THE CITY OF SAN DIEGO

OFFICE OF THE INDEPENDENT BUDGET ANALYST REPORT

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City of San Diego Public Utilities Water Fund Cost of Service Study

OVERVIEW

The City of San Diego Public Utilities Department (PUD) operates the water fund, which distributes approximately 171 million gallons of potable water daily to 1.3 million City of San Diego citizens over 400 square miles. The PUD is able to accomplish this significant task through rates charged to customers to provide funding for operations and maintenance and to replace or expand vital infrastructure.

Periodically, the PUD will undertake a cost of service study (COSS) to ensure that the rates charged to users of the system are able to both adequately fund all areas of operations and capital needs, and to also ensure ratepayers that charges for utilization of the system are appropriate. The *San Diego Public Utilities Department Water Fund Cost of Service Study* has been undertaken to determine if rates for the water fund are properly set for FY 2014 and FY 2015. The PUD hired the consulting firm of Black & Veatch (B&V) to complete an independent COSS to determine if current water rates are sufficient to ensure the fund's financial viability over this time frame. To do so, B&V analyzed the three performance indicators that are critical to the water fund's ability to function properly: cash flow, proper funding of reserves, and sufficient debt service coverage for compliance with bond covenants.

Based on B&V's estimate of the water fund's projected revenues, over this two-year period, from current rates charged to customers; projected spending on operations and maintenance; expenditures necessary for investments in infrastructure; and both known and projected wholesale water price increases charged to the PUD, the consultant has determined that a rate increase is required to maintain the financial viability of the water fund in both FY 2014 and FY 2015. B&V and the PUD are recommending a 7.25 percent rate adjustment for the cost of potable water delivered to customers in FY 2014 and 7.50 percent for FY 2015 to ensure the water fund's proper operation, based on the continued recommendation of a 1.25X debt service coverage. It should be noted that this time frame does not take into consideration any impacts for desalinated water purchases, or the status of the Point Loma wastewater treatment plant waiver and potential implementation of indirect potable reuse (IPR). Due to the potential need to address water rates to provide funding for these items in the near future, the COSS time-frame is only two years. It is anticipated by the PUD that future COSS will be conducted every two years due to the potential for rising wholesale water rates and funding requirements of future capital improvement projects.

The purpose of this report is to analyze the various projections and assumptions utilized in the COSS to determine the necessity of the proposed increase in water rates, and to also highlight areas of additional importance or concern.

BACKGROUND

The City of San Diego is a member agency of the San Diego County Water Authority (CWA), which provides untreated wholesale water to the PUD that accounts for approximately 85 – 90 percent of the water delivered to local City of San Diego customers. In turn, CWA is a member of The Metropolitan Water District of Southern California (MWD), which delivers water to member agencies from the Colorado River and Sacramento – San Joaquin River Delta, among other sources.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Price Increase in Untreated Water Delivered to Agencies

CY 2011	CY 2012	CY 2013	CY 2014
7.50%	7.50%	5.00%	5.00%

SAN DIEGO COUNTY WATER AUTHORITY

45% of water imported from Metro Water District
55% of water from other sources

Price Increase in Untreated Water Delivered to Agencies

CY 2011	CY 2012	CY 2013	CY 2014
14.70%	7.50%	9.60%	2.60%

CITY OF SAN DIEGO PUBLIC UTILITIES - WATER

85 - 90% of water imported from County Water Auth.
10 - 15% of water from other sources (reservoir)

Rate Increases Implemented in Each FY

FY 2011*	FY 2012	FY 2013	FY 2014 **
5.92%	0.00%	0.00%	7.25%

* *Increase in commodity rates*
** *Proposed COSS increase for commodity rates*

MWD has increased rates for water delivered to their member agencies by 7.5 percent in calendar years 2011 and 2012, 5.0 percent in 2013, and will also raise water prices an additional 5.0 percent in 2014[1]. In response to these increases from MWD, as well as required investments in capital infrastructure, the CWA has had to continually increase water rates charged to their member agencies, including the City of San Diego PUD. CWA increased water rates 14.7 percent in calendar year 2011, 7.5 percent in 2012, 9.6 percent in 2013, and will increase rates by 2.6 percent in 2014. Despite these increases in wholesale water rates charged by the CWA, the City of San Diego PUD has not raised water rates since 2011 when a 5.92 percent rate increase was implemented.

The PUD was able to absorb the rate increases from CWA during FY 2012 and 2013 by, as described in the COSS, "through a combination of drafting more local water, drawing on reserves, and implementing operational efficiencies." In FY 2012, the PUD was able to offset the rate increase due to a number of factors including the department having received $15.4 million in grant funds above budgeted revenues and actual operating expenditures totaling $50.9 million less than budgeted amounts. Of this reduction in operating expenditures in FY 2012, $36.5 million was from a reduction in water purchases from CWA.

This reduction in purchased water from budgeted levels was able to be accomplished due to significant rainfall in the region during the winter of 2010, and the amount of available local water in City of San Diego reservoirs increasing dramatically. In FY 2012, the PUD utilized this additional water in local reservoirs to reduce the amount of water required to be purchased from CWA. With the increase in revenues and decrease in expenditures in 2012, the department was able to transfer $29.8 million in savings to the rate stabilization reserve for future operations. As defined by the City's Reserve Policy, the rate stabilization reserve is to be utilized to "maintain the legal covenant ratios in accordance with the respective bond installment purchase agreements". In FY 2013, the department was able to absorb the rate increase from CWA by utilizing $11.8 million of rate stabilization reserve revenue to preserve sufficient cash flow and maintain bond covenant requirements.

Despite projecting the utilization of the remaining $18.0 million of the $29.8 million transferred to the rate stabilization reserve for operations in FY 2014, the water fund is forecasted in the COSS to barely meet operating needs, and pay debt service due to increases in water costs from CWA and other new operations and maintenance expenditures. In FY 2015, projections deteriorate further due to the lack of additional one-time revenues from the rate stabilization reserve and also due to a forecasted increase in wholesale water rates, which would result once again in violating debt service covenants. Based on these forecasts, water rate increases are required to ensure the continued financial viability of the water fund.

[1] 5.0 percent average annual rate increase for 2013 & 2014

FISCAL/POLICY DISCUSSION

Three COSS Objectives

As stated previously, the three COSS objectives to ensure the financial viability of the water fund are to have sufficient revenues to:

- Maintain cash flow to pay for operations,
- Properly fund reserves, and
- Preserve bond covenants for debt service coverage.

The following sections will review each objective and highlight any additional areas of note.

Revenues Prior to Proposed Rate Adjustment

The COSS projects that total water demand from customers will remain flat from projected FY 2013 levels, which is consistent with the water fund's usage experience over recent fiscal years of flat to negative growth in consumption. Other revenue generated by the water fund (excluding rate stabilization revenue) is projected to decline slightly, from $55.1 million in FY 2013 to $49.7 million in FY 2015, due to a decline in services provided to other city funds and elimination of one-time land sale revenues, among other smaller changes. As previously mentioned, the water fund is utilizing the remaining $18.0 million in rate stabilization reserves in FY 2014 to aid in maintaining bond covenant restrictions. Excluding one-time rate stabilization revenue that was utilized in FY 2013 and 2014, total revenue without the COSS proposed rate adjustments, in both FY 2014 or 2015, are projected to be slightly reduced:

TOTAL WATER FUND REVENUE	FY 2013	FY 2014	FY 2015
Water Sales	$ 379,835	$ 379,909	$ 379,909
Other Revenues	67,311	65,074	49,747
Total Revenue	$ 447,146	$ 444,983	$ 429,656
One-Time Rate Stabilization Revenue	$ 11,800	$ 18,000	$ -
Net System Revenues	$ 435,346	$ 426,983	$ 429,656

* $ in thousands

Based on our analysis, the assumptions used in the COSS to develop the revenue projections prior to any rate adjustments are reasonable.

Maintenance of Proper Cash Flow

The water fund must generate enough cash flow in each fiscal year of the COSS to be able to properly cover operations and maintenance expenditures, pay for capital improvement projects and infrastructure investment, and repay debt obligations.

Operations and Maintenance(O&M)

Water purchases account for the majority of operations and maintenance expenses. Total purchases are projected to grow from $204.9 million in FY 2013[2] to $229.1 million at the end of FY 2015. The COSS projects no growth in the aggregate amount of water utilized by water fund customers, though total cost of water purchases will increase 7.4 percent in FY 2014. This increase is due to CWA rate increases as previously outlined. It should be noted that increases in wholesale water prices charged by CWA are initiated at the beginning of each calendar year, which is half-way through the City of San Diego's fiscal year. This 7.4 percent increase is primarily attributable to a full year of the calendar year 2013 increase of 9.6 percent taking effect, in addition to six months of the calendar year 2014 increase of 2.6 percent. The 4.1 percent increase in FY 2015 is attributable to a full year of the calendar year 2014 increase of 2.6 percent and six months of calendar year 2015 increase of 2.25 percent.[3]

TOTAL WATER PURCHASES		
FY 2013	FY 2014	FY 2015
$ 204,947	$ 220,110	$ 229,125
% Increase	7.4%	4.1%

* $ in thousands

Other O&M expenditures include personnel costs, energy & utilities, supplies, contracts, and other miscellaneous costs. The COSS assumes inflation of 1.0 percent in supplies and contracts per fiscal year, 5.0 percent for energy and utilities, and no inflation for all other groups of O&M expenditures. In addition to general inflation of expenditures, the COSS includes new expenditures for an expansive condition assessment of water pipelines of $8.3 million, and $5.2 million for an operational efficiency evaluation to explore ways to better optimize revenue and / or find cost savings in water operations. The total impact on O&M expenditures, from wholesale water price increases and these other adjustments, are as follows:

[2] All figures presented in this report for FY 2013 are unaudited and are therefore subject to change
[3] Increase each year shown in table is not a direct blend of each rate increase that takes effect in each fiscal year due to different rate increases from CWA for treated water PUD may purchase and differing amounts of use of local reservoir water, among other reasons. Additionally, PUD and B&V have estimated a CWA increase of 2.25 percent for calendar year 2015. CWA has made no official decision on any rate increase in 2015 and will not do so until June 2014.

TOTAL WATER O&M EXPENDITURES			
	FY 2013	FY 2014	FY 2015
Water Purchases	$ 204,947	$ 220,110	$ 229,125
Other O&M	137,202	156,313	159,829
Total O&M	$ 342,149	$ 376,423	$ 388,954

* $ in thousands

Assumptions used to develop the water purchase cost projections in the COSS are reasonable based on known CWA price increases in calendar year 2014. However the potential exists for a price increase in wholesale water above 2.25 percent in calendar year 2015 as assumed in the COSS. However, the 2.25 percent rate increase projection for 2015 can be considered practical based on recent comments from CWA. In a press release dated May 15, 2013, the General Manager of CWA commented that a "significant reduction in our Capital Improvement Program" would occur, and "other measures will be taken to control costs and keep proposed changes relatively small".

O&M expenditures included in the COSS can be considered an appropriate projection for each fiscal year.

Capital Improvement Projects

WATER FUND YEARLY CIP SPENDING *($ in thousands)*						
FY 2009*	FY 2010*	FY 2011*	FY 2012	FY 2013	FY 2014	FY 2015
$ 67,057	$ 51,816	$ 57,034	$ 64,074	$ 72,945	$ 88,355	$ 98,585

** Excludes spending on Water Treatment Plants due to significant costs that will not occur in COSS*

The COSS projects $187.0 million for spending on capital improvement projects (CIP) over the two fiscal years of the study; $88.4 million in FY 2014 and $98.6 million in FY 2015. The PUD has averaged approximately $62.6 million per fiscal year in CIP spending over the last five years, excluding capital investment in water treatment plants to more accurately represent typical CIP expenditures. The amount of CIP expenditures included in the COSS for FY 2014 is 41.2 percent greater than the average of the prior five fiscal years average; while FY 2015 is 57.5 percent greater. The COSS projects that the implementation of multiple award construction contracts (MACC), an increased task limit for job orders, and the development of a project cascade list will allow expanded CIP spending as compared to prior fiscal years. It should also be noted that the COSS includes the assumption that CIP costs will increase at a rate of 2.3 percent per year based on inflation indices for construction costs.

The COSS utilizes both a sample of CIP expenditures that would be representative of projects undertaken each fiscal year and certain specific actions for mandate compliance. The COSS CIP expenditures include 23 miles of cast iron water mains both awarded and replaced in FY 2014 and 28 miles awarded and replaced in FY 2015. This is in comparison to an average of 26 miles replaced per year over the last three fiscal years. Additionally, the water fund is still under the compliance order from the California Department of Public Health which requires 10 of miles of water main replacement to be awarded per fiscal year. For comparison purposes, the PUD awarded 17.7 miles in FY 2013 and 24.2 miles in FY 2012. The projections for the number of miles awarded included for water main replacements in the COSS will continue the Department's commitment to exceed compliance order minimum mandates.

All funding for the PUD capital improvement program for both fiscal years will be funded from water fund cash balances. No new borrowing from the State Revolving Loan Fund (SRF) or debt issuances are projected in the COSS; however $9.2 million in SRF funds that have not been expended as of yet will be utilized in FY 2014. In FY 2014, $29.9 million of funding for the CIP is projected to come from the water fund's Dedicated Reserve from Efficiency and Savings (DRES). The DRES was established in FY 2008 to, as stated in the Reserve Policy (Policy 100-20), "preserve savings from efficiencies" and will "be used to accelerate water CIP schedules, which will minimize future City rate increases."

In accordance with the Reserve Policy, the full DRES balance will be utilized to cash fund a portion of total FY 2014 CIP expenditures. Additional funds utilized in FY 2014 for CIP are projected to be $8.0 million in capacity fees generated in FY 2014, $0.7 million in remaining grant funds, and $40.6 million in water fund existing available cash balance. In FY 2015, $8.0 million in cash for CIP expenditures will come from capacity fees, with the remaining $90.6 million coming from water fund existing available cash.

We would also note that these CIP expenditure projections assume that there is no impact on project delivery costs due to the implementation of new prevailing wage requirements. On July 26, 2013, the City approved an ordinance to require the payment of prevailing wage laws to all City public works projects. The impact of prevailing wage requirements on total construction project costs is the subject of much debate. Our office estimated that prevailing wage requirements will increase total project costs by 5 percent and could be significantly higher (IBA-13-27 and IBA-13-33). Although the estimated percentage increase is relatively small, given that the percentage would be applied to a multi-million dollar construction budget, the resulting additional costs could be significant.

Since funding for CIP in the COSS is coming solely from existing cash sources, rates generated from customers of the water fund do not have to cover CIP expenditures in FY 2014 or FY 2015. If actual cash expended on CIP varies from these projected levels due to the implementation of prevailing wage or for any other reason in either or both fiscal years, there will be no impact on the department's cost of service, only on available fund balance.

Repayment of Debt Obligations

Based on the COSS projection of utilizing cash funding for all CIP expenditures in FY 2014 and FY 2015, no new debt issuances are projected. Total aggregate debt service for each fiscal year is based on actual amortization schedules for the water fund's outstanding debt obligations. Debt service included in the COSS is as follows:

TOTAL AGGREGATE DEBT SERVICE		
FY 2013	FY 2014	FY 2015
$ 64,382	$ 66,835	$ 67,454

* $ in thousands

Evaluation of Cash Flow in COSS

WATER FUND CASH FLOW *($ in thousands)*				
Revenues				
		FY 2014		**FY 2015**
Water Sales	$	379,909	$	379,909
Other Revenue		65,074		49,747
Total Water Fund Revenue	$	444,983	$	429,656
Expenditures				
		FY 2014		**FY 2015**
Water Purchases	$	220,110	$	229,125
Other O&M		156,313		159,829
Total O&M Expenditures	$	376,423	$	388,954
Debt Service		66,835		67,454
Total Water Fund Expenses	$	443,258	$	456,408
Net Water Fund Cash Flow	$	1,725	$	(26,752)

Combining each area of operation over the next two fiscal years allows the water fund's projected cash flow based on current rates to be properly evaluated. Based on the COSS assumptions and no growth in revenue, the water fund's cash flow in FY 2014 is positive by $1.7 million or 0.4 percent of total water fund projected expenditures. Based on this narrow margin and the variability of projections, it can be stated that cash flow is not sufficient to properly support operations in FY 2014. In FY 2015, projections show that net water fund cash flow is $26.8 million in deficit as projected revenues are unable to fully fund total expenditures. Based on the lack of cash flow in both fiscal years, a rate increase is needed to accomplish the first goal of the COSS, to provide sufficient funding for the continued financial viability of the utility.

Funding of Reserves

The COSS must also address properly funding all reserves as outlined in the City's Reserve Policy. The policy addresses the water fund's following reserve accounts: operating, rate stabilization, secondary purchase, and DRES. The rate stabilization reserve is also being utilized in FY 2014 to support debt service coverage, leaving the Reserve Policy dictated minimum amount of $20.5 million in reserves for FY 2015. As previously mentioned, the DRES will be fully utilized in FY 2014 to fund CIP expenditures and no new contributions to this reserve are anticipated in FY 2015. The COSS does not take into account any cash that would be deposited into the DRES from the annual de-appropriation of water fund encumbrances. Based on historical levels of DRES deposits, this could increase cash available for the CIP by $1 – 2 million per year, which would not impact the COSS.

The operating reserve is required to maintain 70 days of operating expenses in each fiscal year. As total expenditures are forecasted to increase annually, contributions will be required to be made to the operating reserve to maintain proper coverage. The secondary purchase reserve was established to maintain 6 percent of the annual water purchases budget to purchase additional water “in case of a major drought or unforeseen emergency that diminishes the City’s normal supply”. As with the operating reserve, as water costs increase in each fiscal year, contributions will need to be made to this reserve to maintain adequate coverage. In reviewing the COSS, the contributions to the operating reserve in both fiscal years and the FY 2014 contribution to the secondary purchase reserve are not adequate to maintain compliance with the Reserve Policy. The shortfall in contributions in FY 2014 is approximately $2.7 million and $2.4 million in FY 2015.

In discussions with the department, contributions to the secondary purchase reserve and operating reserve are made at fiscal year-end and are made using available fund balance. Additionally, PUD management monitors reserve balances each fiscal year to ensure compliance with the Policy and has committed to continue to do so in each future fiscal year. As will be discussed later in this report, the water fund has sufficient cash in fund balance to make up the shortfall in contributions, and as a result, these shortfalls will not impact the COSS.

Debt Service Coverage

Outstanding bond issuances for the water fund are governed by covenants between the utility and the bondholder. These bond covenants are binding terms of a legal agreement. Based on a debt service coverage covenant, the water fund is required to maintain an aggregate debt service coverage of 1.0X. This means that the water fund must generate at least enough revenue from its operations to pay annual debt service.

The water fund’s outstanding debt is serviced on an annual basis from net operating revenues generated by the utility as previously illustrated in the cash flow section. The minimum required revenue for adherence to the debt service coverage covenant is projected to be generated in FY 2014 by the narrowest of margins (3 percent above minimum levels). Due to the potential variability in revenue and expenditure projections used in the COSS, this projected narrow margin is not sufficient to ensure that the water fund can comply with this covenant in FY 2014. In FY 2015, based on the current rate structure, the covenant would be violated as the COSS projects a $26.8 million operating deficit.

To maintain access to credit markets to allow for financing of large capital projects in coming years, to keep interest rate costs from increasing exponentially due to a default, and to avoid negative perceptions of City operations, it is important that a rate increase be implemented during FY 2014 and FY 2015 to provide sufficient cash flow to assure compliance with the debt service coverage covenant of the City’s outstanding water bonds.

Other Issues for Consideration

Fund Balance / Cash

WATER FUND YEAR-END CASH & INVESTMENT BALANCES							
	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013*	Increase from 2008
	$ 212,932	$ 225,556	$ 221,585	$ 214,550	$ 359,067	$ 331,003	$ 118,071
% increase		5.9%	-1.8%	-3.2%	67.4%	-7.8%	55.5%

* Based on COSS FY 2013 year-end projections, unaudited, $ in thousands

The water fund's cash fund balance has grown significantly since the last COSS was completed in 2007. The fund balance figures shown above and in the COSS include cash held in reserve but available for water fund operational activities including DRES, rate stabilization and secondary purchase reserve. Fund balance has grown $118.1 million or 55.5 percent since the end of FY 2008, with the most significant increase coming in FY 2012. This increase is FY 2012 is primarily due to:

- $40 million in Proposition 50 State of California grant revenues that were previously applied for, but received in FY 2012.

- Approximately $65 million in state revolving loan funds and bond proceeds that reimbursed previous PUD expenditures. These funds were applied for in a previous fiscal year, but not received until FY 2012.

The COSS projects this cash balance to decline over the next two fiscal years due to the cash funding of the entire $186.9 million for the water fund two-year CIP program. The COSS estimates that the cumulative fund balance will decline from $331.0 million at the end of FY 2013 to $194.5 million in total cash at the end of FY 2015. Of this ending FY 2015 cash balance, $69.9 million is required to be set-aside per the Reserve Policy, leaving $124.6 million in net available fund balance.

WATER FUND BALANCE IN COSS *($ in thousands)*	FY 2013	FY 2014	FY 2015
Cumulative Fund Balance	$ 331,003	$ 279,528	$ 194,507
Funds Held in Reserves	115,462	67,746	69,900
Fund Balance Less Reserves	$ 215,541	$ 211,782	$ 124,607

In discussions with the Office of the City Comptroller, we learned that despite the significant cash balance available at the end of the COSS, this source of funds cannot be used to support debt service coverage requirements. Debt service coverage, per covenant requirements, must come from cash flow generated by the utility's operations. Transferring cash from this balance back to operations would not be counted in the debt service coverage calculation for covenant compliance since it was revenue generated by operations in years prior. Additionally, this fund balance cannot be refunded to customers also due to debt service coverage requirements. If the water fund were to issue refunds to utility customers, the total amount refunded from the fund balance would be counted as an operating expenditure, reducing cash flow, and ultimately lowering the fund's debt service coverage.

Though this cash balance cannot be utilized to mitigate the increase in water rates that are being proposed in the COSS, this fund balance can continue to be used for CIP expenditures. As noted in the beginning of this report, this COSS does not include any potential impacts due to purchase of desalinated water, or the expiration of the secondary treatment waiver for the Point Loma wastewater plant and the potential for implementation of indirect potable reuse (IPR)[4]. It is anticipated that these projects will impact rates in the next two-year COSS for 2016 and 2017. Though the exact financial impact is currently unknown, each of these items are expected to have a significant impact on water rates paid by water fund customers.

The cost for IPR implementation ranges from approximately $370 million to well in excess of $1 billion depending on the number of water purification facilities constructed and pipeline costs for sending treated water to the San Vincente reservoir.[5] IPR has received continued support from City Council, the City's Water Policy Implementation Task Force, and environmental groups, among others, and may need to be implemented for a continued secondary treatment waiver. Any water purification facility construction will be a joint effort between the water and wastewater funds; though any specific capital cost allocation to each fund has not yet been determined. Based on the significant cost for IPR and the general positive attitude toward water purification, this large ending cash balance could be utilized in upcoming years for the implementation of IPR and to aid in offsetting increased water rates to raise sufficient funds for the capital investment in the project.

CONCLUSION

Our office supports the proposed water rate increase based on the following:

- The COSS incorporates reasonable assumptions in the two-year water fund operational outlook. Based on our review of the three COSS objectives, analysis for two of the objectives results in the need for rate increases in both FY 2014 and FY 2015 (cash flow requirements and debt service coverage).

- The rate increases recommended in each fiscal year of the COSS are based on Black and Veatch's recommendation to maintain a 1.25X debt service coverage in each fiscal year. This coverage ratio allows both sufficient cash flow for the water fund's continued financial viability in each fiscal year while maintaining bond covenants, and also sets a good balance with the total rate increase imposed on customers.

- Though the significant increase in the water fund's cash balance was not generated specifically for implementation of IPR, the "prevailing winds" are leaning towards construction of a water purification facility to increase and diversify the City of San

[4] Or direct potable reuse if approved by the California Department of Public Health
[5] City of San Diego Water Purification Demonstration Project – Project Report, March 2013

Diego's water portfolio and to continue the Point Loma wastewater treatment plant's secondary treatment waiver. Based on the significant cost to implement IPR, water fund cash balances may provide potential future rate relief to customers.

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