in Medicare coordinated Health Plans offered by TMWA. TMWA will pay a percentage of the cost (including dependent coverage) if retiree pays the balance. Retiree share is 15% (0% if Medicare Risk contract elected) plus 4% for each year of service less than 20. For example, retiree with: • 20 or more years would pay 15% of the premium – TMWA pays 85% • 15 years would pay 35% of the premium – TMWA pays 65% • 20 + year retiree electing Medicare Risk would pay $0 (PPO was being treated as Medicare Risk, but this will change effective July 1, 2010) <u>Age 60+ with 10+ years on July 1, 1998</u> Retiree share for this grandfathered group is 0% plus 4% for each year of service (YOS) less than 20.
IBEW Post 1997 Hires	Account that can be used to pay premiums or for eligible health expenses. The account is $1,250 x years of service. It is debited by eligible premium costs and does not grow with interest. Once exhausted, the retiree may convert to COBRA but only for the 18-month COBRA continuation period.
MPAT	<u>Prior to Age 65</u> Annual employer subsidy of $235 x YOS up to 30, prorated for each month of retirement while under 65 <u>On or After 65</u> Annual employer subsidy of $105 x YOS up to 35, prorated for each month of retirement while 65 and above <u>Early Retirement Reduction before age 62</u> Subsidy reduced if employee retires before 62, by 5% for each full year retirement precedes age 62. An employee who retires at age 60 would receive 90% of the $235 per YOS prior to 65 and 90% of $105 per YOS starting at 65. <u>Application of Monthly Credits</u> Employer subsidy reduces premium cost of the Health Plan selected by retiree <u>Dependent Coverage</u> Unlike IBEW pre-1998, there is no extra subsidy (or credit) for spouse coverage
Death Benefits	No Spouse: No continuation beyond COBRA rights, except that $1,250 x YOS account will be used for any eligible dependants Surviving spouse: Subsidy for Pre-1998 IBEW and MPAT continues for surviving spouse for up to 12 months. Thereafter, the coverage converts to spouse continuation under COBRA for up to 24 months.

Actuarial Basis *(continued)*

Summary of Plan Provisions – Life Insurance

Eligibility	MPAT and IBEW employees who "retire" under the Nevada PERS retirement system
Death Benefit	Employee coverage is 1 x annual salary at no cost to the employee. • Retiree coverage amount is same as employee coverage on retirement date • Retiree coverage reduced by 50% at age 70 • Reduced to $2,000 at age 75

Glossary

Actuarial Accrued Liability. The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

Actuarial Cost Method. Sometimes called “funding method,” a technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

Annual OPEB Cost. An accrual-basis measure of the periodic cost of an employer’s participation in a defined benefit OPEB Plan

Annual Required Contribution. The Normal Cost plus amortization of the Unfunded Actuarial Accrued Liability.

Net OPEB Obligation. The cumulative difference since the effective date of GASB 45, between annual OPEB cost and the employer’s contributions to the plan.

Normal Cost. The annual cost assigned to the current year, under the actuarial cost method in use.

OPEB liabilities. The amount recognized by an employer for contributions to an OPEB plan less then OPEB expense/expenditures.

Unfunded Actuarial Accrued Liability. The excess of the present value of prospective benefits, as of the date of a valuation, over the sum of (1) the value of the assets and (2) the present value of future normal costs determined by any actuarial cost methods. For methods that define an accrued liability, this amount equals the excess of the accrued liability over assets.