



AGENDA ITEM NO. 8.D.

DATE: April 28, 2016
TO: Board of Directors
FROM: Tammy Rudock, General Manager

SUBJECT: MPWD CAPITAL IMPROVEMENT PROGRAM (CIP) DISCUSSION:
1. REVIEW PRIOR BOARD DISCUSSIONS AND INFORMATIONAL SUMMARY
2. CONSIDER ALTERNATIVE CIP FINANCING AMOUNTS AND ALTERNATIVES
3. FINANCIAL MANAGEMENT PLAN FOR MPWD UNDER DIFFERENT FINANCING PLAN SCENARIOS
4. BOARD CONSIDERATION OF PROCESS FOR SELECTION AND AWARD OF PROFESSIONAL AND CONTRACTING SERVICES

RECOMMENDATION:

The Board will engage in discussions about the proposed CIP as outlined above.

FISCAL IMPACT:

None (for the Board discussion).

DISCUSSION:

In response to prior Board discussions and preliminary informational CIP presentations, staff was asked to prepare a summary of those discussions and create an FAQ (Frequently Asked Questions) section for easy reference. The initial DRAFT summary document is attached. This is a work in progress and resource document, so Board input would be appreciated.

The DRAFT summary document was a team effort and involved the District Engineer, the MPWD's Municipal Finance Advisor (Wulff Hansen & Company), the Operations Manager, and me.

Significant MPWD strategic planning has been built upon in order to get to the place where we are today. That is described within the introduction of the FAQs.

Because the final version of the Bartle Wells Associates updated Cash Flow Projections

were received on Monday, April 25th, there was little to no time for staff and the MPWD's Municipal Finance Advisor to develop alternatives for proposed CIP financing based upon the revised revenue projections for FY 2016/2017. It is anticipated that DRAFT alternatives may be available prior to the Board meeting and transmitted under separate cover.

Moreover, because it is budget preparation time for the next fiscal year, any proposed CIP financing options are not only contingent upon cash flow projections but fiscal year budget projections. Next month is better timing for presentation of potential CIP financing alternatives.

The District Counsel will be prepared to respond to questions during the Board's discussion regarding the selection and award of contractual services.

Attachment: DRAFT Summary of Board Discussions – Proposed CIP and Potential Options for Financing

BOARD ACTION: APPROVED:____ DENIED:____ POSTPONED:____ STAFF DIRECTION:____

UNANIMOUS____ ZUCCA____ WARDEN____ STUEBING____ VELLA____ LINVILL____

SUMMARY OF BOARD DISCUSSIONS

PROPOSED CAPITAL IMPROVEMENT PROGRAM (CIP) AND POTENTIAL OPTIONS FOR FINANCING

The Mid-Peninsula Water District (MPWD) has completed several strategic projects during the past 24 months, each of them building upon the other, in order to best consider the entire MPWD system and its capital infrastructure rehabilitation and improvement needs, namely:

- Construction standards and specifications;
- Water hydraulic modeling and capital program development;
- Water capacity charges update; and
- Water financial plan and rate study.

First, senior Operations staff, management, and the District Engineer teamed up and revised its construction standards and specifications. These were important not only for consistent construction application throughout the MPWD system for future operations and maintenance, but also in preparation for any major capital improvement program.

Next, in preparation of a meaningful capital program, the same team systematically reviewed the MPWD's infrastructure and developed a water hydraulic model to identify deficiencies. This was an 18-month process and one in which institutional knowledge of the MPWD system blended with engineering know-how and management experience resulting in the development of a comprehensive list of needed capital projects within the MPWD system. A distribution system analysis was developed by the District Engineer for each project, including an engineering cost estimate. Nearly 90 capital projects were identified, totaling over \$50 million. Operations staff selected several pertinent criteria for evaluating the projects for prioritization. That priority list resulted in the MPWD's proposed Capital Improvement Program (CIP). A 5-year CIP is currently being discussed, and while the exact amount has not yet been approved, the concept of \$20-\$25 million is the range under consideration. The water hydraulic model is a valuable tool for operations and maintenance analyses, development assessments and fire flow reviews, and is maintained to keep it current.

Third, the MPWD hired an independent public finance consultant, Bartle Wells Associates, to work with staff for review and update of the MPWD's development impact fees and structure. That nearly 9-month process was thoroughly vetted by the Board of Directors to ensure transparent stakeholder and customer participation and input. The result was a Water Capacity Charges Update dated March 20, 2015, and adopted by the Board of Directors per Ordinance No. 112 dated April 23, 2105. Not only were water capacity charges updated for new development requiring a "buy-in" to the MPWD system for its added service impact, but the MPWD also created water demand offset fees to manage the new demand within its available regional water system supply from San Francisco Public Utilities Commission (SFPUC). This is in addition to the new development requirements to comply with current building codes requiring high efficient water fixtures. These supplemental revenues depend upon the level of proposed development within the MPWD service area, but are additional

resources for capital projects and water conservation and educational programs and public outreach.

Finally, the MPWD updated its water financial plan and reviewed its rates and structure, again with the assistance of Bartle Wells Associates. A rate workshop was held on March 26, 2015. A water financial plan and rate study was presented and adopted by the Board of Directors on May 26, 2015, including phased increases to the monthly fixed system charge and within the tiered structure. Further provisions adopted were pass-through of additional increases by SFPUC to projected wholesale water rates, and emergency water shortage rates should the MPWD experience a significant decrease in its water commodity revenues as a result of greater water use reductions due to a drought.

Since the completion of the above critical projects and since late 2015, the MPWD has been engaged in discussions around options for implementing a CIP and funding alternatives. Prioritized projects were presented to and accepted by the Board as a capital program. Staff has been working with its municipal finance advisor, Wulff Hansen & Company, since January 2016, to identify potential options for financing a 5-year CIP. So far, the 5-year CIP and introductory debt service financing options presented. A final CIP, how it would be financed, the specific level of financing, and the implementation of a CIP have not been finalized and remains under development.

The end of the MPWD's fiscal year is coming up and updated financial reports (based upon actual revenues received and expenditures made) and new operating and capital budget projections for FY 2016/2017 are going to be extremely useful going forward.

In summary of the Board's discussions, these Frequently Asked Questions (FAQs) were developed and will be updated to ensure resourcefulness throughout the process.

FAQs

1. Why is a Capital Improvement Program important?

- *It allows for a systematic evaluation of all potential projects at the same time in a prioritized order.*
- *It allows for grouping of projects for construction, which will reduce overall program cost.*
- *It aids in the preservation of the MPWD's infrastructure while ensuring the efficient use of public funds.*
- *It provides sound information to the Board of Directors and its customers on the infrastructure needs of the MPWD.*
- *Through its development it allows an opportunity to foster cooperation among staff, management and District Engineer.*
- *It is a reinvestment of ratepayer dollars back into the water system, which is good financial stewardship.*

2. What has been the MPWD's current process for CIP implementation?

The MPWD's practice has been to appropriate a certain dollar amount per year, typically between \$1 million to \$1.5 million dollars, to fund capital projects on a cash "pay go" basis. There is no systematic way of evaluating if this level of funding was adequate to ensure the timely replacement of MPWD infrastructure.

3. What happens if the MPWD maintains the status quo and continues with a cash "pay-go" program?

The pay-go system has allowed the MPWD to slowly replace some deficient distribution pipeline segments and rehabilitate or replace some tanks that were not seismically safe. But much of the MPWD water system is more than 50 years old and is spread out over nine (9) distinct pressure zones. The system's age in combination with system pressures exceeding 120 pounds per square inch (psi), have led to and continue to create many water leaks, which has wasted millions of gallons of water and resulted in personnel and maintenance costs to repair main breaks.

The comprehensive analysis resulting from the water hydraulic modeling indicates the MPWD has historically been underfunding its capital infrastructure needs and now must undertake an accelerated program to catch up. If it does not, the MPWD system risks falling further behind and being vulnerable to severe damage during a large seismic event and increased maintenance costs.

The external financial auditor, James Marta & Company, reported last year that the MPWD's existing capital replacement is not keeping pace with the annualized depreciation of the system, thereby an increased level of capital spending was recommended. Reference the attached slide.

4. Briefly describe the identified \$50 million CIP.

As a result of the water hydraulic modeling, the currently identified CIP includes 90 unique projects consisting of replacement of:

- *14 miles of water main (15% of the MPWD's system);*
- *Seismically vulnerable water tanks;*
- *Pressure regulators;*
- *Hydrants for fire safety; and*
- *Other MPWD infrastructure.*

5. How were the proposed CIP projects prioritized?

Senior MPWD Operations personnel that work within the system daily were involved in developing criteria used to prioritize the 90 capital projects. After deliberation, six (6) criteria were selected and included: pipe failure over the past five (5) years, distribution system benefits, pipe age, pipe material, City pavement condition, and static water pressure. Each of the criteria was given a certain range of scores with a maximum score of 81 points. Each project was scrutinized based on the criteria and a score was given, which lead to the prioritization of the projects.

6. Why do a 5-year CIP, and how did the MPWD arrive at the proposed \$25 million funding level?

One of the MPWD's goals in its Strategic Plan was to develop and implement a rolling 5-year capital program. Because there has historically been a minimal level of capital reinvestment, the MPWD has fallen behind on funding its capital infrastructure needs, and in order to cost effectively bundle pipeline replacement projects, the MPWD aimed to create a capital program that would accomplish at least \$4 million to \$5 million per year (three to four times that of the MPWD's existing funding level). Another significant factor was ensuring a sustainable level of capital funding within the MPWD's existing annual water rate revenues, which is currently under review since the MPWD is having FY 2016/2017 budget discussions. Therefore, a list of 30 prioritized capital projects was finalized for a 5-year program, including the completion of the Automated Metering Infrastructure (AMI) program, totaling approximately \$25 million.

7. What are some financing options?

- Continue on a "pay-go" basis.
Utilize available revenues to pay for planned projects. It will take 16 years to pay for \$25 million planned 5-year CIP. Cost of unexpected maintenance will reduce available funds and extend over 16 years' completion of planned projects. Current ratepayers pay for capital projects while future ratepayers do not pay an equitable share. The MPWD may experience an impairment of its operations due to delayed needed infrastructure improvements.
- Debt.
Ability to finance much needed capital improvements now. Rates are the lowest in 25 years. Term of debt can be flexible from 10 to 30 years. The debt can be structured to allow pre-payment after 10 years.
- A hybrid approach, including a combination of debt and "pay go."
Debt will be issued to complete capital projects and use all excess revenues that can be used for "pay go" or pay down the debt, which shortens the term of the debt.
- Returning to only "pay go" depends upon how much of the excess revenues after debt service is applied to early payment of the debt. First additional reduction of the debt beyond the scheduled payment of principal will occur after 10 years.*

Exhibits are attached for sample private placement and public offering debt, including breakdown of estimated principal, interest, all-in interest costs, and detailed costs of issuance. These examples were prepared by the MPWD's Municipal Finance Advisor team and as a result of the FY 2016/2017 cash flow projections contained within the Bartle Wells Associates Water Finance & Rate Update dated April 24, 2016.

*Potential debt payoff estimates are also attached (for each debt example).

8. What is the difference between a private placement loan and revenue bond debt financing?

Private place debt is issued by the MPWD that is sold to private investors, usually a bank or an insurance company. The debt can only be sold to qualified institutional buyers. Structure may be the same as a revenue bond. A placement agent is used instead of an underwriter. MPWD will only have to deal with one representative of the investors when negotiating for changes on the terms of the debt. The rate is usually fixed. The cost of issuance is substantially lower than issuing public debt. No continuing disclosure requirement and in the initial sale a Disclosure Counsel is not used and no official statement or formal disclosure document is required. The term of the debt is shorter and generally cannot exceed 20 years limiting the amount of capital projects that can be financed through the issuance.

Revenue bond financing is long-term debt issued by the MPWD that is sold to the public. Fixed terms and covenants. Impossible to negotiate changes of terms with bondholders. The cost of issuance is generally higher than a private placement. Sold to an underwriter that resells to the public. Compared to a private placement, the debt can be issued for up to 30 years increasing the size of the financing and the amount of capital projects that can be financed with the same annual debt payment. The net interest cost can be slightly lower than a private placement.

9. How much does it cost to do a debt financing?

Exhibits are attached for sample private placement and public offering debt, including breakdown of estimated principal, interest, all-in interest costs, and detailed costs of issuance. These examples were prepared by the MPWD's Municipal Finance Advisor team and as a result of the FY 2016/2017 cash flow projections contained within the Bartle Wells Associates Water Finance & Rate Update dated April 24, 2016.

Potential debt payoff estimates are also attached (for each debt example).

10. Why not mortgage the MPWD's Dairy Lane property to raise cash for the CIP?

The MPWD owns all of its properties, including its Operations Center at 3 Dairy Lane in Belmont. There are many challenges with borrowing against public property, and the same water rate revenues would be the payment source. It makes more sense to borrow a lump sum, especially at current market rates of interest, and pledge a revenue source rather than encumber the MPWD's property that might be needed later in an emergency.

The amount available to borrow would be limited to 50% to 75% of the appraised value of the property. The revenue pledge may impair the ability to borrow additional funds when needed as that source of repayment would already be pledged.

11. Are there other properties owned by the MPWD, and, if so, why not sell them for cash toward the CIP?

Another one of the MPWD's strategic goals is to evaluate the properties it owns and carefully consider those that might be considered surplus by the Board and potentially for sale.

Selling properties would result in a loss of appreciating assets. It may impact the MPWD's credit rating making debt issuance less attractive to underwriters, placement agents, bond insurers, and investors. It also reduces the ability to raise additional funds in the future if needed. It could create a negative perception of the MPWD—selling assets to raise cash.

This could be a one-time infusion of cash to the MPWD, determined by the Board to be used toward paying off any capital debt financing or toward additional capital projects on a "pay go" basis.

12. How much does the MPWD have in reserves, and why not use them to pay for the CIP?

The table below reflects the current reserves totaling \$4.2 million through March 31, 2016.

	Balance @ Mar 2014	Balance @ Mar 2015	Balance @ Mar 2016	Budget for Reserve Policy
RESERVES				
Capital Reserves	2,024,494	1,034,676	1,545,326	2,500,000
Emergency Reserves	2,000,000	2,000,000	2,000,000	2,500,000
Working Capital Reserves	500,000	500,000	500,000	2,500,000
TOTAL RESERVE FUNDS	4,524,494	3,534,676	4,045,326	2,500,000

It would be a policy decision by the Board of Directors as to what level, if any, of the MPWD's reserves to use for its capital program. Reserves are important in the event of an emergency or as the result of some unplanned operating revenue decrease(s) or expenditure(s). The MPWD's current reserve policy is set at \$5 million. The Board of Directors has recently expressed its intention of revisiting its reserve policy in the near future.

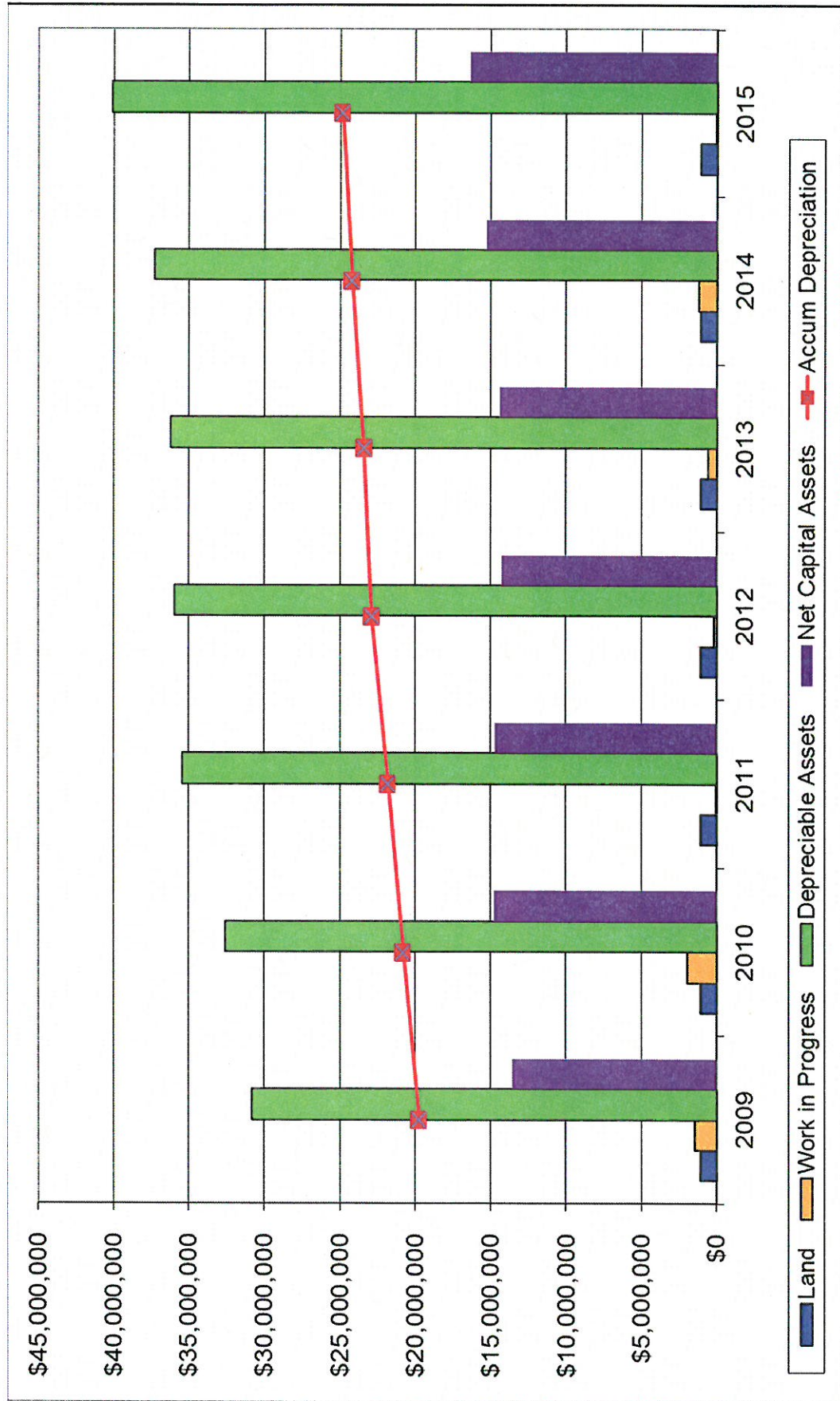
13. Explain all potential cash funding sources for the CIP.

Four (4) cash sources have been identified so far for CIP funding on a continued “pay-go” basis, or for annual loan/debt service payments, or a combination of both: Water revenues, development impact revenues, reserves, or real property sales. The Board of Directors would authorize the funding source(s) for any approved CIP.

- *Water revenues can be used for any type of improvement related to the MPWD’s business.*
- *Development impact revenues are normally used and may have statutory requirements such that they can only be used to support the construction of new infrastructure and facilities to support the impacts of growth to the system.*
- *Reserves, unless restricted, are an available cash source that could be used as a funding source;*
- *Real property sales proceeds, generally speaking, and unless restricted, could be used as a source of funding.*

*Thank you for being interested in the MPWD.
Please contact General Manager Tammy Rudock
at tammyr@midpeninsulawater.org or 650-591-8941
with questions or comments on any of the FAQs contained herein.*

Capital Assets



James Marta & Company LLP
Certified Public Accountants

MID-PENINSULA WATER DISTRICT
Private Placement; RATE 3.25%; 20 YEARS

Prepared by Wulff, Hansen & Co.

4/27/2016

All figures are preliminary, estimated and subject to change

Period Ending	Principal	Coupon *	Interest	Debt Service	Available Revenue**	Excess Revenue	Cumulative Excess	Debt Service Coverage Ratio***
10/1/2017	530,000	3.25%	515,450.00	1,045,450.00	1,500,000	454,550	454,550	1.435
10/1/2018	590,000	3.25%	458,575.00	1,048,575.00	1,772,000	723,425	1,177,975	1.690
10/1/2019	610,000	3.25%	439,400.00	1,049,400.00	1,462,000	412,600	1,590,575	1.393
10/1/2020	630,000	3.25%	419,575.00	1,049,575.00	1,425,000	375,425	1,966,000	1.358
10/1/2021	650,000	3.25%	399,100.00	1,049,100.00	1,500,000	450,900	2,416,900	1.430
10/1/2022	670,000	3.25%	377,975.00	1,047,975.00	1,500,000	452,025	2,868,925	1.431
10/1/2023	690,000	3.25%	356,200.00	1,046,200.00	1,500,000	453,800	3,322,725	1.434
10/1/2024	715,000	3.25%	333,775.00	1,048,775.00	1,500,000	451,225	3,773,950	1.430
10/1/2025	735,000	3.25%	310,537.50	1,045,537.50	1,500,000	454,463	4,228,413	1.435
10/1/2026	760,000	3.25%	286,650.00	1,046,650.00	1,500,000	453,350	4,681,763	1.433
10/1/2027	785,000	3.25%	261,950.00	1,046,950.00	1,500,000	453,050	5,134,813	1.433
10/1/2028	810,000	3.25%	236,437.50	1,046,437.50	1,500,000	453,563	5,588,375	1.433
10/1/2029	835,000	3.25%	210,112.50	1,045,112.50	1,500,000	454,888	6,043,263	1.435
10/1/2030	865,000	3.25%	182,975.00	1,047,975.00	1,500,000	452,025	6,495,288	1.431
10/1/2031	895,000	3.25%	154,862.50	1,049,862.50	1,500,000	450,138	6,945,425	1.429
10/1/2032	920,000	3.25%	125,775.00	1,045,775.00	1,500,000	454,225	7,399,650	1.434
10/1/2033	950,000	3.25%	95,875.00	1,045,875.00	1,500,000	454,125	7,853,775	1.434
10/1/2034	985,000	3.25%	65,000.00	1,050,000.00	1,500,000	450,000	8,303,775	1.429
10/1/2035	1,015,000	3.25%	32,987.50	1,047,987.50	1,500,000	452,013	8,755,788	1.431
	14,640,000		5,263,212.50	19,903,212.50	28,659,000	8,755,788		

Project Fund	14,446,500
Estimated Total Cost of Issuance	193,500
Total Par Amount	14,640,000

TIC	3.24972%
All-in TIC	3.39968%

Estimated and Subject to Actual Proposals

Bond Counsel	60,000
Placement Agent	30,000
Municipal Advisor	60,000
Public Financing Corp.	3,500
Investor's Counsel	15,000
Misc.	25,000
Total COI	193,500

* Based on estimated rates in Private Placement market as of 04/25/2016, to be determined by competitive bid

** Source: Rate Study update from MPWD

*** Debt Service Coverage (DSC): A debt service coverage ratio is an indicator of the amount of funds available to pay debt service after O&M expenses and other pre-debt obligations have been met. A DSC ratio of 1.40 means the utility has 40% more funds available to pay debt service than the amount of the debt service payment(s). For example, assuming a utility has a \$1.0 million debt service payment, a DSC of 1.40 means that the utility has \$1.4 million available to pay debt service.

- Debt Service Coverage Covenant (1.25, estimated and determined through negotiation): The DSC below which water rate increases may be required to avoid technical default.

- True Interest Cost (TIC): A measurement of interest expense to the issuer of bonds, without the adjustment of COI in calculation.

- All-in TIC: A measurement of total cost of a bond financing, including adjustment of COI in calculation.

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MID-PENINSULA WATER DISTRICT

Private Placement; RATE 3.25%; 20 YEARS

Prepared by Wulff, Hansen & Co.

4/27/2016

All figures are preliminary, estimated and subject to change

Period Ending	Principal	Coupon	Interest	Debt Service	Available Revenue	Excess Revenue	Cumulative Excess	Principal + Excess Revenue ⁽²⁾
10/1/2017	530,000	3.25%	515,450.00	1,045,450.00	1,500,000	454,550	454,550	
10/1/2018	590,000	3.25%	458,575.00	1,048,575.00	1,772,000	723,425	1,177,975	
10/1/2019	610,000	3.25%	439,400.00	1,049,400.00	1,462,000	412,600	1,590,575	
10/1/2020	630,000	3.25%	419,575.00	1,049,575.00	1,425,000	375,425	1,966,000	
10/1/2021	650,000	3.25%	399,100.00	1,049,100.00	1,500,000	450,900	2,416,900	
10/1/2022	670,000	3.25%	377,975.00	1,047,975.00	1,500,000	452,025	2,868,925	
10/1/2023	690,000	3.25%	356,200.00	1,046,200.00	1,500,000	453,800	3,322,725	
10/1/2024	715,000	3.25%	333,775.00	1,048,775.00	1,500,000	451,225	3,773,950	
10/1/2025	735,000	3.25%	310,537.50	1,045,537.50	1,500,000	454,463	4,228,413	
10/1/2026	760,000	3.25%	286,650.00	1,046,650.00	1,500,000	453,350	4,681,763 ⁽¹⁾	
	6,580,000							3,378,238
10/1/2027	785,000	3.25%	261,950.00	1,046,950.00	1,500,000	453,050	453,050	1,238,050.00
10/1/2028	810,000	3.25%	236,437.50	1,046,437.50	1,500,000	453,563	453,563	1,263,562.50
10/1/2029	835,000	3.25%	210,112.50	1,045,112.50	1,500,000	454,888	454,888	1,289,887.50
10/1/2030	865,000	3.25%	182,975.00	1,047,975.00	1,500,000	452,025	906,913	
10/1/2031	895,000	3.25%	154,862.50	1,049,862.50	1,500,000	450,138	1,357,050	
10/1/2032	920,000	3.25%	125,775.00	1,045,775.00	1,500,000	454,225	1,811,275	
10/1/2033	950,000	3.25%	95,875.00	1,045,875.00	1,500,000	454,125	2,265,400	
10/1/2034	985,000	3.25%	65,000.00	1,050,000.00	1,500,000	450,000	2,715,400	
10/1/2035	1,015,000	3.25%	32,987.50	1,047,987.50	1,500,000	452,013	3,167,413	
	8,060,000							
	14,640,000							

⁽¹⁾ In 2026 when bonds are callable, \$ 4,681,763 will be available to pay down the outstanding principal, amount of \$8,060,000, leaving \$ 3,378,238 outstanding.⁽²⁾ The remaining outstanding balance will be paid using principal and excess revenue for each year. And it will take another three years to payoff the \$3,378,238

No. of years to pay the debt: 13 years

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MID-PENINSULA WATER DISTRICT

Public Offering; 25 YEARS

Prepared by Wulff, Hansen & Co.

4/27/2016

All figures are preliminary, estimated and subject to change

Period Ending	Principal	Coupon*	Interest	Debt Service	Available Revenue**	Excess Revenue	Cumulative Excess	Debt Service Coverage Ratio
10/1/2017	565,000	0.85%	482,217.67	1,047,217.67	1,500,000	452,782	452,782	1.432
10/1/2018	605,000	1.10%	440,321.50	1,045,321.50	1,772,000	726,679	1,179,461	1.695
10/1/2019	615,000	1.23%	433,666.50	1,048,666.50	1,462,000	413,334	1,592,794	1.394
10/1/2020	620,000	1.45%	426,102.00	1,046,102.00	1,425,000	378,898	1,971,692	1.362
10/1/2021	630,000	1.49%	417,112.00	1,047,112.00	1,500,000	452,888	2,424,580	1.433
10/1/2022	640,000	1.61%	407,725.00	1,047,725.00	1,500,000	452,275	2,876,855	1.432
10/1/2023	650,000	1.72%	397,421.00	1,047,421.00	1,500,000	452,579	3,329,434	1.432
10/1/2024	660,000	1.87%	386,241.00	1,046,241.00	1,500,000	453,759	3,783,193	1.434
10/1/2025	675,000	2.00%	373,899.00	1,048,899.00	1,500,000	451,101	4,234,294	1.430
10/1/2026	685,000	2.10%	360,399.00	1,045,399.00	1,500,000	454,601	4,688,895	1.435
10/1/2027	700,000	2.22%	346,014.00	1,046,014.00	1,500,000	453,986	5,142,881	1.434
10/1/2028	715,000	2.33%	330,474.00	1,045,474.00	1,500,000	454,526	5,597,407	1.435
10/1/2029	735,000	2.45%	313,814.50	1,048,814.50	1,500,000	451,186	6,048,593	1.430
10/1/2030	750,000	2.57%	295,807.00	1,045,807.00	1,500,000	454,193	6,502,786	1.434
10/1/2031	770,000	2.70%	276,532.00	1,046,532.00	1,500,000	453,468	6,956,254	1.433
10/1/2032	790,000	2.84%	255,742.00	1,045,742.00	1,500,000	454,258	7,410,512	1.434
10/1/2033	815,000	2.94%	233,306.00	1,048,306.00	1,500,000	451,694	7,862,206	1.431
10/1/2034	840,000	3.00%	209,345.00	1,049,345.00	1,500,000	450,655	8,312,861	1.429
10/1/2035	865,000	3.10%	184,145.00	1,049,145.00	1,500,000	450,855	8,763,716	1.430
10/1/2036	890,000	3.15%	157,330.00	1,047,330.00	1,500,000	452,670	9,216,386	1.432
10/1/2037	920,000	3.20%	129,295.00	1,049,295.00	1,500,000	450,705	9,667,091	1.430
10/1/2038	945,000	3.30%	99,855.00	1,044,855.00	1,500,000	455,145	10,122,236	1.436
10/1/2039	980,000	3.40%	68,670.00	1,048,670.00	1,500,000	451,330	10,573,566	1.430
10/1/2040	1,010,000	3.50%	35,350.00	1,045,350.00	1,500,000	454,650	11,028,216	1.435
	18,070,000		7,060,784.17	25,130,784.17	36,159,000	11,028,216		

Project Fund	17,534,221.94
Estimated Total Cost of Issuance	535,778.06
Total Par Amount	18,070,000.00

TIC	2.95179%
All-in TIC	3.07944%

Estimated and Subject to Actual Proposals

(1) Underwriter's Discount	225,875.00
(2) Bond Insurance	50,261.57
(3) Surety Reserve Fund	13,641.49
Bond Counsel	70,000.00
Disclosure Counsel	30,000.00
Municipal Advisor	70,000.00
Public Financing Corp.	3,500.00
Trustee	7,500.00
Rating Agencies	30,000.00
Consultant	10,000.00
Misc.	25,000.00
Total Estimated COI	535,778.06

* Based on Comparable Public Offerings as of 04/21/2016; actual rates to be determined by competitive sale of bonds

** Source: Rate Study update from MPWD

(1) Estimated at 1.20% of Bond Issuance, to be determined by competitive bid

(2) Estimated at 0.20% of total Debt Service, insures Debt Service, to be determined by competitive bid

(3) Estimated at 1.30% of Debt Service Reserve Requirements, to be determined by competitive bid; Surety replaces debt service reserve estimated at approximately \$1,050,000; funded from bond proceeds

- True Interest Cost (TIC): A measurement of interest expense to the issuer of bonds, without the adjustment of COI in calculation.

- All-in TIC: A measurement of total cost of a bond financing, including adjustment of COI in calculation.

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FOR DISCUSSION PURPOSES ONLY

MID-PENINSULA WATER DISTRICT
Public Offering; 25 YEARS

Prepared by Wulff, Hansen & Co.

4/27/2016

All figures are preliminary, estimated and subject to change

Period Ending	Principal	Coupon*	Interest	Debt Service	Available Revenue**	Excess Revenue	Cumulative Excess	Principal + Excess Revenue (2)
10/1/2017	565,000	0.85%	482,217.67	1,047,217.67	1,500,000	452,782	452,782	1,153,986.00
10/1/2018	605,000	1.10%	440,321.50	1,045,321.50	1,772,000	726,679	1,179,461	1,169,526.00
10/1/2019	615,000	1.23%	433,666.50	1,048,666.50	1,462,000	413,334	1,592,794	1,186,185.50
10/1/2020	620,000	1.45%	426,102.00	1,046,102.00	1,425,000	378,898	1,971,692	1,204,193.00
10/1/2021	630,000	1.49%	417,112.00	1,047,112.00	1,500,000	452,888	2,424,580	1,223,468.00
10/1/2022	640,000	1.61%	407,725.00	1,047,725.00	1,500,000	452,275	2,876,855	1,244,258.00
10/1/2023	650,000	1.72%	397,421.00	1,047,421.00	1,500,000	452,579	3,329,434	
10/1/2024	660,000	1.87%	386,241.00	1,046,241.00	1,500,000	453,759	3,783,193	
10/1/2025	675,000	2.00%	373,899.00	1,048,899.00	1,500,000	451,101	4,234,294	
10/1/2026	685,000	2.10%	360,399.00	1,045,399.00	1,500,000	454,601	4,688,895 (1)	
	6,345,000							7,036,105
10/1/2027	700,000	2.22%	346,014.00	1,046,014.00	1,500,000	453,986	5,142,881	
10/1/2028	715,000	2.33%	330,474.00	1,045,474.00	1,500,000	454,526	5,597,407	
10/1/2029	735,000	2.45%	313,814.50	1,048,814.50	1,500,000	451,186	6,048,593	
10/1/2030	750,000	2.57%	295,807.00	1,045,807.00	1,500,000	454,193	6,502,786	
10/1/2031	770,000	2.70%	276,532.00	1,046,532.00	1,500,000	453,468	6,956,254	
10/1/2032	790,000	2.84%	255,742.00	1,045,742.00	1,500,000	454,258	7,410,512	
10/1/2033	815,000	2.94%	233,306.00	1,048,306.00	1,500,000	451,694	7,862,206	
10/1/2034	840,000	3.00%	209,345.00	1,049,345.00	1,500,000	450,655	8,312,861	
10/1/2035	865,000	3.10%	184,145.00	1,049,145.00	1,500,000	450,855	8,763,716	
10/1/2036	890,000	3.15%	157,330.00	1,047,330.00	1,500,000	452,670	9,216,386	
10/1/2037	920,000	3.20%	129,295.00	1,049,295.00	1,500,000	450,705	9,667,091	
10/1/2038	945,000	3.30%	99,855.00	1,044,855.00	1,500,000	455,145	10,122,236	
10/1/2039	980,000	3.40%	68,670.00	1,048,670.00	1,500,000	451,330	10,573,566	
10/1/2040	1,010,000	3.50%	35,350.00	1,045,350.00	1,500,000	454,650	11,028,216	
	11,725,000		7,060,784.17	25,130,784.17	36,159,000	11,028,216		
	18,070,000							

(1) In 2026 when bonds are callable, \$ 4,688,895 will be available to pay down the outstanding principal, amount of \$11,725,000, leaving \$ 7,036,105 outstanding.

(2) The remaining outstanding balance will be paid using principal and excess revenue for each year. And it will take another three years to payoff the \$7,036,105

No. of years to pay the debt: 16 years

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MID-PENINSULA WATER DISTRICT

Public Offering; 30 YEARS

Prepared by Wulff, Hansen & Co.

4/27/2016

All figures are preliminary, estimated and subject to change

Period Ending	Principal	Coupon	Interest	Debt Service	Available Revenue**	Excess Revenue	Cumulative Excess	Debt Service Coverage Ratio
10/1/2017	460,000	0.85%	586,469.54	1,046,469.54	1,500,000	453,530	453,530	1.433
10/1/2018	510,000	1.10%	537,446.50	1,047,446.50	1,772,000	724,554	1,178,084	1.692
10/1/2019	515,000	1.23%	531,836.50	1,046,836.50	1,462,000	415,164	1,593,247	1.397
10/1/2020	520,000	1.45%	525,502.00	1,045,502.00	1,425,000	379,498	1,972,745	1.363
10/1/2021	530,000	1.49%	517,962.00	1,047,962.00	1,500,000	452,038	2,424,783	1.431
10/1/2022	535,000	1.61%	510,065.00	1,045,065.00	1,500,000	454,935	2,879,718	1.435
10/1/2023	545,000	1.72%	501,451.50	1,046,451.50	1,500,000	453,549	3,333,267	1.433
10/1/2024	555,000	1.87%	492,077.50	1,047,077.50	1,500,000	452,923	3,786,189	1.433
10/1/2025	565,000	2.00%	481,699.00	1,046,699.00	1,500,000	453,301	4,239,490	1.433
10/1/2026	575,000	2.10%	470,399.00	1,045,399.00	1,500,000	454,601	4,694,091	1.435
10/1/2027	590,000	2.22%	458,324.00	1,048,324.00	1,500,000	451,676	5,145,767	1.431
10/1/2028	600,000	2.33%	445,226.00	1,045,226.00	1,500,000	454,774	5,600,541	1.435
10/1/2029	615,000	2.45%	431,246.00	1,046,246.00	1,500,000	453,754	6,054,295	1.434
10/1/2030	630,000	2.57%	416,178.50	1,046,178.50	1,500,000	453,822	6,508,117	1.434
10/1/2031	645,000	2.70%	399,987.50	1,044,987.50	1,500,000	455,013	6,963,129	1.435
10/1/2032	665,000	2.84%	382,572.50	1,047,572.50	1,500,000	452,428	7,415,557	1.432
10/1/2033	685,000	2.94%	363,686.50	1,048,686.50	1,500,000	451,314	7,866,870	1.430
10/1/2034	705,000	3.00%	343,547.50	1,048,547.50	1,500,000	451,453	8,318,323	1.431
10/1/2035	725,000	3.10%	322,397.50	1,047,397.50	1,500,000	452,603	8,770,925	1.432
10/1/2036	745,000	3.15%	299,922.50	1,044,922.50	1,500,000	455,078	9,226,003	1.436
10/1/2037	770,000	3.20%	276,455.00	1,046,455.00	1,500,000	453,545	9,679,548	1.433
10/1/2038	795,000	3.30%	251,815.00	1,046,815.00	1,500,000	453,185	10,132,733	1.433
10/1/2039	820,000	3.40%	225,580.00	1,045,580.00	1,500,000	454,420	10,587,153	1.435
10/1/2040	850,000	3.50%	197,700.00	1,047,700.00	1,500,000	452,300	11,039,453	1.432
10/1/2041	880,000	3.50%	167,950.00	1,047,950.00	1,500,000	452,050	11,491,503	1.431
10/1/2042	910,000	3.50%	137,150.00	1,047,150.00	1,500,000	452,850	11,944,353	1.432
10/1/2043	940,000	3.60%	105,300.00	1,045,300.00	1,500,000	454,700	12,399,053	1.435
10/1/2044	975,000	3.60%	71,460.00	1,046,460.00	1,500,000	453,540	12,852,593	1.433
10/1/2045	1,010,000	3.60%	36,360.00	1,046,360.00	1,500,000	453,640	13,306,233	1.434
	19,865,000		10,487,767.04	30,352,767.04	43,659,000	13,306,233		

Project Fund	19,291,349.05
Estimated Total Cost of Issuance	573,650.95
Total Par Amount	19,865,000.00

TIC	3.19640%
All-in TIC	3.29940%

Estimated and Subject to Actual Proposals

(1) Underwriter's Discount	248,312.50
(2) Bond Insurance	60,705.53
(3) Surety Reserve Fund	13,632.92
Bond Counsel	70,000.00
Disclosure Counsel	30,000.00
Municipal Advisor	70,000.00
Public Financing Corp.	3,500.00
Trustee	7,500.00
Rating Agencies	35,000.00
Consultant	10,000.00
Misc.	25,000.00
Total Estimated COI	573,650.95

* Based on Comparable Public Offerings as of 04/21/2016; actual rates to be determined by competitive sale of bonds

** Source: Rate Study update from MPWD

(1) Estimated at 1.20% of Bond Issuance, to be determined by competitive bid

(2) Estimated at 0.20% of total Debt Service, insures Debt Service, to be determined by competitive bid

(3) Estimated at 1.30% of Debt Service Reserve Requirements, to be determined by competitive bid; Surety replaces debt service reserve estimated at approximately \$1,050,000; funded from bond proceeds

- True Interest Cost (TIC): A measurement of interest expense to the issuer of bonds, without the adjustment of COI in calculation.

- All-in TIC: A measurement of total cost of a bond financing, including adjustment of COI in calculation.

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FOR DISCUSSION PURPOSES ONLY

MID-PENINSULA WATER DISTRICT
Public Offering; 30 YEARS

Prepared by Wulff, Hansen & Co.

4/27/2016

All figures are preliminary, estimated and subject to change

Period Ending	Principal	Coupon	Interest	Debt Service	Available Revenue**	Excess Revenue	Cumulative Excess	Principal + Excess Revenue ⁽²⁾
10/1/2017	460,000	0.85%	586,469.54	1,046,469.54	1,500,000	453,530	453,530	
10/1/2018	510,000	1.10%	537,446.50	1,047,446.50	1,772,000	724,554	1,178,084	
10/1/2019	515,000	1.23%	531,836.50	1,046,836.50	1,462,000	415,164	1,593,247	
10/1/2020	520,000	1.45%	525,502.00	1,045,502.00	1,425,000	379,498	1,972,745	
10/1/2021	530,000	1.49%	517,962.00	1,047,962.00	1,500,000	452,038	2,424,783	
10/1/2022	535,000	1.61%	510,065.00	1,045,065.00	1,500,000	454,935	2,879,718	
10/1/2023	545,000	1.72%	501,451.50	1,046,451.50	1,500,000	453,549	3,333,267	
10/1/2024	555,000	1.87%	492,077.50	1,047,077.50	1,500,000	452,923	3,786,189	
10/1/2025	565,000	2.00%	481,699.00	1,046,699.00	1,500,000	453,301	4,239,490	
10/1/2026	575,000	2.10%	470,399.00	1,045,399.00	1,500,000	454,601	4,694,091 ⁽¹⁾	
	5,310,000							9,860,909
10/1/2027	590,000	2.22%	458,324.00	1,048,324.00	1,500,000	451,676	5,145,767	1,041,676.00
10/1/2028	600,000	2.33%	445,226.00	1,045,226.00	1,500,000	454,774	5,600,541	1,054,774.00
10/1/2029	615,000	2.45%	431,246.00	1,046,246.00	1,500,000	453,754	6,054,295	1,068,754.00
10/1/2030	630,000	2.57%	416,178.50	1,046,178.50	1,500,000	453,822	6,508,117	1,083,821.50
10/1/2031	645,000	2.70%	399,987.50	1,044,987.50	1,500,000	455,013	6,963,129	1,100,012.50
10/1/2032	665,000	2.84%	382,572.50	1,047,572.50	1,500,000	452,428	7,415,557	1,117,427.50
10/1/2033	685,000	2.94%	363,686.50	1,048,686.50	1,500,000	451,314	7,866,870	1,136,313.50
10/1/2034	705,000	3.00%	343,547.50	1,048,547.50	1,500,000	451,453	8,318,323	1,156,452.50
10/1/2035	725,000	3.10%	322,397.50	1,047,397.50	1,500,000	452,603	8,770,925	1,177,602.50
10/1/2036	745,000	3.15%	299,922.50	1,044,922.50	1,500,000	455,078	9,226,003	
10/1/2037	770,000	3.20%	276,455.00	1,046,455.00	1,500,000	453,545	9,679,548	
10/1/2038	795,000	3.30%	251,815.00	1,046,815.00	1,500,000	453,185	10,132,733	
10/1/2039	820,000	3.40%	225,580.00	1,045,580.00	1,500,000	454,420	10,587,153	
10/1/2040	850,000	3.50%	197,700.00	1,047,700.00	1,500,000	452,300	11,039,453	
10/1/2041	880,000	3.50%	167,950.00	1,047,950.00	1,500,000	452,050	11,491,503	
10/1/2042	910,000	3.50%	137,150.00	1,047,150.00	1,500,000	452,850	11,944,353	
10/1/2043	940,000	3.60%	105,300.00	1,045,300.00	1,500,000	454,700	12,399,053	
10/1/2044	975,000	3.60%	71,460.00	1,046,460.00	1,500,000	453,540	12,852,593	
10/1/2045	1,010,000	3.60%	36,360.00	1,046,360.00	1,500,000	453,640	13,306,233	
	14,555,000		10,487,767.04	30,352,767.04	43,659,000	13,306,233		
	19,865,000							

⁽¹⁾ In 2026 when bonds are callable, \$ 4,694,091 will be available to pay down the outstanding principal, amount of \$ 14,555,000, leaving \$ 9,860,909 outstanding.⁽²⁾ The remaining outstanding balance will be paid using principal and excess revenue for each year. And it will take another three years to payoff the \$ 9,860,909

No. of years to pay the debt: 19 years

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