



**TO:** TMWA Board Members  
**FROM:** Jeff Tissier, (outgoing) Chief Financial Officer/Treasurer  
Michele Sullivan, (incoming) Chief Financial Officer/Treasurer  
**DATE:** March 8, 2016  
**SUBJECT:** Discussion and action on the TMWA Draft Funding Plan for Fiscal Years 2017 through 2021.

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### **Recommendation**

Two 2017-2021 Draft Funding Plans are presented to the TMWA Board for consideration and one for approval. Recommendation is to continue with the deferral of certain bond maturities, monitor TMWA's financial performance through the period of higher water demands in calendar year 2016 and analyze the ability to close the funding gap between recurring revenues and the cost of servicing the customer base.

### **Executive Summary**

Two funding plans are presented in this report that analyzes the ability of TMWA to fund operating expenses, principal and interest payments on all currently outstanding debt, principal and interest payments on any new money issuance, and all capital improvements presented in the TMWA 2017-2021 Capital Improvement Plan (CIP). The funding period coincides with TMWA's proposed CIP period. These high level presentations are based upon very detailed financial projections. Assumptions used in these financial projections can be found in **Attachment C** and are common to both funding plans.

Critical financial goals for TMWA that need to be considered in these funding plans are as follows:

- Maintain a senior lien coverage (DSC) ratio that not only meets bond covenants but also pays for rehabilitative capital projects on a pay-as-you-go basis.
- Achieve and maintain an asset/liability match to mitigate changes in interest rates.
- Maintain high investment grade credit ratings to cost effectively access the credit markets.
- Maintain recurring revenues sufficient to cover the cost to serve customers

The TMWA Board adopted a policy in August of 2003 to maintain a senior lien debt coverage ratio at 1.50x (excluding developer facility fees), which pays for cash operating expenses, all principal and interest on outstanding debt and for rehabilitative capital projects on a pay-as-you-go basis. This policy maintains recurring revenues to meet the cost of service. Recurring revenues are comprised of water sales, hydroelectric revenues, other miscellaneous operating revenues and investment income with water sales making up anywhere from 90 to 95% of recurring revenues. The cost to serve customers is defined as annual cash operating expenses, principal and interest payments on all outstanding debt as well as rehabilitative capital projects and outlays. If recurring revenues are less than the cost to serve customers this is referred to as a funding gap.

A byproduct of the senior lien debt coverage policy is that unrestricted cash and investments are maintained at a level that provides for an asset/liability match to mitigate the impacts of changes in interest rates. Asset/liability matching allows for investment income to move in tandem with interest expense on outstanding variable rate debt (TMWA's tax-exempt commercial paper program) effectively mitigating the risk of changes in interest rates.

Strong balances of cash and investments help underpin the high investment grade credit ratings of TMWA which when combined with the senior lien DSC ratio of at least 1.50x affords the AA/AA-/AA- investment grade credit rating by Moodys/S&P/Fitch, the three major credit rating agencies in the nation. These credit ratings allow for cost effective access to the credit markets making TMWA bonds a desirable investment for potential investors. The interplay between the senior lien DSC ratio and strong cash and investment levels is critical to maintaining the aforementioned investment grade credit ratings.

Throughout the recession and into the first year of consolidated water utility operations, TMWA has maintained its financial position to accomplish these aforementioned financial goals. Notwithstanding this accomplishment, developments related to the recent drought have potentially impacted future water sale revenue in a negative manner, requiring TMWA management to develop and propose an alternative mitigating strategy that was acted upon by the TMWA Board at the February meeting.

This strategy looks to the current refunding and defeasance of the Series 2006 Refunding Bonds which provides a unique opportunity to defer the 2017; 2018; 2019 maturities totaling \$39.1 million beyond fiscal year 2034. This allows for TMWA to decrease the funding gap without significant increases in water rates which could impact customer water demands. Further water demand reductions would increase the funding gap with serious negative financial consequences. This approach provides the utility with flexibility in that if water demands do return to more normal levels and increase water sales over what the attached projections show, the Board could decide to continue to redeem more short term variable debt (tax exempt commercial paper, or TECP), thereby reducing TMWA's total outstanding debt. Although deferring fixed rate maturities is not desirable the ability to continue redeeming TECP is an example of TMWA's significant debt management flexibility.

The tables found in *Attachment A* present the financial metrics and disparity between recurring revenues and the cost to serve customers without the deferral of the aforementioned maturities of the Series 2006 Refunding Bonds. In this five year projection senior lien debt service coverage ratios immediately decline well below a board approved policy, breaching bond covenants in fiscal year 2020 and reducing unrestricted cash and investments to a level that threatens the liquidity of TMWA based on underlying operating and financial assumptions found in *Attachment C*. In addition, asset/liability matching practices are no longer in balance reducing investment income on unrestricted cash and investments which significantly increases TMWA's exposure to variable interest rates on outstanding short term variable debt.

The tables found in *Attachment B* present the financial metrics and disparity between recurring revenues and the cost to serve customers with the deferral of the aforementioned maturities of the Series 2006 Refunding Bonds. In this five year projection senior lien debt service coverage ratios are temporarily held well above the board approved policy, but the bond indenture covenants are still breached in fiscal year 2020. The reduction of unrestricted cash and investments to a level that threatens the liquidity of TMWA is mitigated significantly based on underlying operating and financial assumptions found in *Attachment C*. Water sale assumptions are based on actual calendar year 2015 water demands that included conservation due to drought and the real possibility that most of that conservation could become permanent (i.e. permanent changes regarding the amount of water needed to sustain landscaping and replacing turf with water efficient landscaping). Customer growth is included in the 5-year forecast per the demand projections contained in the proposed 2016-2035 Water Resource Plan.

Of particular importance is the maintenance of the fiscal health of TMWA to achieve better asset/liability matching. This provides an opportunity to achieve a successful refunding and defeasance of TMWA's \$202 million in outstanding Series 2007 Refunding Bonds in the third quarter of fiscal year 2017. By maintaining a healthy DSC ratio and treasury balance we will position TMWA for success in the 2007 Refunding in 2017. This scenario removes the immediate pressure to raise customer rates significantly mitigating a potential demand response from a large rate increase.

The deferral of the aforementioned maturities of the Series 2006 Refunding Bonds provides for a number of benefits but comes at the expense of savings on the Series 2006 refunding and defeasance, a tradeoff considered prudent in light of the current water sales situation. The deferral provides the time necessary to close the funding gap in a measured and thoughtful manner. Attention to the financial metrics and funding gap in fiscal year 2020 cannot be understated and needs to be addressed. This can be achieved through a number of avenues.

The avenues include TMWA management continuing with strong cost control measures, as demonstrated over the past five years while continuing to explore operating cost synergies from the water utility consolidation. The deferral allows for the potential to successfully refund and defease the Series 2007 Refunding Bonds which in turn could meaningfully reduce future cost of service. This future refunding is very dependent on interest rates early next year which cannot be accurately predicted at this time. Another benefit is that the deferral of the maturities gives TMWA time to see if there is a rebound in water demand which could revive water sales to some degree, in turn increasing recurring revenues and helping to close the funding gap.

Truckee Meadows Water Authority  
Debt Service Coverage Ratios (DSCs) Senior and Subordinate

<i>Debt Service Coverage (DSC) Ratios</i>	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Operating Revenues	93,059,450	94,633,619	95,222,732	95,107,077	95,149,686
Investment Income	2,301,540	2,575,347	2,321,028	2,464,495	2,981,113
Total Revenues	95,360,990	97,208,966	97,543,760	97,571,572	98,130,799
Operating Expenses	(54,231,126)	(55,981,965)	(57,547,380)	(59,292,472)	(60,859,322)
Net Revenues	41,129,864	41,227,001	39,996,380	38,279,100	37,271,477
Senior Lien Debt Service	31,078,863	31,089,088	31,094,088	31,099,438	31,102,750
Senior Lien DSC	1.32	1.33	1.29	1.23	1.20
Total Sr. Lien and SRF Debt Service	33,289,959	33,301,426	33,264,210	33,226,126	33,184,753
Total Sr. Lien and SRF DSC	1.24	1.24	1.20	1.15	1.12
Total Annual Debt Service incl. TECP Interest	33,788,888	33,972,478	34,143,344	34,327,513	34,447,891
Total Subordinate DSC	1.22	1.21	1.17	1.12	1.08
Projected Rate Increases	0.0%	0.0%	0.0%	0.0%	0.0%

<i>TMWA's Revenue Sufficiency and Cost of Service</i>	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Operating Expenses	\$ 54,231,126	\$ 55,981,965	\$ 57,547,380	\$ 59,292,472	\$ 60,859,322
Principal and Interest on all outstanding debt	33,788,888	33,972,478	34,143,344	34,327,513	34,447,891
Rehabilitative Capital Spending	28,640,000	24,993,000	19,294,500	20,597,000	16,932,000
Total Projected Cost of Service (COS)	\$ 116,660,014	\$ 114,947,443	\$ 110,985,224	\$ 114,216,985	\$ 112,239,213
Recurring Revenues (RR)	\$ 95,360,990	\$ 96,948,567	\$ 97,610,519	\$ 97,605,310	\$ 97,624,360
COS-RR Surplus (Deficiency)	\$ (21,299,024)	\$ (17,998,876)	\$ (13,374,705)	\$ (16,611,675)	\$ (14,614,853)
Surplus (Deficiency) as a % of Cost of Service	-18.3%	-15.7%	-12.1%	-14.5%	-13.0%

<i>TMWA's Asset/Liability Matching</i>	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Unrestricted Cash and Investments (End of Year)	\$ 65,051,897	\$ 46,855,947	\$ 35,097,759	\$ 20,582,244	\$ 7,839,091
Projected outstanding Tax-Exempt Commercial Paper	\$ 89,400,000	\$ 84,400,000	\$ 79,600,000	\$ 74,000,000	\$ 68,800,000
Asset/Liability-Match (Mismatch)	\$ (24,348,103)	\$ (37,544,053)	\$ (44,502,241)	\$ (53,417,756)	\$ (60,960,909)

ATTACHMENT A

Major Assumptions:

No developer fees included in DSC calculations  
 Growth in residential/commercial/irrigation customer connections FY 2017-2600 connections in FY 2018 to 1500 in FY 2018 back to 600 in FY 2020  
 Water sale projections based upon calendar year 2015 customer demands which reflected 15% to 20% conservation  
 Assume extension of FY 2017-208-2019 2006 Refunding Bond maturity extensions to Fee 2035-2037  
 2006 Refunding after extensions reflect net decrease in principal of approximately \$24 million  
 Inflation projections General 2.5% power 3% postal 5% health care 5%  
 Staffing held at 206 FTE's throughout planning horizon  
 Median river flows for hydro revenue projections except for 2017 recovery year

Outstanding TECP assumed to be \$93.8 as of June 30, 2016 declining to \$82.0 million FY 2021  
 Subordinate DSCs includes DWSRF principal and interest and TECP interest expenses

Truckee Meadows Water Authority  
Debt Service Coverage Ratios (DSCs) Senior and Subordinate

<i>Debt Service Coverage Ratios</i>	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Operating Revenues	93,059,450	94,633,619	95,222,732	95,107,077	95,149,686
Investment Income	2,231,304	2,575,347	2,321,028	2,464,495	2,981,113
Total Revenues	95,290,754	97,208,966	97,543,760	97,571,572	98,130,799
Operating Expenses	(54,231,126)	(55,981,965)	(57,547,380)	(59,292,472)	(60,859,322)
Net Revenues	41,059,628	41,227,001	39,996,380	38,279,100	37,271,477
Senior Lien Debt Service	17,814,263	18,003,563	17,859,963	32,004,563	31,648,500
<b>Senior Lien DSC</b>	<b>2.30</b>	<b>2.29</b>	<b>2.24</b>	<b>1.20</b>	<b>1.18</b>
Total Sr. Lien and SRF Debt Service	20,025,359	20,215,901	20,030,085	34,131,251	33,730,503
<b>Total Sr. Lien and SRF DSC</b>	<b>2.05</b>	<b>2.04</b>	<b>2.00</b>	<b>1.12</b>	<b>1.10</b>
Total Annual Debt Service incl. TECP Interest	20,524,288	20,886,953	20,909,219	35,232,638	34,993,641
<b>Total Subordinate DSC</b>	<b>2.00</b>	<b>1.97</b>	<b>1.91</b>	<b>1.09</b>	<b>1.07</b>
Projected Rate Increases	0.0%	0.0%	0.0%	0.0%	0.0%

<i>TMWA's Revenue Sufficiency and Cost of Service</i>	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Operating Expenses	\$ 54,231,126	\$ 55,981,965	\$ 57,547,380	\$ 59,292,472	\$ 60,859,322
Principal and Interest on all outstanding debt	20,524,288	20,886,953	20,909,219	35,232,638	34,993,641
Rehabilitative Capital Spending	28,640,000	24,993,000	19,294,500	20,597,000	16,932,000
<b>Total Projected Cost of Service</b>	<b>\$ 103,395,414</b>	<b>\$ 101,861,918</b>	<b>\$ 97,751,099</b>	<b>\$ 115,122,110</b>	<b>\$ 112,784,963</b>
Recurring Revenues	\$ 95,290,754	\$ 96,952,731	\$ 97,726,663	\$ 97,769,023	\$ 98,311,212
Surplus (Deficiency)	\$ (8,104,660)	\$ (4,909,187)	\$ (24,436)	\$ (17,353,087)	\$ (14,473,751)
Surplus (Deficiency) as a % of Cost of Service	-7.8%	-4.8%	0.0%	-15.1%	-12.8%

<i>TMWA's Asset/Liability Matching</i>	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Unrestricted Cash and Investments (End of Year)	\$ 80,373,045	\$ 75,266,921	\$ 76,859,033	\$ 61,602,028	\$ 48,999,784
Projected outstanding Tax-Exempt Commercial Paper	89,400,000	84,400,000	79,600,000	74,000,000	68,800,000
Asset/Liability-Match (Mismatch)	\$ (9,026,955)	\$ (9,133,079)	\$ (2,740,967)	\$ (12,397,972)	\$ (19,800,216)

ATTACHMENT B

**2017-2021 Five Year Funding Plan Assumptions  
(ATTACHMENT C)**

**Operational Assumptions**

- 1) Greater reliance on surface water in fiscal year 2017 due to improved weather patterns with groundwater supplies augmenting the surface water treatment plants. Both surface water treatment plants to operate.
- 2) The Longley Lane Water Treatment Plant will be operated more as a pump transfer station rather than using the treatment membranes in order to reduce operating expenses.
- 3) The North Valleys Integration Pipeline Project should be completed in the first quarter of fiscal year 2017. Fish Springs Ranch (Vidler) groundwater will be made available to the North Valleys reducing reliance on groundwater in the Lemmon Valley Basin. Water flow maintained to optimize water quality.
- 4) The Mt. Rose/Galena Surface Water Treatment Plant operational in the middle of fiscal year 2018 with operating costs assumed to be \$600 per mgal.
- 5) River flows are assumed to be adequate to operate the hydroelectric facilities with the exception of fiscal year 2017 when river flows are anticipated to drop off in October and return in the February 2017 timeframe.
- 6) Truckee River Operating Agreement (TROA) is expected to diminish hydroelectric revenues by at least \$0.5 million per year due to storage activities of the various parties to the agreement and bypass flows.

**Revenue/Capital Contribution Assumptions**

- 1) Projected water sale revenues for FY 2017 based upon calendar year 2015 customer demands. This includes the impact of the drought and converting flat rate customers to metered billing.
- 2) Hydroelectric sales assumed to be based on median river flows except for fiscal year 2017.
- 3) Growth in service connections is consistent with growth projections presented in the Draft 2015-2035 Water Resource Plan. The Five Year Funding Plan anticipates an additional 9,000 service connections over the five year period from approximately 2,400 connections in fiscal year 2017 decreasing to 1,630 connections in fiscal year 2021.
- 4) Weighted average yield on investable cash is estimated to be 0.40% in fiscal year 2017 rising to 1.31% in fiscal year 2021. These yields are sufficient to maintain prudent asset/liability management practices. The Forward Delivery Agreements for the Debt Service Reserve Fund and part of the Operations and Maintenance Fund are assumed to continue in effect yielding 5.5%
- 5) Will serve sales are expected to be approximately \$25.0 million over the ensuing five years. Other developer contributions are projected to be \$23.9 million over the ensuing five years, sufficient to pay for expanded capacity projects.

6) Collection of Water Meter Retrofit fees are suspended in fiscal year 2019 after sufficient funds are collected to finalize meter installations on the remaining non-metered connections.

**Operating Expense Assumptions**

1) Wages and salaries are assumed to increase by 2.0% in fiscal year 2017 as previously approved by the TMWA Board pursuant to labor negotiations with IBEW Local 1245. Thereafter wages and salaries are assumed to increase 2.5% annually.

2) Public Employee contribution rates are assumed to increase to 29% in fiscal year 2018 and 2019 and to 30% in fiscal years 2020 and 2021.

3) Health care premiums are assumed to increase 5% annually. No change to employer/employee allocation of costs. OPEB trust contributions are assumed to increase 4% per year - less than health premiums due to funded status of the trusts.

4) Life and disability premiums assumed to increase 4% annually. Workmen's compensation premiums assumed to increase 2.5% annually due to favorable loss modification factors to premium calculations.

5) General inflation on all service and supplies assumed to increase by 2.5% annually with the exception of power and fuel assumed to increase 3% annually and postal rates 5% annually.

6) Power consumption is estimated to be approximately 51,500 megawatt hours in fiscal year 2017 increasing to 52,900 megawatt hours in fiscal year 2021.

**Debt Management Assumptions**

1) With the Enhanced Funding Plan the Series 2006 Refunding Bond defeasance assumes deferral of the 2017; 2018; 2019 maturities beyond fiscal year 2034. Defeasance savings are estimated to be a net present value of approximately \$15.0 million.

2) Both scenarios of Five Year Funding Plans do not assume any benefits from a Series 2007 Refunding Bonds defeasance. Since no defeasance of these bonds are assumed the springing of the debt service reserve fund and termination of operations and maintenance reserve forward delivery agreements remain in force.

3) Tax-exempt commercial paper interest rates are assumed to be 0.50% to 0.60% in fiscal year 2017 increasing to 1.69% to 1.86% in fiscal year 2021.

4) Total draws on the 2015 Drinking Water State Revolving Fund Loan (DWSRF) is expected to be \$12.0 million, \$3.0 million less than the \$15.0 million authorization.

5) No valuation adjustments or original issue premium has been computed for the defeasance of the Series 2006 Refunding Bonds. When the bond defeasance is priced and closed the final budget will reflect the amortization of these numbers.

**Treasury Assumptions**

- 1) Total cash and investments at the beginning of fiscal year 2017 are estimated to be \$178.5 million. Of this total \$89.2 million is restricted and \$89.3 million unrestricted.
- 2) Restricted reserves that were transferred from the South Truckee Meadows General Improvement District (STMGID) are sufficient to fund all capital improvements in this former service area.
- 3) Collection of the Water Meter Retrofit Fee is suspended in fiscal year 2019 since sufficient proceeds are projected to be collected to fund the remaining services with no meter currently installed.