

PRELIMINARY OFFICIAL STATEMENT DATED _____, 2016

NEW ISSUE—Book-Entry Only

Ratings:
S&P: “__”
Moody’s: “__”
See “RATINGS”

In the opinion of Stradling, Yocca, Carlson & Rauth, a Professional Corporation, Sacramento, California, and Amira Jackmon, Attorney at Law, Berkeley, California, Co-Bond Counsel, under existing statutes, regulations, rulings and judicial decisions, and assuming the accuracy of certain representations and compliance with certain covenants and requirements pertaining to the 2016 Series A Bonds, interest on the 2016 Series A Bonds is excluded from gross income for federal income tax purposes, and is not an item of tax preference for purposes of calculating the federal alternative minimum tax imposed on individuals and corporations. In the further opinion of Co-Bond Counsel, interest on the 2016 Series A Bonds is exempt from State of California personal income tax. See “TAX MATTERS.”



\$ _____*
Public Utilities Commission
of the City and County of San Francisco
Wastewater Revenue Bonds,
2016 Series A

Dated: Date of Delivery

Due: October 1, as shown on inside front cover

General. This cover page contains certain information for quick reference only. It is not intended to be a summary of the security or terms of the Public Utilities Commission of the City and County of San Francisco Wastewater Revenue Bonds, 2016 Series A (the “2016 Series A Bonds”). Investors are instructed to read the entire Official Statement to obtain information essential to making an informed investment decision.

Authority for Issuance. The Public Utilities Commission of the City and County of San Francisco (the “SFPUC”) is issuing the 2016 Series A Bonds pursuant to authority granted by the Charter of the City and County of San Francisco (the “City”), through Proposition E approved by voters of the City on November 5, 2002, and under a Fourth Supplemental Indenture dated as of April 1, 2016, by and between the SFPUC and U.S. Bank National Association, as trustee (the “Trustee”), and which supplements the Indenture dated as of January 1, 2003, by and between the SFPUC and the Trustee (as supplemented and amended to date, the “Indenture”). See “SECURITY FOR THE BONDS.”

Purposes. The 2016 Series A Bonds are being issued primarily to finance and refinance (through the retirement of commercial paper notes) certain capital projects benefiting the Wastewater Enterprise (as defined herein). Proceeds of the 2016 Series A Bonds will also be applied to (a) fund capitalized interest with respect to the 2016 Series A Bonds for a limited period, and (b) pay the costs of issuance of the 2016 Series A Bonds. See “PLAN OF FINANCE.”

Denominations and Interest. The 2016 Series A Bonds will be available in denominations of \$5,000 or any integral multiple thereof and will mature in the years and amounts and accrue interest from their date of delivery at the rates set forth on the inside cover page of this Official Statement. Interest on the 2016 Series A Bonds is payable semiannually on April 1 and October 1 of each year, commencing October 1, 2016. See “THE 2016 SERIES A BONDS.”

Book-Entry Only. The 2016 Series A Bonds will be issued as fully registered bonds, registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York (“DTC”), and will be available to the ultimate purchasers (the “Beneficial Owners”), under the book-entry system maintained by DTC. Beneficial Owners will not receive physical certificates representing their interests in the 2016 Series A Bonds. The principal of, premium, if any, and interest on the 2016 Series A Bonds are payable to DTC by the Trustee, and, so long as DTC is acting as securities depository for the 2016 Series A Bonds, disbursements of such payments to DTC Participants is the responsibility of DTC and disbursements of such payments to the Beneficial Owners is the responsibility of DTC Participants. See “THE 2016 SERIES A BONDS.”

Redemption. The 2016 Series A Bonds are subject to optional and mandatory sinking fund redemption prior to maturity. See “THE 2016 SERIES A BONDS – Redemption.”

Security. Under the Indenture, the SFPUC has irrevocably pledged the Net Revenues of its Wastewater Enterprise to the punctual payment of principal of, premium, if any, and interest on the 2016 Series A Bonds and all outstanding parity revenue bonds issued under the Indenture, subject to the allocation of funds provided in the Indenture. The 2016 Series A Bonds are payable on a parity with certain Outstanding Bonds previously issued by the SFPUC under the Indenture. See “SECURITY FOR THE BONDS.”

Limited Obligation. The SFPUC is not obligated to pay the principal of, premium, if any, or interest on the 2016 Series A Bonds from any source of funds other than Net Revenues. The SFPUC has no taxing power. The General Fund of the City is not liable for the payment of the principal of, premium, if any, or interest on the 2016 Series A Bonds, and neither the credit nor the taxing power of the City is pledged to the payment of the principal of, premium, if any, or interest on the 2016 Series A Bonds. The 2016 Series A Bonds are not secured by a legal or equitable pledge of, or charge, lien, or encumbrance upon, any of the property of the City or of the SFPUC or any of its income or receipts, except Net Revenues. See “SECURITY FOR THE BONDS.”

MATURITY SCHEDULE
(See inside cover)

The 2016 Series A Bonds are to be sold through a competitive sale expected to be held on _____, 2016.

The 2016 Series A Bonds are offered when, as and if issued by the SFPUC and received by the successful bidder, subject to the approval of validity by Stradling, Yocca, Carlson & Rauth, a Professional Corporation, Sacramento, California, and Amira Jackmon, Attorney at Law, Berkeley, California, Co-Bond Counsel to the SFPUC, and to certain other conditions. Certain matters will be passed upon for the SFPUC and the City by Orrick, Herrington & Sutcliffe LLP, San Francisco, California, Disclosure Counsel, and by the City Attorney of the City and County of San Francisco. It is expected that the 2016 Series A Bonds in fully registered form will be available for delivery in book-entry form through the facilities of DTC, on or about _____, 2016.

The date of this Official Statement is _____ 2016.

* Preliminary, subject to change.
OHSUSA:762547306

This Preliminary Official Statement and the information contained herein are subject to completion and amendment. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities, in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of

MATURITY SCHEDULE*

2016 Series A Bonds

(Base CUSIP[†] Number: _____)

\$_____ Serial Bonds

Maturity (October 1)	Principal Amount	Interest Rate	Price or Yield [‡]	CUSIP [†]
	\$	%	%	

\$_____ % Term Bonds Due October 1, _____ Price:** _____% CUSIP[†] _____

* Preliminary, subject to change.

† CUSIP is a registered trademark of The American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by Standard & Poor's Financial Services LLC on behalf of The American Bankers Association. This data is not intended to create a database and does not serve in any way as a substitute for the CUSIP services. Neither the SFPUC nor the initial purchaser of the 2016 Series A Bonds assumes any responsibility for the accuracy of the CUSIP data.

‡ Reoffering prices and yields have been provided by the initial purchaser of the 2016 Series A Bonds. See "PURCHASE AND REOFFERING."

WASTEWATER ENTERPRISE MAJOR FACILITIES



Figure 1-1 – SFPUC Wastewater Enterprise – Major Facilities (Not to Scale)

The SFPUC Wastewater Enterprise operates and maintains the City of San Francisco’s combined sewer system which collects and treats both sewage and stormwater. This system consists of 993 miles of sewer lines which collect sanitary sewage from homes, businesses, and stormwater runoff; large transport storage box facilities; 27 pump stations that transport sewage and stormwater; and three treatment plants that discharge the treated water into the San Francisco Bay and Pacific Ocean. San Francisco has eight distinct urban watersheds: five on the Bayside (North Shore, Channel, Islais, Sunnydale, and Yosemite) and three on the Westside (Richmond, Sunset, and Lake Merced). The three treatment plants in the sewer system treat sewage and stormwater based on whether the collection point is on the Bayside or the Westside. The Oceanside Treatment Plant is not connected to the Bayside treatment systems. The map above depicts certain major facilities of the combined sewer system and the ridge separating the Bayside from the Westside facilities. See “THE WASTEWATER ENTERPRISE.”

The 2016 Series A Bonds are not secured by a legal or equitable pledge of, or charge, lien or encumbrance upon, any of the property of the SFPUC or of its income or receipts, except Net Revenues. See “SECURITY FOR THE BONDS.”

GENERAL INFORMATION

No dealer, broker, salesperson or other person has been authorized by the SFPUC to give any information or to make any representation other than those contained herein and, if given or made, such other information or representation must not be relied upon as having been authorized by the SFPUC.

This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor there any sale of the 2016 Series A Bonds, by any person in any jurisdiction in which it is unlawful for such person to make such an offer, solicitation or sale. This Official Statement is not to be construed as a contract with the initial purchasers of the 2016 Series A Bonds. Any statement made in this Official Statement involving any forecast or matter of estimates or opinion, whether or not expressly so stated, is intended solely as such and not as a representation of fact.

The information set forth herein other than that provided by the SFPUC, although obtained from sources which are believed to be reliable, is not guaranteed as to accuracy or completeness. The information and expressions of opinion herein are subject to change without notice and neither delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the SFPUC or the City since the date hereof.

The City maintains a website at <http://www.sfgov.org> and the SFPUC maintains a website at <http://www.sfwater.org>. In addition, certain information and reports found on other websites, and other information and reports, are referred to in this Official Statement. *The information and reports available on such websites, and the other referenced information and reports, are not incorporated by reference into this Official Statement and should not be relied upon in making an investment in the 2016 Series A Bonds.*

The issuance and sale of the 2016 Series A Bonds have not been registered under the Securities Act of 1933 in reliance upon the exemption provided thereunder by Section 3(a)2 for the issuance and sale of municipal securities.

IN CONNECTION WITH THE OFFERING OF THE 2016 SERIES A BONDS, THE UNDERWRITERS MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE 2016 SERIES A BONDS AT LEVELS ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

This Official Statement is delivered for use in connection with the issuance, sale and delivery of the 2016 Series A Bonds and may not be reproduced or used, in whole or in part, for any other purpose.

FORWARD-LOOKING STATEMENTS

CERTAIN STATEMENTS CONTAINED IN THIS OFFICIAL STATEMENT REFLECT NOT HISTORICAL FACTS BUT FORECASTS AND "FORWARD-LOOKING STATEMENTS." ALL FORWARD-LOOKING STATEMENTS ARE PREDICTIONS AND ARE SUBJECT TO KNOWN AND UNKNOWN RISKS AND UNCERTAINTIES. NO ASSURANCE CAN BE GIVEN THAT THE FUTURE RESULTS DISCUSSED HEREIN WILL BE ACHIEVED, AND ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THE FORECASTS DESCRIBED HEREIN. IN THIS RESPECT, THE WORDS "ESTIMATE," "PROJECT," "ANTICIPATE," "EXPECT," "INTEND," "BELIEVE" AND SIMILAR EXPRESSIONS ARE INTENDED TO IDENTIFY FORWARD-LOOKING STATEMENTS. ALL PROJECTIONS, FORECASTS, ASSUMPTIONS, EXPRESSIONS OF OPINIONS, ESTIMATES AND OTHER FORWARD-LOOKING STATEMENTS ARE EXPRESSLY QUALIFIED IN THEIR ENTIRETY BY THE CAUTIONARY STATEMENTS SET FORTH IN THIS OFFICIAL STATEMENT. GIVEN THEIR UNCERTAINTY, INVESTORS ARE CAUTIONED NOT TO PLACE UNDUE RELIANCE ON SUCH STATEMENTS.

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

Francesca Vietor, Commission President
Anson Moran, Commission Vice President
Ann Moller Caen, Commissioner
Vince Courtney, Commissioner
Ike Kwon, Commissioner

PUBLIC UTILITIES COMMISSION OFFICIALS

Harlan L. Kelly, Jr., General Manager
Michael Carlin, Deputy General Manager and Chief Operating Officer
Tommy T. Moala, Assistant General Manager, Wastewater Enterprise
Juliet Ellis, Assistant General Manager, External Affairs
Barbara Hale, Assistant General Manager, Power Enterprise
Kathy How, Assistant General Manager, Infrastructure Division
Steven R. Ritchie, Assistant General Manager, Water Enterprise
Eric L. Sandler, Assistant General Manager, Business Services and Chief Financial Officer

CITY AND COUNTY OF SAN FRANCISCO

MAYOR

Edwin M. Lee

BOARD OF SUPERVISORS

London Breed, Board President, District 5

John Avalos, District 11
David Campos, District 9
Malia Cohen, District 10
Mark Farrell, District 2
Jane Kim, District 6

Eric Mar, District 1
Aaron Peskin, District 3
Katy Tang, District 4
Scott Wiener, District 8
Norman Yee, District 7

CITY ATTORNEY

Dennis J. Herrera

CITY TREASURER

José Cisneros

OTHER CITY AND COUNTY OFFICIALS

Benjamin Rosenfield, Controller
Naomi Kelly, City Administrator

SPECIAL SERVICES

Co-Bond Counsel
Stradling, Yocca, Carlson & Rauth,
a Professional Corporation
Sacramento, California

Amira Jackmon, Attorney at Law
Berkeley, California

Disclosure Counsel
Orrick, Herrington & Sutcliffe LLP
San Francisco, California

Co-Financial Advisors
Public Resources Advisory Group
Los Angeles, California

First Southwest Company, LLC
Oakland, California

Trustee
U.S. Bank National Association
San Francisco, California

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OFFICIAL STATEMENT

\$ _____*
**PUBLIC UTILITIES COMMISSION
OF THE CITY AND COUNTY OF SAN FRANCISCO
WASTEWATER REVENUE BONDS,
2016 SERIES A**

INTRODUCTION

This Introduction is qualified in its entirety by reference to the more detailed information included and referred to elsewhere in this Official Statement. The offering of the 2016 Series A Bonds to potential investors is made only by means of the entire Official Statement. Terms used in this Introduction and not otherwise defined have the respective meanings assigned to them elsewhere in this Official Statement, including “APPENDIX A—SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

General

This Official Statement, including the cover page and Appendices hereto, is provided to furnish certain information in connection with the offering by the Public Utilities Commission of the City and County of San Francisco (the “SFPUC”) of its Wastewater Revenue Bonds, 2016 Series A (the “2016 Series A Bonds”).

Authority for Issuance

The SFPUC is issuing the 2016 Series A Bonds pursuant to authority granted by the Charter (the “Charter”) of the City and County of San Francisco (the “City”), under Proposition E, approved by the voters of the City on November 5, 2002, and a Fourth Supplemental Indenture, dated as of _____ 1, 2016 (the “Fourth Supplemental Indenture”), by and between the SFPUC and U.S. Bank National Association, as trustee (the “Trustee”), which supplements an Indenture, dated as of January 1, 2003 (“Original Indenture”), by and between the SFPUC and the Trustee, as amended by a First Supplemental Indenture dated as of May 1, 2010 (the “First Supplemental Indenture”), a First Amendment to Indenture, dated as of May 1, 2010 (the “First Amendment to Indenture”), a Second Supplemental Indenture dated as of January 1, 2013 (the “Second Supplemental Indenture”), and a Third Supplemental Indenture dated as of February 1, 2013 (the “Third Supplemental Indenture”), each between the SFPUC and the Trustee. The Original Indenture, as so amended and supplemented, including and as amended and supplemented by the Fourth Supplemental Indenture, is referred to herein collectively as the “Indenture.”

The 2016 Series A Bonds are being issued pursuant to Ordinance No. 107-14, adopted by the Board of Supervisors of the City (the “Board of Supervisors”) on July 2, 2014, and under a resolution adopted by the SFPUC governing body (the “Commission”) on _____, 2016.

See “OBLIGATIONS PAYABLE FROM REVENUES – Authority for Issuance of Revenue Bonds and Other Obligations Payable from Revenues.”

Purposes

The 2016 Series A Bonds are being issued primarily to finance and refinance (through the retirement of commercial paper notes) select projects authorized in the capital program for the Wastewater Enterprise (as defined herein), including the Sewer System Improvement Program (as further described herein, the “SSIP”). See “WASTEWATER ENTERPRISE CAPITAL PROGRAM” and “SEWER SYSTEM IMPROVEMENT PROGRAM.”

* Preliminary, subject to change.

Proceeds of the 2016 Series A Bonds will also be applied to (a) fund capitalized interest with respect to the 2016 Series A Bonds for a limited period, and (b) pay the costs of issuance of the 2016 Series A Bonds.

See “PLAN OF FINANCE.”

The SFPUC and the Wastewater Enterprise

The SFPUC is a department of the City responsible for the maintenance, operation and development of three utility enterprises. See “THE PUBLIC UTILITIES COMMISSION.”

The Wastewater Enterprise provides sewage and stormwater collection, treatment and disposal services to residential, commercial and industrial customers in the City, as well as three municipal sewer service providers that serve residents and businesses in northern San Mateo County. The Wastewater Enterprise’s services are provided through (i) a combined system that collects sewage and stormwater, (ii) three wastewater treatment plants and (iii) effluent outfalls to the San Francisco Bay and Pacific Ocean. See “THE WASTEWATER ENTERPRISE.”

The other two enterprises of the SFPUC deliver retail water services to the City and wholesale water to users in three other Bay Area counties, and power (predominantly hydroelectric) for City government operations and to other users. The revenues of these other two enterprises are not available for, and do not secure, payment of the principal, of premium, if any, or interest on the Bonds. See “THE PUBLIC UTILITIES COMMISSION.”

Security for the Bonds

Under the Indenture, the SFPUC has irrevocably pledged the Net Revenues of the Wastewater Enterprise to the punctual payment of principal of, premium, if any, and interest on the Bonds (as defined below), which consist of any parity revenue bonds issued under the Indenture, including the 2016 Series A Bonds and the outstanding Bonds described below, subject to the flow of funds contained in the Indenture. The 2016 Series A Bonds and all other Bonds are secured by a parity lien on Net Revenues. See “SECURITY FOR THE BONDS.”

The Indenture defines “Net Revenues” as all “Revenues,” less all Operation and Maintenance Costs of the Wastewater Enterprise (each as further defined below). Revenues are generated principally from the sewer service charges to customers for the sanitary wastewater and stormwater collection, treatment and disposal services of the Wastewater Enterprise. Wastewater rates are set by the SFPUC, subject to rejection by resolution of the Board of Supervisors. See “FINANCIAL OPERATIONS.”

The SFPUC is not obligated to pay the principal of, premium, if any, or interest on the 2016 Series A Bonds from any source of funds other than Net Revenues. The SFPUC has no taxing power. The General Fund of the City is not liable for the payment of the principal of, premium, if any, or interest on the 2016 Series A Bonds, and neither the credit nor the taxing power of the City is pledged to the payment of the principal of, premium, if any, or interest on the 2016 Series A Bonds. The 2016 Series A Bonds are not secured by a legal or equitable pledge of, or charge, lien or encumbrance upon, any of the property of the City or of the SFPUC or any of its income or receipts, except Net Revenues. See “SECURITY FOR THE BONDS.”

No Reserve Account will be established for the 2016 Series A Bonds.

Outstanding and Future Parity Bonds and Other Indebtedness

Parity Bonds. The SFPUC has issued four series of outstanding Bonds:

- wastewater revenue bonds captioned “Public Utilities Commission of the City and County of San Francisco Wastewater Revenue Bonds, 2010 Series A” (the “2010 Series A Bonds”), which were issued in the aggregate principal amount of \$47,050,000 on June 8, 2010;

- wastewater revenue bonds captioned “Public Utilities Commission of the City and County of San Francisco Wastewater Revenue Bonds, 2010 Series B (Federally Taxable – Build America Bonds – Direct Payment)” (the “2010 Series B Bonds”), which were issued in the aggregate principal amount of \$192,515,000 on June 8, 2010;

- wastewater revenue bonds captioned “Public Utilities Commission of the City and County of San Francisco Wastewater Revenue Bonds, 2013 Series A (Refunding)” (the “2013 Series A Bonds”), which were issued in the aggregate principal amount of \$193,400,000 on January 30, 2013; and

- wastewater revenue bonds captioned “Public Utilities Commission of the City and County of San Francisco Wastewater Revenue Bonds, 2013 Series B” (the “2013 Series B Bonds”), which were issued in the aggregate principal amount of \$331,585,000 on February 27, 2013.

The Indenture permits, upon the satisfaction of certain conditions, the issuance of additional bonds secured by a pledge of Net Revenues (the “Additional Bonds”) on a parity with the 2010 Series A Bonds, the 2010 Series B Bonds, the 2013 Series A Bonds, the 2013 Series B Bonds and the 2016 Series A Bonds. See “SECURITY FOR THE BONDS – Additional Series of Bonds.”

All bonds issued and outstanding at any given time under the Indenture, including the 2016 Series A Bonds as the context requires, are referred to collectively in this Official Statement as the “Bonds.”

State Loans. Under the Indenture, the SFPUC may enter into loan agreements with the State, and any board, department or agency thereof, in order to finance certain categories of projects relating to the facilities of the Wastewater Enterprise. These loans may be payable from Net Revenues on a parity with the Bonds (the “Parity State Loans”), or on a subordinated lien basis relative to the Bonds, as determined by the SFPUC. As of the date of this Official Statement, the SFPUC has entered into one Parity State Loan in the amount of \$7,435,000 for the Wastewater Enterprise’s Lake Merced Green Infrastructure – Holloway Green Street Project, an SSIP project. However, the Wastewater Enterprise has not yet submitted a request for reimbursement to, nor received reimbursement from, the State, so no repayment obligation has yet been incurred or calculated. See “OBLIGATIONS PAYABLE FROM REVENUES – Parity State Loans.”

See “SECURITY FOR THE BONDS—Additional Parity State Loans” and “APPENDIX A—SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

Risk Factors

Investment in the 2016 Series A Bonds is subject to material risks. For a general overview of certain risk factors which should be considered, in addition to other matters set forth in this Official Statement, in evaluating an investment in the 2016 Series A Bonds, see “RISK FACTORS.”

Continuing Disclosure

The SFPUC will covenant in a Continuing Disclosure Certificate, to be executed and delivered by the SFPUC concurrently with the issuance of the 2016 Series A Bonds, to provide certain financial information and operating data relating to the Wastewater Enterprise and notices of certain enumerated events, in certain cases only if material. Such information and notices will be filed by the SFPUC with the Municipal Securities Rulemaking Board (“MSRB”) through its Electronic Municipal Market Access system (“EMMA”). For more information concerning the SFPUC’s continuing disclosure commitment and the form of the Continuing Disclosure Certificate, see “CONTINUING DISCLOSURE” and “APPENDIX D – FORM OF CONTINUING DISCLOSURE CERTIFICATE.”

Although the SFPUC filed on EMMA materials describing the effectiveness of certain amendments to the Indenture, it failed to file timely a simultaneous and duplicative notice of a material event. The SFPUC has, at least once in the last five years, failed to file in a timely manner notice of a change in the rating of SFPUC bonds resulting from a change in the rating of a bond insurer. The current ratings of the SFPUC’s bonds are correct on EMMA.

This Official Statement speaks only as of its date, and the information contained herein is subject to change. Except as required by the Continuing Disclosure Certificate, the SFPUC has no obligation to update the information in this Official Statement. See “CONTINUING DISCLOSURE” and “APPENDIX D – FORM OF CONTINUING DISCLOSURE CERTIFICATE.”

Other Matters

Brief descriptions of the 2016 Series A Bonds, the security and sources of payment for the 2016 Series A Bonds, the SFPUC, and the Wastewater Enterprise are provided herein. Such descriptions do not purport to be comprehensive or definitive. Definitions of certain capitalized terms used herein may be found in “APPENDIX A—SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.” All references made to various documents herein are qualified in their entirety by reference to the forms thereof, all of which are available for inspection at the office of the SFPUC at:

San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
Attention: Assistant General Manager, Business Services and Chief Financial Officer
(415) 554-3155

THE 2016 SERIES A BONDS

General

The 2016 Series A Bonds will be dated as of their date of delivery and will accrue interest from the date of delivery at the rates per annum set forth on the inside cover page of this Official Statement. Interest on the 2016 Series A Bonds is payable on April 1 and October 1 of each year, beginning October 1, 2016. Interest on the 2016 Series A Bonds will be calculated on the basis of a 360-day year composed of twelve 30-day months.

The 2016 Series A Bonds will mature on the dates and in the principal amounts set forth on the inside cover page of this Official Statement. The 2016 Series A Bonds will be issued in fully registered form in denominations of \$5,000 or any integral multiple of \$5,000.

Under the Indenture, the record date with respect to the payment of principal of and interest on the Bonds is the 15th day of the month immediately preceding an interest payment date, whether or not such day is a Business Day.

Securities Depository and Book-Entry System

The 2016 Series A Bonds will be issued in fully registered form, registered in the name of Cede & Co., as nominee for The Depository Trust Company (“DTC”), New York, New York, as the Owner of the 2016 Series A Bonds.

So long as DTC, or its nominee, Cede & Co., is the Owner of the 2016 Series A Bonds, all payments on the 2016 Series A Bonds will be made directly to DTC. Disbursement of such payments to the DTC Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners of the 2016 Series A Bonds will be the responsibility of the DTC Participants. See “APPENDIX F—SECURITIES DEPOSITORY AND THE BOOK-ENTRY SYSTEM.”

Redemption*

Optional Redemption. The 2016 Series A Bonds maturing prior to October 1, ____ are not subject to redemption prior to their stated maturity dates.

* Preliminary, subject to change.

The 2016 Series A Bonds maturing on or after October 1, _____ are subject to redemption prior to their stated maturity, at the option of the SFPUC, from and to the extent of any source of available funds, as a whole or in part (and if in part, as described in the sub-section “—Selection of Bonds for Redemption” below), on any date on or after _____ 1, _____, at a redemption price equal to 100% of the principal amount of the 2016 Series A Bonds to be redeemed, plus accrued interest thereon to the date fixed for redemption, without premium. If 2016 Series A Bonds are to be optionally redeemed in part, the SFPUC shall direct the maturities, or portions thereof, to be redeemed.

Mandatory Sinking Fund Redemption. The 2016 Series A Bonds maturing on October 1, _____, and October 1, _____, and payable from the 2016 Series A Sinking Fund Account, are further subject to redemption prior to their stated maturity, from the 2016 Series A Sinking Fund Account, on any October 1 on or after October 1, _____, and October 1, _____, respectively, by lot within any such maturity if less than all of the 2016 Series A Bonds of such maturity and tenor be redeemed, upon payment of the principal amount thereof and accrued interest thereon to the date fixed for redemption, without premium.

The Trustee, on or before September 30 of each year (commencing on or before September 30, _____), will deposit in the 2016 Series A Sinking Fund Account from the Principal Fund moneys in an amount sufficient to call and redeem or to pay at maturity, as the case may be, the principal of 2016 Series A Term Bonds maturing on October 1, _____, in the following respective principal amounts on the next succeeding October 1 in each of the following years.

Redemption Date (October 1)	Principal Amount
	\$

*

* Maturity

The Trustee, on or before September 30 of each year (commencing on or before September 30, _____), will deposit in the 2016 Series A Sinking Fund Account from the Principal Fund moneys in an amount sufficient to call and redeem or to pay at maturity, as the case may be, the principal of 2016 Series A Term Bonds maturing on October 1, _____, in the following respective principal amounts on the next succeeding October 1 in each of the following years.

Redemption Date (October 1)	Principal Amount

*

* Maturity

Selection of 2016 Series A Bonds for Redemption. Subject to DTC’s procedures relating to the selection of bonds for redemption (see “APPENDIX F – SECURITIES DEPOSITORY AND THE BOOK-ENTRY SYSTEM,” whenever less than all of the 2016 Series A Bond of any one maturity are called for redemption, the Trustee will select the 2016 Series A Bonds of such maturity to be redeemed from the Outstanding 2016 Series A Bonds of that maturity. For purposes of such selection, 2016 Series A Bonds will be deemed to be made up of \$5,000 portions of principal.

Notice of Redemption. Notice of redemption will be mailed by the Trustee at least thirty days but not more than sixty days prior to the redemption date, to DTC (so long as the DTC Book-Entry System is used). The actual receipt by the owner of any 2016 Series A Bond of notice of such redemption is not a condition precedent to redemption, and failure to receive a redemption notice or any defect in a redemption notice will not affect the validity of the proceedings for the redemption of such 2016 Series A Bonds or the cessation of the accrual of interest

on the date fixed for such redemption. See “APPENDIX F – SECURITIES DEPOSITORY AND THE BOOK-ENTRY SYSTEM.”

Rescission of Notice of Redemption. The SFPUC may, at its option, on or prior to the date fixed for redemption in any notice of optional redemption, rescind and cancel such notice of redemption by written request to the Trustee and the Trustee will give notice of such cancellation to the recipients of the notice of redemption being cancelled.

Effect of Redemption. When notice of redemption has been duly given as described above, and moneys for payment of the redemption price are held by the Trustee, the 2016 Series A Bonds called for redemption will, on the redemption date designated in such notice, become due and payable at the redemption price specified in such notice; and from and after the date so designated interest on the 2016 Series A Bonds called for redemption will cease to accrue, and such 2016 Series A Bonds will cease to be entitled to any benefit or security under the Indenture, and the Owners of said 2016 Series A Bonds will have no rights in respect thereof except to receive payment of the redemption price thereof. The Trustee, upon surrender for payment of any of said 2016 Series A Bonds, will pay such 2016 Series A Bonds at the redemption price, together with accrued interest thereon. All 2016 Series A Bonds redeemed will be cancelled upon surrender and no 2016 Series A Bonds will be issued in place thereof.

Defeasance

The obligations of the SFPUC and the pledge, lien, covenants and agreements of the SFPUC made or provided for in the Indenture will be fully discharged and satisfied as to any 2016 Series A Bond and such Bond will no longer be deemed outstanding thereunder if certain conditions set forth in the Indenture are satisfied. See “APPENDIX A – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Defeasance.”

PLAN OF FINANCE

The 2016 Series A Bonds are being issued to finance and refinance (through the retirement of commercial paper notes) a portion of the design, acquisition and construction of various capital projects in furtherance of the SFPUC’s Wastewater Enterprise capital program, including the SSIP. See “ESTIMATED SOURCES AND USES OF FUNDS,” “WASTEWATER ENTERPRISE CAPITAL PROGRAM and “SEWER SYSTEM IMPROVEMENT PROGRAM.”

ESTIMATED SOURCES AND USES OF FUNDS

The proceeds of the 2016 Series A Bonds are expected to be applied as follows:

<u>Sources of Funds</u>	
Par Amount	\$
(Net) Original Issue Premium	_____
Total Sources	\$
<u>Uses of Funds</u>	
Deposit to 2016 Series A Capital Project Account (1)	\$
Retirement of Commercial Paper Notes	
Underwriter’s Discount	
Costs of Issuance (2)	
Capitalized Interest (3)	
Total Uses	\$ _____
(1)	To finance a portion of the SSIP and other capital program projects. See “PLAN OF FINANCE,” “WASTEWATER ENTERPRISE CAPITAL PROGRAM.”
(2)	The costs of issuance include amounts for legal fees, Trustee’s fees, financial advisory fees, fees of the Public Utilities Revenue Bond Oversight Committee, rating agency fees, printing costs, and other issuance costs relating to the issuance of the 2016 Series A Bonds.
(3)	Represents capitalized interest with respect to the 2016 Series A Bonds for a limited period.

SECURITY FOR THE BONDS

Pledge of Net Revenues

General. Under the Indenture, the SFPUC has irrevocably pledged the Net Revenues of the Wastewater Enterprise to the punctual payment of principal of, premium, if any, and interest on the Bonds, which consist of any parity revenue bonds issued under the Indenture, and Parity State Loans. This pledge is subject to the flow of funds contained in the Indenture, as described below. See “– Flow of Funds” below.

The facilities comprising the Wastewater Enterprise have not been pledged or mortgaged and do not otherwise secure payment of the Bonds.

Pursuant to Section 5451 of the California Government Code, the pledge of, lien on and security interest in Net Revenues and certain other funds granted by the Indenture is valid and binding in accordance with the terms thereof from the time of issuance of the 2016 Series A Bonds; the Net Revenues and such other funds will be immediately subject to such pledge; and such pledge will constitute a lien and security interest which will immediately attach to such Net Revenues and other funds and will be effective, binding and enforceable against the SFPUC, its successors, creditors, and all others asserting rights therein to the extent set forth and in accordance with the terms of the Indenture irrespective of whether those parties have notice of such pledge and without the need for any physical delivery, recordation, filing or other further act. Such pledge, lien and security interest are not subject to the provisions of Article 9 of the California Uniform Commercial Code.

For definitions of capitalized terms used herein and not otherwise defined, see “APPENDIX A – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Definitions.”

Limited Obligation. THE SFPUC IS NOT OBLIGATED TO PAY THE PRINCIPAL OF, PREMIUM, IF ANY, OR INTEREST ON THE 2016 SERIES A BONDS EXCEPT FROM NET REVENUES. THE SFPUC HAS NO TAXING POWER. THE GENERAL FUND OF THE CITY IS NOT LIABLE FOR THE PAYMENT OF THE PRINCIPAL OF, PREMIUM, IF ANY, OR INTEREST ON THE 2016 SERIES A BONDS, AND NEITHER THE CREDIT NOR THE TAXING POWER OF THE CITY IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL

OF, PREMIUM, IF ANY, AND INTEREST ON THE 2016 SERIES A BONDS. THE 2016 SERIES A BONDS ARE NOT SECURED BY A LEGAL OR EQUITABLE PLEDGE OF, OR CHARGE, LIEN, OR ENCUMBRANCE UPON, ANY OF THE PROPERTY OF THE CITY OR OF THE SFPUC OR ANY OF ITS INCOME OR RECEIPTS, EXCEPT NET REVENUES.

Wastewater Enterprise. The Indenture defines “Enterprise” (referred to in this Official Statement as the “Wastewater Enterprise”) as meaning the whole and each and every part of the municipal sanitary waste and storm water collection, treatment and disposal system and auxiliary or related facilities of the SFPUC, including all of the presently existing system of the SFPUC for the collection, treatment and disposal of sanitary waste and storm water and all future additions, betterments, and extensions to the system or any part thereof.

Net Revenues. The Indenture defines “Net Revenues” as all of the Revenues, less all Operation and Maintenance Costs of the Enterprise.

The Indenture defines “Revenues” as all gross revenues of the Wastewater Enterprise, including all charges received and all other income and receipts derived by the SFPUC from the operation of the Wastewater Enterprise, or arising from the Wastewater Enterprise, including connection and installation charges, but excluding:

- (a) any money received by or for the account of the SFPUC from the levy or collection of taxes;
- (b) moneys received from the State of California and the United States of America and required to be deposited in restricted funds;
- (c) refundable deposits made to establish credit;
- (d) advances and contributions made to the SFPUC to be applied to construction;
- (e) moneys received constituting casualty insurance proceeds with respect to all or any part of the Wastewater Enterprise (which shall be received and disposed of pursuant to the Indenture) and moneys received constituting other insurance proceeds;
- (f) moneys received from the sale or disposition of all or any part of the Wastewater Enterprise (which shall be received and disposed of pursuant to the Indenture);
- (g) moneys received upon the taking by or under the threat of eminent domain of all or any part of the Wastewater Enterprise (which moneys shall be received and disposed of pursuant to the Indenture);
- (h) proceeds from Bonds issued by the SFPUC or proceeds from loans or other indebtedness obtained by the SFPUC; and
- (i) moneys or securities received by the SFPUC as gifts or grants the use of which is restricted by the donor or grantor.

The term “Revenues” also includes (i) all interest or other income (excluding profits or losses from the sale or disposition of Permitted Investments or other securities owned by or on behalf of the SFPUC) derived from the deposit or investment of any moneys in any fund or account established under the Indenture (excluding any Rebate Fund and any escrow fund pledged for the payment of defeased bonds) or in any fund or account of the Wastewater Enterprise and legally available to pay Debt Service on the Bonds, and (ii) any other moneys, proceeds and other amounts that the SFPUC determines should be “Revenues” under the Indenture.

The Indenture defines “Operation and Maintenance Costs of the Enterprise” as the reasonable and necessary costs of operating and maintaining the Wastewater Enterprise, calculated on the basis of generally accepted accounting principles, including (among other things) salaries and wages, fees for services, costs of materials, supplies and fuel, reasonable expenses of management, legal fees, accounting fees, repairs and other expenses necessary to maintain and preserve the Wastewater Enterprise in good repair and working order, and

reasonable amounts for administration, overhead, insurance, taxes (if any), and the payment of pension charges and proportionate payments to such compensation and other insurance or outside reserve funds as the SFPUC may establish or the Board of Supervisors may require with respect to employees of the SFPUC, as provided in the Charter.

However, the term “Operation and Maintenance Costs of the Enterprise” excludes in all cases (a) depreciation and obsolescence charges or reserves therefor, (b) amortization of intangibles or other bookkeeping entries of a similar nature, (c) costs of capital additions, replacements, betterments, extensions or improvements to the Wastewater Enterprise, which under generally accepted accounting principles are chargeable to a capital account or to a reserve for depreciation, (d) charges for the payment of principal of and interest on any revenue bonds or other indebtedness issued before or after the date of the Indenture for Wastewater Enterprise purposes and (e) such costs as are scheduled to be paid by the SFPUC from moneys other than Revenues, such moneys to be clearly available for such purpose.

Flow of Funds

The Indenture provides that all Revenues must be paid into the Revenue Fund, which must be maintained in the City Treasury. Moneys in the Revenue Fund, including earnings thereon, are required by the Indenture to be applied for the following purposes and only in the following order of priority:

- (a) payment of Operation and Maintenance Costs of the Enterprise;
- (b) payment of Bonds, Parity State Loans, Policy Costs and amounts due as reimbursement under any Letter of Credit Agreement, as provided in the Indenture; and
- (c) any other lawful purpose of the SFPUC.

Net Revenues deposited in the Revenue Fund, as described in (b) above, will be applied to pay interest and principal on the Bonds and to make deposits to the Bond Reserve Fund if the amounts therein are less than the Required Reserve. See “APPENDIX A – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

The Indenture defines “Refundable Credits” as (a) with respect to a Series of Bonds issued as Build America Bonds under Section 54AA of the Code, which the SFPUC has elected to receive under Section 54AA(g)(1) of the Code, and (b) with respect to a Series of Bonds issued as Build America Bonds under any other provision of the Code that creates a substantially similar direct-pay subsidy program, the amounts which are payable by the Federal government under the applicable provisions of the Code, which the SFPUC has elected to receive under the applicable provisions of the Code.

The Indenture defines “Build America Bonds” as any bonds or other obligations issued as Build America Bonds under Section 54AA of the Code, or under any other provision of the Code that creates a substantially similar direct-pay subsidy program.

The Indenture provides that all of the Refundable Credits received by the SFPUC shall be deposited immediately upon receipt in the Interest Fund, and such Refundable Credits are irrevocably pledged to the punctual payment of the interest on the Bonds issued as Build America Bonds (“BABs”), and the Refundable Credits shall not be used for any other purpose while any of the Bonds issued as Build America Bonds remain Outstanding.

Rate Covenants

Sufficiency of Revenues. The SFPUC has covenanted in the Indenture that it will, at all times while any of the Bonds remain Outstanding, establish, fix, prescribe and collect rates, fees and charges in connection with the sanitary wastewater and stormwater collection, treatment and disposal services and facilities furnished by the Wastewater Enterprise so as to yield Revenues at least sufficient, after making reasonable allowances for contingencies and error in the estimates, calculated on a cash basis, to pay the following amounts:

- (a) the interest on and principal of the Bonds as they become due and payable (but not including any interest for which moneys have been deposited in the Interest Fund from the proceeds of any Series of Bonds or from any other source);
- (b) all other payments required for compliance with the terms of the Indenture and of any Supplemental Indenture providing for the issuance of Additional Bonds pursuant to the Indenture;
- (c) all other payments to meet any other obligations of the SFPUC which are charges, liens or encumbrances upon, or payable from, Revenues; and
- (d) all current Operation and Maintenance Costs of the Enterprise (but not including such Operation and Maintenance Costs of the Enterprise as are scheduled to be paid by the SFPUC from moneys other than Revenues, such moneys to be clearly available for such purpose).

Debt Service Coverage. In addition to the requirements described above, the SFPUC has covenanted that it will, at all times while any of the Bonds remain Outstanding, establish, fix, prescribe and collect rates, fees and charges in connection with the sewage and stormwater collection, treatment and disposal services and facilities furnished by the Wastewater Enterprise so as to yield Net Revenues during the immediately ensuing period of twelve months which (together with any fund balances of the SFPUC or the Wastewater Enterprise which are available for payment of Debt Service and are not budgeted to be expended during such twelve months, but excluding the Bond Reserve Fund), calculated on a cash basis, are at least equal to 1.25 times the Annual Debt Service (but excluding any interest moneys for the payment of which have been deposited in the Interest Fund from the proceeds of any Series of Bonds or from any other source) for said twelve-month period.

“Annual Debt Service” is defined in the Indenture as the sum of principal and interest on all Outstanding Bonds and Parity State Loans as computed for the twelve-month period ending June 30 to which reference is made, and calculated in a manner consistent with the determination of Average Annual Debt Service and Maximum Annual Debt Service as provided in the definitions thereof. In determining the amount of interest coming due during any twelve-month period ending June 30 on any Series of Bonds that were issued as Build America Bonds, including the 2010 Series B Bonds, amounts equal to the Refundable Credits the SFPUC is scheduled to receive during each such twelve-month period ending June 30 will be deducted from such interest. See “APPENDIX A – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.”

No Reserve Account

The Indenture requires that the Bond Reserve Fund be established with the Trustee and funded in an amount equal to the “Required Reserve,” if any, applicable to each series of Bonds. If the Required Reserve for a Series of Bonds is greater than zero, the Indenture requires the establishment of a bond reserve account (each, a “Reserve Account”) within the Bond Reserve Fund for such Series of Bonds, and requires the deposit in that bond reserve account of an amount equal to the Required Reserve for the related Series of Bonds.

The Fourth Supplemental Indenture does *not* require the establishment of a Reserve Account for the 2016 Series A Bonds. The Reserve Accounts established with respect to the 2010 Series A Bonds and the 2010 Series B Bonds do not secure the 2016 Series A Bonds. No Reserve Account has been established with respect to the 2013 Series A Bonds or the 2013 Series B Bonds.

Additional Series of Bonds

The Charter and the Indenture authorize the issuance of Additional Bonds payable from Net Revenues on a parity with Outstanding Bonds and the 2016 Series A Bonds, upon satisfaction of the conditions set forth therein.

The SFPUC expects to issue Additional Bonds to finance the costs of additional improvements included in the SSIP and other portions of the Wastewater Enterprise’s capital program. See “FINANCING PLAN FOR CAPITAL IMPROVEMENTS” and “RISK FACTORS—Costs of the SSIP; Timely Completion of the SSIP.”

Charter Requirements. Under the Charter, the SFPUC may issue revenue bonds (including Additional Bonds) relating to the Wastewater Enterprise without voter approval in the following circumstances, among others:

- (a) to issue revenue bonds (including Additional Bonds) approved by an affirmative vote of two-thirds of the members of the Board of Supervisors for the purpose of reconstructing, replacing, expanding, repairing or improving the Wastewater Enterprise;
- (b) to issue bonds (including Additional Bonds) approved by an affirmative vote of three-fourths of the members of the Board of Supervisors if the bonds are to finance buildings, fixtures or equipment which are deemed necessary by the Board of Supervisors to comply with an order of a duly constituted state or federal authority having jurisdiction over the Wastewater Enterprise; and
- (c) to issue refunding bonds which are expected to result in net debt service savings to the City on a present value basis, calculated as described in the SFPUC's Debt Management Policies and Procedures.

The Charter also generally authorizes the SFPUC to issue revenue bonds upon the approval of a majority of the voters voting on the proposition at a general or special election.

Indenture Requirements. The Indenture provides that Additional Bonds secured on a parity with the Bonds may be issued for any lawful purpose if no Event of Default has occurred and is continuing under the Indenture or any Supplemental Indenture and no event has occurred which, but for the passage of time or the giving of notice, would constitute an Event of Default under the Indenture or any Supplemental Indenture. Prior to the issuance of such Additional Bonds, the SFPUC is required to file with the Trustee, among other documents, the following:

- (a) a Certificate of the Commission demonstrating that the SFPUC has complied with the rate covenant under the Indenture and that the requirements for issuing Additional Bonds under the Indenture have been met;
- (b) if any portion of the proceeds of such Series of Bonds is to be used to finance construction, a certificate of the Consulting Engineers setting forth (i) the estimated date of completion for the portion of the Project for which such Series of Bonds is being issued and for any other uncompleted portion of the Project, and (ii) an estimate of the cost of construction of such portion of the Project and of any other uncompleted portion of the Project;
- (c) a Certificate of the Commission setting forth for each of the next three Fiscal Years (and, if any portion of the proceeds of such Series of Bonds is to be used to finance construction, the three Fiscal Years following the Fiscal Year in which the Consulting Engineers estimate such portion of the Project will be completed), estimates of (i) Revenues, (ii) Operation and Maintenance Costs of the Enterprise and (iii) Net Revenues; and
- (d) a Certificate of the Commission setting forth (i) the estimates of Net Revenues as set forth in the Certificate of the SFPUC pursuant to paragraph (c) above for each of such three Fiscal Years (and, if any portion of the proceeds of such Series of Bonds is to be used to finance construction, the three Fiscal Years following the Fiscal Year in which the Consulting Engineers estimate such portion of the Project will be completed), (ii) the Annual Debt Service for each of such Fiscal Years, including Annual Debt Service as estimated in such Certificate of the Commission with respect to future Series of Bonds, if any, which such Certificate of the Commission shall estimate will be required to complete payment of the cost of construction of such portion of the Project and any other uncompleted portion of the Project, and (iii) demonstrating that the estimated Net Revenues (together with any fund balances of the SFPUC which are available for the payment of Debt Service but excluding the Bond Reserve Fund) in each of the Fiscal Years set forth in (c) above is at least equal to 1.25 times the Annual Debt Service for such respective Fiscal Years.

See "APPENDIX A—SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE—Definitions."

The Indenture provides the SFPUC with flexibility as to the nature and terms of any Additional Bonds issued with a lien and charge on Net Revenues on a parity with the Outstanding Bonds. Such Additional Bonds may: mature over any period of time; bear interest at a fixed, variable or zero rate; be in any denominations; be in any form (including registered, coupon or book-entry); include or exclude redemption provisions; be subject to optional or mandatory tender for purchase; be sold at such price or prices; be further secured by any separate and additional security; and otherwise include such additional terms and provisions as the SFPUC may determine, consistent with the Indenture and applicable provisions of the Charter.

Additional Parity State Loans

Pursuant to the Charter, the SFPUC can incur indebtedness, including additional State loans, without voter approval, but subject to Board of Supervisors' approval. The Indenture permits the SFPUC to enter into Parity State Loans or loans on a subordinated lien basis relative to the Bonds, as determined by the SFPUC. Pursuant to the State's Revolving Fund Loan program (the "SRF Loan Program"), the SFPUC entered into a State Revolving Fund Loan dated as of October 16, 2015 and plans to enter into additional State Revolving Fund Loans (each an "SRF Loan") over the next several years to obtain long-term financing for a portion of the SSIP. See "OBLIGATIONS PAYABLE FROM REVENUES—Parity State Loans."

Under the Indenture, the SFPUC may only enter into additional Parity State Loans if no Event of Default has occurred and is continuing under the Indenture or any Supplemental Indenture (and no event has occurred which, but for the passage of time or the giving of notice, would constitute an Event of Default under the Indenture or any Supplemental Indenture).

In addition, in connection with the execution and delivery of such Parity State Loans, the SFPUC is required to deliver a Certificate to the Trustee setting forth, for each of the next three Fiscal Years after the delivery of the Parity State Loans:

- (i) the Revenues and Operation and Maintenance Costs of the Enterprise; and
- (ii) the Annual Debt Service;

demonstrating that the estimated Net Revenues (together with any fund balances of the SFPUC which are available for Debt Service, but excluding the Bond Reserve Fund), in each of such three Fiscal Years is at least equal to 1.25 times the Annual Debt Service.

Refunding Bonds

City Charter Requirements. The Charter permits the issuance of refunding bonds without voter approval only if such refunding results in net debt service savings on a present value basis, calculated as described in the SFPUC's Debt Management Policies and Procedures.

Indenture Requirements. The Indenture provides that Additional Bonds may be issued to refund any Bonds without meeting the test for the issuance of Additional Bonds described above, if the SFPUC delivers to the Trustee (among other documents) a certificate of a Qualified Financial Advisor to the effect that the Average Annual Debt Service for the Additional Bonds will be equal to or less than the Average Annual Debt Service on the Bonds to be refunded.

Subordinate Obligations; Obligations Not Payable from Revenues

The Indenture permits the SFPUC to authorize and issue bonds, notes, warrants, certificates or other obligations or evidences of indebtedness, the principal of or interest on which would be payable either (i) from Net Revenues after and subordinate to the payment from Net Revenues of the principal of and interest on the Bonds, or (ii) from moneys which are not Revenues. The SFPUC may issue bonds or incur other indebtedness secured by a pledge of Net Revenues on a basis subordinate to the pledge thereof securing the Bonds without limitation.

Investments

The Indenture provides that moneys in all funds and accounts held by the Trustee under the Indenture shall be invested upon receipt in Permitted Investments as directed by the SFPUC and all accounts funds and accounts held by the Treasurer shall be invested in Legal Investments. “Legal Investments” means any obligations or investments in which the Treasurer may legally invest the SFPUC’s funds. For information regarding the investment of moneys held in the various funds and accounts of the SFPUC, see “FINANCIAL OPERATIONS – Investment of SFPUC Funds.”

OBLIGATIONS PAYABLE FROM REVENUES

Authority for Issuance of Revenue Bonds and Other Obligations Payable from Revenues

The Charter authorizes the SFPUC to issue revenue bonds and commercial paper notes and to incur other obligations payable from or secured by a pledge of Revenues. The 2016 Series A Bonds are being issued under Proposition E, Ordinance 107-14, adopted by the Board of Supervisors on July 2, 2014, and a resolution adopted by the Commission on _____, 2016. See “APPENDIX B—SUMMARIES OF CERTAIN LOCAL INITIATIVES (PROPOSITIONS E AND P)” and “SECURITY FOR THE BONDS—Additional Series of Bonds,” “—Additional Parity State Loans” and “—Refunding Bonds.”

Outstanding Parity Revenue Bonds

The following outstanding Bonds (the “Outstanding Bonds”) have been issued pursuant to the Indenture and are secured by a parity pledge of Net Revenues.

Series of Bonds	Purpose	Initial Principal Amount	Principal Amount Outstanding as of April 1, 2016
Wastewater Revenue Bonds, 2010 Series A	Refinance capital program costs	\$ 47,050,000	\$ 47,050,000
Wastewater Revenue Bonds, 2010 Series B	Finance and refinance SSIP and other capital program costs	192,515,000	192,515,000
Wastewater Revenue Bonds, 2013 Series A	Refund 2003 Clean Water Bonds and refund SRF Loans	193,400,000	98,585,000
Wastewater Revenue Bonds, 2013 Series B	Finance and refinance SSIP and other capital program costs	331,585,000	331,585,000
Total:		\$764,550,000	\$669,735,000

Additional Bonds

The SFPUC intends to issue Additional Bonds under the Indenture to finance select capital program projects, including SSIP projects. See “WASTEWATER ENTERPRISE CAPITAL PROGRAM,” “SEWER SYSTEM IMPROVEMENT PROGRAM” and “FINANCING PLAN FOR CAPITAL IMPROVEMENTS.”

Parity State Loans

The SFPUC plans to enter into Parity State Loans with the State of California over the next several years to obtain long-term financing for a portion of the SSIP. The Parity State Loans are low-cost SRF Loans provided and administered by the State Water Resources Control Board on a project-by-project basis. The State’s recently revised SRF Loan Program provides favorable terms to the SFPUC, including up to 30-year amortizing loan terms which commence upon project completion, an interest rate on each SRF Loan that is equal to one-half of the true interest cost for the State of California’s most recent General Obligation Bond issue at the time such loan is entered into, and repayment of the SRF Loans on a parity with the Bonds rather than on a basis senior to the Bonds as had been the

case in connection with certain loans entered into under the prior version of the program. The SRF Loan Program offers loans to applicant entities based on available moneys and placement on a statewide priority list. Although placement on the priority list is a necessary condition to receiving SRF Loan Program moneys, placement on the priority list does not create an obligation on the part of the applicant to accept SRF Loan Program moneys.

Pursuant to the State's new SRF Loan Program, the SFPUC entered into an SRF Loan dated as of October 16, 2015 in the amount of \$7,435,000 for the Lake Merced Green Infrastructure – Holloway Green Street Project, an SSIP project. However, the Wastewater Enterprise has not yet submitted a request for reimbursement to, nor received reimbursement from, the State, so no repayment obligation has yet been incurred or calculated. Once funds are drawn pursuant to a reimbursement request, the interest rate on the loan will be 1.60%, and principal will amortize over a 30-year term commencing one year following completion of the project. The SFPUC currently expects debt service on the SRF Loan will first become due beginning in Fiscal Year 2018-19. This loan is the first of several SRF Loans the SFPUC anticipates entering into in order to finance SSIP projects. The State estimates that it can enter into approximately \$2.24 billion of SRF Loans with the SFPUC over the next five years based on current financial projections of the Wastewater Enterprise.

The SFPUC had previously entered into thirteen SRF Loans totaling an aggregate principal amount of \$280 million during the period from 1991 to 2001 under the State's original SRF Loan Program, including certain loans that were payable on a basis senior to repayment of the Bonds. As of February 2013, the SFPUC had paid in full all such prior SRF Loans, including by refunding certain loans with proceeds of the Series 2013 Series A Wastewater Revenue Bonds. The SFPUC has covenanted in the Fourth Supplemental Indenture not to enter into state loans payable on a basis senior to the Bonds.

Subordinate Debt and Commercial Paper

No Limits on Subordinate Debt. The SFPUC may issue bonds or incur other indebtedness secured by a pledge of Net Revenues on a basis subordinate to the pledge thereof securing the Bonds, without limitation.

Commercial Paper Program. In 2007, the SFPUC established a commercial paper program (authorized by Proposition E) to meet the interim expenditure and encumbrance needs relating to the Wastewater Enterprise's capital program. The commercial paper program has a current authorization of \$500 million. As of April 1, 2016, the SFPUC had \$135 million aggregate principal amount of Wastewater Commercial Paper Notes outstanding, all of which are secured by and payable from Net Revenues on a basis subordinate to the payment of debt service on the Bonds.

The Wastewater Commercial Paper Notes are supported by respective bank credit facilities, as follows: (a) a Letter of Credit (LOC) with Wells Fargo N.A. in the amount of \$75 million and a stated expiration date of February 11, 2017; (b) an LOC with Bank of America, N.A. in the amount of \$75 million and a stated expiration date of July 7, 2017; (c) an LOC with Barclays Bank PLC in the amount of \$100 million and a stated expiration date of October 19, 2018; (d) a Revolving Credit and Term Loan Agreement ("RCTLA") with The Bank of Tokyo Mitsubishi UFJ, Ltd., acting through its New York Branch in the amount of \$75 million and a stated expiration date of July 7, 2018; (e) an RCTLA with U.S. Bank National Association in the amount of \$75 million and a stated expiration date of February 8, 2017; and (f) an RCTLA with State Street Bank and Trust Company in the amount of \$100 million and a stated expiration date of October 20, 2016.

Contingent Payment Obligations

The Wastewater Enterprise has no interest rate swaps, caps or hedges or other contingent payment obligations payable from Revenues. The Wastewater Enterprise may in the future, however, incur contingent payment obligations payable from Revenues. Such contingent payment obligations may be payable on a parity with the Bonds if the conditions for the issuance of parity debt under the Indenture are met. See "SECURITY FOR THE BONDS—Additional Series of Bonds."

Other Obligations Payable from Revenues

The SFPUC completed the construction of a new, 13-story office building at 525 Golden Gate Avenue in San Francisco to house the administrative offices of the SFPUC's three utility enterprises and moved into the building in July 2012. Total project costs were approximately \$202 million and were financed with land sale proceeds, fund balances, grants and the proceeds of certificates of participation (the "2009 Golden Gate COPs"), representing interests in a City General Fund lease, executed and delivered in two series (one of which constitutes Build America Bonds) on October 7, 2009 in the aggregate principal amount of \$167,670,000. Pursuant to a Memorandum of Understanding between the City and the SFPUC, the SFPUC will reimburse the City General Fund for all debt service in connection with this City financing (net of Refundable Credits received). The SFPUC allocates such payment obligations internally among its three utility enterprises based on percentage usage. The Wastewater Enterprise has been allocated 18.88% of such obligations, payable from Revenues on a basis subordinate to the payment of principal of and interest on the Bonds and any Parity State Loans.

Revenue Bond Oversight Committee

On November 5, 2002, the voters of the City adopted Proposition P, an ordinance that established the Public Utilities Revenue Bond Oversight Committee ("RBOC") to report publicly to the Mayor, the SFPUC and the Board of Supervisors regarding the expenditure of revenue bond proceeds on the repair, replacement, upgrading and expansion of the Wastewater Enterprise, the Water Enterprise, and the Power Enterprise (each as defined herein).

The RBOC has seven members appointed as follows: two by the Mayor, two by the Board of Supervisors, one by the City Controller, one by the Bay Area Water Users Association under the auspices of the Bay Area Water Supply and Conservation Agency. The seventh member is the City's Budget Analyst or his or her representative. The work of the RBOC is funded by 1/20th of 1% of the gross bond proceeds of revenue bond issuances or sales to the extent permitted by law.

The RBOC's current term expires on January 1, 2019.

The RBOC may, by majority vote of all its members, prohibit the issuance or sale of authorized SFPUC revenue bonds which have yet to be issued or sold if, after reviewing materials provided by the SFPUC and conducting its own independent audit, and after consultation with the City Attorney, the RBOC determines that revenue bond proceeds have been or are being spent on purposes not authorized by the authorizing bond resolution or otherwise in a manner amounting to an illegal expenditure or illegal waste of such revenue bond proceeds. The SFPUC may appeal such a decision to the Board of Supervisors within thirty days. The Board of Supervisors may overturn such a decision by the RBOC by a two-thirds vote of all members of the Board of Supervisors with evidence from the SFPUC of corrective measures satisfactory to the Board of Supervisors or may remand the decision to the RBOC for further consideration.

For further information regarding the RBOC, see "APPENDIX B—SUMMARIES OF CERTAIN LOCAL INITIATIVES (PROPOSITIONS E AND P)."

Debt Service Requirements

Set forth in the following table are debt service requirements for the 2010 Series A Bonds, the 2010 Series B Bonds, the 2013 Series A Bonds, the 2013 Series B Bonds and the 2016 Series A Bonds.

DEBT SERVICE REQUIREMENTS ON OUTSTANDING BONDS

Fiscal Year (ending June 30)	Outstanding Bonds ⁽²⁾⁽³⁾	2016 Series A Bonds Principal	2016 Series A Bonds Interest	Total Debt Service ⁽¹⁾⁽⁴⁾
2016	\$15,905,413	\$	\$	\$
2017	52,253,751			
2018	50,496,301			
2019	50,553,826			
2020	50,639,601			
2021	50,711,476			
2022	49,248,476			
2023	45,719,966			
2024	41,379,962			
2025	41,252,516			
2026	41,118,113			
2027	40,969,768			
2028	40,818,158			
2029	40,653,598			
2030	40,478,303			
2031	40,299,043			
2032	40,104,952			
2033	39,902,608			
2034	39,695,346			
2035	39,477,702			
2036	39,250,596			
2037	39,012,852			
2038	38,767,150			
2039	38,505,339			
2040	38,240,155			
2041	37,964,181			
2042	37,820,700			
2043	37,821,600			
2044	-			
2045	-			
TOTAL⁽¹⁾	\$1,159,061,445	\$	\$	\$

(1) Totals may not add due to rounding.

(2) Includes 2010 Series A Bonds, 2010 Series B Bonds, 2013 Series A Bonds and 2013 Series B Bonds. Does not include debt service relating to the Parity State Loan in the amount of \$7,435,000 for the Wastewater Enterprise’s Lake Merced Green Infrastructure – Holloway Green Street Project. The Wastewater Enterprise has not yet submitted a request for reimbursement to, nor received reimbursement from, the State, so no repayment obligation has yet been incurred or calculated. See “OBLIGATIONS PAYABLE FROM REVENUES – Parity State Loans.” Also does not include debt service on subordinate Wastewater Commercial Paper Notes. See “OBLIGATIONS PAYABLE FROM REVENUES—Subordinate Debt and Commercial Paper.”

(3) Calculation of interest due on Bonds shown without an offset for Refundable Credits.

(4) Outstanding Bonds, plus 2016 Series A Bonds principal, plus 2016 Series A Bonds net interest.

THE CITY AND COUNTY OF SAN FRANCISCO

The City is the economic and cultural center of the Bay Area and northern California. The limits of the City encompass over 93 square miles, of which 49 square miles are land, with the balance consisting of tidelands and a portion of the San Francisco Bay (the “Bay”). The City is located at the northern tip of the San Francisco Peninsula, bounded by the Pacific Ocean to the west, the Bay and the San Francisco-Oakland Bay Bridge to the east, the entrance to the Bay and the Golden Gate Bridge to the north, and San Mateo County to the south. Silicon Valley is about a 40-minute drive to the south, and the wine country is about an hour’s drive to the north. The City’s most recently completed and adopted Comprehensive Annual Financial Report (the “CAFR”) for its fiscal year 2013-14 reported that the City’s population in 2013 was 837,442 according to the U.S. Census Bureau.

The San Francisco Bay Area consists of the nine counties contiguous to the Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma Counties (collectively, the “Bay Area”). The economy of the Bay Area includes a wide range of industries, supplying local needs as well as the needs of national and international markets. Major business sectors in the Bay Area include retail, entertainment and the arts, conventions and tourism, service businesses, banking, professional and financial services, corporate headquarters, international and wholesale trade, multimedia and advertising, technology and higher education.

The City is a major convention and tourist destination. According to the San Francisco Travel Association, a nonprofit membership organization, during the calendar year 2013, approximately 16.9 million people visited the City and spent an estimated \$9.38 billion during their stay. The City is also a leading center for financial activity in the State and is the headquarters of the Twelfth Federal Reserve District, the Eleventh District Federal Home Loan Bank, and the San Francisco regional Office of Thrift Supervision.

The City benefits from a highly skilled, educated and professional labor force. The CAFR estimates that per-capita personal income of the City for fiscal year 2013-14 was \$76,886. The San Francisco Unified School District operates 5 transitional kindergarten schools, 72 elementary and K-8 school sites, 13 middle schools, 18 senior high schools (including two continuation schools and an independent study school), and 34 State-funded preschool sites, and sponsors 13 independent charter schools. Higher education institutions located in the City include the University of San Francisco, California State University-San Francisco, University of California-San Francisco (a medical school and health science campus), the University of California Hastings College of the Law, the University of the Pacific’s School of Dentistry, Golden Gate University, City College of San Francisco (a public community college), the Art Institute of California – San Francisco, the San Francisco Conservatory of Music, the California Culinary Academy and the Academy of Art University.

San Francisco International Airport (“SFO”), located 14 miles south of downtown San Francisco in an unincorporated area of San Mateo County and owned and operated by the City, is the principal commercial service airport for the Bay Area and one of the nation’s principal gateways for Pacific traffic. In fiscal year 2013-14, SFO serviced approximately 46.1 million passengers and handled 370,525 metric tons of cargo. The City is also served by the Bay Area Rapid Transit District (“BART”) (electric rail commuter service linking the City with the East Bay and the San Francisco Peninsula, including SFO), Caltrain (a conventional commuter rail line linking the City with the San Francisco Peninsula), and bus and ferry services between the City and residential areas to the north, east and south of the City. San Francisco Municipal Railway (“Muni”), operated by the San Francisco Municipal Transportation Agency (the “SFMTA”), provides bus and streetcar service within the City. The Port of San Francisco (the “Port”), which administers 7.5 miles of Bay waterfront held in “public trust” by the Port on behalf of the people of the State, promotes a balance of maritime-related commerce, fishing, recreational, industrial and commercial activities and natural resource protection.

The City is governed by a Board of Supervisors elected from eleven districts to serve four-year terms, and a Mayor who serves as chief executive officer, elected citywide to a four-year term. Edwin M. Lee is the 43rd and current Mayor of the City, having been elected by the voters of the City in November 2011. The City’s budget for fiscal years 2014-15 and 2015-16 totals \$8.58 billion and \$8.56 billion, respectively. The City’s General Fund portion of each year’s budget is \$4.27 billion in fiscal year 2014-15 and \$4.33 billion in fiscal year 2015-16, with the balance being allocated to all other funds, including enterprise fund departments, such as the SFMTA, SFO, the Port and the SFPUC. The City’s CAFR estimates that the City employed approximately 29,236 full-time-equivalent

employees at the end of fiscal year 2013-14. According to the Controller, the preliminary fiscal year 2014-15 total net assessed valuation of taxable property in the City is approximately \$181.8 billion.

THE GENERAL FUND OF THE CITY IS NOT LIABLE FOR THE PAYMENT OF PRINCIPAL OF, PREMIUM, IF ANY, OR INTEREST ON THE BONDS, AND NEITHER THE CREDIT NOR THE TAXING POWER OF THE CITY IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, PREMIUM, IF ANY, OR INTEREST ON THE 2016 SERIES A BONDS. THE BONDS ARE NOT SECURED BY A LEGAL OR EQUITABLE PLEDGE, OF, OR CHARGE, LIEN, OR ENCUMBRANCE UPON, ANY OF THE PROPERTY OF THE CITY.

THE PUBLIC UTILITIES COMMISSION

General

The SFPUC is a department of the City responsible for the maintenance, operation and development of three utility enterprises: the Wastewater Enterprise, the Water Enterprise and the Power Enterprise (which is a component of Hetch Hetchy Water and Power), all as further described below.

The revenues of the Water Enterprise and the Power Enterprise are not available for payment of the principal of, premium, if any, or interest on the Bonds. See "SECURITY FOR THE BONDS—Pledge of Net Revenues."

Organization, Purposes and Powers

Wastewater Enterprise. The Wastewater Enterprise's collection and treatment system consists of a combined sewer collection system conveying sewage and stormwater flows within the City to three water pollution control plants, also located within the City. Treated effluent flows are then discharged through deep-water outfalls into the San Francisco Bay and Pacific Ocean. The Wastewater Enterprise also currently provides sewage treatment service on Treasure Island pursuant to contract, and operates an onsite sewage and stormwater reclamation and treatment facility at the SFPUC headquarters at 525 Golden Gate Avenue. See "THE WASTEWATER ENTERPRISE."

Water Enterprise. Nearly 2.6 million people rely on water supplied by the SFPUC to meet their daily water needs through its Water Enterprise. The SFPUC serves as the retail water supplier for the City and is responsible for water deliveries to residents and institutions within the City limits, as well as to a number of retail accounts outside of the City limits. In addition, the SFPUC sells water to 26 Wholesale Customer entities in San Mateo, Alameda and Santa Clara Counties under contractual agreements.

The revenues of the Water Enterprise are not "Revenues" under the Indenture and do not secure the payment of the principal of, premium, if any, or interest on the Bonds. See "SECURITY FOR THE BONDS—Pledge of Net Revenues."

Hetch Hetchy – Water and Power Operations. Hetch Hetchy Water and Power operates dams (among them O'Shaughnessy Dam being the largest), reservoirs (among them Hetch Hetchy Reservoir being the largest), hydroelectric generation and transmission facilities and water transmission facilities from Hetch Hetchy Valley to the connection with the Water Enterprise (collectively, the "Hetch Hetchy Project"), which provides water for distribution through the Water Enterprise and hydroelectric power to municipal and public infrastructure, services and facilities of the City (the "Power Enterprise"). The Power Enterprise, which is a component of the Hetch Hetchy Water and Power Project, was created in February 2005 as a separate system within Hetch Hetchy Water and Power. The Power Enterprise focuses on providing adequate and reliable supplies of electric power to meet the municipal requirements of the City, including power to operate municipal streetcars and electric buses, street and traffic lights, municipal buildings and other City facilities, including SFO. Additionally, the Power Enterprise provides power to the Modesto and Turlock Irrigation Districts (located in the central valley of California) and to other commercial customers consistent with prescribed contractual obligations and federal law.

The revenues of the Power Enterprise are not “Revenues” under the Indenture and do not secure the payment of the principal of, premium, if any, or interest on the Bonds. See “SECURITY FOR THE BONDS—Pledge of Net Revenues.”

Commission Members

Under the Charter, the SFPUC is given exclusive charge of the operation and management of all water, wastewater and municipal customers’ energy supplies and utilities of the City as well as the real, personal and financial assets under the SFPUC’s jurisdiction. The SFPUC is governed by the Commission.

In June 2008, an initiative measure amended the Charter, changing the process for Commission appointments, and establishing qualifications for commissioners, as follows:

- The Commission consists of five members appointed by the Mayor, subject to confirmation by a majority of the Board of Supervisors.
- Seat 1 is designated for a member with experience in environmental policy and an understanding of environmental justice issues.
- Seat 2 is designated for a member with experience in ratepayer or consumer advocacy.
- Seat 3 is designated for a member with experience in project finance.
- Seat 4 is designated for a member with expertise in water systems, power systems, or public utility management.
- Seat 5 is designated for an at-large member.
- Members may be suspended by the Mayor and may be removed by a three-fourths vote of the Board of Supervisors for official misconduct.

The current members of the Commission and the appointment and expiration dates of their terms are:

<u>Name and Title</u>	<u>Seat</u>	<u>Originally Appointed</u>	<u>Term Expires</u>
Francesca Vietor, President	1	September 2008	August 2016
Anson Moran, Vice President	4	July 2009	August 2018
Ann Moller Caen	3	March 1997	August 2016
Vince Courtney	5	January 2011	August 2016
Ike Kwon	2	February 2015	August 2018

Management

Management of the SFPUC is led by the General Manager. The General Manager is appointed by the Mayor from candidates submitted by the Commission. Once appointed by the Mayor, the General Manager serves at the pleasure of the Commission; however, the Commission also has Charter authority to employ the General Manager under an individual contract.

Brief biographies of the General Manager and principal members of the senior management of the SFPUC are set forth below.

Harlan L. Kelly, Jr. Harlan L. Kelly, Jr. became General Manager of the SFPUC in September 2012. He previously served as the SFPUC’s Assistant General Manager, Infrastructure, and was responsible for implementing over \$10 billion in capital programs for water, sewer and power, including the \$4.6 billion Water System Improvement Program, the \$6.9 billion Sewer System Improvement Program, and the \$202 million SFPUC

Headquarters and Administration Building at 525 Golden Gate Avenue. His civil engineering career spanning nearly three decades includes his tenure as the City Engineer of San Francisco. At San Francisco Department of Public Works, he held functional and project management positions, including Acting General Manager, and Deputy Director of Engineering, during which he managed complex capital improvement programs that included the rebuild and seismic retrofit of City Hall, and expansions of convention, hospital, county jail, and public arts facilities. He is a licensed professional engineer, and a graduate of the University of California at Berkeley. He is the recipient of the Municipal Fiscal Advisory Committee's Public Municipal Excellence Award from the San Francisco Planning and Urban Research Association; the Public Works Leader of the Year Award from the American Public Works Association – Northern California Chapter; the Eminent Engineer Award from the National Engineering Honor Society Tau Beta Pi; and the Heroes and Hearts Award from the San Francisco General Hospital Foundation for exceptional community service. He is a member of the Construction Managers Association of America, the American Society of Civil Engineers, the National Society of Black Engineers, and the American Public Works Association. He is co-founder of the youth internship program Project Pull, which has been in continuous operation since 1995, and he has served on the Board of Directors of the Embarcadero YMCA.

Michael Carlin. Michael Carlin is the SFPUC Deputy General Manager and Chief Operating Officer (“COO”), reporting directly to the General Manager. He was appointed in 2009. As the Deputy General Manager and COO, Mr. Carlin supervises the agency's efforts in capital planning, emergency response, asset management, and other functions across the three business lines—water, power and wastewater. Prior to this position, Mr. Carlin served as the Assistant General Manager for Water where he led the effort to diversify the water supply portfolio. He continues in that role leading many of the environmental initiatives including addressing the impact of climate change on the organization. Mr. Carlin joined the SFPUC in 1996 as the Water Resources Planning Manager where he led the effort to develop comprehensive capital plans. That effort led to the establishment and execution of the Water System Improvement Program. Prior to joining the City, Mr. Carlin worked for more than a decade at the San Francisco Regional Water Board where he was the Planning Chief. Mr. Carlin holds a B.A. in Biology from San Francisco State University and an M.P.A. with an emphasis in Environmental Management from Golden Gate University. Mr. Carlin is a native San Franciscan and continues to live in the City today.

Tommy T. Moala. Tommy T. Moala is the Assistant General Manager of the Wastewater Enterprise which protects public health and safety and the environment through the collection and treatment of wastewater and stormwater. Mr. Moala oversees operations, maintenance, facility improvements and regulatory compliance for the City's three wastewater treatment plants, 993-mile long collection system and Treasure Island facilities. A former Naval Propulsion Engineer, Mr. Moala has more than 15 years' experience in managing wastewater systems. He began his 26-year career with the SFPUC as a Stationary Engineer, moving up steadily through the ranks to Senior Engineer, Chief Stationary Engineer and Operations Manager. A team recipient of the National Protection Agency O & M Award and the National Association of Clean Water Agency Award, Mr. Moala has also received then-Mayor Gavin Newsom's Public Managerial Excellence Award and the SFPUC O'Shaughnessy Award for organizing the SFPUC Emergency Response Team dispatched to Hurricane Katrina. He is a member of the Water Environment Federation, the California Water Environment Federation, the National Association of Clean Water Agencies and the American Water Works Association.

Juliet Ellis. Juliet Ellis is the Assistant General Manager for External Affairs at the SFPUC. Prior to joining the SFPUC as an Assistant General Manager, Juliet served as a Commissioner for two years. Juliet now oversees the implementation of Environmental Justice and Community Benefits policies as Assistant General Manager, along with the Policy and Government Affairs, Communications, and Sustainability Planning teams within the SFPUC. Juliet also oversees the SFPUC's national partnerships with other public utilities with the goal of scaling community benefits programs within the public sector. Before joining the SFPUC, Juliet spent nine years as the Executive Director of Urban Habitat, a regional social and environmental justice organization. She also served as the Associate Program Officer for Neighborhood and Community Development at The San Francisco Foundation. Juliet received her Masters of Science in Business Administration at San Francisco State University with an emphasis in Environmental and Urban Studies.

Barbara Hale. Barbara Hale is Assistant General Manager of the Power Enterprise. Ms. Hale oversees the Power Enterprise, including Power Retail Services, Utilities Services, Regulatory Affairs, Infrastructure Development and Power Purchasing and Scheduling. She is responsible for the development of a strategic business plan for the organization, setting out priorities, objectives, schedules and policy issues. Ms. Hale oversees all

power-related inter-governmental relations, works directly with the Commission on policy and capital matters, and provides direction and leadership to a multi-discipline staff at remote and downtown locations. Ms. Hale provides strategic advice on energy policy matters to the General Manager and manages a staff responsible for developing specific energy efficiency projects and renewable and other advanced sources of electrical generation. Ms. Hale also acts as liaison between the SFPUC and State and federal agencies responsible for energy policy, such as the California Public Utilities Commission, the California Energy Commission, the California Power Authority, the Federal Energy Regulatory Commission, and the United States Department of Energy. Ms. Hale graduated cum laude from San Francisco State University with a B.A. in Economics, receiving special recognition for high achievement with the Department Honors Award. Ms. Hale has pursued extensive graduate coursework in Applied Economics.

Kathy How. Kathy How is Assistant General Manager of Infrastructure, responsible for capital programs and projects implementation for SFPUC facilities, including the Water System Improvement Program, Sewer System Improvement Program and the Hetchy System Improvement Program. Prior to this position, Ms. How was Deputy AGM for Project Delivery, and was responsible for managing engineering design, construction management, and environmental review for all capital projects, whether in-house or consultant designed. Prior to joining the SFPUC in 2003, Ms. How was Assistant City Engineer at the Department of Public Works overseeing project management, architectural and engineering design and construction management for projects in the Seismic Safety bond programs, and Program Director for the Marina Yacht Harbor Renovations at the Recreation and Park Department. She joined the SFPUC to work on initiating program environmental review, development of program goals and objectives for the Water System Improvement Program, and implementation of projects. She is a licensed professional civil engineer in California, and holds a degree in Civil Engineering from the University of California, Berkeley.

Steven R. Ritchie. Steven Ritchie is the Assistant General Manager of the Water Enterprise, responsible for overseeing water system operations and planning from the Hetch Hetchy Project through the Regional Water System to the City Distribution Division. He is also responsible for the management of the SFPUC's lands and natural resources. Mr. Ritchie was the Manager of Planning at the SFPUC from 1995 to 1998. Prior to his current assignment, he managed the South Bay Salt Pond Restoration Project, a multi-agency effort to restore 15,100 acres of valuable habitat in South San Francisco Bay, while providing for flood risk management and public access. In addition, Mr. Ritchie has worked at management positions at the San Francisco Bay Regional Water Quality Control Board (1987-1995), the CalFed Bay-Delta Program (1998-2000), and URS consultants (2000-2004). He has a B.S. and M.S. in Civil Engineering from Stanford University.

Eric L. Sandler. Eric L. Sandler is Assistant General Manager, Business Services and Chief Financial Officer and is responsible for managing a range of internal and external service functions of the Commission including Finance, Customer Service, Information Technology, and Assurance and Internal Controls. Appointed in 2015, he has over 25 years of experience in municipal and infrastructure financing. Prior to joining the Commission, he served as Director of Finance for the East Bay Municipal Utility District, Director of Finance/Treasurer for the San Diego County Water Authority and Director of Financial Planning for the SFPUC. Before joining public service, Mr. Sandler worked in several infrastructure finance positions including renewable energy project finance and municipal investment banking. Mr. Sandler serves on boards and committees of various industry organizations including the Association of California Water Agencies and the National Association of Clean Water Agencies. He has a Bachelor's degree in Biology from Stanford University and a Master's degree in Business Administration from the University of California, Berkeley.

Employee Relations

The wages, hours and working conditions of City employees, including employees of the SFPUC, are determined by collective bargaining pursuant to State law (the Meyers-Milias-Brown Act, California Government Code Sections 3500-3511) and the Charter. Except for nurses and a few hundred unrepresented employees, the Charter requires that bargaining impasses be resolved through final and binding interest arbitration conducted by a panel of three arbitrators. The award of the arbitration panel is final and binding unless legally challenged. Strikes by City employees, including employees of the SFPUC, are prohibited by the Charter. Since 1976, no City employees have participated in a union-authorized strike. See "RISK FACTORS – Legal Action."

The City's budget for Fiscal Year 2015-16 includes 29,053 budgeted City positions. City workers are represented by 37 different labor unions. The largest unions in the City are the Service Employees International Union, Local 1021; the International Federation of Professional and Technical Engineers, Local 21; and the unions representing police, fire, deputy sheriffs and transit workers. In May 2014, the City negotiated three-year agreements (for Fiscal Years 2014-15 through 2016-17) with most of its labor unions. In general, the parties agreed to: (1) annual wage increases schedule of 3% (October 11, 2014), 3.25% (October 10, 2015), and between 2.25% and 3.25% depending on inflation (July 1, 2016); and (2) some structural reforms of the City's healthcare benefit and cost-sharing structures to rebalance required premiums between the two main health plans offered by the City. These changes to health contributions build on reforms agreed to by most unions during earlier negotiations.

The SFPUC employs approximately 2,400 of the City's workers. The Charter governs the SFPUC's employment policies and authorizes the San Francisco Civil Service Commission to establish rules and procedures to implement those policies. Of the 37 labor unions representing City workers more broadly, 14 presently represent SFPUC employees. Most SFPUC employees collectively bargain every three years.

Over the next five years, nearly half of the SFPUC workforce will be eligible for retirement. A new generation of jobs will require workers with specialized training, skills and experience, and local hiring requirements will need to be observed. See The SFPUC's Strategic Sustainability Plan includes indicators for employee training and development. The SFPUC also provides ethics training, diversity training, management training, environmental management system training, as well as fraud prevention and awareness training.

The following table summarizes the number of SFPUC and Wastewater Enterprise employees covered by collective bargaining agreements as of February 26, 2016, each of which expire on June 30, 2017.

TABLE 1
COLLECTIVE BARGAINING AGREEMENTS

Employee Bargaining Unit	SFPUC Full-Time Equivalent Employment⁽¹⁾	Wastewater Enterprise Full-Time Equivalent Employment⁽¹⁾
International Association of Machinists, Lodge 1414	47	3
Carpenters, Local 22	20	2
International Brotherhood of Electrical Workers, Local 6	127	21
Laborers, Local 261	152	35
San Francisco Association of Personnel Professionals, Local 21	38	2
Municipal Executives Association	157	11
Operating Engineers, Local 3	22	1
Plumbers, Local 38	224	34
International Federation of Professional and Technical Engineers, Local 21	925	163
Service Employees International Union, Local 1021	327	42
San Francisco City Workers United	14	5
Stationary Engineers, Local 39	317	211
Teamsters, Local 856	1	-
Teamsters, Local 853	39	15
Transport Workers Union Local 250-A, Automotive Service Workers	6	1
Unrepresented Employees	1	-
Total	2417	546

⁽¹⁾ As of February 26, 2016. Actual full-time equivalent employment totals will differ from the number of positions budgeted by the SFPUC for a variety of reasons, including certain requirements in the respective collective bargaining agreements.

Source: SFPUC.

Employee Benefit Plans

Retirement System Plan Description. The SFPUC participates in the City’s single employer defined benefit retirement plan (the “Plan”) which is administered by the San Francisco City and County Employees’ Retirement System (the “Retirement System” or “SFERS”). The Plan covers substantially all full time employees of the SFPUC along with other employees of the City. The Plan provides basic service retirement, disability, and death benefits based on specified percentages of final average salary and provides cost-of-living adjustments after retirement. The Plan also provides pension continuation benefits to qualified survivors. The Charter and City Administrative Code are the authorities that establish and amend the benefit provisions and employer obligations of the Plan.

The Retirement System is administered by a Retirement Board consisting of seven members, three appointed by the Mayor, three elected from among the members of the Retirement System, at least two of whom must be actively employed, and a member of the Board of Supervisors appointed by the President of the Board of Supervisors. To aid in the administration of the Retirement System, the Retirement Board appoints an Executive Director and an Actuary. The Executive Director serves as chief executive officer, with responsibility extending to all divisions of the Retirement System. The Actuary's responsibilities include the production of data and a summary

of plan provisions for the independent consulting actuarial firm retained by the Retirement Board to prepare an annual valuation report and other analyses as described below. The independent consulting actuarial firm is currently Cheiron, Inc., a nationally recognized firm selected by the Retirement Board pursuant to a competitive process.

In response to an application filed by the Retirement System, the Internal Revenue Service (“IRS”) issued a favorable Determination Letter for SFERS in March 2012. Issuance of a Determination Letter constitutes a finding by the IRS that operation of the defined benefit plan in accordance with the plan provisions and documents disclosed in the application qualifies the plan for federal tax exempt status. The favorable Determination Letter included IRS review of all SFERS provisions, including Proposition C. See “—Pension and Healthcare Cost Reforms— Proposition C.”

Plan Financial Reports and Funded Status. The Retirement System issues a publicly available financial report that includes financial statements and required supplementary information for the Plan. That report may be obtained by writing to the San Francisco City and County Employees’ Retirement System, 30 Van Ness Avenue, Suite 3000, San Francisco, CA 94102, or by calling (415) 487-7020.

The funded status of the Plan as of July 1, 2014 (the most recent date for which information is available) was as follows:

**TABLE 2
RETIREMENT PLAN FUNDED STATUS
(AS OF JULY 1, 2014)**

	(000s)
Actuarial Liability	\$ 21,122,600
Actuarial Value of Assets	\$ 18,012,100
Unfunded Actuarial Liability	\$ 3,110,500
Funded Status (assets/liabilities)	85.3%

Source: SFERS.

The Retirement System discloses accounting and financial reporting information under GASB Statement No. 67, first implemented by the Retirement System in Fiscal Year 2013-14. The City reports accounting and financial information about the Retirement System under GASB Statement No. 68, first implemented by the City in Fiscal Year 2014-15. The accounting statements separated financial reporting from funding and required certain additional information in the notes to the City’s financial statements. Funding requirements relating to the SFPUC are described below in “—Retirement System Funding Policy.” In general, the City’s funding of its pension obligations is not affected by the changes to its reporting requirements under GASB Statement No. 68, though such changes did result in changes to the SFPUC’s reported salaries and working capital. See “HISTORICAL OPERATING RESULTS—Summary of Historical Operating Results and Debt Service Coverage.”

Retirement System Funding Policy. Contributions to the basic Plan are made by both the SFPUC and its employees. Employee contributions are mandatory. Employee contribution rates are approved through collective bargaining and vary by union and employment category. For Fiscal Years 2013-14 and 2014-15, the SFPUC’s employee contribution rates varied from 7.5% to 13.0% as a percentage of gross covered salary. For the 2014-15 Fiscal Year, most employee groups agreed through collective bargaining that employees would contribute the full amount of the employee contribution on a pretax basis.

The SFPUC is required to contribute at an actuarially determined rate and allocates the applicable portions of such contribution to the separate enterprises, including the Wastewater Enterprise. For the prior three Fiscal

Years, the Wastewater Enterprise has paid 100% of its required contributions. The contributions by the Wastewater Enterprise required for Fiscal Years 2012-13 through 2015-16 are summarized in the following table.

**TABLE 3
WASTEWATER ENTERPRISE RETIREMENT PLAN CONTRIBUTIONS**

Fiscal Year	Actuarially Determined Rate as a Percentage of Covered Payroll	Contribution (000s)	Percent of Required Contribution
2012-13	20.70%	\$ 9,200	100%
2013-14	24.82%	11,290	100
2014-15	26.76%	12,288	100
2015-16 [†]	22.80%	10,427	100

[†] Based on Budget for Fiscal Year 2015-16.

Source: SFERS July 1, 2014 Actuarial Valuation Report (produced by Cheiron March 4, 2015); SFPUC.

The annual actuarial valuation of the Retirement System is a joint effort of the Retirement System and its independent consulting actuarial firm. The Charter prescribes certain actuarial methods and amortization periods to be used by the Retirement System in preparing the actuarial valuation. The Retirement Board adopts the economic and demographic assumptions used in the annual valuations. Demographic assumptions such as retirement, termination and disability rates are based upon periodic demographic studies performed by the consulting actuarial firm approximately every five years. Economic assumptions are reviewed each year by the Retirement Board after receiving an economic experience analysis from the consulting actuarial firm.

At the January 2015 Retirement Board meeting, the consulting actuarial firm recommended that the Retirement Board adopt the following economic assumptions for the July 1, 2014 actuarial valuation: long-term investment earnings assumption of 7.50%, long-term wage inflation assumption of 3.75% and long-term consumer price index assumption of 3.25%. After consideration of the analysis and recommendation, the Retirement Board voted to adopt these recommended assumptions. At the November 2015 Retirement Board meeting, the Retirement Board voted to continue these economic assumptions with no changes for the July 1, 2015 actuarial valuation following the recommendation of the consulting actuarial firm. The Retirement Board also voted to update demographic assumptions, including mortality, after review of a new demographic assumptions study by the consulting actuarial firm.

Upon receipt of the consulting actuarial firm's valuation report, Retirement System staff provides a recommendation to the Retirement Board for their acceptance of the consulting actuary's valuation report. In connection with such acceptance, the Retirement Board acts to set the annual employer contribution rates required by the Retirement System as determined by the consulting actuarial firm and approved by the Retirement Board. This process is mandated by the Charter.

Pursuant to the Charter, the consulting actuarial firm and the Retirement Board set the actuarially required employer contribution rate using three related calculations:

First, the normal cost is established for the Retirement System. The normal cost of the Retirement System represents the portion of the actuarial present value of benefits that SFERS will be expected to fund that is attributable to a current year's employment. The Retirement System uses the entry age normal cost method, which is an actuarial method of calculating the anticipated cost of pension liabilities, designed to fund promised benefits over the working careers of the Retirement System members.

Second, the contribution calculation takes account of the amortization of a portion of the amount by which the actuarial accrued liability of the Retirement System exceeds the actuarial value of Retirement System assets, such amount being known as an "unfunded actuarial accrued liability" or "UAAL." The

UAAL can be thought of as a snapshot of the funding of benefits as of the valuation date. There are a number of assumptions and calculation methods that bear on each side of this asset-liability comparison. On the asset side, the actuarial value of Retirement System assets is calculated using a five-year smoothing technique, so that gains or losses in asset value are recognized over that longer period rather than in the immediate time period such gain or loss is identified. On the liability side, assumptions must be made regarding future costs of pension benefits in addition to demographic assumptions regarding the Retirement System members including rates of disability, retirement, and death. When the actual experience of the Retirement System differs from the expected experience, the impacts on UAAL are called actuarial gains or losses. Under the Retirement Board's updated Actuarial Funding Methods Policy any such gain or loss is amortized over a closed 20-year period. Similarly, if the estimated liabilities change due to an update in any of the assumptions, the impact on UAAL is also amortized over a closed 20-year period. Prior to the updated Policy which became effective with the July 1, 2014 actuarial valuation, the amortization period for gains, losses and assumption changes was 15 years at the valuation date.

Third, supplemental costs associated with the various SFERS benefit plans are amortized. Supplemental costs are additional costs resulting from the past service component of SFERS benefit increases. In other words, when the Charter is amended to increase benefits to some or all beneficiaries of the Retirement System, the Retirement System's liability is correspondingly increased in proportion to the amount of the new benefit associated with service time already accrued by the then-current beneficiaries. These supplemental costs are required to be amortized over no more than 20 years according to the Charter. The Retirement Board has adopted a 15-year closed period for changes to active member benefits and a 5-year closed period for changes to inactive or retired members effective for all changes on or after July 1, 2014. The prior Board Retirement Policy specified closed 20-year periods for all benefit changes.

The consulting actuarial firm combines the three calculations described above to arrive at a total contribution requirement for funding the Retirement System in the next Fiscal Year. This total contribution amount is satisfied from a combination of employer and employee contributions. Employee contribution rates are mandated by the Charter. Sources of payment of employee contributions (*i.e.* in the case of the SFPUC, the SFPUC, or its employee) are the subject of collective bargaining agreements with each bargaining unit. As described above, most of the SFPUC's employee groups have agreed through collective bargaining that employees would contribute the full amount of the employee contribution on a pretax basis. The employer contribution rate is established by Retirement Board action each year and is expressed as a percentage of salary applied to all wages covered under the Retirement System.

The assumptions and calculations described above were made as of their respective dates and are subject to change thereafter, including, for example, as a result of a subsequent Retirement Board action to revise the actuarial assumptions applied in the calculations. There is a risk that actual results will differ significantly from such assumptions and calculations.

Projected Future Pension Contributions and Costs. The new funding policies described above, favorable investment returns and the recognition of deferred investment gains following the large investment losses in Fiscal Year 2008-09, which is now fully reflected in the actuarial value of assets after a five-year smoothing period, resulted in a 3.96% decrease in the employer contribution rate for Fiscal Year 2015-16, from 26.76% to 22.80%. The City projects that SFERS employer contribution rates will increase beginning in Fiscal Year 2016-17, however.

Health Care Benefits. Health care benefits of the SFPUC employees, retired employees and surviving spouses are financed by beneficiaries and by the City through the City and County of San Francisco Health Service System (the "Health Service System"). The Wastewater Enterprise's annual contribution for both active and retired employees amounted to approximately \$10.091 million and \$9.921 million in Fiscal Years 2013-14 and 2014-15, respectively.

Included in these amounts are \$2.678 million and \$2.771 million for Fiscal Years 2013-14 and 2014-15, respectively, to provide post-retirement benefits for the Wastewater Enterprise's retired employees, on a pay-as-you-go basis.

The City has determined a Citywide Annual Required Contribution (“ARC”), interest on net other post-employment benefits other than pensions (“OPEB”) obligation, ARC adjustment, and OPEB cost based upon an actuarial valuation performed in accordance with Governmental Accounting Standards Board Statement (“GASB”) No. 45, by the City’s actuaries. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost of each year and any unfunded actuarial liabilities (or funding excess) amortized over 30 years. The City’s allocation of the OPEB related costs to the SFPUC for the year ended June 30, 2014 based upon its percentage of Citywide payroll costs is presented below.

The following table shows the components of the City’s annual OPEB allocations for the Wastewater Enterprise for the Fiscal Years ending June 30, 2014 and 2015, for the amount contributed to the plan, and changes in the City’s net OPEB obligation:

TABLE 4
ANNUAL OPEB OBLIGATION FOR THE WASTEWATER ENTERPRISE
FOR FISCAL YEARS ENDING JUNE 30, 2014 AND JUNE 30, 2015
(IN THOUSANDS)

	2014	2015
Annual required contribution	\$ 7,020	\$ 7,323
Interest on net OPEB obligation	1,469	1,666
Adjustment to ARC	(1,224)	(1,390)
Annual OPEB cost (expense)	7,265	7,599
Contribution made	(2,678)	(2,771)
Increase in net OPEB obligation	4,587	4,828
Net OPEB obligation – beginning of year	32,565	37,152
Net OPEB obligation – end of year	37,152	41,980

Source: SFPUC, Financial Services.

The City issues a publicly available financial report on a City-wide level that includes the complete note disclosures and required supplementary information related to the City’s post-retirement health care obligations. The report may be obtained by writing to the City and County of San Francisco, Office of the Controller, 1 Dr. Carlton B. Goodlett Place, Room 316, San Francisco, CA 94102, or by calling (415) 554-7500.

The City’s OPEB Unfunded Actuarial Accrued Liability (“UAAL”) was \$3.9 billion for Fiscal Year 2014-15. The amount allocable to the Wastewater Enterprise, as of July 1, 2015, was \$83.6 million.

Pension and Health Care Costs Reforms

City voters have implemented City employee pension and health care cost reforms in recent years to help mitigate future cost increases. These include the following propositions:

Proposition B. Proposition B was a Charter amendment approved by voters in June 2008 that increased the years of service required to qualify for employer-funded retiree health benefits for City employees who retire under SFERS and were hired on or after January 10, 2009. Employees hired before January 10, 2009, became eligible to participate in the retirement health care system after 5 years of service and the employer paid 100% of the contribution. Proposition B also stated that a separate Retiree Health Care Trust Fund would be created to pay for the City’s future costs related to retiree health care. This trust fund will be funded by employer and employee contributions for employees hired on or after January 10, 2009. These new employees would contribute up to 2% of their pre-tax pay and employers would contribute 1%.

Proposition C. Proposition C was a Charter amendment approved by voters in November 2011 that changed the way the City and current and future employees share in funding SFERS pension and health benefits.

With regard to pension benefits, the base employee contribution rate remains at 7.5% for most employees when the City contribution rate is between 11% and 12% of City payroll. Employees making at least \$50,000 will pay an additional amount up to 6% of compensation when the City contribution rate is over 12% of City payroll. When the City contribution rate falls below 11%, employee contributions will be decreased proportionately.

Proposition C creates new retirement plans for employees hired on or after January 7, 2012 that: (1) for miscellaneous employees, increased the minimum retirement age to 53 with 20 years of service or 65 with 10 years; (2) for safety employees, kept the minimum retirement age at 50 with five years of service, but increased the age for maximum benefits to 58; (3) for all employees, limited covered compensation, calculated final compensation from a three-year average, and changed the multipliers used to calculate pension benefits, and (4) for miscellaneous employees, raised the age of eligibility to receive vesting allowance to 53 and reduced by half the City's contribution to vesting allowances.

With regard to health benefits, elected officials and employees hired on or before January 9, 2009, contribute up to 1% of compensation toward their retiree health care, with matching contribution by the City. For employees or elected officials who left the City workforce before June 30, 2001, and retire after January 6, 2012, Proposition C requires that the City contributions toward retiree health benefits remain at the same levels they were when the employee left the City workforce.

Proposition C also limits cost-of-living adjustments for SFERS retirees; however, in 2015, the Court of Appeals held in a suit against the City brought by a retiree organization, *Protect Our Benefits v. San Francisco* (1st DCA Case No. A140095), that certain changes to payment of supplemental cost of living allowances imposed by Proposition C could not be applied to current City employees and those who retired after November 1996 when the supplemental cost of living allowance provisions were originally adopted, but could be applied to SFERS members who retired before November 1996. On June 17, 2015, the California Supreme Court denied review of the Court of Appeals decision. It is estimated that the actuarial liabilities of the Plan will increase by approximately \$388 million, or 1.8%, for back payment of supplemental cost of living allowances payable for 2013 and 2014.

THE WASTEWATER ENTERPRISE

Background and History

Initial development of the City's combined system dates back to the second half of the nineteenth century. In accordance with common engineering practice of that period, the combined system collected both sewage and stormwater runoff and transported them to a large number of discharge points on the shoreline of San Francisco Bay. Now all municipal wastewater treatment providers nationally are required to provide some level of urban stormwater treatment.

Today the Wastewater Enterprise provides sewage and stormwater collection, treatment and disposal services through the operation of combined sewage and stormwater system. The Wastewater Enterprise provides such sanitary wastewater and stormwater services across eight distinct urban watersheds, with one all-weather wastewater treatment plant and one wet-weather treatment plant serving the North Shore, Channel, Islais, Sunnydale, and Yosemite urban watersheds with effluent outfalls to the San Francisco Bay (the "Bayside Watersheds"), and a separate all-weather wastewater treatment plant serving the Richmond, Sunset, and Lake Merced urban watersheds with an effluent outfall to the Pacific Ocean (the "Westside Watersheds").

Of an estimated total combined wastewater flow of 40 billion gallons per year throughout the entire system, aggregating both watersheds, approximately 34 billion gallons per year receive full secondary treatment, 4.5 billion gallons per year receive primary or decant treatment and are discharged to deep-water outfalls, and 1.5 billion gallons per year receive the equivalent to wet weather primary treatment and are discharged through nearshore outfalls.

In separate sewer areas of the city, new multi-phase revitalization projects such as Mission Bay, Treasure Island and the Hunter's Point Naval Shipyard are implementing green infrastructure or low-impact design elements

that allow for the treatment of stormwater by natural techniques such as vegetated swales, infiltration and other approved methods prior to discharge into the receiving waters.

The Wastewater Enterprise was operated by the City’s Department of Public Works until July 1996, when the Mayor transferred its operation to the SFPUC.

Service Area

The service area of the Wastewater Enterprise encompasses approximately 29,773 acres and includes residents of the City and of northern San Mateo County through arrangements with three municipal sewer service providers: North San Mateo County Sanitation District, the Bayshore Sanitary District and the City of Brisbane (collectively, the “Municipal Customers”). The SFPUC also currently provides waste treatment service on Treasure Island pursuant to contract, and expects eventually to expand its service area to include Treasure Island. See “—Wastewater Treatment—Contract Services,” “WASTEWATER ENTERPRISE CAPITAL PROGRAM—Treasure Island” and “FINANCING PLAN FOR WASTEWATER ENTERPRISE CAPITAL PROGRAM.”

The Wastewater Enterprise serves residential, commercial and industrial users, making up a daytime “population equivalent” of approximately 1,069,731 in 2014. United States Census estimates of the total daytime and nighttime populations of the City from 2010 to 2014 are reflected in the table below.

TABLE 5
CITY OF SAN FRANCISCO POPULATION

	2010	2011	2012	2013	2014
Daytime ⁽¹⁾	950,728	990,449	992,493	1,021,780	1,069,731
Nighttime	805,253	812,826	825,863	841,138	852,469

⁽¹⁾ Includes the estimated number of people who work, but do not live, within the City.

Source: United States Census.

Customer Base

As of January 2016, the SFPUC has 163,742 active retail wastewater accounts. Of these, over 90% are residential accounts, with the remainder being commercial, industrial, or municipal. Major non-residential customer categories include retail, offices, restaurants, and services, which together account for 50% of non-residential customers. The total number of customer accounts has changed very little over the previous five years, increasing by a total of less than 1% since January 2011. Although the City’s population is increasing, the SFPUC anticipates similarly modest growth in the total number of customer accounts over the next several years, as the majority of new customer accounts opened in the City are for urban infill construction replacing previously-existing buildings and the SFPUC’s multifamily residential accounts comprise multiple dwelling units. In addition to its retail customers, the SFPUC provides wholesale sewage treatment services to three customers located in northern San Mateo County, and operates wastewater treatment facilities on Treasure Island pursuant to a "caretaker" contractual agreement and certain lease agreements between the Treasure Island Development Authority and the U.S. Navy. See “—Wastewater Treatment—Contract Services.”

The following table sets forth a five-year history of the number of customer accounts served by the Wastewater Enterprise, grouped by user type.

TABLE 6
SUMMARY OF ACTIVE SEWER ACCOUNTS BY USER TYPE
FOR FISCAL YEARS ENDED JUNE 30

User Type	2011	2012	2013	2014	2015
Multi-Family Residential ⁽¹⁾	36,269	36,275	36,301	36,248	36,313
Single-Family Residential	110,608	110,875	111,007	111,125	111,173
<i>Subtotal Residential</i>	146,877	147,150	147,308	147,373	147,486
Commercial ⁽¹⁾	15,439	15,439	15,400	15,430	15,460
Municipal Customers	716	719	729	725	731
Suburban ⁽²⁾	9	8	8	9	9
Total	163,041	163,316	163,445	163,537	163,686

⁽¹⁾ Includes Presidio Trust Accounts.

⁽²⁾ In addition to suburban customers, service is provided to North San Mateo County Sanitation District, Bayshore Sanitary District and the City of Brisbane.

Source: SFPUC Customer Service.

Separate rate schedules apply to single-family residential, multi-family residential, and non-residential customers. See “FINANCIAL OPERATIONS—Wastewater Enterprise Rates and Charges.”

Combined Sewage and Stormwater System

History and Background Regarding Combined System. On average, over three quarters of the City’s annual rainfall occurs between November and March. Depending on the duration, intensity and storm pattern, combined flows of sewage and stormwater can exceed the collection and treatment system hydraulic capacity, resulting in combined sewer discharges.

In order to reduce the number and volume of combined sewer overflows during wet-weather events, the City built a series of large underground transport/storage structures (box sewers and tunnels) around the perimeter of the City to intercept, temporarily store, and transport the mixture of storm runoff and sewage to new or upgraded treatment facilities. The primary purpose of this system of transport/storage structures is to reduce the incidence and volume and provide treatment of discharges in wet weather. Prior to their construction, untreated combined sewer overflows occurred throughout the City whenever rainfall occurred at a rate of 0.02 inches per hour. By providing both storage volume and detention time, the transport/storage structures allow for treatment of the stored combined sewage and stormwater flows at the treatment plants after storms. In addition, the retention of the combined flows in the transport/storage structures allows solids to settle, and weir and baffle structures retain floatable materials, providing the equivalent of wet-weather primary treatment.

With these improvements, the facilities of the Wastewater Enterprise are designed to minimize the number of wet-weather discharge events. In all methods of discharge, the combined wastewater receives the level of treatment prescribed by federal and state law.

Sewer Lines. The Wastewater Enterprise’s collection and transport system currently has a storage capacity of approximately 200 million gallons, and includes approximately 993 miles of sewer lines of which 781 miles is made up of collecting sewers of 36 inches or less in diameter.

TABLE 7
SEWER SYSTEM BY PIPE LENGTH IN MILES AND AGE

Year Built	Gravity Pipe <36" Diameter	All Other Pipe ⁽¹⁾	Total Pipe	Percent of Total
1860 – 1900	85	45	130	13%
1901 – 1940	381	66	447	45
1941 – 1980	181	54	235	24
1981 – present	114	47	161	16
Unknown	20	0	20	2
Total	781	212	993	100%

⁽¹⁾ Includes gravity pipe greater than 36" in diameter, tunnels, force mains, transport/storage, effluent outfall and overflow discharge.

Source: SFPUC, Wastewater Enterprise

Transport/Storage Structures. In addition to sewer lines, the Wastewater Enterprise maintains 24 miles of underground transport/storage structures which are located around the perimeter of the city to intercept, temporarily store, and transport the mix of stormwater runoff and sewage to treatment plants. These structures, which operate in both dry and wet weather, were built between 1979 and 1997. The largest of these structures, the Westside Transport structure, is approximately 2 miles long, 45 feet deep and 25 feet wide. The transport/storage structures were designed with sufficient storage to reduce combined sewer discharges and protect beneficial uses of receiving waters for the San Francisco Bay and the Pacific Ocean. The transport/storage and collection system provides approximately 200 million gallons worth of storage (approximately three days of dry weather flow).

The performance of the transport/storage structures and treatment facilities complies with the requirements of the National Combined Sewer Overflow Control Policy, as implemented by discharge permits issued on behalf of the United States Environmental Protection Agency (the "EPA") by the San Francisco Bay Regional Water Quality Control Board (the "Regional Water Quality Control Board"). See "REGULATORY MATTERS." By providing both storage volume and detention time, the transport/storage structures allow for delayed treatment of combined sewage and stormwater flows at the treatment plants at the conclusion of a wet weather event. They also provide a "buffer" for dry weather flows in the event of an unplanned outage.

Pump Stations. The Wastewater Enterprise has 27 pump stations, which include six major all-weather pump stations, two major wet-weather pump stations, 18 minor pump stations, and one major effluent pump station for bayside effluent discharge.

Outfalls and Nearshore Discharge Structures. The Wastewater Enterprise currently has three offshore outfalls that discharge to deep waters — Southeast Bay Outfall, Northpoint Outfall, and Southwest Ocean Outfall. In addition to these outfalls, 36 combined sewer discharge structures, or near-shore outfalls, serve as relief points of the combined sewer system. These structures operate infrequently, and only during large storm events. Discharges through these permitted sites receive the equivalent of wet weather primary treatment.

Urban Watershed Management. The SFPUC is working to improve the system's stormwater drainage performance and its sewage treatment efficiency. The SFPUC Stormwater Program complies with regulatory requirements and is designed to maximize sewer system performance, engage community members in its work, improve watershed function, enhance the environmental quality of the City's neighborhoods, and protect the water quality of the San Francisco Bay and Pacific Ocean. To achieve these goals, the SFPUC has adopted regulations that require new and redevelopment projects in San Francisco to install and operate green technologies for managing stormwater runoff.

Useful Life. The average useful life of typical collecting sewers (i.e., gravity pipes 36 inches or less in diameter) is approximately 110 years. The average useful life for other sewer pipes/infrastructure (such as tunnels, force mains, transport/storage boxes) is 50 years, while large outfalls have a typical useful life ranging from 50 to 100 years. However, many conditions, including pipe material and soil conditions, affect actual pipe lifespan. The approximate ages of the various components of the Wastewater Enterprise's sewer lines are set forth in Table 7 above.

The historical rate of replacement for the Wastewater Enterprise's sewer pipes (less than 36-inch diameter) has been at a 200-year replacement cycle. Aging sewers, if left unaddressed, would result in increased leakage, sinkholes, sewer line failures, reduced system reliability and possibly public health and safety risks. The SFPUC has developed its capital program, including SSIP and the Renewal & Replacement program in part to address the aging infrastructure, with the objective of ultimately returning to a 110-year replacement cycle, and in part to upgrade other critical infrastructure. Replacement of specific sewer sections will be prioritized under an asset management approach which considers the current condition of the section in question and applicable risks of failure. The sewers will be inspected through closed-circuit television and the likelihood of failure will be calculated based on a condition scoring algorithm taking into account the severity and quantity of defects identified in each inspection. The consequence of failure is calculated based on level of service, including protection of the public, preservation and improvement of quality of life, cost efficiency, customer service, and environmental responsibility. To implement this Renewal and Replacement program, the SFPUC has divided the city into 182 individual grids for the purpose of scheduling inspections for all gravity sewer mains on a 5-year cycle. These grids are prioritized by predicted total risk, using age of sewer as the main factor. The goal is to inspect the sewers predicted to be in the worst condition and in highly sensitive locations first. As the inspections proceed, each surveyed sewer receives a risk score and sewers identified for replacement are scheduled based on risk scores, proximity, and utility coordination. See "WASTEWATER ENTERPRISE CAPITAL PROGRAM" and "SEWER SYSTEM IMPROVEMENT PROGRAM."

Wastewater Treatment

Wastewater Treatment Plants. The Wastewater Enterprise operates three major wastewater treatment facilities (in addition to the transport/storage structures that provide the equivalent of wet weather primary treatment), two serving the Bayside Watersheds and one serving the Westside Watersheds:

- Southeast Water Pollution Control Plant (the "Southeast Plant"), which treats dry and wet weather flows collected from the Bayside Watersheds (18,597 acres, or 63% of the total city service area) as well as the Municipal Customers;
- North Point Wet-Weather Facility (the "North Point Facility"), which treats a portion of wet-weather flows collected from the north Bayside Watersheds; and
- Oceanside Water Pollution Control Plant (the "Oceanside Plant"), which treats dry and wet weather flows collected from the Westside Watersheds (11,176 acres, or 37% of the total city service area) and minor flows from northern San Mateo County.

The Oceanside Plant and related collection facilities in the Westside Watersheds are not interconnected with the Southeast Water Pollution Control Plant or the North Point Facility and the collection facilities in the Bayside Watersheds.

Southeast Water Pollution Control Plant. The Southeast Plant is an all-weather secondary wastewater treatment plant serving the sewage and stormwater treatment needs for nearly two-thirds of the City in the Bayside Watersheds, which consists of 18,587 acres including the Marina, Downtown, South of Market Area, Mission, Hunters Point, and Visitacion Valley neighborhoods, plus 1.65 million gallons per day ("mgd") of dry weather flow from North San Mateo City Municipal District, Bayshore Sanitary District and the City of Brisbane. Land uses in the Bayside Watersheds are a mixture of residential, commercial, light industrial and heavy industrial. The Southeast Plant, as the only Bayside dry-weather facility, is a critical component of the system that must meet high availability requirements. The Bayside Watersheds wastewater flow is collected by the combined sewer system and

conveyed to the Southeast Plant via gravity sewers, tunnels, transport/storage structures, pump stations and force mains.

The Southeast Plant provides preliminary, primary and secondary treatment using a high-purity-oxygen activated sludge process prior to effluent disinfection. Sludge treatment consists of gravity-belt thickening, anaerobic digestion, chemical conditioning and dewatering. Plant effluent is discharged during dry weather into the San Francisco Bay through a deep water outfall in the vicinity of Pier 80. During wet weather, treated effluent is discharged through the Pier 80 outfall and through an additional outfall at the shoreline of Islais Creek.

The Southeast Plant was planned and designed in the 1940s and commenced operations in 1951 as a primary treatment facility. In order to meet the mandates of the federal Clean Water Act, the Southeast Plant was expanded in the early 1980s to provide secondary treatment of all Bayside Watersheds dry-weather flows with a daily average design capacity of approximately 85 mgd and peak-hour design flow of 142 mgd. In 1996, the plant's wet weather capacity was increased to 250 mgd, with 150 mgd receiving secondary treatment prior to disinfection and discharge. During wet weather, additional wet-weather facilities are operated at the Southeast Plant to provide primary treatment and disinfection to the remaining 100 mgd of combined wastewater flow.

The Southeast Plant operates every day of the year in both wet weather and dry weather conditions. Many of its critical systems have operated past their expected useful life and replacement facilities are needed to ensure reliability requirements are met, including seismic upgrades. During the last two years, a full condition assessment was conducted of the Southeast Plant and the highest priority needs were identified for both the liquid treatment and solids treatment facilities. The assessment took into account current maintenance records, remaining life, and compliance with levels of Service. Projects have been identified for all of the major treatment processes, and for various support, monitoring and control systems. Maintenance and repair projects, including repairs to digester roofs and existing biosolids treatment and storage equipment, have been undertaken to bolster some of the facilities considered to be the most vulnerable so that they function until the new facilities are completed. See "SEWER SYSTEM IMPROVEMENT PROGRAM." Because the Southeast Plant is not interconnected with the other treatment plants, it cannot be shut down during construction of such projects as there would be no substitute wastewater treatment option. Instead, the Southeast Plant will remain in service during construction. See "RISK FACTORS—Risks Related to Wastewater Enterprise Facilities and Operation—Limited Redundancy."

North Point Wet-Weather Facility. The North Point Facility is a wet-weather primary wastewater treatment plant serving the northeast quadrant of the Bayside Watersheds, an area comprising predominantly commercial and residential land uses. The North Point Facility was originally constructed in 1951 as an all-weather primary treatment facility, but did not incorporate digesters and so sludge was pumped to the digesters at the newly constructed Southeast Plant for treatment. In response to the mandates of the federal Clean Water Act, the North Point Facility was converted into a strictly wet-weather treatment plant in 1983, providing up to 150 mgd of primary treatment.

The North Point Facility provides preliminary, primary and disinfection treatment. Effluent from the North Point Facility is discharged into the San Francisco Bay through a deep water outfall system at Piers 33 and 35. At the conclusion of each wet-weather event, grit and solids are flushed out of the sedimentation tanks and directed to the Channel Pump Station, which pumps them to the Southeast Plant for treatment.

Oceanside Water Pollution Control Plant. Constructed in 1993, the Oceanside Plant is an all-weather secondary wastewater treatment plant that provides the wastewater treatment and stormwater treatment needs for San Francisco's Westside Watersheds and San Mateo County flows that drain to this basin. Land uses in the Westside Watersheds are primarily residential.

The Oceanside Plant's dry weather capacity is up to 43 mgd of secondary treatment. The Oceanside Plant's wet-weather capacity is up to 65 mgd of primary and 43 mgd of secondary treatment using the high-purity-oxygen activated sludge process. Sludge treatment consists of gravity belt thickening, anaerobic digestion, chemical conditioning and dewatering. The Oceanside Plant began operations in September 1993 and complies with all dry- and wet-weather discharge requirements. Up to 195 mgd of plant effluent and decanted wet weather flow is discharged approximately 4 miles offshore into the Pacific Ocean through a deep ocean outfall.

Emergency Operations. The Wastewater Enterprise maintains up-to-date contingency plans in the event of an unplanned outage or failure of a treatment facility, process unit, pump station, sewer pipeline or other infrastructure element. The wastewater collection and treatment system is designed with some redundancy and flexibility in order to facilitate responses to emergency events, though the Westside Watershed and Oceanside Watershed are not interconnected. The collection system is equipped with pump stations and isolation valves so that flows can be redirected to help mitigate impacts in the event of a failure.

If an unplanned shutdown of critical treatment facilities were to occur, the transport/storage structures and collection system pipes provide approximately 200 million gallons of storage (providing up to several days of storage in some portions of the system, depending on the inflow). The wastewater treatment facilities and major pump stations are also built with some redundancy, and in some instances may continue operation with select equipment outages. Critical infrastructure elements with higher failure risk or for which adequate redundancy is not available have been identified as projects in the SSIP to increase system flexibility and the ability to respond to unplanned events. See “RISK FACTORS—Risks Related to Wastewater Enterprise Facilities and Operations.”

Biosolids Management. The Southeast Plant and the Oceanside Plant produce approximately 75,000 wet tons per year of sewage sludge or biosolids, which are highly treated and anaerobically digested. During wet-weather months, biosolids are trucked to the Potrero Hills Landfill in Solano County and the Altamont and Vasco Road Landfills in Alameda County, where biosolids are used as Alternative Daily Cover. During dry-weather months, biosolids are trucked to various ranches in Solano and Sonoma Counties and applied directly as a soil amendment for farming or to enhance pasture productivity in accordance with federal and local county regulations. Throughout the year, a portion of the SFPUC’s biosolids are sent to a ranch in Sacramento County for storage and/or land application in accordance with federal and local county regulations. Additionally, a small portion (about 5%) of the Southeast Plant biosolids are trucked to a Merced County composting site and are processed into a Class A biosolids compost.

The Wastewater Enterprise coordinates the application, testing and sampling procedures required by the applicable regulatory agencies. Because current beneficial use options may not offer a long-term solution (due to more stringent regulations and encroaching suburban development in currently agricultural use areas), the SFPUC is exploring other means of beneficially using biosolids and upgrading the level of treatment. The Oceanside Plant’s digesters have been retrofitted for a conversion to a Temperature Phased Anaerobic Digestion (“TPAD”) process, which will enable the Oceanside Plant to produce Class A biosolids. The SFPUC anticipates that TPAD processing will commence at the Oceanside Plant in by 2018. The SFPUC also plans to implement technology at the Southeast Plant to produce Class A biosolids as part of an SSIP project.

See “SEWER SYSTEM IMPROVEMENT PROGRAM – SSIP Projects and Scope” and “REGULATORY MATTERS” below.

Contract Services. The Wastewater Enterprise also provides waste treatment service on Treasure Island, by agreement with the Treasure Island Development Authority (“TIDA”), a non-profit public benefit agency vested with the rights to administer municipal services to Treasure Island and Yerba Buena Island during interim reuse of the property. Such waste treatment service is provided at a wastewater treatment plant currently owned by the U.S. Navy, subject to agreements between TIDA and the U.S. Navy for the conveyance of property on Treasure Island to TIDA. The wastewater system serving Treasure Island and Yerba Buena Island, located in San Francisco Bay between San Francisco and Oakland, are served by a wastewater system that currently relies on pumping to convey sewage to a secondary facility for treatment and discharge. The treatment plant is designed to treat an average of 2.0 mgd, with a permitted capacity of up to 4.4 mgd. The wastewater collection system consists of 10 miles of sewers and 29 wastewater pump stations. In addition, a stormwater collection system includes 6 stormwater pump stations and a number of shallow water outfalls.

In connection with ongoing redevelopment activities on Treasure Island, the SFPUC anticipates that the Treasure Island facilities, including collection and other facilities being built by the developer as part of the project, will eventually be transferred to the SFPUC and be integrated into the Wastewater Enterprise’s overall system assets. Following such transfer, the SFPUC would provide sewer discharge service and impose rates and charges directly on customers on Treasure Island, and payments the SFPUC receives from such customers would constitute Revenues as and to the extent provided under the Indenture. The SFPUC would also be responsible for operation

and maintenance, and such costs would constitute Operation and Maintenance Costs of the Enterprise as and to the extent provided under the Indenture. Finally, the SFPUC would be responsible for the future repair and replacement of all facilities transferred to it, including collection and treatment facilities. The SFPUC expects that it will need to replace the existing treatment plant on Treasure Island, and has included preliminary projected costs of such project in its Ten-Year Capital Plan. See “—System Capacity and Projected Needs—Projected Demand,” “WASTEWATER ENTERPRISE CAPITAL PROGRAM—Treasure Island” and “FINANCING PLAN FOR WASTEWATER ENTERPRISE CAPITAL PROGRAM.”

System Capacity

When the three treatment facilities and other elements of the collection system are fully operational, the Wastewater Enterprise can provide up to 575 mgd of combined wastewater and stormwater treatment, including 193 mgd of secondary treatment, 272 mgd of primary treatment and 110 mgd of equivalent-to-primary treatment provided by the transport/storage structures located around the perimeter of the City.

TABLE 8
TREATMENT PLANT MAXIMUM CAPACITY
(MILLION GALLONS PER DAY)

Plant	Dry Weather	Peak Wet Weather
Southeast	105	250
Oceanside	43	65
North Point	N/A	150
Total	128	465

Source: SFPUC, Wastewater Enterprise

The three treatment plants discharge up to 365 mgd through deep-water outfalls. Another 100 mgd of secondary treated effluent with disinfection can be discharged through a shallow water outfall to Islais Creek during peak wet-weather events. The combined sewer system is designed to handle wet weather events and its permits explicitly allows for them, including discharge from the system when a storm exceeds the capacity of the system.

Current System Demands

Wastewater Enterprise facilities collected, treated and discharged an average of approximately 70 mgd of sanitary wastewater during dry-weather periods between 2011 and 2015. Both Bayside and Oceanside have been experiencing declining dry weather flows over the last five years, primarily due to water use conservation efforts.

TABLE 9

**AVERAGE DRY WEATHER TREATMENT
IN FISCAL YEARS ENDED JUNE 30
(MILLION GALLONS PER DAY)**

Plant	2011	2012	2013	2014	2015
Southeast	57.8	56.6	57.4	57.8	51.9
Oceanside	14.4	15.3	13.8	12.8	12.2
Total	72.2	71.9	71.2	70.6	64.1

Source: SFPUC, Wastewater Enterprise

Projected Future Demand

Results of the SFPUC’s water demand forecasts predict that the SFPUC’s in-City retail water demand will increase only slightly from 2010 through 2035, even though household population in the City is projected to increase by nearly 12% during the same period. See “—Service Area” and “—Customer Base.” This growth differential is attributable to decreases in average per capita water usage due to conservation, including significant use of low-flow plumbing fixtures. For wastewater production, this translates to relatively flat growth of influent flow to the treatment plants, but more solids and biochemical oxygen demand loading.

Results of the SFPUC’s water demand forecasts show that the SFPUC’s in-City retail water demand will increase only slightly from 2010 through 2035, even though household population in the City is expected to increase by nearly 12% for the same period. This is attributable to a decrease in average per capita water usage due to conservation, including the significant use of low-flow plumbing fixtures. For wastewater production, this translates to relatively flat growth of influent flow to the treatment plants, but more solids and biochemical oxygen demand loading.

The Wastewater Enterprise’s existing treatment plants have sufficient excess capacity to address the currently anticipated increase in demand, therefore no significant expansion is expected to be required in order to meet the needs of the City based upon these population growth projections alone. However, the SFPUC expects to provide a new treatment plant at Treasure Island with additional capacity and associated infrastructure in order to meet the needs at full build-out of the proposed conversion of the former Treasure Island Naval Station to residential and commercial uses, though agreements for the provision and construction of the treatment plant have not yet been finalized.

See “—Contract Services.”

Because the SFPUC maintains a combined sewer system, there may be other factors in the future, including environmental changes and regulatory developments, that could require expanded collection or treatment capacity.

WASTEWATER ENTERPRISE CAPITAL PROGRAM

Capital and Financial Planning Process

The SFPUC’s long-term capital and financial planning is performed on an annual rolling ten-year forward looking basis. The SFPUC prepares a Ten-Year Capital Plan for each of its enterprises, as required by the Charter of the City and County of San Francisco. The Ten-Year Capital Plan serves as the basis for the development of the annual Ten-Year Financial Plan. Proposed long-term capital programs, projects and investments, and related costs are included in the Ten-Year Financial Plan. Consistent with the Charter, updates to the Ten-Year Capital and Financial Plans are annually reviewed and adopted by the SFPUC Commission each February. The Ten-Year Financial Plan provides estimated rate impacts of projected capital and operating spending and assures compliance with debt service coverage and fund balance reserve policy requirements.

The Ten-Year Capital Plan is not a budget and is not “appropriated” like a budget. The Annual Capital Programs can be revised during the development of the budget and final projects, costs and totals for the Capital Programs can change. Consequently, even though the annual Capital Programs are based on the Ten-Year Capital Plan, they may occasionally differ from it.

The Wastewater Enterprise Ten-Year Capital Plan for Fiscal Years 2016-17 to 2025-26, adopted by the SFPUC Commission in February 2016, totals approximately \$5.5 billion, including projected SSIP costs for that period. See “FINANCING PLAN FOR WASTEWATER ENTERPRISE CAPITAL PROGRAM.” The Ten-Year Capital Plan includes projects in four categories: (i) the Sewer System Improvement Program; (ii) Renewal and Replacement; (iii) Treasure Island; and (iv) Wastewater Facilities and Infrastructure.

Sewer System Improvement Program

The SFPUC has embarked on a comprehensive \$6.9 billion Sewer System Improvement Program (“SSIP”) to be implemented over approximately the next twenty (20) years. The SSIP is a series of major capital improvement projects that are intended to bring the City’s wastewater and stormwater collection system into a state of good repair, and meet levels of service goals endorsed by the Commission in 2012.

The SSIP capital projects address specific challenges and deficiencies facing the Wastewater Enterprise, maximize system reliability and flexibility, improve operational and seismic reliability, and ensure present and future regulatory compliance. The SSIP project development will also consider environmental benefits, sustainability, and community benefits in addressing long-term wastewater needs. However, the SFPUC is not subject to any consent decree requiring specific improvements. The implementation of the SSIP projects is being phased over a twenty (20) year period in an effort to maintain ratepayer affordability and minimize impacts throughout the City.

Information on the SSIP may be found in “SEWER SYSTEM IMPROVEMENT PROGRAM”.

Renewal and Replacement

The Wastewater Enterprise undertakes renewal and replacement projects to improve performance or extend the service life of an existing asset. These projects are typically annual ongoing projects and fall into two categories: Renewal and Replacement Collection System and Renewal and Replacement Treatment Plants.

The Renewal and Replacement Collection System category includes the following projects: Condition Assessment projects to clean, video inspect, as well as perform condition assessment of sewer facilities; Sewer Improvement projects to maintain the existing functionality of the collection system and repair and replacement of structurally inadequate sewers; Spot Sewer Replacement projects which consist of as-needed replacement of localized failed sections of existing sewer facilities; Hydraulic Improvement projects to upgrade sewers with hydraulic deficiencies; and, Salt Water Intrusion projects to prevent San Francisco Bay water from entering the wastewater collection system, which can be detrimental to the treatment plant’s biological system and result in corrosion of exposed metal.

The Renewal and Replacement Treatment Plant Improvements includes projects to maintain the capacity and reliable performance and extend the useful life of aging assets such as transport/storage boxes, discharge structures, pump stations, force mains, tunnels and treatment plants. Priority lists are maintained for both collection and treatment projects, with collection system projects identified using an Asset Management approach which considers the current condition of the section in question and applicable risks of failure. See “THE WASTEWATER ENTERPRISE—Combined Sewage and Stormwater System—Useful Life.”

Treasure Island

Treasure Island and Yerba Buena Island, located in San Francisco Bay between San Francisco and Oakland, are served by a wastewater system that currently relies on pumping to convey wastewater to a secondary facility for treatment and discharge. The treatment plant is designed to treat an average flow of 2 mgd, with a

permitted capacity of up to 4.4 mgd. These wastewater facilities are not interconnected with the wastewater infrastructure in San Francisco. The Treasure Island treatment plant is currently owned by the United States Navy, but operated and maintained by the Wastewater Enterprise pursuant to a cooperative agreement with the Navy. However, the SFPUC expects eventually to expand its service area to include Treasure Island. See “—Wastewater Treatment—Contract Services.” In connection with such expansion, the SFPUC anticipates constructing a new treatment plant with additional capacity and associated infrastructure in order to meet the needs at full build-out of the proposed conversion of the former Treasure Island Naval Station to residential and commercial uses, though agreements for the provision and construction of the treatment plant have not yet been finalized. The projected costs of such project are included in the SFPUC’s Ten-Year Capital Plan, however.

The Treasure Island and Yerba Buena Island wastewater collection system consists of 10 miles of sewers and 29 wastewater pump stations. In addition, a stormwater collection system includes 6 stormwater pump stations and a number of shallow water outfalls. With the exception of any new treatment plant constructed by the SFPUC, the SFPUC expects that the developer undertaking the conversion project will construct all other new wastewater infrastructure relating to the development, including collection facilities, prior to transferring such facilities to the SFPUC.

Wastewater Facilities and Infrastructure

There are three projects that which fall into the category of Wastewater Facilities and Infrastructure: (i) the Ocean Beach Protection Project, (ii) the Southeast Community Facility and (iii) the Islais Creek Outfall.

The Ocean Beach Protection Project will facilitate the development of a comprehensive shoreline management and protection plan in partnership with relevant stakeholders and regulatory agencies to provide a long-term solution to the erosion issue along Ocean Beach between Sloat and Skyline Boulevard, in an effort to protect the integrity of critical SFPUC wastewater assets that are jeopardized by the ongoing shoreline erosion and to mitigate potential impacts to the Lake Merced Tunnel and other critical wastewater assets at this location. Such assets include the Lake Merced Transport Tunnel, the Westside Pump Station, the Westside Transport, and the Oceanside Plant.

The Southeast Community Facility was originally built in the 1980s as a community mitigation measure for expansion of the Southeast Plant with the purpose of providing opportunities for residents in the Bayview Hunters Point community to participate in education programs, to establish and expand daycare opportunities and to provide information and resources for the enhancement and growth of the community as a whole. The Southeast Community Facility Project will focus on improving the functional and operational reliability of the facility to ensure it fulfills its goals of providing for the education and jobs training needs of the community. Infrastructure improvements, such as energy efficiency upgrades, building envelope repairs, tenant space reconfigurations and consolidations, life/safety, and accessibility upgrades, as required by applicable codes will be provided. The project will include evaluation of programming and siting of the community facility and associated green houses.

The Islais Creek Outfall Project will replace the effluent pipelines within Islais Creek and rehabilitate the existing upstream, on-shore pipelines, booster pump station pump manifold and isolation valves. This project was recently included in the capital program following a determination by the SFPUC in 2015 that one of the two pipelines had extensive corrosion and a risk of pipeline failure would continue to exist until the issue could be addressed.

Environmental Considerations

Projects undertaken by the SFPUC are generally subject to CEQA and certain projects involving the participation of federal agencies, including projects on federal land, are also subject to NEPA.

Under CEQA, a project that may have a significant effect on the environment and is to be carried out or approved by a public agency must comply with a comprehensive environmental review process, including the preparation of an Environmental Impact Report (“EIR”). The EIR reflects not only an independent technical analysis of the project’s potential impacts, but also the comments of other agencies with some form of jurisdiction

over the project and the comments of interested members of the public. Contents of the EIR include a detailed statement of the project's significant environmental effects; any such effects that cannot be avoided if the project is implemented; mitigation measures proposed to minimize such effects; alternatives to the proposed project; the relationship between local and short-term uses and long-term productivity; any significant irreversible environmental changes that would result from the project; the project's growth-inducing impacts; and a brief statement setting forth the agency's reasons for determining that certain effects are not significant and hence do not require discussion in the EIR. Prior to the sale of bonds, the San Francisco Planning Department Environmental Review Officer will issue a "Planning Certificate" required under Proposition E approved by the voters of San Francisco at the November 5, 2002 General Election. The Planning Certificate will identify the status of environmental review for each capital project to be funded under the proposed bond sale and the type of CEQA document either completed or to be completed for each project. CEQA compliance must be completed for each project prior to project approval or approval to award a construction contract to implement any project to be funded by the proposed bond sale. The Planning Certificate relating to the projects being financed from proceeds of the 2016 Series A Bonds was issued on May 19, 2014.

Any action or proceeding challenging the SFPUC's determination must be brought within 30 days following the filing of such notice. Actions have been, and in the future may be, filed against the SFPUC challenging a project's compliance with CEQA, including the adequacy of the EIR and other environmental documents, for particular projects. If an action challenging the SFPUC's compliance with CEQA is successful, the particular project could be delayed, revised, suspended or canceled. CEQA also contains a number of exemptions, which the SFPUC uses for its projects when appropriate.

As part of its regular planning and budgetary process, the San Francisco Planning Department gives careful attention to environmental considerations. All projects are evaluated under the SFPUC's environmental evaluation procedures, developed in compliance with federal and State laws and regulations, and City Ordinances and Administrative Code procedures.

SEWER SYSTEM IMPROVEMENT PROGRAM

Program Summary

The SFPUC has embarked on a comprehensive \$6.9 billion Sewer System Improvement Program ("SSIP") to be implemented in 3 phases over approximately the next 20 years. The SSIP is a series of major capital improvement projects that are intended to bring the City's wastewater and stormwater system into a state of good repair, and meet Commission-endorsed levels of service goals. The SSIP has a scope, budget and schedule based on the Commission's endorsed levels of service. The Commission's authorization of the program specified that the program would be implemented in three phases, with the highest priority and best defined projects to be included in Phase 1.

SSIP Program Development and Chronology

In February 2010 the Commission directed staff to proceed with the procurement of a program management consultant to assist City staff with implementation of the SSIP. The AECOM-Parsons Joint Venture was selected and the Program Management Consultant ("PMC") team began work on September 6, 2011 to validate the SSIP scope, schedule, and budget.

On August 28, 2012, the Commission endorsed these SSIP Goals and levels of service, validated the scope and phased implementation approach for the overall \$6.9 billion SSIP, and authorized SFPUC staff to move forward with planning and development on a proposed Phase 1 set of SSIP projects representing \$2.7 billion.

In October, 2015, the PMC was assigned to work on refining program scope, budget and schedule based on newly available information, and various constraints and challenges. This effort included project re-prioritization, scope refinement, budget re-alignment and schedule re-alignment. The PMC assessment was completed in February 2016 and they provided SFPUC their recommendations for revising program.

On March 22, 2016, the Commission adopted the “March 2016 SSIP Baseline Scope, Budget and Schedule.” The overall SSIP budget remained at approximately \$6.9 billion, however, the budget for SSIP Phase 1 increased from \$2.7 billion to \$2.9 billion.

Program Objectives

The SSIP capital improvement projects are designed to address specific challenges and deficiencies facing the Wastewater Enterprise, maximize system reliability and flexibility, improve operational and seismic reliability, and promote current and future regulatory compliance. The SSIP project development will also consider environmental benefits, sustainability, and community benefits in addressing the long-term wastewater needs.

Program Goals

The program goals for the SSIP, as endorsed by the Commission in August 2012, include the following:

1. Provide a compliant, reliable, resilient and flexible system that can respond to catastrophic events;
2. Integrate grey and green infrastructure to manage stormwater and minimize flooding;
3. Provide benefits to impacted communities;
4. Modify the system to adapt to climate change;
5. Achieve economic and environmental sustainability; and
6. Maintain ratepayer affordability.

The March 2016 SSIP review did not change these program goals.

Program Scope

According to the SSIP – Baseline, March 2016, the overall scope of SSIP projects is divided into three major subprograms: Treatment Plants, Collection System, and Land Reuse.

Treatment Plants. Treatment plant projects are proposed at the Southeast Plant, Oceanside Plant and North Point Facility that would address aging infrastructure and outdated technologies; increase seismic and operational reliability; and reduce odors, noise, visual and other public impacts. These projects would also address long-term regulatory compliance by ensuring continued performance that is aimed at meeting current and future regulatory mandates. The major treatment project is the Biosolids Digester Project at the Southeast Plant, which will replace the aged existing digester and solids handling treatment processes with a more technologically advanced facility, intended to ensure long-term reliable and sustainable treatment, improve the biosolids end product to a Class A level, and to ensure disposal and/or reuse of biosolids.

A majority of the SSIP improvements will occur at the Southeast Water Pollution Control Plant to upgrade the building and systems which were planned, designed and built in the 1940s and 1950s. See “WASTEWATER ENTERPRISE—Wastewater Treatment—Southeast Water Pollution Control Plant.” The largest project in the SSIP is the Biosolids Digester, a new digester and solids handling facility to replace the aging facility at the Southeast Plant. The new facility will include more modern treatment processes designed to produce Class A biosolids. Biosolids treatment processes are expected to include solids thickening, screening, dewatering, thermal hydrolysis pretreatment, digestion, gas handling, energy generation and reuse, and odor control. Several other SSIP projects are scheduled to be constructed at the Southeast Plant, which will require careful logistical and space planning and scheduling of key project interfaces. These other projects focus on liquid treatment and basic infrastructure, including: construction of a new all-weather 250 million gallon per day headworks facility and other improvements to oxygen generation, clarifiers, gas handling, disinfection, facility-wide distributed control systems and power feed

and switchgear. The Southeast Plant will be operational throughout the construction of these capital improvements. See “WASTEWATER ENTERPRISE—Wastewater Treatment—Southeast Water Pollution Control Plant” and “RISK FACTORS—Risks Related to Wastewater Enterprise Facilities and Operation—Limited Redundancy.”

In addition to the work at Southeast Plant, there will be reliability improvements to both Oceanside Plant and North Point Facility, including seismic, electric, and general reliability improvements for these aging facilities.

Collection System. Proposed collection system projects would increase the ability of the sewer system to collect and convey wastewater and stormwater and would address aging infrastructure including large diameter sewers, pump stations, transport/storage boxes, and combined sewer discharge structures. The collection system projects also include interdepartmental projects that capture sewer improvement opportunities arising from capital projects initiated by other City and County agencies. Other collection system improvements are expected to include reliability projects for sewer pipelines and boxes, combined sewer discharge structures, and pump stations. Additionally, the SFPUC anticipates projects focused on stormwater management and control, flood resilience (particularly in low lying areas that are susceptible to flooding) and green infrastructure. The green infrastructure is expected to include eight projects, one in each of the City’s eight urban watersheds, designed to assist the SFPUC in monitoring and evaluating the effectiveness of green infrastructure.

The major collection system project is the Central Bayside System Improvement Project. This project would provide redundancy back-up to the existing 66-inch Channel Force Main, which conveys 60% of the flow to the Southeast Plant, and improve stormwater conveyance in the local drainage basins. The Channel Force Main has been subject to long term settlement and previously experienced temporary failures in connection with the Loam Prieta Earthquake in 1989. Phase 1 of the SSIP includes complete planning and design work for this project. Flood Resilience is the next largest project and includes improvements to stormwater management systems intended to reduce flooding during wet weather. Particular improvements have been identified through the SFPUC’s urban watershed assessment process. The process involves characterizing each of the eight watersheds in the City through extensive hydraulic modeling, condition assessment and stakeholder input. A suite of projects to meet watershed objectives, including green infrastructure alternatives, have been initiated based on this characterization.

Land Reuse. There are currently projects to acquire 1800 Jerrold and 1801 Jerrold, located adjacent to the Southeast Plant (SEP), to serve a variety of functions in support of projects planned at SEP. Over the next ten years, multiple construction projects have been planned at SEP to upgrade and/or replace aging infrastructure. Each of these potential projects will require laydown, trailers and staging areas, as well as secured space for physical storage of equipment. 1800 Jerrold is a 6.04 acre site which is presently occupied by another city department under the Office of Contract Administration (OCA) and used as a central shop. 1801 Jerrold, a 1.54 acre site, is under the jurisdiction of the Department of Public Works and is presently used as a dispatch yard for Street Repair. It was formerly an asphalt plant for the city. Subsequent to the relocation of current occupants, the properties would be acquired and the sites cleared and remediated for other potential uses to support SEP and SSIP. Following the completion of geotechnical and environmental investigation, plans for demolition, environmental remediation and reuse will be developed.

Program Budget

The Commission has authorized SFPUC staff to proceed with planning and developing projects for Phase 1 of the SSIP. To date, the Board of Supervisors has appropriated \$528 million for Phase 1 projects. Subject to Commission and Board of Supervisors consideration of project environmental review and actions to approve project budgets, construction of Phase 1 projects and implementation of Phases 2 and 3 of the SSIP would occur over the next 20 years. The following table summarizes the Approved Budgets for the March 2016 Revised SSIP.

TABLE 10
SEWER SYSTEM IMPROVEMENT PROGRAM
(March 2016 Approved Budget)⁽¹⁾
(Millions)

Subprograms	Phase 1	Phase 2	Phase 3	Total Project Cost Estimate
Treatment Plants	\$ 2,182	\$ 1,299	\$ 407	\$ 3,888
Collection System	505	1,708	476	2,670
Land Reuse	98			98
Program Management (PM)	125	152	43	320
TOTAL SSIP	\$ 2,910	\$ 3,159	\$ 926	\$ 6,976

(1) The Commission approved what is referred to as the “SSIP – Baseline” on March 22, 2016.

Due to the size of the overall program, a phased approach was developed to simplify implementation of the SSIP projects. This was done to manage rate impacts, consider construction sequencing impacts, and maintain existing operations and permit compliance. While all projects are needed to meet the Program’s Level of Service, Phase 1 projects focused on ensuring regulatory compliance, enhancing process reliability and redundancy, improving plant odor control, and replacing antiquated biosolids and headworks facilities with state of the art technology. As such, Phase 1 focuses on treatment plant improvements, while Phase 2 emphasizes collection system improvements, and Phase 3 primarily focuses on improvements resulting from condition assessment investigations.

Program Schedule:

According to the Approved March 2016 Revised SSIP, the overall SSIP Phase 1 completion date is October 2026.

Management Approach

The development and implementation of the projects in the capital program, including SSIP projects, are led by SFPUC staff, with oversight and ultimate responsibility by the General Manager, Assistant General Manager of the Wastewater Enterprise, and Assistant General Manager of the Infrastructure Division.

Consultants are employed to support a number of programmatic functions, such as strategic program development, risk assessment and mitigation, program controls, various independent technical reviews, construction planning and management, and labor and community relations. The services of consultants are also used on an as-needed or project-specific basis to assist SFPUC staff with functions such as engineering design, environmental review, right-of-way engineering and surveying, and construction management.

Potential Changes to SSIP Projects

Because the SSIP projects are currently in the preliminary and planning stages, uncertainties exist that may result in changes to the scope and phasing of the projects, changes to the project budgets, and delays and cost increases. These factors include, without limitation, the following:

- market conditions and the bidding environment for construction costs, which could worsen over the 20-year life of the program;
- market conditions for financing the various phases of the SSIP, which could worsen over the 20-year life of the program;

- changes in the legal and regulatory requirements affecting the Wastewater Enterprise and the SSIP (see “REGULATORY MATTERS”);
- the discovery of unforeseen underground/geotechnical conditions, particularly for projects with tunneling activities and extensive earthwork;
- the discovery of unforeseen site conditions associated with existing infrastructure; many of the SSIP projects involve upgrades to existing structures and facilities that were built a very long time ago and accurate as-built records are not always available;
- the discovery of unforeseen site conditions associated with utility conflicts;
- unexpected failure of aging infrastructure or major equipment that warrant expedited repair or replacement;
- unexpected environmental discoveries that may impact construction activities; those may include the discovery of protected species, archaeological artifacts, contaminated soil or hazardous material at project sites;
- contractor claims, contractor non-performance, failure of contractors to execute within contract price, or failure of contractors to meet schedule terms;
- errors or omissions in contract documents (drawings and specifications) that may result in change orders;
- equipment and material vendors’ lack of compliance with quality and schedule requirements;
- inclement weather affecting contractor performance and timeliness of completion;
- labor issues involving work stoppages or slowdowns; or
- the occurrence of a major seismic or other natural or man-made catastrophic event.
- unforeseen public opposition to projects or elements of projects

See “RISK FACTORS.”

FINANCING PLAN FOR WASTEWATER ENTERPRISE CAPITAL PROGRAM

Long Term Financing of Capital Program.

Pursuant to the Wastewater Enterprise’s Ten-Year Financial Plan for Fiscal Years 2016-17 to 2025-26, which is based on the Ten-Year Capital Plan for that period, and which was adopted by the SFPUC Commission in February 2016, it is projected that long-term debt financing will fund approximately \$4.6 billion of the Ten-Year Capital Plan. Revenue (pay-as-you-go) funding will provide approximately \$819 million of funds for most of the remaining portion of the Ten-Year Capital Plan. Long-term debt financing is expected to be comprised primarily of Additional Bonds and Parity State Loans. See “OBLIGATIONS PAYABLE FROM REVENUES—Parity State Loans.”

Interim Funding of Capital Program.

The Wastewater Enterprise utilizes its commercial paper program to meet the expenditure and encumbrance needs of capital projects on an interim basis through design and into the early project construction phase. Commercial paper is then refunded and consolidated into either long-term revenue bond issues or Parity State Loans when the outstanding and encumbered amount of commercial paper approaches authorized limits. This

approach allows the SFPUC to take advantage of lower short-term interest rates, and to size and closely time long-term financings with projected need.

The SFPUC has established a commercial paper program authorizing the issuance of up to \$500 million in Wastewater Commercial Paper Notes. Of such authorized amount, as of April 1, 2016 the SFPUC had \$135 million aggregate principal amount of tax-exempt Wastewater Commercial Paper Notes outstanding, which the SFPUC expects to repay in full using a portion of the proceeds of the 2016 Series A Bonds. The SFPUC anticipates issuing additional commercial paper to provide interim financing for Wastewater Enterprise capital projects under the \$500 million authorization. See “OBLIGATIONS PAYABLE FROM REVENUES – Subordinate Debt and Commercial Paper” and “PLAN OF FINANCE.”

Sources & Uses of Funding the Capital Program.

The table below sets forth the projected sources and uses of funds for the Wastewater Enterprise’s capital program, including the SSIP. Non-SSIP capital program categories include Renewal and Replacement projects, Wastewater Facilities and Infrastructure projects, and Treasure Island projects. The projected repayment of principal and interest on these future debt financings has been incorporated into the SFPUC’s approved rates through Fiscal Year 2017-18, and has also been reflected in the remaining projection period set forth in the Ten-Year Financial Plan for Fiscal Years 2018-19 to 2025-26.

If the Wastewater Enterprise’s capital program, including the SSIP, is carried out on the currently projected schedule, the SFPUC projects that retail sewer rates will increase annually by an average of approximately 11% from Fiscal Year 2018-19 to Fiscal Year 2025-26, after the current adopted rate period ends in Fiscal Year 2017-18. *However*, no rate increases beyond Fiscal Year 2017-18 have been proposed to, or adopted by, the SFPUC’s Commission or submitted to the Board, and any future rate increases are subject to future Commission approval (subject to the Board’s ability to reject rate increases). See “FINANCIAL OPERATIONS – Wastewater Enterprise Rates and Charges.”

TABLE 11
WASTEWATER ENTERPRISE CAPITAL PROGRAM
FINANCING PLAN FOR FISCAL YEARS ENDED JUNE 30
(IN THOUSANDS)⁽¹⁾

	2016⁽²⁾	2017	2018	2019	2020
APPROPRIATIONS					
SSIP	\$422,284	\$175,921	\$670,560	\$1,008,829	\$756,833
Renewal and Replacement Wastewater Facilities & Infrastructure	91,051	97,315	100,735	104,886	105,644
Treasure Island	23,300	12,000	19,000	29,000	26,000
Total Uses	0	0	20,463	22,240	21,090
	\$536,635	\$285,236	\$810,758	\$1,164,955	\$909,567
SOURCES OF FUNDS					
Revenue Bonds / Parity State Loans	\$482,635	\$230,136	\$763,258	\$1,114,455	\$833,067
Wastewater Revenues	41,000	43,000	45,000	48,000	74,000
Capacity Fee Revenues	13,000	12,100	2,500	2,500	2,500
Total Sources	\$536,635	\$285,236	\$810,758	\$1,164,955	\$909,567

⁽¹⁾ Amounts set forth are projections. Actual results may differ materially from these projections. See “FORWARD-LOOKING STATEMENTS” above.

⁽²⁾ Budgeted.

Source: SFPUC, Financial Services

FINANCIAL OPERATIONS

General

The SFPUC is a department of the City and, as such, the financial operations of its three enterprises are included in the Comprehensive Annual Financial Report of the City and shown as enterprise funds. *The City's Comprehensive Annual Financial Report is not incorporated by reference herein.*

The following information is provided with respect to the Wastewater Enterprise only and does not purport to reflect the financial position of the SFPUC or the City as a whole.

Basis of Accounting. The accounts of the Wastewater Enterprise are organized on the basis of a proprietary fund type, specifically an enterprise fund. The financial activities of the Wastewater Enterprise are accounted for on a flow of economic resources measurement focus, using the accrual basis of accounting. Under this method, all assets and liabilities associated with its operations are included on the statement of net assets; revenues are recorded when earned, and expenses are recorded when liabilities are incurred.

The Wastewater Enterprise applies all applicable GASB pronouncements.

City Budget Process. The SFPUC's operating and capital budget preparation and approval is a part of a City-wide process. The SFPUC is one of several departments which prepares biannual budgets. The Commission reviews and approves the SFPUC's two-year budget, which is then submitted to the Mayor's Office for review. The Mayor then incorporates the proposed budget, with amendments, into the City-wide budget that is submitted to the Board of Supervisors for approval. Under the Charter, the Board of Supervisors may increase or decrease any proposed expenditure in the Mayor's budget so long as the aggregate changes do not cause the expenditures to exceed the total amount of expenditures proposed by the Mayor. The Charter further provides that the Mayor may reduce or reject any expenditure authorized by the Board of Supervisors except appropriations for bond interest, redemption or other fixed charges, subject to reinstatement of any such expenditure by a two-thirds vote of the Board of Supervisors.

City Services Auditor. On November 4, 2003, voters in the City adopted Proposition C, an ordinance that established the City Services Auditor ("CSA"), an audit function within the Office of the City Controller. Pursuant to the provisions of this ordinance, which have been incorporated into the Charter, the CSA has broad oversight authority and responsibilities including, but not limited to, (i) to reporting upon level of effectiveness for City public services, (ii) auditing financial and management performance of City departments and functions, (iii) ensuring the financial integrity and improving the overall performance and efficiency of City government, and (iv) maintaining a whistleblower hotline to investigate upon reports of fraud, waste and abuse.

CSA is currently auditing the Wastewater Enterprise with a focus on legal and regulatory compliance and internal controls, including operational functions, payroll and contracts. The audit is scheduled to be published in the spring of 2016.

Wastewater Enterprise Rates and Charges

General. Sewer service charges are the primary funding source for the payment of costs associated with the Wastewater Enterprise's sanitary wastewater and stormwater collection, treatment and disposal services. Pursuant to the Charter, the SFPUC prepares an analysis of projected revenues and revenue requirements of the Wastewater Enterprise at least once every five years and then sets rates projected to be sufficient to fund the proposed budget, to maintain an adequate operating reserve and to comply with Indenture requirements. In addition to meeting funding and reserve requirements, the rates must also comply with regulations or policies promulgated by the EPA, the State Water Resources Control Board and the Board of Supervisors and with the requirements of the City's Charter and the State Constitution; however, the SFPUC's sewer service rates are not subject to any approval proceedings by the California Public Utilities Commission or any other State or federal agencies. See "CONSTITUTIONAL, STATUTORY AND CHARTER LIMITATIONS – Proposition 218."

Federal and State Requirements. Under federal clean water laws and regulations, entities accepting federal grant funds (such as the SFPUC) must comply with certain requirements, including the requirement that user

charges be set to ensure that recipients of sewer services pay their proportionate share of the costs of operation, as well as system maintenance and replacement based on the quantity and characteristics of the users' discharge into the public sewage system. The Federal "Revenue Program Guidelines" are incorporated into the State water quality regulations, which are administered and enforced by the State Water Resources Control Board. See "REGULATORY MATTERS" for a more detailed discussion of State and Federal regulations affecting the Wastewater Enterprise.

Summary of Charter Rate-Setting Requirements. Pursuant to certain provisions of Proposition E, which became effective with respect to the Wastewater Enterprise on January 3, 2003, the Charter was amended to authorize the Commission to set rates, fees and other charges in connection with providing Wastewater Enterprise services. These rate changes are subject to rejection, within 30 days of submission, by the Board of Supervisors. If the Board of Supervisors does not act within 30 days, the rates become effective without further action.

In setting Wastewater Enterprise rates, fees and charges, the Commission must:

- (a) Establish rates, fees and charges at levels sufficient (i) to improve or maintain financial condition and bond ratings at or above levels equivalent to highly rated utilities (see "RATINGS"), (ii) to meet requirements and covenants under all bond resolutions and indentures (including the Indenture) and (iii) to provide sufficient resources for the continued financial health (including appropriate reserves), operation, maintenance and repair, consistent with good utility practice;
- (b) Retain an independent rate consultant to conduct rate and cost of service studies at least every five years;
- (c) Set retail rates, fees and charges based on the cost of service;
- (d) Conduct all studies mandated by applicable State or Federal law to consider implementing connection fees servicing new development;
- (e) Conduct studies of rate-based conservation incentives and/or lifeline rates and similar rate structures to provide assistance to low income users, and to take the results of each study into account when establishing rates, fees and charges, in accordance with State and federal laws; and
- (f) Adopt annually a rolling five-year forecast of rates, fees and charges.

Rate Setting Process. The Wastewater Enterprise periodically adjusts rates based on a comprehensive cost of service analysis and the resulting revenue requirement analysis, as required by the Charter. The biannual budget submitted to the Commission, the Mayor and the Board of Supervisors for approval is used as the basis for determining annual revenue requirements. The Wastewater Enterprise projects revenues under the existing schedule of rates for sufficiency. If additional revenues are required to meet budgetary sufficiency or if the cost structure of the Wastewater Enterprise has changed, recommended rate schedule increases are submitted to the Commission for its consideration. After receiving public comment, the Commission adopts a rate resolution and transmits its recommended rate schedules to the Board of Supervisors. Once submitted, the Board of Supervisors has authority under the Charter to vote to reject the proposed rate schedules within 30 days. If rejected, the existing rate schedules remain in effect until such time as a new rate schedule is resubmitted by the Commission and not rejected by the Board of Supervisors.

Whenever rates are revised, costs are allocated to pollutant parameters, volume, suspended solids, oil and grease, and chemical oxygen demand, and any costs are then allocated to each of the rate categories. See "– Wastewater Enterprise Rates and Charges – Rate Categories."

As part of the annual Ten-Year Financial Plan process, the Wastewater Enterprise develops a ten-year rate forecast using projected revenues under existing rates plus additional revenues from projected rate increases, as required, to meet the projected revenue requirements during the forecast period. This forecast is updated each year

resulting in a “rolling” rate forecast that is intended to moderate the effects of any significant changes in revenue requirements in any year.

In addition to complying with the requirements of the Charter, the rate-setting process must comply with the requirements of the State Constitution. See “CONSTITUTIONAL, STATUTORY AND CHARTER LIMITATIONS – Proposition 218.”

SFPUC Citizens Advisory Committee and Rate Fairness Board The Public Utilities Commission Citizens’ Advisory Committee (“CAC”), established by a Charter amendment in 2002, provides recommendations to the SFPUC’s General Manager and the Board of Supervisors regarding the SFPUC’s long-term strategic, financial and capital improvement plans. The CAC is comprised of seventeen appointees. Each member of the Board of Supervisors may appoint one member who must be a resident of his or her supervisory district. Candidates must demonstrate one or more of the following qualifications: represent a community, business, environmental, or environmental justice organization, or have demonstrated knowledge, skill or experience in a field related to public utilities, environmental justice or environmental science. Two additional members of the CAC are appointed by the President of the Board of Supervisors, one of whom represents a small business and the other of whom represents an environmental justice organization. Four members are appointed by the Mayor and must include one member who represents regional water customers of the SFPUC, one who represents a large City water user, one who has knowledge of engineering or financial management and one who represents a regional or statewide environmental organization.

Proposition E, approved by voters in 2002, directed the establishment of a Rate Fairness Board to advise the SFPUC on water, sewer and power rate matters. The Rate Fairness Board consists of seven members: the City Administrator or his or her designee; the Controller or his or her designee; the Director of the Mayor’s Office of Public Finance or his or her designee; two residential City retail customers, consisting of one appointed by the Mayor and one by the Board of Supervisors; and two City retail business customers, consisting of a large business customer appointed by the Mayor and a small business customer appointed by the Board of Supervisors. Specific powers for the Rate Fairness Board include the authority to: (1) review the five-year rate forecasts produced by the SFPUC enterprises, including the Wastewater Enterprise; (2) hold one or more public hearings on annual rate recommendations before the SFPUC adopts rates; (3) provide a report and recommendations to the SFPUC on any rate proposal; and, (4) in connection with periodic rate studies, submit to the SFPUC rate policy recommendations for the Commission’s consideration, including recommendations to reallocate costs among various retail utility customer classifications, subject to any outstanding bond requirements. The Rate Fairness Board is not authorized, however, to reject proposed rates approved by the Commission.

Currently Approved Four-Year Rate Schedule. In May 2014, the Commission approved four years of annual retail water and sewer service rate increases beginning July 1, 2014 and applicable to Fiscal Years 2014-15 through 2017-18. Separate rate schedules apply to single-family residential, multi-family residential, and non-residential customers. See “THE WASTEWATER ENTERPRISE—Customer Base.” Under State law, all sewer rates reflect cost of service by customer class.

Under its current rate structure, 100% of the Wastewater Enterprise’s customer bills are calculated based on metered water volumes, with a per-customer “flow factor” adjustment to estimate the percentage of water that does not enter the system as sewage. See “—Residential Users and “—Non-Residential Users.” As a result, decreased water sales volumes can reduce Wastewater Enterprise Revenues.

Residential Users. Residential users are charged on the basis of discharge units. Monthly discharge units are determined for residential customer accounts by multiplying an account’s total monthly water consumption by the “flow factor” applicable to such account, which calculation is designed to approximate that portion of the account’s total water use returned to the sewer system as wastewater. For example, a customer using 10 units of water and having a flow factor of 90% would be billed for 9 discharge units. Each discharge unit represents 100 cubic feet of water discharged as approximated by this calculation. The standard flow factor for single-family residential accounts is 90%. The standard flow factor for multi-family residential accounts is 95%. All residential discharge is assumed to be of a standard strength.

Single and multi-family residential wastewater rates currently have two tiers. For Single-Family Residential customers, tier 1 currently includes the first four hundred cubic feet, representing average water consumption for this class. For multi-family accounts, tier 1 includes three hundred cubic feet, representing average water consumption for this customer class, and that amount is multiplied based on the number of dwelling units at the service address. Both single-family and multi-family residential wastewater tiers will be phased into a uniform, single tier rate by Fiscal Year 2017-18.

TABLE 12

HISTORICAL AND ADOPTED SINGLE-FAMILY RESIDENTIAL USER SEWER RATES

Fiscal Year	Tier One ⁽¹⁾	Additional Discharge Units ⁽¹⁾	Average Monthly Bill
2010-11	\$6.91	\$9.21	\$42.83
2011-12	7.16	9.55	44.40
2012-13	7.52	10.03	46.63
2013-14	7.90	10.53	48.97
2014-15 ⁽²⁾	9.06	11.23	44.89
2015-16 ⁽²⁾	9.82	11.34	45.97
2016-17 ⁽²⁾	10.84	11.66	50.24
2017-18 ⁽²⁾	12.40	12.40	56.92

⁽¹⁾ Until June 30, 2014, Tier One included the first 300 cubic feet of water consumption per dwelling unit per month billed at the lifeline rate and all excess use at the regular residential rate. As of July 1, 2014, first tier includes the first 400 cubic feet. Effective July 1, 2017, residential wastewater will begin a new billing structure without tiers.

⁽²⁾ Rates approved on May 13, 2014.

Source: SFPUC, Financial Services

TABLE 13

HISTORICAL AND ADOPTED MULTI-FAMILY RESIDENTIAL USER SEWER RATES

Fiscal Year	Tier One ⁽¹⁾	Additional Discharge Units ⁽¹⁾	Average Monthly Bill
2010-11	\$6.51	\$8.68	\$31.68
2011-12	7.49	9.99	36.46
2012-13	7.86	10.49	38.27
2013-14	8.25	11.01	40.16
2014-15 ⁽²⁾	9.24	11.48	36.90
2015-16 ⁽²⁾	9.95	11.51	37.91
2016-17 ⁽²⁾	10.91	11.75	40.96
2017-18 ⁽²⁾	12.40	12.40	45.88

- (1) Tier One includes the first 300 cubic feet of water consumption per dwelling unit per month billed at the lifeline rate and all excess use at the regular residential rate. Effective July 1, 2017, residential wastewater will begin a new billing structure without tiers.
- (2) Rates approved on May 13, 2014.

Source: SFPUC, Financial Services

Non-Residential Users. Non-residential wastewater rates have a uniform rate for volume plus per pound strength charges. Non-residential users are charged the cost for each parameter according to the schedule of rates in the table below. Customers whose parameter loadings are not based on periodic sampling are charged on the basis of standard parameter loadings established by the General Manager for each Standard Industrial Classification code in accordance with applicable state and federal laws and regulations.

TABLE 14
HISTORICAL AND ADOPTED NON-RESIDENTIAL USER DISCHARGE RATES
(PER DISCHARGE UNIT)

Fiscal Year ⁽¹⁾	Volume charge (per 100 cubic feet)	Suspended solids (per pound)	Oil/Grease (per pound)	Chemical Oxygen Demand (per pound)
2010-11	\$6.5548	\$0.8819	\$1.1035	\$0.2156
2011-12	6.5548	0.8819	1.1035	0.2156
2012-13	6.5548	0.8819	1.1035	0.2156
2013-14	6.6203	0.8907	1.1145	0.2178
2014-15 ⁽¹⁾	6.1450	0.8280	0.8670	0.4400
2015-16 ⁽¹⁾	6.4530	0.8700	0.8670	0.4400
2016-17 ⁽¹⁾	6.9040	0.9310	0.9740	0.4940
2017-18 ⁽¹⁾	7.6640	1.0330	1.0820	0.5480

⁽¹⁾ Rates approved on May 13, 2014.

Source: SFPUC, Financial Services

Appeals. Multi-family residential water rates have a multiplier based on the number of dwelling units at the service address and Sewer service charges are assessed on the basis of water use as billed by the Water Enterprise multiplied by a flow factor. See “– Wastewater Enterprise Rates and Charges.” For example, it is assumed that 90% of the volume of water measured at the customer meter for a single-family residential user is discharged to the sewer system as wastewater requiring treatment. Customers who can demonstrate higher rates of consumptive use than that reflected in the applicable flow factor, such as irrigation, can apply to the Residential Users Appeals Board for a lower flow factor (i.e., percentage of metered water returned to the sewage system).

Revenues

Sewer Service Charges. Sewer service charges are imposed based on discharge volume estimates and, in the case of non-residential users, suspended solids, oil and grease and chemical oxygen demand. See “WASTEWATER ENTERPRISE—Rates and Charges.” The following tables show billed discharge by category and annual sewer billings for Fiscal Years 2010-11 to 2014-15.

**TABLE 15
ANNUAL BILLED DISCHARGE BY CATEGORY**

Fiscal Year ⁽¹⁾	Volume (Hundred Cubic Feet)	Suspended Solids (Thousand Pounds)	Oil and Grease (Thousand Pounds)	Chemical Oxygen Demand (Thousand Pounds)
2010-11	27,063,139	47,101	14,350	115,473
2011-12	26,857,053	46,742	14,240	114,593
2012-13	26,535,868	46,183	14,070	113,223
2013-14	26,796,985	46,638	14,209	114,337
2014-15	24,667,341	42,931	13,079	105,250

Source: SFPUC, Financial Services

**TABLE 16
ANNUAL SEWER BILLINGS BY USER TYPE
FOR FISCAL YEARS ENDED JUNE 30
(THOUSANDS)**

User Type	2011	2012	2013	2014	2015
Multi-Family Residential	\$ 82,056	\$ 93,264	\$ 95,607	\$ 99,603	\$100,178
Single-Family Residential	53,466	55,776	58,683	64,377	61,048
<i>Subtotal Residential</i>	\$135,522	\$149,040	\$154,290	\$163,980	\$161,226
Commercial Municipal Customers	\$ 76,784	\$ 75,604	\$ 74,978	\$ 76,740	\$ 76,042
Suburban	6,519	6,316	6,520	6,205	5,534
Total	3	2	2	3	2
	\$218,828	\$230,962	\$235,790	\$246,928	\$242,804

Source: SFPUC, Financial Services

Sewer Account Billing and Delinquencies. Sewer service charges are billed on a combined water and sewer utility bill on either a monthly or bi-monthly basis. Payments are due 15 days after the bill date. If payments are not made, late payment charges are assessed 15 days from the due date or 30 days from the bill date. Accounts are considered delinquent 15 days after a second unpaid bill. Water service may be disconnected or a lien may be assessed against the property for non-payment of water and sewer services.

Current accounts receivables are shown in the table below. These amounts exclude receivables from municipal customers.

**TABLE 17
ACCOUNTS RECEIVABLES AGING REPORT
AS OF JUNE 30, 2015**

Period	Amount	Percent of Total	Percent of Total Fiscal Year 2014-15 Revenues
Current	\$ 21,732,839	77.39%	8.88%
31—60 Days	993,988	3.54	0.41
61—90 Days	340,192	1.21	0.14
Over 90 Days	5,017,001	17.86	2.05
Total	<u>\$28,084,021</u>	<u>100.00%</u>	
Credit Balances	(660,521)		
Total Aged Receivables	<u>27,423,500</u>		
Less Allowance For Doubtful Accounts	<u>(2,490,390)</u>		
Accounts Receivable, Net of Allowance	\$24,933,110		

Source: SFPUC, Financial Services

Once an account is delinquent, a series of notices are sent to the customer and if payment is still not made, action to shut-off the water supply is initiated. However, if the delinquent account is in the name of the property owner and payment is still not made despite such notices, the customer will receive a lien warning notice. After a lien notice is delivered, a lien hearing is held and, if the bill still remains outstanding, the lien is recorded and can only be removed upon full payment of all unpaid charges, plus administrative fees and interest. Liens not paid during the Fiscal Year in which they are recorded are transferred to the City Tax Collector's Office, Bureau of Delinquent Revenues for collection as a lien against the property. Accounts for which property transfers occurred prior to recording the lien and closed accounts with amounts less than \$25 are normally written off as uncollectible.

As a result of these collections processes, the SFPUC's annual write-offs for wastewater accounts remain relatively low. The following table shows a five-year history of write-offs for uncollectible accounts, excluding municipal customers:

TABLE 18
WRITE-OFFS FOR UNCOLLECTIBLE ACCOUNTS
As of Fiscal Year End, June 30

	Amount	% of Total Revenues
2011	\$3,559	0.002%
2012	5,870	0.002%
2013	6,020	0.003%
2014	2,800	0.001%
2015	3,852	0.002%

Source: SFPUC, Financial Services

Capacity Charges. Effective July 1, 2005, any customer requesting a new connection to the sewer system or requiring additional collection or treatment capacity as a result of any addition, improvement, modification or change in use of an existing connection as determined solely by the General Manager must pay a capacity charge for the new or additional capacity required to serve the customer. The capacity charge is site specific and may not be sold, traded or conveyed in a manner to another site or customer. The capacity charge does not convey or imply ownership in or of any facilities of the Wastewater Enterprise.

Effective July 1, 2014, capacity charges are assessed based on water meter equivalents, which provide a direct estimate of wastewater flow to the system, and Standard Industrial Classification (SIC) code, which accounts for wastewater strength. For a single residential customer with a 5/8" water meter, the wastewater capacity charge fee for the 2015-16 Fiscal Year is \$4,343. The capacity charge is adjusted on July 1st of each subsequent year by the annual change in the 20-City Average Construction Cost Index (CCI) published by ENR Magazine.

Capacity charges have averaged approximately 3.24% of revenues over the past five years.

Operating and Maintenance Expenses

“Operating and Maintenance Expenses” cover the general operational expenses of the Wastewater Enterprise. These expenses include labor and employment benefits, contractual services, materials and supplies, depreciation, general and administrative, services from other departments and other miscellaneous costs. See “HISTORICAL OPERATING RESULTS” and “EMPLOYEE RELATIONS.” Services from other departments include payment for services from other City departments, such as the City Attorney’s Office and the General Services Agency.

Allocation of Costs. Various common costs incurred by the SFPUC are allocated among the Wastewater Enterprise, the Water Enterprise and the Power Enterprise. The most recent cost allocation review was completed in 2014. Allocations are based on the SFPUC management’s best estimate and may change from year to year depending on activities undertaken by each enterprise and information available.

For Fiscal Year 2015-16, the SFPUC budgeted \$27.0 million in administrative costs to the Wastewater Enterprise, which is recorded as personal service expenses and also in other various operating expenses in the Wastewater Enterprise financial statements. For Fiscal Year 2014-15, the SFPUC allocated \$26.9 million in administrative costs to the Wastewater Enterprise.

Payments to/from the City. The SFPUC receives payments from other agencies of the City for their share of the proportionate cost of the service provided to them. Over the past five years, these service deliveries generated revenues that have averaged approximately 3% of Wastewater Enterprise revenues.

A variety of City departments provide services such as engineering, purchasing, legal, data processing, telecommunications, and human resources to the Wastewater Enterprise and charge amounts designed to recover

those costs. These charges totaled approximately \$11.9 million and \$11.5 million for the years ended June 30, 2015 and 2014, respectively.

On October 7, 2009, the City and County of San Francisco issued \$167.67 million in fixed-rate Certificates of Participation, Series 2009 C and D, to fund the construction of the headquarters of the SFPUC at 525 Golden Gate Avenue. Pursuant to a Memorandum of Understanding between the City and the SFPUC, the SFPUC will reimburse the City General Fund for all costs in connection with this City financing. Such obligations are subordinate to debt service on the Bonds and payments related thereto are allocated among the three SFPUC Enterprises. See “OBLIGATIONS PAYABLE FROM REVENUES—Other Obligations Payable from Revenues.”

Debt Management and Fund Balance Reserve Policies

The SFPUC has established “Debt Management Policies and Procedures” for debt financing under its jurisdiction. It has also established separate “Bond Disclosure Compliance Policies & Procedures”. These policies apply to all SFPUC enterprises, including the Wastewater Enterprise, and are intended to enable the SFPUC to effectively manage its debt issuance and administration practices. The “Debt Management Policies and Procedures” are reviewed bi-annually and revised, as necessary, with Commission approval. The most recent revisions were approved on March 24, 2015.

The SFPUC also established a “Fund Balance Reserve Policy” in 2010. This policy is applied to the long-term financial planning of all SFPUC enterprises, including the Wastewater Enterprise. The Fund Balance Reserve Policy states that operating and capital plans, budgets and rates will be projected and proposed for adoption such that all bond indenture requirements are met or exceeded and that Operating Fund Balance Reserves meet one or more of the following: total at least 15% of annual revenues; total at least 15% of annual expenditures; or result in Debt Service Coverage, on a bond indenture basis, including fund balance reserves available to pay debt service, of at least 1.25 times.

The SFPUC makes no representation that these policies will not be revised or amended and, except to the extent required for compliance with the terms of the Indenture, and makes no representation that these policies will be followed by the SFPUC.

Investment of SFPUC Funds

The SFPUC’s pooled deposits and investments are invested pursuant to State law and the investment policy established from time to time by the City Treasurer and overseen by the Treasury Oversight Committee. The current policy seeks the preservation of capital, liquidity and yield, in that order of priority. Under the City Treasurer’s current investment procedures, the SFPUC’s pooled deposits and investments are invested in the City’s larger pooled investment fund (the “City Pool”). Among other purposes, the City Pool serves in effect as a disbursement account for expenditures from the City’s various segregated and pooled funds. Investments are generally made so that securities can be held to maturity. The City Treasurer calculated the weighted average maturity of these investments as of December 31, 2015 to be 422 days.

The following table sets forth the approximate book values of the investments held in the City Pool reported by the City Treasurer as of December 31, 2015. The Wastewater Enterprise’s pooled deposits and investments accounted for approximately \$287.46 million, or approximately 3.8%, of such amounts.

TABLE 19
CITY POOLED INVESTMENT FUND
(AS OF DECEMBER 31, 2015)

Investments	Book Value (millions)
U.S. Treasuries	\$ 498.4
Federal Agencies	4,233.3
State & Local Government Agency Obligations	213.7
Public Time Deposits	1.2
Negotiable CDs	1,025.0
Commercial Paper	443.7
Medium Term Notes	722.5
Money Market Funds	185.1
Supranationals	74.9
Total	\$7,397.9

Source: Office of the Treasurer & Tax Collector of the City and County of San Francisco.

The SFPUC's non-pooled deposits and investments consist primarily of funds related to the SFPUC's Outstanding Bonds, which are invested pursuant to policy established by the SFPUC, subject to the restrictions contained in the applicable bond documentation.

Risk Management and Insurance

The SFPUC's risk management program encompasses both self-insured and insured coverage. Risk assessments and coverage are coordinated by the SFPUC Enterprise Risk Manager through the City Office of Risk Management. With certain exceptions, the City and SFPUC's general approach is to first evaluate self-insurance for the risk of loss to which it is exposed. Based on this analysis, the SFPUC has determined that mitigating risk through a "self-retention" mechanism is more economical as it manages risks internally and administers, adjusts, settles, defends, and pays claims from budgeted resources (i.e., pay-as-you-go). When economically more viable or when required by debt financing covenants, the SFPUC obtains commercial insurance.

At least annually, the City reviews and actuarially determines general liability and workers' compensation liabilities, which are recorded as "Damages and Claims" and "Accrued Worker's Compensation" in the financial statements.

The SFPUC does not maintain commercial earthquake coverage for the Wastewater Enterprise, with certain minor exceptions, such as a sub-limit for fire-sprinkler leakage due to earthquake under the Property Insurance program.

The following is a summary of the SFPUC’s coverage approach to risk:

Primary Risks	Typical Coverage Approach
General Liability	Self-Insured
Property	Purchased Insurance & Self-Insured
Workers’ Compensation	Self-Insured through City-Wide Pool
Other Risks	Typical Coverage Approach
Surety Bonds	Purchased and Contractually Transferred
Professional Liability	Combination of Self-Insured, Purchased Insurance and Contractual Risk Transfer
Errors & Omissions	Combination of Self-Insured, Purchased Insurance and Contractual Risk Transfer
Builders Risk	Purchased Insurance & Contractual Risk Transfer
Public Officials Liability	Purchased Insurance

The SFPUC’s property risk management approach varies depending on whether the facility is currently under construction, or if the property is part of revenue-generating operations. The majority of purchased insurance is for revenue-generating facilities, debt-financed facilities, and mandated coverage to meet statutory or contractual requirements.

Additionally, the SFPUC acknowledges the importance of aligning strategic planning to the risk management process and has implemented an Enterprise Risk Management (“ERM”) program to meet this need. The framework provides a strategic approach to managing operational risks. The ERM program has been implemented thus far at the SFPUC Business & Financial Services Bureau and Power Enterprises and plans are in place to continue implementation across the remainder of the SFPUC.

Capital Project Risk Management. For capital construction projects, the SFPUC has utilized traditional contractual risk transfer, owner-controlled insurance programs or other alternative insurance programs. Under the latter two approaches, the insurance program usually provides coverage for the entire construction project, along with multiple risk coverages, such as general liability and workers compensation. When a contractual risk transfer is used for capital construction risks, the SFPUC requires each contractor to provide its own insurance, while ensuring that the full scope of work be covered with satisfactory levels to limit the SFPUC’s risk exposure balanced by that which is commercially available.

Performance bonds are required, and Builder’s Risk insurance must be purchased, in most phases of the construction contracting process for such phases, as bid, performance, and payment or maintenance. Additionally, bonds may be required in other contracts where goods or services are provided to ensure compliance with applicable terms and conditions such as warranty.

Professional liability policies are either directly purchased insurance on behalf of the SFPUC, transferred through contract to the contracted professional, or retained through self-insurance on a case by case basis depending on the size, complexity or scope of construction or professional service contracts. Professional liability policies are typically purchased for services provided by engineers, architects, design professionals and other licensed or certified professional service providers.

Builder’s Risk policies of insurance are required to be provided either through an owner-controlled insurance program or the contractor on all construction projects for the full value of the construction.

HISTORICAL OPERATING RESULTS

Summary of Historical Operating Results and Debt Service Coverage

The historical results of operations reflected in the table below are based on the tables contained in the Financial Statements entitled “Statements of Revenues, Expenses and Changes in Net Assets” and “Statements of Cash Flows” for the Fiscal Years listed. However, operating and investment income presented in this table differs from the Change in Net Assets. This table presents Debt Service Coverage on a cash basis as prescribed under the Indenture and excludes certain elements of nonoperating revenue and expenses included in the Statements of Revenues, Expenses and Changes in Net Assets. The calculation of debt service coverage includes net operating income and funds not budgeted to be spent in the next twelve months and legally available to pay debt service, as permitted under the Indenture. The audited financial statements of the Wastewater Enterprise for Fiscal Years 2013-14 and 2014-15, prepared by the SFPUC and audited by KPMG LLP, independent certified public accountants, are attached as APPENDIX C to this Official Statement. The following table should be read in conjunction with such financial statements. KPMG LLP has not reviewed the following table. See “APPENDIX C—SFPUC WASTEWATER ENTERPRISE FINANCIAL STATEMENTS.”

TABLE 19
HISTORICAL REVENUE, OPERATING & MAINTENANCE EXPENSE
AND DEBT SERVICE COVERAGE FOR FISCAL YEARS ENDED JUNE 30
(IN THOUSANDS)⁽¹⁾

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
OPERATING & INVESTMENT REVENUE					
Sewer Service Charges	\$220,586	\$233,628	\$235,479	\$244,705	\$244,604
Other Revenues	4,875	4,983	5,738	5,869	5,041
Investing Activities	1,927	2,975	524	2,400	1,207
Capacity Fees ⁽²⁾	3,755	5,544	11,337	9,523	6,357
Total Revenues	<u>\$231,143</u>	<u>\$247,130</u>	<u>\$253,078</u>	<u>\$262,497</u>	<u>\$257,209</u>
OPERATING & MAINTENANCE EXPENSE⁽³⁾					
Salary and Fringe Benefits ⁽⁴⁾	\$ 73,630	\$ 82,709	\$ 84,155	\$ 85,114	\$ 76,396
Contractual Services	12,577	13,257	13,418	14,314	13,841
Materials and Supplies	8,338	8,921	10,481	10,830	9,815
Depreciation	42,217	44,799	46,347	48,402	50,254
Services of Other Departments	32,689	33,292	34,141	35,274	36,212
General and Administrative ⁽⁵⁾	507	2,815	3,760	396	10,232
Other ⁽⁶⁾	9,126	10,064	15,958	22,010	19,735
Total Operating Expenses	<u>\$179,084</u>	<u>\$195,857</u>	<u>\$208,260</u>	<u>\$216,340</u>	<u>\$216,485</u>
OPERATING AND INVESTMENT INCOME	<u>\$ 52,059</u>	<u>\$ 51,273</u>	<u>\$ 44,818</u>	<u>\$ 46,157</u>	<u>\$ 40,724</u>
COVERAGE CALCULATION⁽⁷⁾					
Operating and Investment Income	52,059	51,273	44,818	46,157	40,724
+ Adjustment to Investing Activities ⁽⁸⁾	108	(299)	337	(601)	127
+ Depreciation & Non-Cash Expenses	44,232	46,271	52,108	50,717	51,773
+ Changes in Working Capital ⁽⁹⁾	5,633	21,375	(13,795)	12,908	3,923
+ SRF Loan Payments	(16,503)	(10,983)	(9,421)	0	0
= "Net Revenue"	<u>\$ 85,529</u>	<u>\$107,637</u>	<u>\$ 74,047</u>	<u>\$109,181</u>	<u>\$ 96,547</u>
+ Other Available Funds ⁽¹⁰⁾	<u>22,769</u>	<u>50,761</u>	<u>80,094</u>	<u>109,807</u>	<u>134,413</u>
Funds Available for Bond Debt Service	<u>\$108,298</u>	<u>\$158,398</u>	<u>\$154,141</u>	<u>\$218,988</u>	<u>\$230,960</u>
Bond Debt Service	\$ 41,838	\$ 42,190	\$ 38,750	\$ 64,852	\$ 60,901
Debt Service Coverage (minimum 1.25)⁽¹¹⁾	2.59x	3.75x	3.98x	3.38x	3.79x
Sufficiency of Revenues (minimum 1.00)⁽¹²⁾	2.04x	2.55x	1.91x	1.68x	1.59x

⁽¹⁾ Operating and Investment Income presented in this table differs from the Change in Net Assets presented in the Statement of Revenues, Expenses and Changes in Net Assets in the Audited Financial Statements. See "APPENDIX C—SFPUC WASTEWATER ENTERPRISE FINANCIAL STATEMENTS." This table presents Debt Service Coverage as defined under the Indenture and excludes certain elements of nonoperating revenue and expenses included in the Statements of Revenues, Expenses and Changes in Net Assets. Examples of excluded elements are Grant Revenue, Interest Expense and Gains from Sale of Assets.

⁽²⁾ Decrease in Fiscal Year 2014-15 is due to rate structure change effective July 2014.

⁽³⁾ Pursuant to the Indenture, the Wastewater Enterprise's share of lease payments associated with the 2009 Golden Gate COPs relating to the SFPUC's 525 Golden Gate Avenue Headquarters is excluded from Operating and Maintenance Expense and, therefore, calculations of Net Revenues and Debt Service Coverage.

⁽⁴⁾ Decrease in Fiscal Year 2014-15 due to pension cost reduction resulting from implementation of GASB Statement No. 68. See "THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION—Employee Benefit Plans—Plan Financial Reports and Funded Status."

⁽⁵⁾ Increase in Fiscal Year 2014-15 due to net change of \$9.1 million in general liabilities accrual.

⁽⁶⁾ Decrease in Fiscal Year 2014-15 due primarily to lower Capital Project funds expense.

⁽⁷⁾ The Indenture defines "Net Revenue" on a cash basis.

⁽⁸⁾ Represents adjustments to show investing activities on a cash basis.

⁽⁹⁾ In accordance with GASB Statement No. 68, roughly \$10 million related to pensions was recognized as deferred inflows of resources in Fiscal Year 2014-15, driving the decrease in working capital. See "THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION—Employee Benefit Plans—Plan Financial Reports and Funded Status."

⁽¹⁰⁾ Per the Indenture, in addition to current year cash flow, includes all funds except for Trust and Agency Funds not budgeted to be spent in such 12 months and legally available to pay debt service.

⁽¹¹⁾ Debt Service Coverage calculated based on Net Revenues and certain available fund balances of the SFPUC or Wastewater Enterprise.

⁽¹²⁾ Unaudited. The Wastewater Enterprise's share of the lease payments associated with the 2009 Golden Gate COPs is included for purposes of Sufficiency of Revenues calculation.

Source: SFPUC, Financial Services

Management Discussion

Certain Impacts of the Current Drought. In Fiscal Year 2014-15 and Fiscal Year 2015-16, budgeted sewer charge revenue was determined assuming a 52.4 mgd and 51.1 mgd billed sewer discharge volume, respectively. Actual billed sewer discharge volumes in Fiscal Year 2014-15 were 50.6 mgd, a 3.5% decrease from budgeted volumes, while Fiscal Year 2015-16 projected billed volumes are 48.5 mgd, a 5.4% decrease from budgeted amounts. Actual Wastewater Enterprise sewer charge revenues (including City Departments) for Fiscal Year 2014-15 were \$248.2 million, as compared to budgeted sewer charge revenues of \$264.5 million for that Fiscal Year, representing a 6.1% decrease. As of February __, projected sewer charge revenues for Fiscal Year 2015-16 are \$250 million, as opposed to budgeted sewer charge revenues of \$262.2 million, representing a projected 4.6% decrease in Fiscal Year 2015-16. Reduced water sales stemming from drought-reduction efforts contributed to such decrease in Revenues. See "THE WASTEWATER ENTERPRISE—Wastewater Enterprise Rates and Charges."

The Ten-Year Financial Plan adopted by the Commission in February 2016 for Fiscal Year 2016-17 to Fiscal Year 2025-26, adjusted projected sewer discharge volumes down to 48.5 mgd throughout the ten-year period. The SFPUC anticipates that the potential financial impacts of such decreases in sewer discharge volumes will be offset by both cost reductions and increased rates. See "THE WASTEWATER ENTERPRISE—Current System Demand," "HISTORICAL OPERATING RESULTS," "PROJECTED OPERATING RESULTS" and "RISK FACTORS—Risks Related to Wastewater Enterprise Facilities and Operation—Unanticipated Decreases in Water Sales Volumes."

PROJECTED OPERATING RESULTS

The following table presents projected operating results for the Wastewater Enterprise. These projections are based on an analysis of historical trends, adjusted where appropriate for known or anticipated changes in operations. The projections are also based on the assumption that all rate increases necessary to finance future expenses, including the SSIP and other capital programs, will be approved and implemented.

THESE PROJECTIONS, ALL OR SOME OF WHICH MAY OR MAY NOT BE REALIZED, ARE BASED ON THE ISSUANCE OF ADDITIONAL BONDS FOR THE CAPITAL PROGRAM, INCLUDING SSIP. CHANGES IN THE CIRCUMSTANCES THAT FORM THE BASES FOR THE ASSUMPTIONS USED IN DEVELOPING THESE PROJECTIONS, AS WELL AS UNANTICIPATED EVENTS, MAY OCCUR SUBSEQUENT TO THE DATE OF THE OFFICIAL STATEMENT. THEREFORE, ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THE PROJECTIONS SHOWN.

TABLE 20
PROJECTED REVENUE, OPERATING AND MAINTENANCE EXPENSE
AND DEBT SERVICE COVERAGE FOR FISCAL YEAR ENDING JUNE 30
(IN THOUSANDS) ⁽¹⁾

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
REVENUE					
Sewer Service—Base Rates	\$238,102	\$250,007	\$267,508	\$296,934	\$338,504
Sewer Service—Rate Increases ⁽²⁾	11,905	17,501	29,426	41,571	47,391
Interest Income ⁽³⁾	800	1,326	1,480	1,633	1,773
Other Miscellaneous Income	4,604	3,427	3,474	3,522	3,573
Total Revenues [†]	<u>\$255,411</u>	<u>\$272,261</u>	<u>\$301,888</u>	<u>\$343,660</u>	<u>\$391,241</u>
OPERATING AND MAINTENANCE EXPENSE ⁽⁴⁾⁽⁵⁾					
O&M Expenses	\$163,068	\$161,450	\$165,545	\$170,442	\$175,512
NET REVENUE ⁽⁶⁾	<u>\$92,343</u>	<u>\$110,811</u>	<u>\$136,343</u>	<u>\$173,218</u>	<u>\$215,729</u>
plus AVAILABLE FUND BALANCE	\$121,246	\$119,599	\$136,258	\$152,536	\$162,553
FUNDS AVAILABLE FOR DEBT SERVICE	<u>\$213,590</u>	<u>\$230,410</u>	<u>\$272,601</u>	<u>\$325,754</u>	<u>\$378,282</u>
Debt Service ^{(7) (8)}					
2010 Series A Bonds	2,276	9,038	9,042	9,042	9,040
2010 Series B Bonds (Net)	7,200	7,200	7,200	7,200	7,200
2013 Series A Bonds	36,109	18,103	16,341	16,398	16,486
2013 Series B Bonds	14,428	14,428	14,428	14,428	14,428
Future Parity Obligations ^{(8) (9)}	-	-	25,670	65,748	87,725
TOTAL DEBT SERVICE ⁽⁸⁾	<u>\$60,013</u>	<u>\$48,768</u>	<u>\$72,681</u>	<u>\$112,816</u>	<u>\$134,879</u>
DEBT SERVICE COVERAGE (minimum 1.25) ^{(8) (10)}	<u>3.56x</u>	<u>4.72x</u>	<u>3.75</u>	<u>2.89x</u>	<u>2.80x</u>
SUFFICIENCY OF REVENUES (minimum 1.00) ^{(8) (11)}	<u>1.50x</u>	<u>2.22x</u>	<u>1.84x</u>	<u>1.51x</u>	<u>1.58x</u>

† Totals may not add due to independent rounding.

(1) Amounts set forth in the table are projections. Actual results may differ materially from these projections. See “FORWARD-LOOKING STATEMENTS” and “—Assumptions Used in Projections.”

(2) Reflects adopted annual rate increases of 5%, 7%, and 11% approved for Fiscal Years 2015-16 through 2017-18 in May, 2014. Average annual rate increases of 14% are assumed the next two years. See “—Assumptions Used in Projections.”

(3) Assumes approximately 1.0% earnings rate on invested cash balance over projection period.

(4) O&M net of depreciation and other non-cash items per Indenture.

(5) Pursuant to the Indenture, the Wastewater Enterprise’s share of lease payments associated with the 2009 Golden Gate COPs relating to the SFPUC’s 525 Golden Gate Avenue Headquarters is excluded from Operating and Maintenance Expense and, therefore, calculations of Net Revenues and Debt Service Coverage.

(6) Represents Net Revenues under the Indenture.

(7) Debt Service on Outstanding Bonds net of capitalized interest and anticipated BABs Interest Subsidy Payment.

(8) Preliminary, subject to change.

(9) Includes net debt service on 2016 Series A Bonds. Assumes future issuance of Additional Series of Bonds of approximately \$480 million in Fiscal Year 2016-17, \$230 million in Fiscal Year 2017-18 and \$760 million in Fiscal Year 2018-19. Standard assumptions include 30-year term, 5% interest rate, and 2 years of capitalized interest. Projections also assume SRF Loan funding for Fiscal Year 2016-17 and Fiscal Year 2018-19 at an annual interest rate of 3%.

(10) Pursuant to the Indenture, Debt Service Coverage calculated based on Net Revenues and certain available fund balances of the SFPUC or Wastewater Enterprise.

(11) The Wastewater Enterprise’s share of the lease payments associated with the 2009 Golden Gate COPs is included for purposes of Sufficiency of Revenues calculation.

Source: SFPUC, Financial Services

Assumptions Used in Projections

In the preparation of the projections set forth in Table 20, the SFPUC has made certain assumptions with respect to conditions that may occur in the future. While the SFPUC believes these assumptions are reasonable for the purpose of the projections, they are dependent on future events, and actual conditions are likely to differ, perhaps materially, from those assumed. To the extent actual future conditions differ from those assumed by the SFPUC or provided to the SFPUC by others, actual results will vary from those projected. This projected information has not been compiled, reviewed or examined by the SFPUC's independent auditors.

The assumptions used in the table above are as follows:

Projected Revenue and Rate Increases. The projected revenues are based on projected wastewater service sales and the schedules of rates to be effective in each year. In May 2014, the SFPUC adopted schedules of rates to be effective in Fiscal Years 2014-15 through 2017-18. The adopted schedules provide for rate increases of 5% in Fiscal Year 2014-15 and Fiscal Year 2015-16, 7% in Fiscal Year 2016-17, and 11% in Fiscal Year 2017-18. Average rate increases for the remainder of the projection period are assumed at 14% for Fiscal Year 2018-19 and Fiscal Year 2019-20. Any such rate increases will be subject to Commission approval.

Projected Operating and Maintenance Expenses. Operating and Maintenance Expense costs are projected to grow by 3% annually for the projection period.

Projected Debt Service. Projected debt service reflects the scheduled debt service on the 2010 Series A Bonds, the 2010 Series B Bonds, the 2013 Series A Bonds and the 2013 Series B Bonds, and the estimated debt service on the 2016 Series A Bonds and future series of Additional Bonds (net of capitalized interest and expected BABs Interest Subsidy Payment relating to 2010 Series B Build America Bonds) and Parity State Loans.

Issuances of Additional Bonds and Parity State Loans assume borrowing rates ranging from 3%-5%, no reserve account and, with respect to the Additional Bonds but not the Parity State Loans, up to two years of capitalized interest. Actual issuance dates, borrowing rates and capitalized interest periods for Additional Bonds may vary from these assumptions.

Following the issuance of the 2016 Series A Bonds, the SFPUC anticipates that it will issue Additional Bonds in Fiscal Year 2016-17, in an aggregate principal amount of approximately \$480 million, in order to fund the SSIP and other Wastewater Enterprise capital program projects, as well as Parity State Loans to fund certain SSIP projects. The SFPUC may also issue refunding bonds from time to time in response to market conditions in order to achieve debt service savings.

RISK FACTORS

This section provides a general overview of certain risk factors which should be considered, in addition to the other matters set forth in this Official Statement, in evaluating an investment in the 2016 Series A Bonds. This section is provided for convenience and is not meant to be a comprehensive or definitive discussion of the risks associated with an investment in the 2016 Series A Bonds, and the order in which this information is presented does not necessarily reflect the relative importance of various risks.

Potential investors in the 2016 Series A Bonds are advised to consider the following factors, among others, and to review this entire Official Statement to obtain information essential to the making of an informed investment decision. Any one or more of the risk factors discussed below, among others, could lead to a decrease in the market value and/or in the marketability of the 2016 Series A Bonds or adversely affect the ability of the SFPUC to make timely payments of principal of or interest on the 2016 Series A Bonds. There can be no assurance that other risk factors not discussed herein will not become material in the future, and the SFPUC has not undertaken to update investors about the emergence of the risk factors in the future.

General

The ability of the SFPUC to comply with its covenants under the Indenture and to generate Net Revenues sufficient to pay principal of and interest on the 2016 Series A Bonds may be adversely affected by actions and events outside of the control of the SFPUC and may be adversely affected by actions taken (or not taken) by voters, property owners, taxpayers or persons obligated to pay fees and charges. Among other matters, general and local economic conditions and changes in law and government regulations could adversely affect the amount of Revenues realized by the SFPUC or significantly raise the cost of operating the Wastewater Enterprise.

In addition, the realization of future Revenues is subject to, among other things, the capabilities of management of the SFPUC, the ability of the SFPUC to provide service to its customers, the ability of the SFPUC to establish, maintain and collect charges from its customers and the ability of the SFPUC to establish, maintain and collect rates and charges sufficient to pay for Operation and Maintenance Costs of the Wastewater Enterprise, the Bonds and other obligations payable from Revenues. See “FINANCIAL OPERATIONS” and “OBLIGATIONS PAYABLE FROM REVENUES.”

Limited Obligation

If the SFPUC defaults on its obligations to make debt service payments on the Bonds, the Trustee has the right under the Indenture to accelerate the total unpaid principal amount of the Bonds. However, in the event of a default and such acceleration, there can be no assurance that the SFPUC, and correspondingly the Trustee, will have sufficient moneys available for payment of the Bonds.

The SFPUC is not obligated to pay the principal of, premium, if any, or interest on the 2016 Series A Bonds except from Net Revenues of the Wastewater Enterprise. The SFPUC has no taxing power. The General Fund of the City is not liable for the payment of the principal of, premium, if any, or interest on the 2016 Series A Bonds, and neither the credit nor the taxing power of the City is pledged to the payment of the principal of, premium, if any, or interest on the 2016 Series A Bonds. The 2016 Series A Bonds are not secured by a legal or equitable pledge of, or charge, lien or encumbrance upon, any of the property of the City or of the SFPUC or any of its income or receipts, except Net Revenues.

No Reserve Account

No Reserve Account has been established for the 2016 Series A Bonds. The Reserve Accounts established with respect to other Series of Bonds do not secure the 2016 Series A Bonds.

Commercial Paper Credit Facilities

The bank credit facilities supporting the Wastewater Commercial Paper Notes are subject to early termination upon the occurrence of certain events, including the failure of the Wastewater Enterprise to make certain payments, the occurrence of certain bankruptcy or insolvency-related events or the reduction below specified levels or the withdrawal or suspension of ratings on certain obligations of the Wastewater Enterprise payable from Net Revenues. Upon the occurrence of such termination, one or more of the following would likely occur: (a) the SFPUC would be prohibited from issuing additional notes supported by such credit facilities; (b) any principal of or interest on Wastewater Commercial Paper Notes paid from a draw on a credit support facility would become a reimbursement obligation of the Wastewater Enterprise to the bank providing such facility, and such reimbursement obligation could bear interest at rates higher than the rates borne by the Wastewater Commercial Paper Notes; and (c) amortization of such reimbursement obligation would be required. The Wastewater Commercial Paper Notes and any reimbursement obligations are payable from Net Revenues on a basis subordinate to the Bonds. See “OBLIGATIONS PAYABLE FROM REVENUES—Subordinate Debt and Commercial Paper” and “FINANCING PLAN FOR WASTEWATER ENTERPRISE CAPITAL PROGRAM—Interim Funding of Capital Program.”

Limitations on Rate-Setting

The generation of Revenues sufficient to satisfy the requirements of the Indenture and to pay the principal of and interest on the 2016 Series A Bonds will require the SFPUC to raise wastewater rates payable by its customers. The increase of wastewater rates is subject to various substantive and procedural requirements and limitations. See “CONSTITUTIONAL, STATUTORY AND CHARTER LIMITATIONS.”

Initiative, Referendum and Charter Amendments and Future Legislation

Under the State Constitution, the voters of the State have the ability to initiate legislation and require a public vote on legislation passed by the State Legislature through the powers of initiative and referendum, respectively. The SFPUC is unable to predict whether any such initiatives might be submitted to or approved by the voters, the nature of such initiatives, or their potential impact on the SFPUC or the Wastewater Enterprise. See “CONSTITUTIONAL, STATUTORY AND CHARTER LIMITATIONS.”

Under the Charter, the voters of the City can restrict or revise the powers of the SFPUC through the approval of a Charter amendment or other initiative. For example, in June 1998 the electorate of the City approved Proposition H which, subject to certain exceptions, including a limited exception to raise rates to pay debt service on voter-approved debt, and froze the SFPUC’s water and sewer rates through July 1, 2006. The SFPUC can give no assurance that the electorate will not seek in the future to freeze or limit rate increases. See “CONSTITUTIONAL, STATUTORY AND CHARTER LIMITATIONS—Charter Limitations.”

In addition, the SFPUC is subject to various laws, rules and regulations adopted by the local, State and federal governments and their agencies. The SFPUC is unable to predict the adoption or amendment of any such laws, rules or regulations, or their effect on the operations or financial condition of the SFPUC.

Risks Related to Wastewater Enterprise Facilities and Operation

The operation of the Wastewater Enterprise, and the physical condition of the Wastewater Enterprise facilities, are subject to a number of risk factors that could adversely affect the reliability of the SFPUC to provide sewage and stormwater collection and treatment services, or increase the operating expenses of the Wastewater Enterprise. Prolonged damage to the Wastewater Enterprise facilities could interrupt the ability of the SFPUC to realize Revenues sufficient to pay principal of and interest on the Bonds, or require the SFPUC to increase expenditures for repairs significantly enough to adversely impact the SFPUC’s ability to pay the principal of or interest on the Bonds. These factors could include, among others, the following.

Aging Facilities. Certain Wastewater Enterprise facilities are near the end of their useful life. Aging assets result in decreased reliability due to sewer line breakage and unplanned facility outages and place a greater maintenance burden on Wastewater Enterprise operations. The average useful life of the sewer system’s sewers (i.e., gravity pipes 36 inches or less in diameter) is approximately 110 years, though many conditions, such as pipe material and soil conditions, affect actual pipe lifespan. The recent historical rate of replacement for the Wastewater Enterprise’s sewer pipes has been at a 200-year replacement cycle. See “THE WASTEWATER ENTERPRISE – Combined Sewage and Stormwater System.” Aging sewers, if left unaddressed, would result in increasing system failures, sinkholes in the street, reduced system reliability and possibly risks to public health and safety and the environment.

The SFPUC is undertaking extensive efforts to increase the replacement rate significantly and to address aging infrastructure, with the objective of ultimately increasing the aggregate miles of sewer replaced each year and achieving a 110-year replacement cycle. The capital program, including the SSIP, is intended to help increase system reliability through equipment and facility improvement including, among other things, increasing sewer inspections and condition assessments in order to more effectively prioritize areas of pipeline replacement. In addition to the collection system, other types of facilities, such as treatment plants and pump stations, also face reliability issues due to age and poor condition. The aging system will be further challenged in connection with the SSIP because it must remain operational during project delivery. Specifically, during construction of SSIP capital

projects, all work, including any required partial, temporary facility shutdowns, will have to be carefully scheduled so that the plants remain functional and in permit compliance with all permits and other applicable requirements.

Limited Redundancy. Many critical Wastewater Enterprise facilities must remain constantly operational to collect and treat sewage and stormwater flows in accordance with Regional Water Quality Control Board requirements. See “REGULATORY MATTERS.” Certain of these Wastewater Enterprise facilities and systems are aging and have limited redundancy. See “—Aging Facilities.” In addition, the Oceanside Plant and the other facilities in the Westside Watersheds are not interconnected with the Southeast Plant, the North Point Facility or the other facilities in the Bayside Watersheds. See “—THE WASTEWATER ENTERPRISE—Wastewater Treatment.” This limited redundancy in facilities and systems, including the absence of an interconnection between the treatment plants and other facilities located in the two separate watersheds, limits the SFPUC’s ability to take components of the system out of service for maintenance and repairs, or to provide backup treatment and other facilities in the event of an unplanned outage. For example, work at the Southeast Treatment Plant will be done while the plant is operating, requiring coordination of facility and systems shutdowns with construction plans. During dry weather the collection system does have excess storage capacity due to the transport/storage structures, however, which can provide up to 200 million gallons worth of capacity and help facilitate treatment flexibility when needed.

The SFPUC expects the SSIP to address certain redundancy issues, including: power supply redundancy for the three treatment plants, and rehabilitation and addition of redundant pumps as necessary at major pump stations. Interconnection of the facilities in the Westside Watershed and Bayside Watershed is not included in the SSIP, however. See “THE WASTEWATER ENTERPRISE—Wastewater Treatment.”

Seismic Hazards. The San Francisco Bay Area is in a seismically active region. The San Andreas Fault lies immediately west of the City, and the Hayward fault is approximately fifteen miles to the east. A third major fault, the Calaveras Fault, is a branch of the Hayward Fault and lies east of the Hayward Fault.

During the past 150 years, the San Francisco Bay Area has experienced several major and numerous minor earthquakes. The largest was the 1906 San Francisco earthquake along the San Andreas Fault with an estimated magnitude of 8.2 on the Richter scale. Another was the 1868 Hayward earthquake along the Hayward Fault. The most recent significant earthquake was the October 1989 Loma Prieta earthquake on the San Andreas Fault, which had a magnitude of 7.1 on the Richter scale and an epicenter near Santa Cruz, approximately fifty-five miles south of the City. According to a recent United States Geological Survey, a significant earthquake along these or other faults has a high probability of occurrence during the repayment period of the 2016 Series A Bonds. A significant earthquake that impacts the City could adversely affect the ability of Wastewater Enterprise customers to pay for service and the capital and operating expenses of the Wastewater Enterprise.

Older facilities may have an increased risk of failure in the event of an earthquake. SSIP and other portions of the capital program include planned and proposed improvements to such older facilities for the purpose of improving seismic reliability.

With certain minor exceptions, the SFPUC does not maintain commercial earthquake insurance coverage for the facilities. See “FINANCIAL OPERATIONS – Risk Management and Insurance”.

Other Natural and Man-Made Disasters. Other natural disasters, including without limitation flooding, landslides, and fire, or man-made disasters or accidents, including without limitation natural gas pipeline failures or explosions, could interrupt operation of the Wastewater Enterprise or otherwise adversely impact the Wastewater Enterprise’s ability to provide services or collect Revenues. See “—Unanticipated Decreases in Water Sales Volumes” and “—Potential Impacts of Climatic Change and Sea Level Rise.”

Statutory and Regulatory Compliance. The operation of the Wastewater Enterprise is subject to a variety of federal and State statutory and regulatory requirements concerning matters such as water quality, discharge requirements, and biosolids management. SFPUC’s failure to comply with applicable laws and regulations could result in significant fines and penalties. In addition to claims by private parties, changes in the scope and standards for public agency wastewater systems such as the Wastewater Enterprise may also lead to administrative orders issued by federal or State regulators. Future compliance with increased regulatory requirements or enforcement

orders could impose substantial additional operating expenses on the Wastewater Enterprise. See “REGULATORY MATTERS.”

Unanticipated Decreases in Water Sales Volumes. Under the SFPUC’s current rate structure, Wastewater Enterprise customer bills are calculated primarily based on metered water volumes (with certain “flow factor” adjustments) and rates are established based upon expected metered water volumes. As a result, water deliveries at less than expected levels would result in lower than expected Revenues. Reduced water deliveries could result from, among other circumstances, reduced water supply, conservation measures or damage to storage, transportation, treatment or delivery systems of the SFPUC’s Water Enterprise. See “FINANCIAL OPERATIONS – Wastewater Enterprise Rates and Charges” and “FINANCIAL OPERATIONS – Revenues – Certain Impacts of Current Drought” and “Seismic Hazards” and “Other Natural or Man-Made Disasters” above.

Increased Operation and Maintenance Expenses. There can be no assurance that the operation and maintenance expenses of the SFPUC, such as wages and salaries, pension and other benefits, and purchased power costs, will not increase, perhaps substantially. See “FINANCIAL OPERATIONS – Operation and Maintenance Expenses.”

Labor Actions. The Charter prohibits SFPUC and other City employees from striking. Nonetheless, a work stoppage or other labor action could limit the SFPUC’s ability to operate the Wastewater Facilities and adversely impact Revenues.

Casualty Losses. The SFPUC’s risk management program includes both self-insured and insured coverages; however, the program does not provide coverage for every conceivable risk of loss. Damage attributable to seismic events and environmental pollution are excluded. In situations where the SFPUC has not purchased commercial coverage, the Wastewater Enterprise has a ‘self-retention’ program that it administers and retains budgeted resources internally to provide coverage for loss liabilities. See also “FINANCIAL OPERATIONS – Risk Management and Insurance.” The SFPUC is not required to either insure against or self-insure against every potential risk of loss, and there is a risk that damage or destruction of property and equipment comprising the Wastewater Enterprise could occur for which no insurance or self-insurance funds will be available. There can be no assurance that insurance providers will pay claims under any policies promptly, or at all, should a claim be made under such policies in connection with property loss or damage. It is possible that an insurance provider will refuse to pay a claim, especially if it is substantial, and force the SFPUC to sue to collect on or settle the insurance claim. Further, there can be no assurances that any insurance proceeds will be sufficient to rebuild or replace any damaged property.

Safety and Security. Military conflicts and terrorist activities may adversely impact the operations of the Wastewater Enterprise or the finances of the SFPUC. The SFPUC continually plans and prepares for emergency situations and immediately responds to ensure services are maintained. However, there can be no assurance that any existing or additional safety and security measures will prove adequate in the event that terrorist activities are directed against the assets of the Wastewater Enterprise or that costs of security measures will not be greater than presently anticipated.

Cybersecurity. The SFPUC has adopted information security policies and maintains an active information security program, which has been reviewed by independent third-party consultants engaged by the SFPUC. The SFPUC has appointed a Chief Information Security Officer who is responsible for annual updates to the SFPUC’s information security policies and is charged with identifying and monitoring threats which are typically addressed by the SFPUC’s information technology services team, and educating staff concerning vulnerabilities. The SFPUC’s information security policies include policies intended to support network, computer and mobile device security (both digital and physical), e-mail security, anti-virus requirements, operating system and application patching, encryption requirements and secure computing asset disposal. The SFPUC’s information security policies further include a guideline that, at least every two years, the SFPUC will engage external consultants to audit and assess the internal controls of the SFPUC’s information security program.

The SFPUC does not purchase liability insurance covering cyber-losses. The SFPUC does require its vendors to purchase Technology Errors & Omissions coverage.

Cost of the SSIP; Timely Completion of the SSIP

The SSIP is the largest component of the Wastewater Enterprise's capital program. The completion of various SSIP projects could be delayed and the overall cost of such projects could increase for a variety of reasons, including, but not limited to, actions by State or federal regulatory agencies, voter initiatives, legal challenges on environmental or other grounds, prolonged contractor disputes, changes in price of commodities or labor, unanticipated geologic or soil conditions, or the occurrence of an earthquake or other natural disaster. See "SEWER SYSTEM IMPROVEMENT PROGRAM – Potential Changes to SSIP Projects."

The SFPUC intends to finance the development and implementation of SSIP projects through the issuance of Additional Bonds and Parity State Loans. If SSIP projects are completed at the cost and on the schedule presently under consideration by the SFPUC, the cost of such projects will require a significant planned increase in the amount of debt payable from Revenues, which will result in significant planned rate increases. Correspondingly, debt service coverage for the Bonds will also be significantly lower than it is currently or has been historically. Were SSIP projects delayed or the cost of SSIP projects to increase without an offsetting reduction in the program scope, the SFPUC would be required either to incur more debt payable from Revenues or to cash fund those costs from Revenues. Either option would likely increase rates payable by SFPUC customers to levels higher than presently anticipated by the SFPUC, and could result in lower debt service coverage ratios than presently anticipated by the SFPUC. See "FINANCING PLAN FOR CAPITAL IMPROVEMENTS."

Over the next several years the SFPUC expects to issue additional revenue bonds and Parity State Loans to fund development and implementation of SSIP projects. The issuance by the SFPUC of such debt is subject to various approval requirements. See "OBLIGATIONS PAYABLE FROM REVENUES."

The ability of the SFPUC to issue additional revenue bonds and Parity State Loans to finance the development and implementation of SSIP projects may also be adversely affected by any adverse change in the financial position of the SFPUC or by general market conditions. There can be no assurance that the SFPUC will be able to issue revenue bonds and Parity State Loans in an aggregate amount sufficient to finance all of the costs of completing the SSIP projects.

Construction Related Risks

General. Construction projects in the capital program, including the SSIP, are subject to ordinary construction risks and delays applicable to projects of their kind, including but not limited to (i) inclement weather affecting contractor performance and timeliness of completion, which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors; (ii) contractor claims or nonperformance; (iii) failure of contractors to execute within contract price; (iv) work stoppages or slowdowns; (v) failure of contractors to meet schedule terms; or (vi) unanticipated project site conditions, including the discovery of hazardous materials on the site or other issues regarding compliance with applicable environmental standards, and other natural hazards or seismic events encountered during construction. In addition, given the limited redundancy of certain Wastewater Enterprise facilities and systems, such systems must remain operational during construction, which could affect construction schedules or budgets. See "—Risks Related to Wastewater Enterprise Facilities and Operation."

The SFPUC expects that numerous other large construction projects to be scheduled during the same time period as the SSIP, which could potentially limit contractor resources available to the SFPUC during bidding or construction phases. The SFPUC conducts regular contractor outreach and expects to continue to work closely with potential contractors to attempt to mitigate the impact of such simultaneous scheduling of large projects.

Another SSIP construction related risk is that much of the work will occur at a single physical location, the Southeast Plant. The phasing staging, materials and/or equipment laydown areas, parking, truck routes, security, and operating needs are being clearly defined for the plant and each individual project by the SFPUC, with consideration of multiple project interfaces. The plant will remain in operation while these projects are being implemented. Currently logistics planning is identifying on and off site parking, construction laydown and staging areas, truck routing for regular operations and construction and the overall facility and equipment shut-down schedule required to maintain permit compliance and complete the SSIP. Where land acquisition or agreements are

required for siting, staging, laydown area, storage, or parking to support the projects, land acquisition could potentially delay a project. See “—Land Acquisition.”

Increased construction costs or delays for any reason in connection with the SFPUC’s capital program and the SSIP could impact the Wastewater Enterprise’s financial condition in general and the implementation of its capital programs in particular.

Land Acquisition. Certain SSIP projects will require the SFPUC to acquire land in and around its facilities in the City. For example, the Southeast Plant is located in densely urban environment with industrial and residential buildings—so securing space will be critical.

A project manager has been hired to manage land issues, because many parcels require long lead times to gain site control. Property is challenging to acquire or lease. Real estate prices in the City and the San Francisco Bay Area can be volatile in general and appear to have been increasing during recent years. The SSIP currently includes an estimated \$98.3 million related to future land purchases required to expand the Southeast Plant and an estimated \$11.3 million related to potential land leases for construction staging areas. At present, the SFPUC cannot predict the final cost of such acquisitions and leases; but it is possible that such costs will exceed budgeted amounts.

Potential Impacts of Climatic Change and Sea Level Rise

The impacts of climate change that would most affect the Wastewater Enterprise relate to changing rainfall patterns, sea level rise and rising tides. Existing climate change models show varied results in terms of projected rainfall patterns making proactive, long-term planning difficult. If they do occur, significant increases in rainfall (intensity, duration or frequency or any combination thereof) could exceed the sewer system’s capacity to collect and store stormwater and wastewater for treatment. SFPUC is investigating a partnership with Lawrence Berkeley National Laboratory to better predict and characterize expected long-term rainfall patterns.

Projected levels for sea level rise and rising tides could result in a backflow (or inflow) of San Francisco Bay water into the sewer system at the lowest weir elevation and increased infiltration due to higher groundwater in coastal areas. During certain high tides, the Wastewater Enterprise already has begun to experience occasional inflows and infiltration from the San Francisco Bay into its sewer system. In response, the Wastewater Enterprise is planning to implement, through the SSIP, a monitoring program and backflow mitigation measures at some points where tides may backflow into the system.

Certain low-lying areas of the City are vulnerable to flooding, especially during seasonal high tides coupled with intense rainfall. This could be exacerbated with predicted sea level rise and possible higher-intensity storms. The SFPUC has embarked on a City-wide flood resilience study to characterize the impact of storms, develop a risk-based framework to identify and prioritize its investments in projects to reduce or mitigate flooding risks, and provide a set of flood risk reduction measures for storms that exceed the capacity of the SFPUC’s stormwater collection and treatment systems. In parallel with the flood resilience study, the SFPUC is expediting the development of certain capital projects in key areas subject to flooding risk in order to improve stormwater management.

Economic, Political, Social and Environmental Conditions

Changes in economic political, social, or environmental conditions on a local, state, federal, and/or international level may adversely affect investment risk generally. Such conditional changes may include (but are not limited to) fluctuations in business production, consumer prices, or financial markets, unemployment rates, availability of skilled labor, technological advancements, shortages or surpluses in natural resources or energy supplies, changes in law, social unrest, fluctuations in the crime rate, political conflict, acts of war or terrorism, environmental damage, and natural disasters.

Bankruptcy

The SFPUC, being an enterprise department of the City, likely cannot itself file for bankruptcy. While an involuntary bankruptcy petition cannot be filed against the City, the City is authorized to file for bankruptcy under certain circumstances. Should the City file for bankruptcy, there could be adverse effects on the holders of the 2016 Series A Bonds.

To the extent that the Revenues are “special revenues” under the United States Bankruptcy Code (the “Bankruptcy Code”), then Revenues collected after the date of the bankruptcy filing should be subject to the lien of the Indenture. If any or all of the Revenues are determined not to be “special revenues,” then any such amounts collected after the commencement of the bankruptcy case will likely not be subject to the lien of the Indenture. The holders of the 2016 Series A Bonds may not be able to assert a claim against any property of the City other than the Revenues, and if any or all of the Revenues are no longer subject to the lien of the Indenture, then there may be limited, if any, funds from which the holders of the 2016 Series A Bonds are entitled to be paid.

The Bankruptcy Code provides that “special revenues” can be applied to necessary operating expenses of the project or system, before they are applied to other obligations. This rule applies regardless of the provisions of the transaction documents. It is not clear precisely which expenses would constitute necessary operating expenses, and any definition in the transaction documents may not be applicable.

If the City is in bankruptcy, the parties (including the Trustee and the holders of the 2016 Series A Bonds) may be prohibited from taking any action to collect any amount from the City or to enforce any obligation of the City, unless the permission of the bankruptcy court is obtained. These restrictions may also prevent the Trustee from making payments to the holders of the 2016 Series A Bonds from funds in the Trustee’s possession. The rate covenants (see “SECURITY FOR THE BONDS – Rate Covenants; Rates and Charges”) may not be enforceable in bankruptcy by the Trustee or the holders of the 2016 Series A Bonds.

Revenues are deposited with and held by the Treasurer and may be commingled with other City funds. See “SECURITY FOR THE BONDS – Flow of Funds”. If the City goes into bankruptcy, the City may not be required to turn over to the Trustee any Revenues that are in its possession at the time of the bankruptcy filing. In addition, if the City has possession of Revenues (whether collected before or after commencement of the bankruptcy) and if the City does not voluntarily turn over such Revenues to the Trustee, it is not entirely clear what procedures the Trustee and the holders of the 2016 Series A Bonds would have to follow to attempt to obtain possession of such Revenues, how much time it would take for such procedures to be completed, or whether such procedures would ultimately be successful.

The City may be able to borrow additional money that is secured by a lien on any of its property (including the Revenues), which lien could have priority over the lien of the Indenture, or to cause some of the Revenues to be released to it, free and clear of lien of the Indenture, in each case as long as the bankruptcy court determines that the rights of the Trustee and the holders of the 2016 Series A Bonds will be adequately protected.

If the City is in bankruptcy it may be able, without the consent and over the objection of the Trustee and the holders of the 2016 Series A Bonds, to alter the priority, interest rate, principal amount, payment terms, collateral, maturity dates, payment sources, covenants (including tax-related covenants), and other terms or provisions of the Indenture and the 2016 Series A Bonds, as long as the bankruptcy court determines that the alterations are fair and equitable.

There may be delays in payments on the 2016 Series A Bonds while the court considers any of these issues. There may be other possible effects of a bankruptcy of the City that could result in delays or reductions in payments on the 2016 Series A Bonds, or result in losses to the holders of the 2016 Series A Bonds. Regardless of any specific adverse determinations in a City bankruptcy proceeding, the fact of a City bankruptcy proceeding could have an adverse effect on the liquidity and value of the 2016 Series A Bonds.

The City invests Revenues in the City’s Pooled Fund. See “FINANCING PLAN FOR WASTEWATER ENTERPRISE CAPITAL PROGRAM—Investment of SFPUC Funds.” Should those investments suffer losses,

Revenues may be lower than expected, and there may be delays or reductions in payments on the 2016 Series A Bonds.

Limitations on Remedies

The remedies available to the owners of the 2016 Series A Bonds upon the occurrence of an event of default under the Indenture in many respects depend upon judicial actions which are themselves often subject to discretion and delay and could prove both expensive and time consuming to obtain. In addition to the limitations on remedies contained in the Indenture, the rights and obligations under the 2016 Series A Bonds and the Indenture may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to limitations on legal remedies against charter cities and counties in the State. The opinions to be delivered by Co-Bond Counsel, concurrently with the issuance of the 2016 Series A Bonds, that the 2016 Series A Bonds constitute valid and binding, limited obligations of the SFPUC and the Indenture constitutes a valid and binding obligation of the SFPUC will also be subject to such limitations and the various other legal opinions to be delivered concurrently with the issuance of the 2016 Series A Bonds will be similarly qualified. See "APPENDIX D—PROPOSED FORM OF OPINION OF CO-BOND COUNSEL."

If the SFPUC fails to comply with its covenants under the Indenture or to pay principal of or interest on the 2016 Series A Bonds, there can be no assurance that the available legal remedies will be adequate to protect the interests of the holders of the 2016 Series A Bonds.

Loss of Tax Exemption/Risk of Tax Audit of Municipal Issuers

As discussed under "TAX MATTERS", interest on the 2016 Series A Bonds could fail to be excluded from the gross income of the owners thereof for purposes of federal income taxation retroactive to the date of the issuance of the 2016 Series A Bonds as a result of future acts or omissions of the SFPUC in violation of its covenants to comply with requirements of the Internal Revenue Code of 1986, as amended. Should such an event of taxability occur, the 2016 Series A Bonds are not subject to redemption or any increase in interest rate and will remain outstanding until maturity.

In December 1999, as a part of a larger reorganization of the IRS, the IRS commenced operation of its Tax Exempt and Government Entities Division (the "TE/GE Division"), as the successor to its Employee Plans and Exempt Organizations division. The TE/GE Division has a subdivision that is specifically devoted to tax-exempt bond compliance. Public statements by IRS officials indicate that the number of tax-exempt bond examinations is expected to increase significantly under the new TE/GE Division. There is no assurance that, if an IRS examination of the 2016 Series A Bonds were undertaken, it would not adversely affect the secondary market value of the 2016 Series A Bonds.

Change in Tax Law

As discussed under "TAX MATTERS," current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the 2016 Series A Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent beneficial owners from realizing the full current benefit of the tax status of such interest.

Failure to Maintain Credit Ratings

Certain rating agencies have assigned ratings to the 2016 Series A Bonds. The ratings issued reflect only the views of such rating agencies. Any explanation of the significance of these ratings should be obtained from the respective rating agencies. See "RATINGS." There is no assurance current ratings will continue for any given period or that such ratings will not be revised downward or withdrawn entirely by the rating agencies if, in the respective judgment of such rating agencies, circumstances so warrant. Any such downward revision or withdrawal of such ratings could be expected to have an adverse effect on the market price of the 2016 Series A Bonds. The

SFPUC undertakes no obligation to maintain its current credit ratings on the 2016 Series A Bonds or to oppose any such downward revision, suspension or withdrawal.

Secondary Market

There can be no guarantee that there will be a secondary market for the 2016 Series A Bonds or, if a secondary market exists, that the 2016 Series A Bonds can be sold for any particular price. Occasionally, because of general market conditions or because of adverse history or economic prospects connected with a particular issue, secondary marketing practices in connection with a particular issue are suspended or terminated. Additionally, prices of issues for which a market is being made will depend upon then prevailing circumstances. Such prices could be substantially different from the original purchase price.

Uncertainties of Projections, Forecasts and Assumptions

Compliance with certain of the covenants contained in the Indenture is based upon assumptions and projections. Projections and assumptions are inherently subject to significant uncertainties. Inevitably, some assumptions will not be realized and unanticipated events and circumstances may occur and actual results are likely to differ, perhaps materially, from those projected. Accordingly, such projections are not necessarily indicative of future performance, and the SFPUC assumes no responsibility for the accuracy of such projections. See **FORWARD-LOOKING STATEMENTS** on the inside front cover of this Official Statement.

Other Risks

The discussion in this section, “RISK FACTORS”, is not meant to be a comprehensive or definitive list of the risks associated with an investment in the 2016 Series A Bonds. There may be other risks inherent in ownership of the 2016 Series A Bonds in addition to those described in this section. Investors are advised to read the entire Official Statement in order to obtain information necessary to make an investment in the 2016 Series A Bonds.

REGULATORY MATTERS

The Wastewater Enterprise meets all known current regulatory permit requirements for its facilities, and is in material compliance with the Porter-Cologne and Clean Water Acts (as described below). This section summarizes the regulatory framework governing the Wastewater Enterprise and its operations.

History and Background

In 1969, the State adopted the Porter-Cologne Water Quality Act (the “Porter-Cologne Act”), creating the State’s current legal framework for the protection of water quality. This adoption was followed at the federal level by the Water Pollution Control Act Amendments of 1972 (the “Clean Water Act”). The Clean Water Act provided an aggressive timetable for eliminating pollution of the nation’s waters and established the basic secondary treatment requirement that 85% of pollutants, as defined in administrative regulations, be removed from sanitary wastewater. The Clean Water Act also required the issuance of discharge permits on a nationwide basis and established a federal grant program for construction of publicly owned wastewater facilities, subsequently replaced by the state revolving fund loan program. Although the EPA has ultimate responsibility for administering the Clean Water Act, many functions have been delegated to the State. The administration of the current loan program and enforcement of regulations are a joint undertaking of the State Water Resources Control Board, the Regional Water Quality Control Board, and EPA Region IX.

City Master Plan

In 1971, the City created its Master Plan to address the requirements of the Porter-Cologne Act, which, following the environmental review process, was adopted by the City and the EPA in 1974, and the City commenced implementation of the plan. With subsequent refinements, the Master Plan has been the SFPUC’s guide for improving the performance of the Wastewater Enterprise and meeting the requirements of State and federal

water quality laws. All projects and improvements described in the Master Plan, as subsequently modified, have been completed and are fully operational.

In the 1970s and 1980s, the Regional Water Quality Control Board issued cease and desist orders to the SFPUC containing project planning, design and construction schedules for Master Plan projects and discharge limit compliance dates. All such cease and desist orders have been satisfied and are no longer in effect.

Federal and State Clean Water Act Permits

Under the Porter-Cologne and Clean Water Acts, the Regional Water Quality Control Board administers water pollution control programs. The Regional Water Quality Control Board issues discharge permits under Section 402 of the Clean Water Act, which establishes the National Pollutant Discharge Elimination System (“NPDES”) permit system. These permits, issued for a five-year period, are also wastewater discharge requirements for the purposes of the Porter-Cologne Act and apply to discharges from the SFPUC’s treatment plants and combined sewer discharge facilities.

The Wastewater Enterprise combined sewer system operates under two wastewater NPDES permits: the 2013 Bayside Permit (NPDES Permit No. CA0037664), covering the Southeast Plant, North Point Facility and other bayside facilities that discharge into the San Francisco Bay; and the 2009 Oceanside Permit (NPDES Permit No. CA0037681; issued jointly with EPA Region IX), covering the Oceanside Plant discharges and other westside facilities that discharge into the ocean. A small portion of the Wastewater Enterprise system within the City consists of separate storm and sanitary sewers. This portion of the system is regulated under the State General Permit for Small Municipal Separate Storm Sewer Systems (MS4) (NPDES Permit No. CAS000004) and the State Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003-DWQ). Currently, the SFPUC’s discharges are in material compliance with its permit requirements, though during the past two years certain discharges have varied from such requirements.

Combined Sewer Overflow Control Policy

With the exception of a small portion of the City of Sacramento, the SFPUC is the only wastewater agency in the State that operates a combined sewer system, in which sanitary wastewater and stormwater runoff are conveyed and treated in the same system of pipes and treatment, storage and discharge facilities. In order to address the unique characteristics of combined sewer systems, the EPA adopted the Combined Sewer Overflow Control Policy (59 FR 18688) in 1994 (the “CSO Policy”). This policy established a consistent national approach for controlling discharges from CSOs to the nation’s water, and has since been incorporated into the Clean Water Act by The Wet Weather Water Quality Act of 2000.

The CSO Policy created a two-phased process for combined sewer systems. During the first phase, the permittee is required to implement “nine minimum controls” specified in the CSO Policy. In addition, the permittee is required to develop and implement a long-term control plan for the purpose of providing facilities and controls sufficient to comply with water quality standards. The SFPUC has implemented the “nine minimum controls”, and construction of the Master Plan projects constituted implementation of the long-term control plan.

The SFPUC’s discharge permits require the preparation of reports analyzing the efficacy of the system’s wet weather operations and the attainment of water quality standards. The SFPUC’s efficacy report for the Bayside Watersheds submitted in June 2012; the efficacy report for the Westside was submitted in July 2014. These reports document the City’s continued compliance with the CSO Policy’s nine minimum controls and long-term control plan requirements.

Stormwater Regulations

In 1987, Congress revised the Clean Water Act to more effectively address pollution caused by stormwater runoff. The regulations require stormwater management plans for municipalities and controls on certain construction sites and other industries. Urban areas with combined sewers, such as most of the City, are exempt. Because a small portion of the City is served by separate sewer systems, the implementation of the Municipal

Separate Storm Sewer System (“MS4”) permit requirements occurred under Phase II of the stormwater program, following the earlier Phase I implementation for cities with a large separate sewer system. The permit for small MS4s (NPDES Permit No. CAS000004) is issued by the State Water Resources Control Board and regulates the stormwater discharge from the SFPUC’s separate sewer systems. The SFPUC operates a stormwater management program that complies with the requirements of the MS4 Permit.

Regulatory Trends

Regulatory developments at the State and Federal level, as well as ongoing permit reissuance activities, may increase operations costs and capital needs of the Wastewater Enterprise and may have an effect on the Wastewater Enterprise operations and its revenues. In the future, additional constituents of concern (possibly including pollutants such as ammonia, nutrients, endocrine disrupting chemicals, human-made chemicals/products) will likely be identified, and additional effluent limits may be added for wastewater discharges into the San Francisco Bay and Pacific Ocean, as water quality objectives are developed for new compounds and improved analytical techniques become available. Additional source control measures, public education and outreach, and additional or advanced treatment processes may be necessary to achieve compliance. SFPUC staff is actively engaged with regulatory officials and the public in the development of these regulatory matters.

These topics and their possible effect on the Wastewater Enterprise are briefly described below:

Impaired Water Bodies and Total Maximum Daily Loads. The Clean Water Act requires states to identify all water bodies that do not achieve designated water quality standards or objectives. Such water bodies are designated as “impaired,” and states are required to identify all sources contributing to the impairment under the Total Maximum Daily Load (“TMDL”) program. States are required to designate wasteload allocations to each contributing point source, such as the SFPUC discharges, in order to promote the recovery of the water body. Central and lower San Francisco Bay are currently listed as impaired for a number of organic and inorganic pollutants, as well as invasive species and trash. The Regional Water Quality Control Board has completed San Francisco Bay TMDLs for mercury and PCBs and is developing a fecal indicator bacteria TMDL for San Francisco Bay beaches.

The San Francisco Bay Mercury and PCBs TMDLs are implemented through a group Watershed Permit (Order No. R2-2012-0096) that applies to all municipal, industrial, and stormwater discharges to San Francisco Bay. The Watershed Permit contains effluent limitations for mercury and PCB discharges from the Southeast Plant with which the SFPUC currently complies.

Contaminated Bay Sediments. California Water Code, Division 7, Chapter 5.6 established a program to assess sediment contamination of the State’s enclosed bays and estuaries. Known as the Bay Protection and Toxic Cleanup Program, the focus of this effort was to identify contaminated sediments with elevated levels of toxins.

In 1999, the State-wide plan identified Mission Creek and Islais Creek as high priority toxic hot spots. For Mission Creek, the plan included preliminary estimates of investigation and study costs at \$1 million, remediation and follow-up monitoring ranging from \$0.8 to \$1.8 million, and possible sewer system structural changes up to \$75 million. The plan included a preliminary estimate of investigation and study costs for Islais Creek at \$1 million. Remediation and monitoring were estimated to range from \$0.8 to \$5.2 million, and possible sewer system structural changes up to \$75 million for Islais Creek. The estimated costs shown above were developed by the Regional Water Quality Control Board and State Water Resources Control Board in 1998 and 1999. The SFPUC provided comments and data studies disputing both the extent of contamination in the creeks and any asserted causal relationship to SFPUC activities. The plan is not self-executing, and requires further regulatory action by the Regional Water Quality Control Board, which has indicated that contaminated sediment issues will be addressed through the TMDL analysis and implementation programs mentioned above. In 2002, both Mission Creek and Islais Creek were added to the Clean Water Act 303(d) list of water quality limited segments (i.e., impaired waterways). A TMDL (or related action) must be completed for the listed waterways.

The 1999 Statewide plan also identified Central Basin (adjacent to the San Francisco Bayside shoreline) as a moderate priority toxic hot spot, but did not identify investigation or remediation costs (costs were only developed for the high priority sites). Central Basin has also been placed on the CWA 303(d) list.

The SFPUC continues to dispute the extent of contamination in the creeks and any causal relationship to SFPUC activities, and will vigorously participate in the development of any TMDLs for such areas.

EPA Region IX has listed Yosemite Creek as a Superfund site. Its sediments, adjacent to Hunters Point and the former Navy Shipyard, must be addressed. The City, along with other potentially responsible parties, is participating in a voluntary nonbinding mediation to allocate any cleanup costs. Because the process is in its early stages, SFPUC cannot reasonably predict whether or to what extent it may be partially responsible for contributing to this contamination remediation project, or whether such cleanup will have any impact on current sewer system operations.

Pursuant to GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*, the Wastewater Enterprise reported \$571,000 in pollution remediation liability as of June 30, 2015.

Contaminants of Emerging Concern. Contaminants of emerging concern include alkyl phenols, flame retardants, hormones, personal care products, pharmaceuticals, steroids, perfluorinated compounds, and pesticides, which typically enter municipal wastewater through bathing, cleaning, laundry, and the disposal of unused products. Pharmaceuticals typically include prescription and over-the-counter therapeutic drugs for both human and veterinary treatment. Personal care products typically include soaps, fragrances, and cosmetics. Secondary treatment facilities remove some of these contaminants, even though they are not specifically designed for this purpose. Currently no water quality standards exist for most of these compounds, therefore, the SFPUC permits do not contain effluent limitations for them.

Nutrient Control for the Bayside. San Francisco Bay has long been recognized as a nutrient-enriched estuary; however, until recently, it had not experienced negative effects of over-enrichment. Changes recently observed in San Francisco Bay indicate that the Bay's resilience to the effects of nutrient enrichment may be declining. In response to these changes, the Regional Water Quality Control Board issued a permit in 2014 for all municipal discharges into the San Francisco Bay to monitor and report nutrient discharges, NPDES No. CA0038873. The Regional Water Quality Control Board is also developing numeric nutrient endpoints ("NNEs"), the purpose of which are to provide a scientifically defensible framework that can serve as guidance for adopting numeric water quality criteria. Whether NNEs will result in new limits that would apply to SFPUC treatment facilities is unclear at this time. The SFPUC and regional groups like the Bay Area Clean Water Association (of which the SFPUC is a member) are participating in the Regional Water Quality Control Board's consideration of the need for and potential characteristics of any such future regulation.

Other Regulatory Agencies with Jurisdiction Over the Wastewater Enterprise

Other regulatory agencies with approval or oversight responsibilities over the siting, construction or operational impacts of the Wastewater Enterprise on air, water and natural resources include the Bay Area Air Quality Management District, the Bay Conservation and Development Commission, the California Coastal Commission, the State Lands Commission, the California Department of Public Health, the National Marine Fisheries Service, the United States Fish and Wildlife Service, the California Department of Fish and Wildlife, and the U.S. Army Corps of Engineers.

Other Laws Affecting the Wastewater Enterprise

As a public agency the SFPUC's actions must be consistent with the California Environmental Quality Act and, where federal approvals or funding is involved, the National Environmental Policy Act. The federal Clean Air Act and the California Clean Air Act of 1988 also regulate emissions from the treatment facilities. All of the SFPUC's treatment facilities meet present Bay Area Air Quality Management District standards.

CONSTITUTIONAL, STATUTORY AND CHARTER LIMITATIONS

The activities of the SFPUC and the Wastewater Enterprise, including, without limitation, the establishment of rates for sewer service and the issuance of Bonds, are subject to a number of limitations under both State and local law. Certain of such limitations are summarized below. Additionally, such limitations may be

revised, enhanced, expanded, or otherwise altered as provided under State and local law, including in certain instances by legislation adopted by State, regional or local authorities, including the State Legislature or the Board of Supervisors, or by the voters of the State or the City themselves through the power of initiative or referendum, by voting in favor of amendments to the Charter, or in any other lawful manner.

State Law Limitations

Tax and Spending Limitations. The taxing powers of public agencies in the State are limited by Article XIII A of the California Constitution, added by an initiative amendment approved by the voters on June 6, 1978, and commonly known as Proposition 13.

Article XIII A limits the maximum ad valorem tax on real property to 1% of “full cash value,” which is defined as “the County Assessor’s valuation of real property as shown on the Fiscal Year 1975-76 tax bill under ‘full cash value’ or, thereafter, the appraised value of real property when purchased, newly constructed, or a change in ownership has occurred after the 1975 assessment.” The full cash value may be adjusted annually to reflect inflation at a rate not to exceed 2% per year, or reduction in the consumer price index or comparable local data, or declining property value caused by damage, destruction, or other factors.

The tax rate limitation referred to above does not apply to ad valorem taxes to pay the debt service on any indebtedness approved by the voters before July 1, 1978, or on any bonded indebtedness for the acquisition or improvement of real property approved by two-thirds of the votes cast by the voters voting on the proposition.

Under the terms of Article XIII A and pursuant to an allocation system created by implementing legislation, each county is required to levy the maximum ad valorem tax permitted by Article XIII A and to distribute the proceeds to local agencies.

Assessed valuation growth allowed under Article XIII A (new construction, change of ownership and up to 2% annual value growth) is allocated among the jurisdictions that serve the tax rate area within which the growth occurs. Local agencies and schools share the growth of base revenues from the tax rate area. Each year’s growth allocation becomes part of each agency’s allocation in the following year. The availability of revenues from tax bases to such entities may be affected by the existence of certain successor agencies to former redevelopment agencies that, under certain circumstances, may be entitled to such revenues resulting from the upgrading of certain property values.

Under State law, any fee that exceeds the reasonable cost of providing the service for which the fee is charged may be considered a “special tax” that must be authorized by a two-thirds vote of the electorate. Accordingly, if a portion of the SFPUC’s wastewater user rates or capacity charges were determined by a court to exceed the reasonable cost of providing service, the SFPUC might not be permitted to continue to collect that portion unless it were authorized to do so by a two-thirds majority of the votes cast in an election to authorize the collection of that portion of the rates or fees. If the SFPUC were unable to obtain such a two-thirds majority vote and were unable to reduce costs, such failure could adversely affect the SFPUC’s ability to pay the debt service on the Bonds.

The United States Supreme Court has upheld Article XIII A against a challenge alleging violation of equal protection under the Fourteenth Amendment to the United States Constitution.

Proposition 218. Proposition 218, a State ballot initiative known as the “Right to Vote on Taxes Act,” was approved by the voters on November 5, 1996. The initiative added Articles XIII C and XIII D to the California Constitution, creating additional requirements for the imposition by most local governments of “general taxes,” “special taxes,” “assessments,” “fees,” and “charges.” Articles XIII C and XIII D became effective, pursuant to their terms, as of November 6, 1996, although compliance with some of the provisions was deferred until July 1, 1997, and certain of the provisions purport to apply to any tax imposed for general governmental purposes (i.e., “general taxes”) imposed, extended or increased on or after January 1, 1995 and prior to November 6, 1996.

Article XIID imposes substantive and procedural requirements on the imposition, extension or increase of any “fee” or “charge” subject to its provisions. A “fee” or “charge” subject to Article XIID includes any levy, other than an ad valorem tax, special tax or assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership. Article XIID prohibits, among other things, the imposition of any proposed fee or charge, and, possibly, the increase of any existing fee or charge, in the event written protests against the proposed fee or charge are presented at a required public hearing on the fee or charge by a majority of owners of the parcels upon which the fee or charge is to be imposed. Except for fees and charges for water, sewer and refuse collection services, the approval of a majority of the property owners subject to the fee or charge, or at the option of the agency, by a two-thirds vote of the electorate residing in the affected area, is required not less than 45 days following the public hearing on any such proposed new or increased fee or charge.

The California Supreme Court decisions in *Richmond v. Shasta Community Services District*, 32 Cal. 4th 409 (2004) (“Richmond”), and *Bighorn-Desert View Water Agency vs. Verjil*, 39 Cal. 4th 206 (2006) (“Bighorn”) have clarified uncertainty surrounding the applicability of Section 6 of Article XIID to service fees and charges. In *Richmond*, the Shasta Community Services District charged a water connection fee, which included a capacity charge for capital improvements to the water system and a fire suppression charge. The Court held that both the capacity charge and the fire suppression charge were not subject to Article XIID because a water connection fee is not a property-related fee or charge because it results from the property owner’s voluntary decision to apply for the connection. In both *Richmond* and *Bighorn*, however, the Court stated that a fee for ongoing water service through an existing connection is imposed “as an incident of property ownership” within the meaning of Article XIID, rejecting, in *Bighorn*, the water agency’s argument that consumption-based water charges are not imposed “as an incident of property ownership” but as a result of the voluntary decisions of customers as to how much water to use.

The SFPUC provides public notice of proposed wastewater rate increases in accordance with the requirements of Article XIID through means that include, among others, holding informational presentations at community group meetings, mailings to residential and commercial customers of public hearings on rate increases, and press releases and media campaigns regarding rate increases, followed by public hearings conducted by the SFPUC’s Rate Fairness Board and by the SFPUC itself. The SFPUC also develops and adopts retail utility user rates and fees in accordance with the requirements of Article XIID(6)(b) that limit property-related fees and charges.

Article XIIC extends the people’s initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIIC to fees, taxes, assessment fees and charges imposed after November 6, 1996 and absent other authority could result in retroactive reduction in any existing taxes, assessments, fees or charges. In *Bighorn*, the Court concluded that under Article XIIC local voters by initiative may reduce a public agency’s water rates and delivery charges. The Court noted, however, that it was not holding that the authorized initiative power is free of all limitations, stating that it was not determining whether the electorate’s initiative power is subject to the public agency’s statutory obligation to set water service charges at a level that will “pay the operating expenses of the agency, ... provide for repairs and depreciation of works, provide a reasonable surplus for improvements, extensions, and enlargements, pay the interest on any bonded debt, and provide a sinking or other fund for the payment of the principal of such debt as it may become due.”

Article XIID imposes the substantive requirement that any wastewater charges may not exceed the proportional cost of the providing service to customers. The Fourth District of the California Court of Appeal decision in *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano*, 235 Cal.App.4th 1493 (2015), clarified that tiered rate structures are compatible with the cost of service limitations of Article XIID when each tier structure is supported by cost of service calculations. The court held that San Juan Capistrano's water rates violated Article XIID because no evidence in the record adequately showed that each tier corresponded to the cost of providing service at a given level of usage.

The courts have not fully interpreted the provisions of Proposition 218. The SFPUC is unable to predict how courts will further interpret Article XIIC and Article XIID, and what, if any, further implementing legislation will be enacted. Under the *Bighorn* case, City voters could adopt an initiative measure that reduces or repeals the SFPUC’s wastewater rates and charges, though it is not clear whether (and courts have not decided whether) any such reduction or repeal by initiative would be enforceable in a situation in which such rates and charges are pledged

to the repayment of bonded indebtedness. There can be no assurance that the courts will not further interpret, or the voters will not amend, Article XIII C and Article XIII D to limit the ability of the SFPUC to impose, levy, charge and collect increased fees and charges for the Wastewater Enterprise, or to call into question wastewater rate increases previously adopted by the SFPUC. No assurance may be given that Articles XIII C and XIII D will not have a material adverse impact on Revenues.

Proposition 26. Proposition 26, which amended Article XIII A and XIII C of the California Constitution, was approved by the electorate at the November 2, 2010 election. Proposition 26 imposes a two-thirds voter approval requirement for the imposition of fees and charges by the State. It also imposes a majority voter approval requirement on local governments with respect to fees and charges for general purposes, and a two-thirds voter approval requirement with respect to fees and charges for special purposes. According to its supporters, Proposition 26 was designed to prevent the circumvention of tax limitations imposed by the voters pursuant to Proposition 13, approved in 1978, Proposition 218, and other measures through the use of non-tax fees and charges.

Proposition 26 expressly excludes from its scope “a charge imposed for a specific government service or product provided directly to the payor that is not provided to those not charged, and which does not exceed the reasonable cost to the governmental entity of providing the service or product to the payor” and “assessments and property-related fees imposed in accordance with the provisions of Article XIII D.” The SFPUC believes that the initiative is not intended to, and would not, apply to fees for wastewater services charged by the SFPUC. The SFPUC, however, is unable to predict how Proposition 26 will be interpreted by the courts to apply to the provision of wastewater services by local governments such as the SFPUC.

Initiative and Referendum

Article XIII A and Articles XIII C and XIII D of the California Constitution were adopted pursuant to the State’s constitutional initiative process. From time to time other initiative measures could be adopted by State voters, or by voters of the City, placing additional limitations on the ability of the SFPUC to increase revenues.

Charter Limitations

The Charter requires that bonds (such as the Bonds) secured by revenues, other than refunding bonds, may be issued only with the assent of a majority of voters. However, under the Charter amendments enacted by the voters in November 2002 (Proposition E), the SFPUC may issue revenue bonds, including notes, commercial paper or other forms of indebtedness, when authorized by ordinance approved by a two-thirds vote of the Board of Supervisors, for the purpose of reconstructing, replacing, expanding, repairing or improving water facilities or wastewater facilities or combinations of water and wastewater facilities under the jurisdiction of the SFPUC (and subject to the further conditions contained in Proposition E). See “OBLIGATIONS PAYABLE FROM REVENUES—Authority for Issuance of Revenue Bonds and Other Obligations Payable from Revenues” and “SECURITY FOR THE BONDS—Additional Series of Bonds—Charter Requirements.”

Future Charter Amendments

Voters in the City could adopt additional Charter amendments in the future which would limit the ability of the SFPUC to issue debt or to enact rate increases, affect the operation of the Wastewater Enterprise or implement other changes affecting the SFPUC and the Wastewater Enterprise. See “RISK FACTORS—Initiative, Referendum and Charter Amendments and Future Legislation.”

LITIGATION

General. The SFPUC is not aware of any litigation pending or threatened questioning the political existence of the City or the SFPUC or contesting the SFPUC’s power to fix water rates and charges, or in any way questioning or affecting:

- (i) the proceedings under which the 2016 Series A Bonds are to be issued;
- (ii) the validity of any provision of the 2016 Series A Bonds or the Indenture;

- (iii) the pledge of Net Revenues by the SFPUC under the Indenture; or
- (iv) the titles to office of the present members of the Board of Supervisors and the Commission.

There are a number of suits and claims pending against the City and the SFPUC, which may include personal injury, wrongful death and other suits and claims against which the City may self-insure. The aggregate amount of the self-insured liabilities of the City and the SFPUC which may result from such suits and claims will not, in the opinion of the City Attorney, materially impair the ability of the SFPUC to pay principal of or interest on the Bonds as they become due. There is no litigation pending, with service of process having been accomplished, against the City or the SFPUC which if determined adversely to the City or the SFPUC would, in the opinion of the City Attorney, materially impair the ability of the SFPUC to pay principal of and interest on the Bonds as they become due.

Flooding Liability. Major rainstorms in the City which exceed the capacity of the combined storm drainage/sewer system result in flooding and property damage, especially in some low-lying areas with structure built on or near land which was originally creeks or bays. Severe flood damage occurred in 2004 due to major rainstorms. Property owners in low-lying areas filed claims against the City. Many claims were settled. Some proceeded to litigation, and the City settled those suits in 2007.

In 2009 and 2012, rainstorms resulted in additional flooding and property damage. In December 2014, two severe rainstorms caused flooding in many of the same low-lying areas that had flooded in 2004, 2009 and 2012. The City responded to both December storms in each of the affected neighborhoods, and helped coordinate and pay for initial clean-up and repair of damage to affected properties. In addition, property owners filed numerous claims for property damage. To date, the City's aggregate costs incurred for restoration, damage mitigation, and claims settlements exceeds \$5 million. The SFPUC continues to conduct technical analysis, explore infrastructure improvements, and document design, operation and maintenance practices necessary to minimize flooding in these areas.

TAX MATTERS

In the opinion of Co-Bond Counsel, under existing statutes, regulations, rulings and judicial decisions, and assuming the accuracy of certain representations and compliance with certain covenants and requirements described herein, interest on the 2016 Series A Bonds is excluded from gross income for federal income tax purposes, and is not an item of tax preference for purposes of calculating the federal alternative minimum tax imposed on individuals and corporations. In the further opinion of Co-Bond Counsel, interest on the 2016 Series A Bonds is exempt from State of California personal income tax. Co-Bond Counsel notes that, with respect to corporations, interest on the 2016 Series A Bonds may be included as an adjustment in the calculation of alternative minimum taxable income, which may affect the alternative minimum tax liability of such corporations.

The difference between the issue price of a 2016 Series A Bond (the first price at which a substantial amount of the 2016 Series A Bonds of the same series and maturity is to be sold to the public) and the stated redemption price at maturity with respect to such 2016 Series A Bond constitutes original issue discount. Original issue discount accrues under a constant yield method, and original issue discount will accrue to a 2016 Series A Bond owner before receipt of cash attributable to such excludable income. The amount of original issue discount deemed received by the 2016 Series A Bond owner will increase the 2016 Series A Bond owner's basis in the applicable 2016 Series A Bond. In the opinion of Co-Bond Counsel, the amount of original issue discount that accrues to the owner of the 2016 Series A Bond is excluded from the gross income of such owner for federal income tax purposes, is not an item of tax preference for purposes of the federal alternative minimum tax imposed on individuals and corporations, and is exempt from State of California personal income tax.

Co-Bond Counsel's opinion as to the exclusion from gross income of interest (and original issue discount) on the 2016 Series A Bonds is based upon certain representations of fact and certifications made by the SFPUC and others and is subject to the condition that the SFPUC comply with all requirements of the Internal Revenue Code of 1986, as amended (the "Code"), that must be satisfied subsequent to the issuance of the 2016 Series A Bonds to assure that interest (and original issue discount) will not become includable in gross income for federal income tax purpose. Failure to comply with the requirements of the Code might cause interest (and original issue discount) on

the 2016 Series A Bonds to be included in gross income for federal income tax purposes retroactive to the date of issuance of the 2016 Series A Bonds. The SFPUC has covenanted to comply with all such requirements.

The amount by which a 2016 Series A Bond owner's original basis for determining loss on sale or exchange, in the applicable 2016 Series A Bond (generally, the purchase price) exceeds the amount payable on maturity (or on an earlier call date) constitutes amortizable 2016 Series A Bond premium, which must be amortized under Section 171 of the Code; such amortizable Bond premium reduces the 2016 Series A Bond owner's basis in the applicable Bond (and the amount of tax-exempt interest received with respect to the 2016 Series A Bonds), and is not deductible for federal income tax purposes. The basis reduction as a result of the amortization of 2016 Series A Bond premium may result in a 2016 Series A Bond owner realizing a taxable gain when a 2016 Series A Bond is sold by the owner for an amount equal to or less (under certain circumstances) than the original cost of the 2016 Series A Bonds to the owner. Purchasers of the 2016 Series A Bonds should consult their own tax advisors as to the treatment, computation and collateral consequences of amortizable 2016 Series A Bond premium.

The Internal Revenue Service (the "IRS") has initiated an expanded program for the auditing of tax-exempt bond issues, including both random and targeted audits. It is possible that the 2016 Series A Bonds will be selected for audit by the IRS. It is also possible that the market value of the 2016 Series A Bonds might be affected as a result of such an audit of the 2016 Series A Bonds (or by an audit of similar municipal obligations). No assurance can be given that in the course of the audit, or otherwise, Congress or the IRS might not change the Code (or interpretation thereof) subsequent to the issuance of the 2016 Series A Bonds to the extent that it adversely affects the exclusion from gross income of interest on the 2016 Series A Bonds or their market value.

SUBSEQUENT TO THE DELIVERY OF THE 2016 SERIES A BONDS, THERE MIGHT BE FEDERAL, STATE OR LOCAL STATUTORY CHANGES (OR JUDICIAL OR REGULATORY INTERPRETATIONS OF FEDERAL, STATE OR LOCAL LAW) THAT AFFECT THE FEDERAL, STATE OR LOCAL TAX TREATMENT OF THE 2016 SERIES A BONDS OR THE MARKET VALUE OF THE 2016 SERIES A BONDS. LEGISLATIVE CHANGES HAVE BEEN PROPOSED IN CONGRESS, WHICH, IF ENACTED, WOULD RESULT IN ADDITIONAL FEDERAL INCOME TAX BEING IMPOSED ON CERTAIN OWNERS OF TAX-EXEMPT STATE OR LOCAL OBLIGATIONS, SUCH AS THE 2016 SERIES A BONDS. THE INTRODUCTION OR ENACTMENT OF ANY OF SUCH CHANGES COULD ADVERSELY AFFECT THE MARKET VALUE OR LIQUIDITY OF THE 2016 SERIES A BONDS. NO ASSURANCE CAN BE GIVEN THAT, SUBSEQUENT TO THE DELIVERY OF THE 2016 SERIES A BONDS, SUCH CHANGES (OR OTHER CHANGES) WILL NOT BE INTRODUCED OR ENACTED OR INTERPRETATIONS WILL NOT OCCUR. BEFORE PURCHASING ANY OF THE 2016 SERIES A BONDS, ALL POTENTIAL PURCHASERS SHOULD CONSULT THEIR TAX ADVISORS REGARDING POSSIBLE STATUTORY CHANGES OR JUDICIAL OR REGULATORY CHANGES OR INTERPRETATIONS, AND THEIR COLLATERAL TAX CONSEQUENCES RELATING TO THE 2016 SERIES A BONDS.

Co-Bond Counsel's opinions may be affected by actions taken (or not taken) or events occurring (or not occurring) after the date hereof. Co-Bond Counsel has not undertaken to determine, or to inform any person, whether any such actions or events are taken or do occur. Co-Bond's engagement with respect to the 2016 Series A Bonds terminates upon their delivery and Co-Bond Counsel disclaims any obligation to update the matters set forth in its opinion. The Indenture and the Tax Certificate relating to the 2016 Series A Bonds permit certain actions to be taken or to be omitted if a favorable opinion of Co-Bond Counsel is provided with respect thereto. Co-Bond Counsel expresses no opinion as to the effect on the exclusion from gross income of interest for federal income tax purposes with respect to any 2016 Series A Bond if any such action is taken or omitted based upon the advice of counsel other than Co-Bond Counsel.

Although Co-Bond Counsel has rendered an opinion that interest (and original issue discount) is excluded from gross income for federal income tax purposes on the 2016 Series A Bonds provided that the SFPUC continues to comply with certain requirements of the Code, the ownership of the 2016 Series A Bonds and the accrual or receipt of interest with respect to the 2016 Series A Bonds may otherwise affect the tax liability of certain persons. Co-Bond Counsel expresses no opinion regarding any such tax consequences. Accordingly, before purchasing any of the 2016 Series A Bonds, all potential purchasers should consult their tax advisors with respect to collateral tax consequences relating to the 2016 Series A Bonds.

A copy of the proposed form of opinion of Co-Bond Counsel is attached hereto as Appendix D.

CERTAIN LEGAL MATTERS

Certain legal matters incident to the authorization, sale and delivery of the 2016 Series A Bonds are subject to the approval of Stradling, Yocca, Carlson & Rauth, a Professional Corporation, Sacramento, California, and Amira Jackmon, Attorney at Law, Berkeley, California, Co-Bond Counsel to the SFPUC. Certain legal matters are being passed upon for the SFPUC by the City Attorney and by Orrick, Herrington & Sutcliffe LLP, San Francisco, California, Disclosure Counsel. Co-Bond Counsel and Disclosure Counsel will receive compensation that is contingent upon the sale and delivery of the 2016 Series A Bonds.

The form of approving opinion of Co-Bond Counsel is set forth in Appendix D, and will be available at the time of delivery of the 2016 Series A Bonds. Co-Bond Counsel is not passing upon and undertakes no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement.

Orrick, Herrington & Sutcliffe LLP, has served as Disclosure Counsel to the SFPUC and in such capacity has advised the SFPUC with respect to the requirements of applicable securities laws and participated with responsible SFPUC officials and staff in conferences and meetings where information contained in this Official Statement was reviewed for accuracy and completeness. Disclosure Counsel is not responsible for the accuracy or completeness of the information presented in this Official Statement and has not undertaken to independently verify any of such information. Rather, the SFPUC is solely responsible for the accuracy and completeness of the information contained in this Official Statement. Upon the issuance of the 2016 Series A Bonds, Orrick, Herrington & Sutcliffe LLP will deliver a letter to the SFPUC concerning certain matters with respect to the Official Statement. No purchaser or holder of the 2016 Series A Bonds, or other person or party other than the SFPUC, will be entitled to rely on such letter or on the fact that Orrick, Herrington & Sutcliffe LLP has acted as Disclosure Counsel to the SFPUC.

RATINGS

Moody's Investors Service ("Moody's") has assigned its municipal bond rating of "____" to the 2016 Series A Bonds, and Standard & Poor's Ratings Services, a Standard & Poor's Financial Services LLC business ("S&P"), has assigned its municipal bond rating of "____" to the 2016 Series A Bonds.

The ratings assigned by Moody's and Standard & Poor's express only the views of the respective rating agencies. The explanation of the significance of these ratings, and any outlook associated with these ratings, may be obtained from Moody's and Standard & Poor's, respectively. Each rating agency generally bases its rating on its own investigations, studies, and assumptions. The SFPUC has provided certain additional information and materials to the rating agencies (some of which does not appear in this Official Statement).

A securities rating is not a recommendation to buy, sell or hold securities and may be subject to revision or withdrawal at any time. There is no assurance such ratings will continue for any given period of time or that such ratings will not be revised downward or withdrawn entirely by the rating agencies, if in the judgment of such rating agencies, circumstances so warrant. Any such downward revision or withdrawal of such ratings may have an adverse effect on the market price of the 2016 Series A Bonds. The SFPUC undertakes no responsibility to maintain its current ratings on the 2016 Series A Bonds or to oppose any such downward revision, suspension or withdrawal.

PURCHASE AND REOFFERING

The 2016 Series A Bonds are being purchased by _____ (the "Initial Purchaser") as the winner of a competitive bid conducted on _____, 2016. The Initial Purchaser has agreed to purchase the 2016 Series A Bonds from the SFPUC at a purchase price of \$_____ (consisting of \$_____ aggregate principal amount of the 2016 Series A Bonds, plus [net] original issue premium of \$_____, less an underwriter's discount of \$_____). Under the terms of its bid, the Initial Purchaser will be obligated to purchase all of the 2016 Series A Bonds if any are purchased, the obligation to make such purchase being subject to certain terms and conditions to be satisfied by the SFPUC.

The Initial Purchaser has certified the reoffering prices or yields set forth on the inside cover hereof. The SFPUC takes no responsibility for the accuracy of these prices or yields. The Initial Purchaser may offer and sell

the 2016 Series A Bonds to certain dealers and others at prices lower than the offering prices stated on the inside cover page. The offering prices may be changed from time to time by the Initial Purchaser.

FINANCIAL STATEMENTS

Attached as Appendix C are the audited financial statements of the Wastewater Enterprise (the “Financial Statements”) for Fiscal Years ended June 30, 2014 and June 30, 2015, prepared by the SFPUC and audited by KPMG LLP, independent certified public accountants, San Francisco, California (the “Auditor”). The financial statements are included for convenience.

The SFPUC has not requested nor did the SFPUC obtain permission from the Auditor to include the audited financial statements as an Appendix to this Official Statement. Accordingly, the Auditor has made no representation in connection with inclusion of the audits herein that there has been no material change in the financial condition of the SFPUC since the most recent audit was concluded. The Auditor has not been engaged to perform and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that report. The Auditor also has not performed any procedures relating to this Official Statement.

CONTINUING DISCLOSURE

The SFPUC has covenanted for the benefit of the Owners of the 2016 Series A Bonds to provide certain financial information and operating data not later than nine months after the end of the SFPUC’s Fiscal Year (which currently ends on June 30), commencing with the report for Fiscal Year 2015-16 (the “Annual Report”) and to provide notices of the occurrence of certain enumerated events. The Annual Report will be filed by the SFPUC with the MSRB through EMMA.

The specific nature of the information to be contained in the Annual Report or the notices of material events is summarized in “APPENDIX E – FORM OF CONTINUING DISCLOSURE CERTIFICATE.” These covenants have been made in order to assist the Initial Purchaser in complying with Securities and Exchange Commission Rule 15c2-12(b)(5) (the “Rule”).

Although the SFPUC filed on EMMA materials describing the effectiveness of certain amendments to the Indenture, it failed to file timely a simultaneous and duplicative notice of material event.

The SFPUC has, at least once in the last five years, failed to file in a timely manner notice of a change in the rating of SFPUC bonds resulting from a change in the rating of a bond insurer. As of the date of this Official Statement, the current ratings of the SFPUC’s bonds are correct on EMMA.

CO-FINANCIAL ADVISORS

Public Resources Advisory Group, Los Angeles, California, and First Southwest Company, LLC, Oakland, California (the “Co-Financial Advisors”), have served as Co-Financial Advisors to the SFPUC in connection with the structuring and delivery of the 2016 Series A Bonds. The Co-Financial Advisors participated with responsible SFPUC officials and staff in conferences and meetings where information contained in this Official Statement was reviewed for accuracy and completeness, but are not obligated to undertake, and have not undertaken to make, an independent verification or to assume responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement. The Co-Financial Advisors will receive compensation that is contingent upon the sale and delivery of the 2016 Series A Bonds.

APPROVAL AND EXECUTION

This Official Statement has been duly approved, executed and delivered by the SFPUC.

PUBLIC UTILITIES COMMISSION OF THE
CITY AND COUNTY OF SAN FRANCISCO

By: _____
Harlan L. Kelly, Jr.
General Manager

APPENDIX A

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

This Appendix includes summaries of certain provisions of the Indenture, which are in addition and complementary to the summaries found under “INTRODUCTION,” “THE 2016 SERIES A BONDS” and “SECURITY FOR THE BONDS” in the Official Statement. The following summaries are qualified in their entirety by reference to the Indenture, a copy of which can be obtained from the SFPUC.

APPENDIX B

SUMMARIES OF CERTAIN LOCAL INITIATIVES (PROPOSITIONS E AND P)

Proposition E – Alternative Method for Issuing Revenue Bonds/Establishment of Rate Fairness Board

Authority to Issue Revenue Bonds. Proposition E, approved by San Francisco voters on November 5th, 2002, which has been incorporated into the San Francisco Charter as Sections 8B.120 – 8B.127, provides for additional authority for the SFPUC to issue revenue bonds, including notes, commercial paper or other forms of indebtedness, when authorized by ordinance approved by a two-thirds vote of the Board of Supervisors of the City, for the purpose of reconstructing, replacing, expanding, repairing or improving water facilities or clean water facilities or combinations of water and clean water facilities under the jurisdiction of the SFPUC. Proposition E authorizes the Board of Supervisors to take any and all actions necessary to authorize, issue and repay such revenue bonds, including, but not limited to, modifying schedules of rates and charges to provide for the payment and retirement of such bonds. Issuance of such revenue bonds is subject to the following additional conditions set forth in Proposition E:

Notwithstanding any other provision of the Charter or of any ordinance of the City, the Board of Supervisors may take any and all actions necessary to authorize, issue and repay such bonds, including, but not limited to, modifying schedules of rates and charges to provide for the payment and retirement of such bonds, subject to the following conditions:

(a) Certification by an independent engineer retained by the SFPUC that:

(1) the projects to be financed by the bonds, including the prioritization, cost estimates and scheduling, meet utility standards; and

(2) that estimated net revenue after payment of operating and maintenance expenses will be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service on the bonds to be issued, and estimated renewal and replacement costs.

(b) Certification by the San Francisco Planning Department that facilities under the jurisdiction of the SFPUC funded with such bonds will comply with applicable requirements of the California Environmental Quality Act.

Setting Rates. The SFPUC is required under Proposition E to set rates, fees and other charges in connection with providing the utility services under its jurisdiction, subject to rejection — within thirty days of submission — by resolution of the Board of Supervisors. If the Board of Supervisors fails to act within thirty days the rates will become effective without further action.

Under Proposition E, in setting retail rates, fees and charges (for water, sewer and power utility services) the SFPUC is required to take the following actions:

1. Establish rates, fees and charges at levels sufficient to improve or maintain financial condition and bond ratings at or above levels equivalent to highly rated utilities of each enterprise under its jurisdiction, meet requirements and covenants under all bond resolutions and indentures, and provide sufficient resources for the continued financial health (including appropriate reserves), operation, maintenance and repair of each enterprise, consistent with good utility practice,

2. Retain an independent rate consultant to conduct rate and cost of service studies for each utility at least every five years;

3. Set retail rates, fees and charges based on the cost of service;

4. Conduct all studies mandated by applicable state and federal law to consider implementing connection fees for water and clean water facilities servicing new development;

5. Conduct studies of rate-based conservation incentives and/or lifeline rates and similar rate structures to provide assistance to low income users, and take the results of such studies into account when establishing rates, fees and charges, in accordance with applicable state and federal laws;

6. Adopt annually a rolling 5-year forecast of rates, fees and other charges; and

7. Establish a Rate Fairness Board.

Rate Fairness Board. Proposition E also directed the establishment of a Rate Fairness Board to advise the SFPUC on water and sewer rate matters. These provisions went into effect on July 1, 2006, with respect to water rates. Specific duties for the Rate Fairness Board include:

- annual review of a five-year rate forecast;
- hold one or more public hearings on annual rate recommendations before the SFPUC adopts rates;
- provide a report and recommendations to the SFPUC on the rate proposal; and,
- in connection with periodic rate studies, submit to the SFPUC rate policy recommendations for the SFPUC's consideration, including recommendations to reallocate costs among various retail utility customer classifications, subject to any outstanding bond requirements.

Proposition P – Revenue Bond Oversight Committee

On November 5, 2002, the voters of San Francisco adopted Proposition P, an ordinance that established the “Public Utilities Revenue Bond Oversight Committee” (“RBOC”). The ordinance, which has been incorporated into the San Francisco Administrative Code as Chapter 5, Article V, Sections 5A.30 – 5A.36, set forth the authority, duties and responsibilities of the RBOC, and established qualifications for Rate Fairness Board membership and related provisions. As approved currently, the RBOC sunsets on January 1, 2019.

In accordance with the provisions of Proposition P, to the extent permitted by law, one-twentieth of one percent of the gross proceeds of the SFPUC's Wastewater Revenue Bonds (the “Bonds”) shall be deposited in a fund established by the Controller's Office and appropriated by the Board at the direction of the RBOC established by Proposition P to cover the costs of said committee; provided that any amounts so paid from the proceeds of Bonds that have not been spent by RBOC in connection with such Bonds (as contemplated by Article 5A.31(c) of the Administrative Code) within 36 months of the date of issuance of such Bonds shall be returned to the SFPUC for deposit into the Capital Project Fund (as such term is defined in the Indenture) and expended by the SFPUC to acquire and construct improvements.

APPENDIX C

SFPUC WASTEWATER ENTERPRISE FINANCIAL STATEMENTS

APPENDIX D
PROPOSED FORM OF OPINION OF CO-BOND COUNSEL

APPENDIX E
FORM OF CONTINUING DISCLOSURE CERTIFICATE
OFFICIAL STATEMENT

\$ _____
**PUBLIC UTILITIES COMMISSION OF THE
CITY AND COUNTY OF SAN FRANCISCO
WASTEWATER REVENUE BONDS,
2016 SERIES A**

This Continuing Disclosure Certificate (the “Disclosure Certificate”) is executed and delivered by the Public Utilities Commission of the City and County of San Francisco (the “SFPUC”) in connection with the issuance of the wastewater revenue bonds captioned above (the “2016 Series A Bonds”). The 2016 Series A Bonds are being issued pursuant to an Indenture dated as of January 1, 2003, between the SFPUC and U.S. Bank National Association, as trustee (the “Trustee”), as amended and supplemented, including as amended and supplemented by a Fourth Supplemental Indenture dated as of _____ 1, 2016, by and between the SFPUC and the Trustee (collectively, the “Indenture”).

The SFPUC covenants and agrees as follows:

SECTION 1. Purpose of the Disclosure Certificate. This Disclosure Certificate is being executed and delivered by the SFPUC for the benefit of the Holders and Beneficial Owners of the 2016 Series A Bonds and in order to assist the Participating Underwriters in complying with Securities and Exchange Commission (the “S.E.C.”) Rule 15c2-12(b)(5).

SECTION 2. Definitions. In addition to the definitions set forth in the Indenture, which apply to any capitalized term used in this Disclosure Certificate unless otherwise defined in this Section 2, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the SFPUC pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

“Beneficial Owner” shall mean any person that: (a) has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any 2016 Series A Bonds (including persons holding 2016 Series A Bonds through nominees, depositories or other intermediaries) including, but not limited to, the power to vote or consent with respect to any 2016 Series A Bonds or to dispose of ownership of any 2016 Series A Bonds; or (b) is treated as the owner of any 2016 Series A Bonds for federal income tax purposes.

“Dissemination Agent” shall mean the SFPUC, acting in its capacity as Dissemination Agent under this Disclosure Certificate, or any successor Dissemination Agent designated in writing by the SFPUC and which has filed with the SFPUC a written acceptance of such designation.

“Holder” shall mean either the registered owners of the 2016 Series A Bonds, or, if the 2016 Series A Bonds are registered in the name of The Depository Trust Company or another recognized depository, any applicable participant in such depository system.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Disclosure Certificate.

“MSRB” shall mean the Municipal Securities Rulemaking Board or any other entity designated or authorized by the Securities and Exchange Commission to receive continuing disclosure filings pursuant to the Rule. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access (EMMA) website of the MSRB currently located at <http://emma.msrb.org>.

“Official Statement” shall mean the final Official Statement, dated _____, 2016, prepared in connection with the sale and offering of the 2016 Series A Bonds.

“Participating Underwriter” shall mean any of the original underwriters or purchasers of the 2016 Series A Bonds required to comply with the Rule in connection with the offering of the 2016 Series A Bonds.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the S.E.C. under the Securities Exchange Act of 1934, as the same may be amended from time to time.

SECTION 3. Provision of Annual Reports.

(a) The SFPUC shall, or shall cause the Dissemination Agent to, not later than 9 months after the end of the SFPUC’s Fiscal Year (which currently ends June 30), commencing March 31, 2013, with the report for the 2011-12 Fiscal Year, provide to the MSRB an Annual Report which is consistent with the requirements of Section 4 of this Disclosure Certificate. If the Dissemination Agent is not the SFPUC, the SFPUC shall provide the Annual Report to the Dissemination Agent not later than 15 days prior to said date. The Annual Report must be submitted in electronic format and accompanied by such identifying information as is prescribed by the MSRB, and may cross-reference other information as provided in Section 4 of this Disclosure Certificate. However, if the audited financial statements of the SFPUC are not available by the date required above for the filing of the Annual Report, the SFPUC shall submit unaudited financial statements and submit the audited financial statements as soon as they are available. If the SFPUC’s Fiscal Year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(c).

(b) If the SFPUC is unable to provide to the MSRB an Annual Report by the date required in subsection (a), the SFPUC shall send a notice to the MSRB in substantially the form attached as Exhibit A.

(c) The Dissemination Agent shall (if the Dissemination Agent is other than the SFPUC), file a report with the SFPUC certifying the date that the Annual Report was provided to the MSRB pursuant to this Disclosure Certificate.

SECTION 4. Content of Annual Reports. SFPUC’s Annual Report shall contain or incorporate by reference the following information:

(a) Audited Financial Statements of the municipal water supply, storage and distribution system of the SFPUC for the prior Fiscal Year, prepared in accordance with generally accepted accounting principles applicable to the SFPUC from time to time. If the SFPUC’s audited financial statements are not available by the date the Annual Report is required to be filed, the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statements, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available;

(b) An update for the prior Fiscal Year of the table in the Official Statement entitled “TABLE 6, SUMMARY OF ACTIVE SEWER ACCOUNTS BY USER TYPE;”

(c) An update for the prior Fiscal Year of the table in the Official Statement entitled “TABLE 12, HISTORICAL AND ADOPTED SINGLE-FAMILY RESIDENTIAL USER SEWER RATES”;

(d) An update for the prior Fiscal Year of the table in the Official Statement entitled “TABLE 13, HISTORICAL AND ADOPTED MULTI-FAMILY RESIDENTIAL USER SEWER RATES”;

(e) An update for the prior Fiscal Year of the table in the Official Statement entitled “TABLE 14, HISTORICAL AND ADOPTED NON-RESIDENTIAL USER DISCHARGE RATES”;

(f) An update for the prior Fiscal Year of the table in the Official Statement in the section entitled “OBLIGATIONS PAYABLE FROM REVENUES – Outstanding Parity Revenue Bonds” showing all bonds and other obligations of the SFPUC secured by Net Revenues; and

(g) An update for the prior Fiscal Year of the table in the Official Statement entitled “TABLE 19, HISTORICAL REVENUE, OPERATING & MAINTENANCE EXPENSES AND DEBT SERVICE COVERAGE.”

Any or all of the items listed above may be set forth in a document or set of documents, or may be included by specific reference to other documents, including official statements of debt issues of the SFPUC or related public entities, which are available to the public on the MSRB website. If the document included by reference is a final official statement, it must be available from the MSRB. The SFPUC shall clearly identify each such other document so included by reference.

SECTION 5. Reporting of Significant Events.

(a) The SFPUC shall give, or cause to be given, notice of the occurrence of any of the following Listed Events with respect to the 2016 Series A Bonds:

1. Principal and interest payment delinquencies.
2. Non payment related defaults, if material.
3. Unscheduled draws on debt service reserves reflecting financial difficulties.
4. Unscheduled draws on credit enhancements reflecting financial difficulties.
5. Substitution of credit or liquidity providers, or their failure to perform.
6. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the 2016 Series A Bonds, or other material events affecting the tax exempt status of the 2016 Series A Bonds.
7. Modifications to rights of security holders, if material.
8. Bond calls, if material, and tender offers.
9. Defeasances.
10. Release, substitution, or sale of property securing repayment of the 2016 Series A Bonds, if material.
11. Rating changes.
12. Bankruptcy, insolvency, receivership or similar event of the SFPUC.
13. The consummation of a merger, consolidation, or acquisition involving the SFPUC or the sale of all or substantially all of the assets of the SFPUC, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material.
14. Appointment of a successor or additional trustee or the change of name of a trustee, if material.

(b) Whenever the SFPUC obtains knowledge of the occurrence of a Listed Event, and, if the Listed Event is described in subsections (a)(2), (a)(7), (a)(8) (if the event is a bond call), (a)(10), (a)(13) or (a)(14) above, the SFPUC determines that knowledge of the occurrence of that Listed Event would be material under applicable federal securities law, the SFPUC shall, or shall cause the Dissemination Agent (if not the SFPUC) to, file a notice of such occurrence with the MSRB, in an electronic format as prescribed by the MSRB, in a timely manner not in excess of 10 business days after the occurrence of the Listed Event. Notwithstanding the foregoing, notice of Listed Events described in subsections (a)(8) and (9) above need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to holders of affected 2016 Series A Bonds under the Indenture.

(c) For purposes of this Certificate, any event described in paragraph (a)(12) above is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent, or similar officer for the SFPUC in a proceeding under the United States Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the SFPUC, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement, or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of said party.

SECTION 6. Termination of Reporting Obligation. The SFPUC's obligations under this Disclosure Certificate shall terminate upon the legal defeasance, prior redemption or payment in full of all of the 2016 Series A Bonds. If such termination occurs prior to the final maturity of the 2016 Series A Bonds, the SFPUC shall give notice of such termination in the same manner as for a Listed Event under Section 5(c).

SECTION 7. Dissemination Agent. The SFPUC may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Certificate.

SECTION 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Certificate, the SFPUC may amend or waive this Disclosure Certificate or any provision of this Disclosure Certificate, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions of Sections 3(a), 3(b), 4 or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the 2016 Series A Bonds or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of the City Attorney or nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the 2016 Series A Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (i) is approved by the owners of a majority in aggregate principal amount of the 2016 Series A Bonds or (ii) does not, in the opinion of the City Attorney or nationally recognized bond counsel, materially impair the interests of the Holders.

In the event of any amendment or waiver of a provision of this Disclosure Certificate, the SFPUC shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the SFPUC. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements: (i) notice of such change shall be given in the same manner as for a Listed Event under Section 5; and (ii) the Annual Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative

form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

SECTION 9. Additional Information. Nothing in this Disclosure Certificate shall be deemed to prevent the SFPUC from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Certificate. If the SFPUC chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Certificate, the SFPUC shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 10. Default. In the event of a failure of the SFPUC to comply with any provision of this Disclosure Certificate, any Participating Underwriter, Holder or Beneficial Owner of the 2016 Series A Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the SFPUC to comply with its obligations under this Disclosure Certificate; provided that any such action may be instituted only in a federal or State court located in the City and County of San Francisco, State of California. Failure by the SFPUC to comply with any provision of this Disclosure Certificate shall not be deemed an Event of Default under the Indenture and the sole remedy under this Disclosure Certificate in the event of any failure of the SFPUC to comply with this Disclosure Certificate shall be an action to compel performance.

SECTION 11. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the SFPUC, the Dissemination Agent, the Participating Underwriters and Holders and Beneficial Owners from time to time of the 2016 Series A Bonds, and shall create no rights in any other person or entity.

Date: _____, 2016.

PUBLIC UTILITIES COMMISSION OF THE
CITY AND COUNTY OF SAN FRANCISCO

By _____
Harlan L. Kelly, Jr.
General Manager

Approved as to Form:

DENNIS J. HERRERA
CITY ATTORNEY

By: _____
Deputy City Attorney

CONTINUING DISCLOSURE CERTIFICATE EXHIBIT A

**FORM OF NOTICE TO THE
MUNICIPAL SECURITIES RULEMAKING BOARD
OF FAILURE TO FILE ANNUAL REPORT**

Name of Issuer: PUBLIC UTILITIES COMMISSION OF THE
CITY AND COUNTY OF SAN FRANCISCO

Name of Issue: WASTEWATER REVENUE BONDS, 2016 SERIES A

Date of Issuance: _____, 2016

NOTICE IS HEREBY GIVEN that the SFPUC has not provided an Annual Report with respect to the above-named Bonds as required by Section 3 of the Continuing Disclosure Certificate of the Public Utilities Commission of the City and County of San Francisco, dated _____, 2016. The SFPUC anticipates that the Annual Report will be filed by _____.

Dated: _____

PUBLIC UTILITIES COMMISSION OF THE CITY AND
COUNTY OF SAN FRANCISCO

By: _____ [to be signed only if filed]
Title _____

APPENDIX F

SECURITIES DEPOSITORY AND BOOK-ENTRY SYSTEM

The information in this APPENDIX has been provided by DTC for use in securities offering documents, and the SFPUC takes no responsibility for the accuracy or completeness thereof. The SFPUC cannot and does not give any assurances that DTC, DTC Participants or Indirect Participants will distribute to the beneficial owners either (a) payments of interest, principal or premium, if any, with respect to the Bonds or (b) certificates representing ownership interest in or other confirmation of ownership interest in the Bonds, or that they will so do on a timely basis or that DTC, DTC Participants or DTC Indirect Participants will act in the manner described in this Official Statement. The current "Rules" applicable to DTC are on file with the Securities and Exchange Commission and the current "Procedures" of DTC to be followed in dealing with DTC Participants are on file with DTC.

As used in this Appendix, "Securities" means the 2016 Series A Bonds, "Issuer" means the SFPUC, and "Agent" means the Trustee.

1. The Depository Trust Company ("DTC"), New York, NY, will act as securities depository for the securities (the "Securities"). The Securities will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Security certificate will be issued for each maturity of the Securities, each in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any maturity exceeds \$500 million, one certificate will be issued with respect to each \$500 million of principal amount, and an additional certificate will be issued with respect to any remaining principal amount of such maturity.

2. DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com. The information contained on this Internet site is not incorporated herein by reference.

3. Purchases of Securities under the DTC system must be made by or through Direct Participants, which will receive a credit for the Securities on DTC's records. The ownership interest of each actual purchaser of each Security ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Securities are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Securities, except in the event that use of the book-entry system for the Securities is discontinued.

4. To facilitate subsequent transfers, all Securities deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Securities with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Securities; DTC's records reflect only the identity of the Direct Participants to whose accounts such Securities are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Securities may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Securities, such as redemptions, tenders, defaults, and proposed amendments to the Security documents. For example, Beneficial Owners of Securities may wish to ascertain that the nominee holding the Securities for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

6. Redemption notices shall be sent to DTC. If less than all of the Securities within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

7. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Securities unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Securities are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Redemption proceeds, distributions, and dividend payments on the Securities will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from Issuer or Agent, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, Agent, or Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of Issuer or Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

9. DTC may discontinue providing its services as depository with respect to the Securities at any time by giving reasonable notice to Issuer or Agent. Under such circumstances, in the event that a successor depository is not obtained, Security certificates are required to be printed and delivered.

10. Issuer may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Security certificates will be printed and delivered to DTC.

11. The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that Issuer believes to be reliable, but Issuer takes no responsibility for the accuracy thereof.