San Diego Public Facilities Financing Authority, California

Water Revenue Bonds
New Issue Report

Ratings

New Issues

Subordinated Water Revenue Bonds, Series 2016A	AA–
Subordinated Water Revenue Bonds, Refunding Series 2016B	AA–
Outstanding Debt	
Water Revenue Bonds	AA
Subordinated Water Revenue Bonds, Series 2012	AA–

Rating Outlook
Stable

Related Research

San Diego Public Facilities Financing Authority, California (February 2016)

2016 Water and Sewer Medians (December 2015)

2016 Outlook: Water and Sewer Sector (December 2015)

Fitch Rates San Diego County Water Authority, CA's $152 MM Water Rev Bonds 'AA+'; Outlook Stable (August 2015)

Analysts
Doug Scott
+1 512 215-3725
douglas.scott@fitchratings.com

Shannon Groff
+1 415 732-5628
shannon.groff@fitchratings.com

New Issue Details

Sale Information: Approximately $46,300,000 Subordinated Water Revenue Bonds, Series 2016A and approximately $659,000,000 Subordinated Water Revenue Bonds, Refunding Series 2016B scheduled to sell the week of May 23 via negotiation.

Security: The bonds are secured by installment payments made by the City of San Diego, California (the city) to the San Diego Public Facilities Financing Authority, California (the authority) and the authority has assigned its right to such installment payments to bondholders. The obligation of the city to make installment payments on the senior lien bonds (series 2009A, 2009B and 2010A) is secured by a pledge of net revenues of the city's water system (the system). The obligation of the city to make installment payments on the subordinate lien bonds (series 2012A, 2016A and 2016B) is secured by a pledge of net system revenues after payment of the senior lien obligations.

Purpose: The 2016A bonds will finance improvements to the system and pay costs of issuance while the 2016B bonds will be used to advance refund a portion of the system's senior lien debt obligations for interest savings and pay costs of issuance.

Final Maturity: Aug. 1, 2045**.**

Key Rating Drivers

Weakened Financial Results to Improve: Financial results for fiscal 2015 were good but slightly lower than historical results due to rising purchased water costs and declining sales that outstripped the rate adjustment for the year. Expectations for fiscal 2016 indicate further weakening, requiring a drawdown of reserves to offset state-mandated drought conservation requirements. The city has prudently responded by passing a five-year rate package that will raise rates around 40% and that is anticipated to improve debt service coverage (DSC) to more traditional levels while also enhancing reserves. Restored financial margins projected by fiscal 2017 are expected to be in-line with the ratings.

Rapidly Escalating Debt Profile: Debt levels currently are relatively high and will begin to climb rapidly over the next few years to very high amounts as the system enters into the first phase of construction of its 20-year $3 billion Pure Water (PW) program. Through fiscal 2025, system debt levels are expected to nearly triple from fiscal 2015 levels.

Diversifying Water Supplies: Development of PW will provide local drought-resilient potable water resources while also addressing wastewater discharge issues. The PW program enjoys broad community support and will greatly reduce the city's dependence on imported supplies, ultimately accounting for around one-third of the city's water resources.

Elevated Customer Charges: User charges are relatively high and will incrementally increase in the coming years as the city pushes forward with PW and other capital needs.

Extensive Service Territory: The service area is broad and diverse with fundamental economic strengths.

Rating History — Senior Lien

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	5/11/16
AA	Affirmed	Stable	2/18/16
AA	Affirmed	Stable	3/12/14
AA	Affirmed	Stable	3/22/12
AA	Affirmed	Stable	6/4/10
AA	Revised	Stable	4/30/10
AA–	Upgraded	Stable	12/11/08
BBB+	Affirmed	Positive	3/27/08
BBB+	Downgraded	Negative	5/27/05
A	Downgraded	Negative	2/16/05
AA–	Assigned	—	9/27/02

Rating History — Subordinate Lien

Rating	Action	Outlook/ Watch	Date
AA–	Affirmed	Stable	5/11/16
AA–	Affirmed	Stable	2/18/16
AA–	Affirmed	Stable	3/12/14
AA–	Affirmed	Stable	3/22/12
AA–	Affirmed	Stable	6/4/10
AA–	Revised	Stable	4/30/10
A+	Upgraded	Stable	12/11/08
BBB	Affirmed	Positive	3/27/08
BBB	Downgraded	Negative	5/27/05
A–	Downgraded	Negative	2/16/05
A+	Assigned	—	9/30/02

Related Criteria

Revenue-Supported Rating Criteria (June 2014)

U.S. Water and Sewer Revenue Bond Rating Criteria (September 2015)

Rating Sensitivities

Reduced Financial Strength: Maintenance of sound financial metrics will be key to preserving credit quality. Reduced coverage levels below those currently projected would be expected to result in a rating downgrade.

Capital Escalation: Capital cost containment will be critical to preserving the existing ratings given the already high debt levels and significant additional leveraging expected. Escalation in the PW program costs from the existing $3 billion total and $1.2 billion allocable to the water utility would be expected to result in negative rating pressure.

Credit Profile

The system serves about 1.4 million people within the city, with more than 90% of the retail customer base residential in nature. The system also provides some recycled water service (generally around 1% of revenues) as well as wholesale service (around 4%) to four customers. There is limited revenue concentration among the retail accounts; for fiscal 2015, the top 10 retail customers accounted for less than 12% of revenues. Of these customers, governmental entities made up seven of the 10 largest accounts. Customer growth over the past five fiscal years has been modest, with total accounts increasing an average of less than 1% annually. Customer growth is expected to remain at about this level for the foreseeable future.

The city's diverse economy continues to benefit from job growth, residential and commercial construction, and increasing tourism. The city's unemployment rate (4.5% in March 2016) remains favorable compared to the national average (5.1%), residents' socio-economic indicators are largely above-average, and the tax base continues to grow strongly.

Operating Profile

Water Supply

Due to a lack of local supplies, the city is heavily reliant on imported water sources from San Diego County Water Authority (CWA). CWA, in turn, receives most of its supplies via the Metropolitan Water District of Southern California (MWD). The city is the largest purchaser of CWA water (the city accounts for around 35% of all CWA sales), and CWA is the largest purchaser of MWD water. Overall, about 85%–90% of the city’s supplies annually are imported, with only about 10%–15% derived from local runoff. The city also maintains several emergency connections to and from neighboring water agencies.

MWD receives its water from the California State Water Project and from the Colorado River. Both of these sources have experienced pressure from drought and legal constraints in recent years that have affected the amount of water available for MWD’s wholesale customers, including CWA. Reliance on imported water is a vulnerability in California but CWA has made considerable investment in the last 20 years to diversify its water supplies, which is viewed positively for its purchasers. Advantageous contract terms allow the city to reduce water purchases during periods of lower water sales, as occurred with the mandatory curtailments ordered by the state in fiscal 2016.

California Drought

As a result of continued drought, California’s governor issued an executive order calling for a 25% voluntary water use reduction in January 2015, followed by an emergency regulation in May 2015 mandating individual conservation standards ranging from 4% to 36% for all retail utilities, including the city, whose conservation standard was set at 16%. The city exceeded its conservation requirements through February 2016. In March 2016 the state certified the supply of Carlsbad as a drought-resilient supply, allowing each of CWA's member agencies – including the city – to reduce their conservation standards by up to 8%. With improvement in drought conditions across the state and the San Diego region's supply storage and diversification, the city expects that the conservation standard will be reduced further in the coming months.

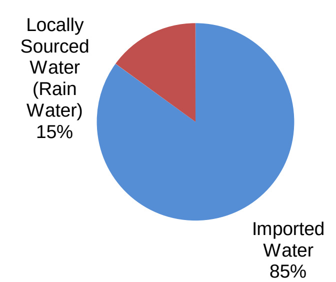
Pure Water Program

To help increase its own supply portfolio in light of possible ongoing restrictions from CWA and MWD, the city embarked on a water reuse study in 2004 that included analysis of health effects and a public participation process. Upon completion of the reuse study the city council voted in 2007 for the system to proceed with an indirect potable reuse demonstration project (the project). The project, which began operations in 2011, consisted of a 1 million gallons per day (mgd) advanced water purification facility (APF) treating recycled water to drinking water quality standards before sending the water to a reservoir, with the reservoir water then diverted to a drinking water treatment plant prior to distribution for drinking water purposes. The project was completed in 2013 and later that year the city council voted unanimously to accept the project and continue pursuing potable reuse as a drinking water option for the city.

Coinciding with the timeframe of the project, the city also was undergoing a discharge permit renewal process beginning in 2010 for its largest wastewater treatment plant – Point Loma (PLWTP). During the permit process the city entered into a cooperative agreement (the agreement) with two environmental groups for these groups to support a modified permit from the Environmental Protection Agency (thereby avoiding an estimated $2 billion in capital costs to transition PLWTP to full secondary treatment) and the city to conduct a recycled water study to find ways to maximize water reuse and minimize flows to PLWTP. Completed and accepted by the city council in 2012, the recycled water study developed alternatives to increasing the region's water supply through both non-potable and indirect potable reuse, identified locations for future APFs, and identified two city-owned reservoirs as potential reservoir augmentation locations. The combined efforts of the project and the recycled water study comprise the PW program.

The city's planned long-term investment in PW is a 20-year program through 2035 that ultimately is expected to provide up to 83 mgd of potable water, equaling around one-third of the city's future water supplies. PW's total capital costs are anticipated at $3 billion, with $1.2 billion attributable to the water system and $1.8 billion allocable to the city's sewer system (sewer revenues are not pledged to bondholders). Additionally, upon full implementation of PW, annual operating costs are estimated at $137 million with the water utility responsible for $86 million. PW consists of the planning, design and construction of new APFs, wastewater treatment facilities, pump stations, transmission lines and pipelines. All capital and operating costs related to wastewater conveyance and treatment through secondary treatment will be borne by the sewer utility while all treatment and conveyance costs beyond secondary treatment will be paid by the water system.

San Diego — Current Water Supply Mix



Source: City of San Diego, CA.

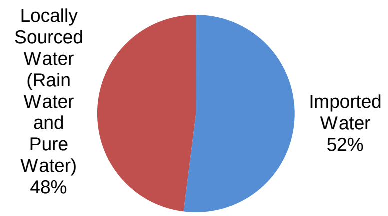
Pure Water Program

Phase 1 – North City
Completion: **2021**
Pure Water Production: **30 mgd**
Additional Reduction in Point Loma Ocean Discharges: **~45 mgd**
Pure Water Delivered to San Vicente or Miramar Reservoir

Phase 2 – Central Area & South Bay
Completion: **2035**
Pure Water Production: **53 mgd**
Additional Reduction in Point Loma Ocean Discharges: **~55 mgd**
Pure Water Delivered to San Vicente or Lake Murray via Central Area
Pure Water Delivered to Lower Otay Reservoir via South Bay (as needed)

Mgd – Million gallons per day.
Source: City of San Diego, CA.

San Diego — 2035 Water Supply Mix



Source: City of San Diego, CA.

PW will be constructed in two phases. Phase 1, which is expected to commence construction in 2018 and be completed in 2025, will cost around $1 billion ($741 million allocated to the water utility) and will focus on expansion of the city's North City wastewater plant and construction of an APF at the plant in order to produce 30 mgd of purified water. Phase 2, expected to begin in 2021 and be completed by 2035, will cost around $2 billion (around $450 million allocated to the water utility) and will include expansion of the South Bay wastewater plant and construction of an APF as well as construction of a new Central Area wastewater treatment and APF, which combined would produce 53 mgd of purified water.

Treatment and Storage

The system operates three water treatment plants (WTPs), with a combined capacity of 378 mgd. Two of the WTPs are expected to be expanded over time to provide sufficient capacity for long-term growth and meet regulatory requirements, although current capacity is sufficient to meet existing demands. The WTPs are each fed by one or more of the system's nine raw water reservoirs.

The raw water reservoirs have a total storage capacity of about 376,000 acre feet (af). By virtue of city council policy, the city shall maintain 7.2 months of annual service requirements within the reservoirs to ensure sufficient supply in the event of emergencies, such as interruption in imported water service, currently equal to up to 125,000 af. Total water within the reservoirs at April 2016 was over 129,000 af.

Regulatory Compliance

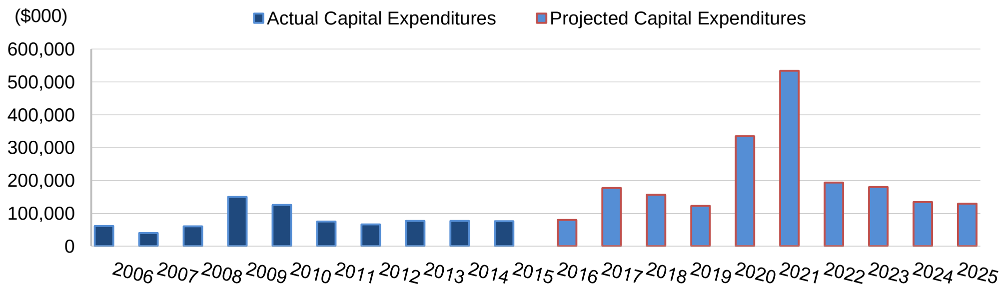
The system is currently in compliance with all federal and state drinking water regulatory standards. However, the system has entered into a compliance order (the order) with state regulators, dating back to 1994, which has been amended from time to time. The order stems from future reliability issues of the system and calls for various capital projects, of which the remaining projects (cast-iron main replacements) are contained in the CIP at a cost of around $63 million and are expected to be completed by 2018. The system has spent over $800 million on projects related to the order.

Debt Profile

Capital Demands

The fiscal 2016–2020 capital improvement program (CIP) totals $873 million, a 40% increase from the fiscal 2014–2018 CIP. The bulk of the CIP (39% or $343 million) and the escalation in capital costs from the prior CIP are attributable to the addition of the PW program. PW costs through fiscal 2020 are related to initial design and construction of phase 1 (North City wastewater treatment plant improvements and APF), with construction expected to commence in 2018. Preliminary capital cost estimates for fiscal years 2021–2025 point to even higher capital expenditures of $1.17 billion, also driven by PW expenditures, which are forecast at $589 million for completion of phase 1 by 2021 and initial construction of phase 2. An additional $270 million of PW costs are expected after fiscal 2025.

San Diego Water System Capital Spending



Source: City of San Diego, CA.

Apart from PW, the fiscal 2016–2020 CIP is focused largely on repair and replacement of system assets, focusing particularly on pipeline replacement (both transmission and distribution). Overall, pipeline repairs account for the second largest component of the CIP behind PW at 38% of total costs and include expenditures associated with completing requirements associated with the order. For fiscal years 2021–2025 pipeline replacements are expected to continue at a similar pace and scope relative to other programmatic areas, accounting for around of 35% capital expenditures.

Funding Sources and Debt Burden

The fiscal 2016–2020 CIP is expected to be funded predominantly from debt sources (about 83%), which are expected to nearly double the system's existing debt levels. With this CIP the debt/equity mix has shifted from a relatively even balance to one relying predominantly on borrowed resources. Further, preliminary funding sources for fiscal 2021–2025 capital needs are expected to continue a reliance on debt, leading to debt levels in 2025 that are nearly 3x the 2015 amounts.

The result of the additional borrowings is expected to produce a debt profile that is significantly leveraged relative to other water utilities, with 2020 debt per customer and debt per capita in the neighborhood of 2x the 'AA' rating category medians and outyear figures rising further. As new debt is issued it is also expected that principal amortization rates, which are currently average, will decline from extended amortization rates of new money debt in order to alleviate carrying cost pressures.

Favorably, annual debt service costs comprised a reasonable 15% of gross revenues in fiscal 2015 and are only expected to increase to 20% by fiscal 2025, consistent with the 'AA' rating category medians. Also, the system has no variable-rate debt or swaps outstanding and there currently are no plans to engage in such products. Capital cost control and successful execution of the CIP will be critical to maintenance of the rating given the system's anticipated highly elevated debt burden relative to other utilities and the potential pressures additional costs would place on the rate base.

Legal Provisions

Rate Covenant

The city covenants to set rates and charges sufficient to generate the greater of 1.0x all system obligations or 1.2x adjusted senior annual debt service (ADS) from adjusted net revenues. The adjustment in revenues and ADS discounts the respective amounts by interest earnings from any reserve fund securing the bonds.

Additional Bonds Test

Additional senior and subordinate lien obligations may be issued, provided the system meets either a historical or projected coverage test. The historical test for senior lien obligations is the greater of 1.2x maximum ADS (MADS) on senior obligations or 1.0x MADS on all obligations, while the projected test is at least 1.2x MADS for five fiscal years following the earlier of either the end of capitalized interest or completion of the project(s) being financed. The historical test for subordinate lien obligations is an amount equal to at least 1.0x MADS, while the projected test has the same parameters as that for senior lien obligations, with the exception that the city must meet MADS by 1.0x. Net revenues may be adjusted for changes in rates and charges and revenue-producing components being financed by debt proceeds.

Debt Service Reserve Fund

The debt service reserve requirement is the standard least of 10% of bond proceeds, 125% average ADS, or MADS for senior and subordinate obligations secured by a common debt service reserve fund (DSRF) or, alternatively, the amount specified in a supplemental indenture for senior or subordinate bonds secured by a separate DSRF. No DSRF will secure either the 2016A or 2016B bonds.

Flow of Funds

All system revenues are deposited into the system’s water utility fund and dispersed in the following order of priority: (a) for operations and maintenance (O&M) expenses; (b) for the payment of senior lien obligations, including replenishment of any senior lien DSRF; (c) for the payment of subordinate lien obligations, including replenishment of any subordinate lien DSRF; and (d) for any lawful system purpose.

Events of Default and Remedies

Events of default generally are limited to failure to pay principal and interest on the bonds but also include continued failure to comply with certain covenants following notice by at least 25% of bondholders. There is no cross-default with the city, although a petition for bankruptcy by the authority is considered an event of default. Following an event of default, the trustee may accelerate repayment of the bonds. However, so long as senior bonds are outstanding, subordinate bondholders may not declare an event of default or seek to accelerate the subordinate bonds.

Financial Profile

Rate Structure

The system’s rate structure includes a base charge (equal to around 35% of the residential charge) as well as a commodity charge based on customer usage. The commodity charge for single-family units includes an inclining block, or conservation-based structure, while the commodity charge for all other rate classes is a single charge per hundred cubic feet of water consumed. In addition to ongoing user charges, the city also assesses a capacity charge for new customers based on the number of equivalent dwelling units. Exposure to these growth-sensitive fees is acceptable, historically accounting for less than 5% of system revenues over the last five fiscal years.

Residential customers generally are billed bimonthly, while industrial, commercial, and large multifamily units are billed monthly. Utility bills include charges for water, wastewater, and storm drain services. Enforcement provisions are typical, and delinquencies have been limited.

Rate History and Flexibility

Over the past several years, the city council has demonstrated a willingness to raise rates to provide for capital funding and ensure sound financial performance. In April 2002, the city council adopted a five-year rate package calling for 6% hikes annually, and in February 2007, the city council approved additional increases of 6.5% annually for fiscal years 2008–2011. The city council has also implemented adjustments regularly to recover CWA pass-through costs, although rates were held flat for fiscal years 2012–2013 to provide customer relief. A two-year package was later passed for fiscal 2014–2015 to generate over 7% increases in revenues each year and boost financial results while performing and later adopting a five-year package for fiscal years 2016–2020 to support the PW program, complete requirements associated with the order and respond to financial challenges from the statewide conservation mandate.

Rates have been slightly elevated relative to median household income in recent years and are currently 1.2% of MHI. While rates are higher than many other major West Coast utilities, they are not significantly elevated and are of limited concern. However, given the level of the most recent rate package, which will increase fiscal 2015 charges around 40% by fiscal 2020, and further adjustments necessary to support the CIP and PW, affordability could become an issue in the future.

Financial Performance

Fiscal operations generally have been good, with the system typically exceeding forecast expectations. This performance continued through fiscal 2015, albeit at a slightly lower level, as declining sales and increased water purchase costs of almost $30 million were only partially offset by a 7.5% rate hike implemented during the middle of the year. Overall, Fitch-calculated senior and total DSC was a solid 2.5x and 1.5x, respectively, exceeding previous projections of 2.1x and 1.2x.

Fiscal 2015 cash levels declined around $50 million from the prior year as fund balance was used for capital expenditures but remained a healthy 234 days cash on hand. System performance is enhanced by the city's establishment of formal policies creating various reserves. These reserves are fully funded and include a RSF and operating reserve, currently targeted at 70 days of O&M. The city also sets aside funds for emergency capital and water purchase expenditures. In total, these reserves equaled over $96 million at the end of fiscal 2015.

Fiscal 2016 results are expected to be comparably weak due to state-mandated conservation requirements implemented at the end of fiscal 2015. The city implemented a 9.8% increase in rates during the middle of fiscal 2016 following completion of its latest rate study but the drop in sales has pressured operating results. Currently, the city expects to utilize $32 million from its RSF, which, combined with other revenues, is anticipated to produce senior and total DSC of 2.0x and 1.2x, respectively. Fitch notes that, excluding the transfer, senior and total DSC would only be 1.2x and 0.7x, respectively.

Financial Summary

($000, Audited Fiscal Years Ended June 30)

	2011	2012	2013	2014	2015
Balance Sheet					
Unrestricted Cash and Investments	214,550	359,067	331,420	291,112	241,805
Accounts Receivable	66,133	62,579	67,858	77,111	68,773
Other Current Unrestricted Assets	54,412	53,865	54,508	64,883	57,612
Current Liabilities Payable from Unrestricted Assets	(92,718)	(109,151)	(119,088)	(128,585)	(125,109)
Net Working Capital	**242,377**	**366,360**	**334,698**	**304,521**	**243,081**
Net Fixed Assets	1,999,677	2,033,473	2,113,140	2,163,294	2,528,784
Net Long-Term Debt Outstanding	893,567	905,322	881,471	859,844	832,806
Operating Statement					
Operating Revenues	371,515	408,119	414,508	447,565	455,222
Non-Operating Revenues	15,251	5,423	3,157	7,708	5,773
Connection Fees	11,752	48,778	13,776	15,213	15,906
Gross Revenues	**398,518**	**462,320**	**431,441**	**469,802**	**476,901**
Operating Expenses (Excluding Depreciation)	(282,863)	(300,657)	(334,242)	(355,539)	(377,722)
Depreciation	(43,054)	(46,030)	(48,334)	(48,957)	(51,935)
Operating Income	**72,601**	**115,633**	**48,865**	**65,306**	**47,244**
Net Revenues Available for Debt Service[a]	115,655	161,663	97,199	114,263	99,179
Senior Lien Debt Service Requirements	34,115	37,518	39,707	39,921	40,063
Total Debt Service Requirements	64,220	68,110	64,573	67,708	67,732
Financial Statistics					
Senior Lien Debt Service Coverage (x)	3.4	4.3	2.4	2.9	2.5
Total Debt Service Coverage (x)	1.8	2.4	1.5	1.7	1.5
Days Cash on Hand	277	436	362	299	234
Days Working Capital	313	445	365	313	235
Debt to Net Plant (%)	45	45	42	40	33
Outstanding Long-Term Debt per Customer ($)	3,253	3,271	3,171	3,085	2,978
Outstanding Long-Term Debt per Capita ($)	676	676	648	623	596
Free Cash to Depreciation (%)[b]	120	189	52	89	54

[a]Equals gross revenues less operating expenses. [b]Equals net revenues available for debt service, less total debt service, divided by depreciation. Note: Numbers may not add due to rounding.

Additional rate adjustments approved as part of the city's five-year rate package and which will be instituted at the beginning of each fiscal year are expected to stabilize DSC at 1.4x in fiscal 2017 and produce incremental increases in DSC through the fiscal 2020 forecast period to 2.0x. The rate hikes will also allow the system to gradually replenish the RSF, although a return to the policy target (5% of prior fiscal year operating revenues) is not expected to occur until after fiscal 2020. Fitch considers the forecast, which assumes continuation of fiscal 2016 sales levels with only limited improvement and no savings associated with the current transaction, as reasonable.

Financial Projections

($000, Fiscal Years Ending June 30)

	2016	2017	2018	2019	2020
Operating Revenues	430,357	500,869	534,826	564,236	606,181
Non-Operating Revenues	8,445	10,322	11,204	12,371	42,455
Connection Fees	15,000	12,000	12,000	12,000	12,000
Transfers In/(Out)[a]	32,000	(3,927)	(9,477)	(6,515)	(6,091)
Gross Revenues	**485,802**	**519,264**	**548,553**	**582,092**	**654,545**
Operating Expenses	(405,420)	(432,981)	(448,800)	(468,864)	(489,542)
Operating Income	**80,382**	**86,283**	**99,753**	**113,228**	**165,003**
Senior Lien Debt Service Requirements	40,993	3,921	8,835	15,315	19,834
Total Debt Service Requirements	67,389	62,566	70,131	76,620	81,124
Financial Statistics					
Senior Lien Debt Service Coverage (x)	2.0	22.0	11.3	7.4	8.3
Total Debt Service Coverage (x)	1.2	1.4	1.4	1.5	2.0
Projected Long-Term Debt per Customer ($)	2,832	3,283	3,634	3,849	4,710
Projected Long-Term Debt per Capita ($)	562	646	710	746	906

[a]Includes transfers (to)/from the rate stabilization fund. Note: Numbers may not add due to rounding.

Source: City of San Diego, CA.

The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.