



**San Francisco
Water Power Sewer**
Services of the San Francisco Public Utilities Commission

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BOARD OF SUPERVISORS
SAN FRANCISCO

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2013 OCT 29 PM 2:44

Handwritten initials

October 29, 2013

Angela Calvillo, Clerk of the Board
1 Dr. Carlton B. Goodlett Place
City Hall, Room 244
San Francisco, CA. 94102

Dear Ms. Calvillo,

Please see the attached Certificates in accordance with Proposition E of 2002, as amended by San Francisco Charter Section 8B.124. The certificates complete File Number 120469, Board of Supervisors Ordinance 115-12, which authorizes the funding of Wastewater Enterprise capital projects in an amount up to \$195,029,514, plus associated financing costs, for Fiscal Year 2013-2014.

Sincerely,
Handwritten signature of Richard Morales

Richard Morales
Debt Manager
San Francisco Public Utilities Commission

Edwin M. Lee
Mayor

Vince Courtney
President

Ann Moller Caen
Vice President

Francesca Vietor
Commissioner

Anson Moran
Commissioner

Art Torres
Commissioner

Harlan L. Kelly, Jr.
General Manager





SAN FRANCISCO PLANNING DEPARTMENT

**Certificate of the City and County of San Francisco Planning Department
Regarding Proposed Indebtedness,
in accordance with Section 8B.124 of the Charter
and Board of Supervisors Ordinances 108-12 and 115-12 authorizing funding of
Wastewater Enterprise capital projects plus associated financing costs through bonds
or other forms of indebtedness, including commercial paper, in an amount up to \$195,029,514,
plus associated financing costs for Fiscal Year 2013-2014. The indebtedness authorized by the
ordinances represents a portion of the total capital projects budget of \$241,608,000
for Fiscal Year 2013-2014.**

I, Sarah B. Jones, Environmental Review Officer of the Planning Department of the City and County of San Francisco (the Planning Department), hereby certify as follows:

1. As the Environmental Review Officer (ERO) of the Planning Department, I am authorized to certify as to the compliance of the San Francisco Public Utilities Commission (SFPUC) with applicable requirements of the California Environmental Quality Act. (CEQA).
2. After consultation with the SFPUC, I understand that the SFPUC proposes to sell Wastewater Revenue Bonds and / or other forms of Indebtedness (the "Revenue Indebtedness") to finance certain improvements to the Wastewater Enterprise of the City and County of San Francisco (the "City"). The improvements proposed for financing include those projects described in the following document, attached to this Certificate as Exhibit A and may represent a subset of the total available authorization
3. I understand that Section 8B.124 of the City Charter grants authority to the City's Board of Supervisors to approve the issuance of Revenue Indebtedness, including revenue bonds and commercial paper, by ordinance upon two-thirds vote of its members and under certain conditions. Ordinance 115-12 related to the debt issuance, are attached hereto as Exhibit B (the Ordinance.)
4. I understand that one of the conditions to the Board of Supervisor's authorization of such Revenue Indebtedness is the delivery of a certificate of the Planning Department regarding the projects or additional to be financed under the authorization provided in Exhibit B, the Ordinance.
5. The San Francisco Planning Commission certifies Environmental Impact Reports as they are completed pursuant to CEQA. In addition, the Planning Department ERO approves Initial Study/Mitigated Negative Declarations, and Categorical Exemptions.
6. Based on a preliminary review of the Projects, and discussions with the SFPUC regarding the requirements for undertaking such additional Projects, I certify that the Projects under the jurisdiction of the SFPUC to be funded with proceeds of the Revenue Indebtedness, as described in the Ordinances, (a) comply with applicable requirements of CEQA, or (b) are not considered to be projects under CEQA at this time and will comply with CEQA if and when they *are* defined. Pursuant to the provisions of Chapter

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31 of the San Francisco Administrative Code, any additional Project to be financed will comply with such applicable requirements prior to any draw on any Revenue Indebtedness proceeds to finance the acquisition or construction of such facilities.

In witness whereof, the undersigned has executed this certification as of this 25 day of October 2013



SARAH B. JONES
Environmental Review Officer

GC: Document3

EXHIBIT A
WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
Sewer System Improvement Program (SSIP)	CWWSIPRPL	Program Wide Efforts	Source Funding, not a "project" under CEQA §15378, Individual projects will be subject to CEQA compliance, Preparation of Mitigated Negative Declarations for acquisition and reuse of 1800 Jerrold Avenue and 1801 Jerrold Avenue adjacent to Southeast Plant are anticipated; Construction of a vactor waste collection station at 1801 Jerrold Avenue would also be subject to CEQA compliance.
SSIP	CWWSIPDP	Biosolids Digester Facilities Project	Preparation of a Mitigated Negative Declaration (MND) or Environmental Impact Report (EIR) is anticipated
SSIP	CWWSIPSSSE02	Southeast Plant- New 250 MGD Grit Improvements	Planning and Design Phases only, not a "project" under CEQA §15378
SSIP	CWWSIPSE00	Southeast Plant	Planning and Design Phases only, not a "project" under CEQA §15378; Except WW-556 New Secondary Effluent Disinfection/New Chemical Feed System construction, anticipated categorical exemption determination, exemption request filed at the Planning Department July 8, 2013; A categorical exemption determination was issued on September 4, 2013 under Planning Department Case Number 2013.0908E for a geoarcheological investigation of the proposed sodium hypochlorite tank farm site
SSIP	CWWSIPTPNP	North Point Facility	Planning and Design Phases only, not a "project" under CEQA §15378

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FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
SSIP	CWWSIPTPOP02	Westside PS Redundant Force Main Improvements	Planning and Design Phases only, not a "project" under CEQA §15378; Preparation of an MND is anticipated, except WW-572 Oceanside Water Pollution Control Plant Wet Weather Pumps and Discharge Pipe Network Improvements construction, categorical exemption determination issued June 13, 2013, Planning Department Case Number 2013.0796E
SSIP	CWWSIPTPOP01	Oceanside Plant	Planning and Design Phases only, not a "project" under CEQA §15378
SSIP	CWWSIPCT01	Central Bayside System Improvements	Planning and Design Phases only, not a "project" under CEQA §15378, Initiation of preparation of an Environmental Impact Report (EIR) for CEQA compliance is anticipated
SSIP	CWWSIPCSSR	Collection System – Large Sewers/Tunnels/Odor Control and Interdepartmental Projects	As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs
SSIP	CWWSIPCSCD	Collection System – Combined Sewer Discharge (CSD) Structures and Transport/Storage Boxes	As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs; Baker Street Outfall Backflow Prevention Pilot Project exemption determination issued August 7, 2013 under Planning Department Case Number 2013.1050E

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FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
SSIP	CWW/SIPCSPS	Collection System – Pump Stations and Force Main Improvements	As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or MNDs; A categorical exemption request will be submitted to the Planning Department for the Sea Cliff Pump Station Number 2 Standby Generator and Facility Upgrades under Contract Number WW-586, issuance of an exemption determination is anticipated
SSIP	CWW/SIPFCDB	Early Implementation Projects	As the individual projects are defined, the appropriate CEQA compliance document will be prepared
SSIP	CWW/SIPUW	Urban Watershed Assessment	As the individual projects are defined, the appropriate CEQA compliance document will be prepared
SSIP	CWW/SIPFCRP	Advanced Rainfall Prediction	It is anticipated that the project will require preparation of an MND; Compliance with the National Environmental Policy Act (NEPA) will also be required with the National Oceanic and Atmospheric Administration (NOAA) acting as the NEPA lead agency; It is anticipated preparation of an Environmental Assessment (EA) will be required under NEPA

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FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
Renewal and Replacement (R&R)	CWWNRNSCA	Collection System – Condition Assessment	Cleaning and Inspection of existing sewers, no physical change in the environment, not a “project” under CEQA §15378
R&R	CWWNRRCSSR	Collection System - Sewer Improvements	As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations
R&R	CWWNRRCSSS	Collection System – Spot Sewer	Under the delegation agreement between the Planning Department and the SFPUC a Certificate of Exemption Determination was issued by the SFPUC on March 5, 2013 under Contract Number WW-567 and the Planning Department Environmental Review Officer granted concurrence with the Determination on March 19, 2013; Also under the delegation agreement a Certificate of Exemption Determination was issued by the SFPUC on July 18, 2013 under Contract Number WW-584 and the Planning Department Environmental Review Officer granted concurrence with the Determination on July 25, 2013
R&R	CWWNRNFT00	Treatment Plant Improvements	As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations or because there would be no physical change in the environment the Improvements would be determined not to be a “project” under CEQA §15378

EXHIBIT A
WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
Wastewater Facilities & Infrastructure (WF&I)	CWP110F01	Treasure Island - New Wastewater Treatment Facility	Final Environmental Impact Report Certified June 7, 2011, No further CEQA compliance required
WF&I	CWWFAC-01	Collection System Division Consolidation	Purchase of the property at 1550 Evans Avenue/ 330 Newhall Street was determined not to be a "project" under CEQA on August 1, 2012 and a General Plan Conformity Determination was issued by the Planning Department on September 7, 2012; When redevelopment of the property is defined, the project will be subject to CEQA compliance, It is anticipated the project will qualify for an exemption determination, A General Plan Conformity Determination will also be required.
WF&I	CWWFAC-02	Ocean Beach Protection	Planning and Design Phases only, not a "project" under CEQA §15378

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Program	Project Number	Project Title	CEQA Compliance
WF&I	CWWFAC-03	Southeast Community Center Improvements	<p>As the individual projects are defined, the appropriate CEQA compliance document will be prepared; It is anticipated that the individual projects will qualify for exemption determinations; Proposed tenant improvements to the Community Center to be completed under Job Order Contract (JOC) Task Order 32-34 (and subsequently Task Order 41-10) were determined not a "project" under CEQA §15378 on August 15, 2012; A categorical exemption determination was issued on July 22, 2013 under Planning Department Case Number 2013.0966E for proposed entrance and various energy conservation and Americans with Disabilities Act compliance improvements to the Community Center to be completed under JOC Task Order 41-12</p>

Certificate of the Consulting Engineers
in connection with Section 8B.124 of the Charter of the City and County of San Francisco, Section 3.06(c)(1)(B) of the Indenture of the San Francisco Public Utilities Commission (SFPUC), and Board of Supervisors Ordinances 108-12 and 115-12 authorizing the Sale of Wastewater Revenue Bonds and / or Other Forms of Indebtedness, including Commercial Paper

This Certificate has been prepared by Parsons Environment & Infrastructure, Inc., (Parsons) at the request of the San Francisco Public Utilities Commission (SFPUC) in support of the SFPUC Wastewater Revenue Bonds and/or Commercial Paper Issuance, as required under Section 8B.124 (a) (i) and (ii) of the San Francisco Charter. Parsons is an independent engineering firm retained by the SFPUC to provide the certification.

This Certificate is divided into Sections A and B. Section A, Certification of the Sewer System Improvement Program, Renewal and Replacement Program, and Wastewater Facilities and Infrastructure Program, certifies that the anticipated projects to be financed by the proposed Revenue Bonds and/or Commercial Paper Notes (the "Notes") including the prioritization, cost estimates and scheduling, meet utility industry standards. Section B, Certification of Bond Requirements, certifies that the estimated net revenue after payment of operating and maintenance expenses and estimated repair and replacement costs, should be sufficient to meet debt service coverage and other indenture or resolution requirements, including debt service requirements on the Notes under the proposed plan of finance, as well as debt service on all Parity and Senior Wastewater obligations.

The findings and conclusions in this Certificate are based on Parsons' review of the following references and data:

1. Wastewater Enterprise Capital Improvement Program Quarterly Report – (April, 2013 to June, 2013), September 4, 2013.
2. Sewer System Improvement Program Phase 1.
3. Wastewater Enterprise Revenue Bonds and Other Forms of Indebtedness – FY 2013-14 Capital Improvement Projects (Attachment A).
4. Wastewater Enterprise FY 2013-14 Capital Improvement Program (Attachment B).
5. Wastewater Enterprise Financial Projections, October 29, 2013 (Attachment C).
6. Meetings and discussions with SFPUC staff.

While developing the Certificate, Parsons reviewed the references and data and consulted with SFPUC staff. This Certification of the CIP is based on the information provided by the SFPUC. The conclusions, observations, and recommendations contained herein constitute only the opinions of Parsons. The various background documents, statements, and other information supplied by the SFPUC, its employees, and other consultants have been relied upon as being accurate in the performance of these analyses; however, no assurances are given nor warranties implied by Parsons as to the accuracy of such information. Parsons makes no certification and gives no assurances except as explicitly set forth in this document.

WASTEWATER ENTERPRISE PROGRAM DESCRIPTION

The responsibilities of the SFPUC's Wastewater Enterprise are to manage, operate, and maintain San Francisco's wastewater collection and treatment system. This is accomplished through three separate but related programs:

- Sewer System Improvement Program
- Renewal and Replacement Program
- Wastewater Facilities and Infrastructure Program

Sewer System Improvement Program

The Sewer System Improvement Program (SSIP) is the SFPUC's wastewater capital improvement program which includes multiple projects to address identified needs by completing necessary improvements and repairs to the existing system. The SSIP is the culmination of several years of wastewater system planning efforts, public meetings, and SFPUC Commission workshops. The purpose of the SSIP is to upgrade the existing wastewater system so it can meet the challenges of today and the future. The implementation of the SSIP projects and their associated expenditures will be phased over the next twenty years in an effort to maintain ratepayer affordability and minimize impacts to communities throughout the City. On August 28, 2012, after a series of three public SSIP workshops, the SFPUC Commission officially endorsed the projects in the \$6.9 billion 20-year SSIP and the associated Goals and Level of Service (LOS). The endorsed Goals include:

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

The scope of the endorsed SSIP is divided into two major project types, namely, treatment plant projects and collection system projects.

Renewal and Replacement Program

The Renewal and Replacement Program (R&R) is a continuing annual program that seeks to address deficiencies in two wastewater infrastructure categories: R&R Collection System; and R&R Treatment Facilities. The goal of the R&R Program is to meet the endorsed levels of service goals, regulatory permit compliance, system reliability and functionality, and sustainable operations of the City's sewer system. The R&R Program also complies with the State of California requirement that a provision be made for the periodic repair and replacement of sewer system facilities.

Wastewater Facilities and Infrastructure Program

The Wastewater Facilities and Infrastructure Program (WF&I) encompasses those capital improvements that fall outside of the SSIP and R&R. These capital projects are intended to provide for necessary upgrades to aging facilities, which are not addressed by the SSIP or R&R, to maintain their intended functions. Projects include improvement to Treasure Island wastewater facilities and improvements to wastewater support facilities (Collection System Consolidation, and Southeast Community Center Improvements).

SECTION A: CERTIFICATION OF SSIP, R&R, AND WF&I

Parsons' review of the references and data for Section A included a "programmatic approach" such that Parsons certifies that the revenue bonds and/or commercial paper proceeds are intended to be used by the SFPUC to fund the capital projects included in the Wastewater Enterprise's SSIP, R&R, and WF&I Programs included in this revenue bonds and/or commercial paper program. Projects may be moved on or off the CIP list, delayed or accelerated as necessary due to scheduling, budgeting, or other constraints.

Based upon our analysis and review of the data and analysis provided by the SFPUC, Parsons certifies that the projects to be financed by the revenue bonds and/or commercial paper program, as identified in the Wastewater Enterprise's SSIP, R&R, and WF&I Programs including the prioritization, cost estimates and scheduling, meet generally accepted utility standards.

SECTION B: CERTIFICATION OF BOND REQUIREMENTS

Bartle Wells Associates conducted a financial analysis evaluating the adequacy of revenues generated by the SFPUC Wastewater Enterprise to meet annual operating and debt service coverage requirements. The financial analysis was developed based on projected financial data from FY 2013-14, other relevant information, and consultations with Financial Services staff.

A five-year financial projection for the SFPUC Wastewater Enterprise has been developed through FY 2017-18 and is presented in Table 1 of the attached Wastewater Enterprise Financial Projections (WEFP), September 11, 2013. As shown in Table 1 of the WEFP, wastewater service charges are projected to be the major source of revenues to cover debt service.

- The SFPUC will implement the following projected rate increases: 5 percent effective FY 2014-15, 5 percent effective FY 2015-16, 6 percent effective FY 2016-17, and 11 percent effective FY 2016-17. These projected rate increases are the same as those included in the SFPUC's latest financial model for the wastewater enterprise.
- The volume of wastewater sales is projected to remain constant beginning in FY 2013-14.
- Interest earnings on fund balances are estimated at 1 percent of beginning annual fund reserves in FY 2013-14 and FY 2014-15, then increase to 1.5% in FY 2015-16 and FY 2016-17, and then increase to 2% in FY 2017/18.
- Operations and maintenance expenses are based on SFPUC budget estimates for FY 2013-14 and escalate at the annual rate of 3 percent thereafter, in line with SFPUC projections. Additional adjustments include projected additional operating expenses related to the SSIP.
- Capital expenditures are based on SFPUC Wastewater Financial Model projections and total approximately \$2.6 billion from FY 2013-14 through FY 2017-18.
- The cash flow projections assume SFPUC's sewer enterprise debt issuances will align with the projected CIP funding requirements each fiscal year. Bond debt service projections assume: debt issuance on January 1 of each year with interest payments due semi-annually on April 1 and October 1 and principal payments due each October 1; approximately 30-year debt repayment terms with interest-only payments for the first three bond years and level annual debt service payments thereafter; 5.0 percent average annual fixed interest rate; use of

capitalized interest to fund interest payments due in the first three bond years; no funding for any new debt service reserve funds.

- Payments on outstanding debt are based on actual debt maturity schedules.

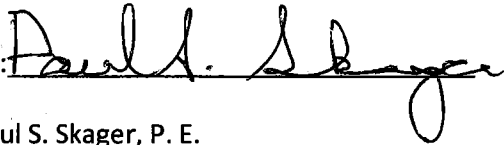
In the opinion of Bartle Wells Associates, the projected wastewater service fees should provide revenue sufficient to:

- Meet projected costs of operations, maintenance, and routine replacement of sewer system facilities.
- Meet debt service obligations on existing and projected debt, including proposed Revenue Bonds and/or Commercial Paper issuances.
- Provide sufficient revenue to finance the costs of projected sewer system capital improvements through FY 2017-18.
- Meet debt service coverage and additional debt test requirements on outstanding and projected debt.
- Meet all other obligations of the SFPUC including charges, liens, or encumbrances on or payable from revenues of the sewer enterprise.

The complete financial analysis is included in the aforementioned WEFP.

Dated this 29th day of October, 2013

Parsons Environment & Infrastructure, Inc.

By: 

Paul S. Skager, P. E.
Vice President

Attachment A
Wastewater Enterprise Revenue Bonds and Other Forms of Indebtedness
FY 2013-14 Capital Improvement Projects

Attachment B
Wastewater Enterprise FY 2013-14 Capital Improvement Program

Attachment C
Wastewater Enterprise Financial Projections, October 29, 2013
Bartle Wells Associates

ATTACHMENT A
WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
SEWER SYSTEM IMPROVEMENT PROGRAM (SSIP)		
CWWSIPRPL	Program Wide Efforts	<p>The Sewer System Improvement Program (SSIP) is a series of capital improvement projects focused on improving the wastewater system to meet the present and future needs of the City. Projects will increase the level of ensured reliability and future sustainability consistent with the SFPUC's endorsed Goals and Levels of Service (LOS) for the wastewater system. The SSIP implementation will require: Condition Assessment (facility inspections), project definition and prioritization, public outreach and education, analysis of the impacts of climate change, sustainability evaluation, and general program management (program controls, change control, constructability). The initial focus will be on scope optimization and validation; and the development of programmatic schedules, cost estimates, rate and spending projections for the SSIP. Activities for this year will also include general program management including technical oversight during project planning and design, program controls, document control, change control, constructability, establishing a community benefits framework that supports the SSIP, regulatory compliance, environmental permitting, climate change studies, specification and standards development, rate study support, and acquisition and reuse of two properties adjacent to the Southeast Plant (SEP) to support a number of SSIP uses and efforts.</p>
CWWSIPDP	Biosolids Digester Facilities Project	<p>The Biosolids Digester Facility project will provide a new digester and solids handling facility replacing the existing aged and failing facility at the Southeast Plant (SEP). The new facility would include state-of-the-art treatment processes, producing Class A (EPA 40 CFR 503) biosolids that can be reused for beneficial purposes. Biosolids treatment processes would include solids thickening, anaerobic digestion, gas handling, energy generation/reuse, dewatering, odor control and side stream treatment.</p> <p>The FY 14 funds will address the Planning and Design phases of this Project.</p>
CWWSIPSE02	Southeast Plant- New 250 MGD Grit Improvements	<p>SEP is the SFPUC's largest wastewater facility treating almost 80% of the City's dry and wet weather flows. Improvements to the pretreatment process are needed to ensure that the SEP facilities maintain permit compliance, operate reliably, and meet the Commission endorsed levels of service (LOS). In the pretreatment process, screenings and grit (e.g., sand and trash) are removed from the wastewater stream. This project will address the aging infrastructure, process performance, energy efficiency, and neighborhood impacts. This project will include</p> <p>a) Inflow Infiltration (I/I) screens, b) Coarse/Fine screens, screenings washers/compactors, screening storage/handling systems, c) Grit removal units, grit washers, grit storage/handling systems, d) Containment and treatment of odors, such that no odors are present past the</p>

ATTACHMENT A
WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWSIPSE00	Southeast Plant	<p>facility's fence line, and e) Flow splitting system to two primary treatment facilities.</p> <p>The FY 14 funds will address the Planning and Design phases of this Project.</p> <p>The Southeast Water Pollution Control Plant (SEP) is the SFPUC's largest wastewater facility treating almost 80% of the City's dry and wet weather flows. SEP has a maximum treatment capacity of 250 million gallons per day (MGD) with a daily average dry-weather flow of 63 MGD. Improvements are needed to ensure that the SEP facilities maintain permit compliance, operate reliably, and meet the Commission endorsed levels of service (LOS). This project will address the liquid treatment portion of the improvements at SEP. Large scale improvements to address aging infrastructure, outdated technology, energy efficiency, neighborhood impacts, and collection system operations will include:</p> <ul style="list-style-type: none"> - Containment and treatment of odors, such that no odors are present past the facility fence line - Architectural and landscape, structural, mechanical, electrical, instrumentation, corrosion and seismic upgrades; - Inclusion of systems that promote energy recovery and energy efficiency; - Refurbishment or expansion of influent pump station, headworks, primary treatment, oxygen generation system, secondary clarifiers, and effluent pump station; - New secondary effluent disinfection; and - New chemical feed facilities. <p>It is also anticipated that immediate improvements will be needed to sustain the facility and ensure reliable operation, safety and regulatory compliance.</p> <p>The FY 14 funds will address the Planning and Design phases of this group of projects. Except one component (New Secondary Effluent Disinfection/New Chemical Feed - WW-556) will be for the construction. Bureau of Environmental Management is currently reviewing WW-556.</p>

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FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWSIPTNP	North Point Facility	<p>The North Point Facility (NPF) is one of the Wastewater Enterprise's oldest facilities and is the only wet weather treatment plant in San Francisco. During wet weather, NPF provides primary treatment to flows from the northeast drainage areas of the City. NPF has a primary treatment capacity of 150 million gallons per day (MGD). Treated flows are discharged through the North Point Outfalls located at Pier 33 and 35. Large-scale improvements to the NPF and North Point Outfall will address aging infrastructure, odor control, seismic deficiencies, outdated equipment and technology and process performance. North Shore Pump Station is a dry weather and wet weather pump station that pumps dry weather flow for the northeastern sector of the City to the Channel Transport Storage structure, and wet weather flows to the NPF. The pump station requires seismic, structural, structural and instrumentation upgrades. It is anticipated that immediate improvements will be needed in the near term to sustain the facility and ensure reliable operation, safety and regulatory compliance, as the overall system operation is evaluated, and the more comprehensive SSIP NPF project(s) is planned, designed and constructed.</p> <p>The FY 14 funds will address the Planning and Design phase of this Project.</p>
CWWSIPTPOP02	Westside PS Redundant Force Main Improvements	<p>This SSIP project will include major improvements to the Westside Pump Station (WPS) and force main to Oceanside Plant. The 36-year old WPS is one of the most critical facilities in the City's wastewater collection system. The pump station is an all-weather facility that pumps dry weather flow to the Oceanside Plant, and wet weather flows to the treatment plant and decant facilities. The flow from WSP is transported through a sole force main with no redundant back-up force main. The existing force main is located along the Great Highway near the susceptible Ocean Beach erosion zone. The new redundant force main will consider alternative routes. Major improvements are needed to ensure that the WPS-related facilities maintain permit compliance, operate reliably, and meet the Commission endorsed levels of service (LOS). The following list of projects are identified:</p> <ul style="list-style-type: none"> - Redundant westside force main (OSP-001) - Screening improvements (OSP-002) - Electrical System Enhancements (OSP-003 and 005) - Wet weather pumps and discharge pipe network improvements (OSP-004) - Odor control and plant water (W3) flushing system (OSP-006 and 007) - Seismic and process equipment upgrades (OSP-010) <p>The FY 14 funds will address the Planning and Design phases of the projects, with the exception of Phase 1 of OSP-004 will be for the construction. OSP-004 project is under WW-572 and BEM is currently reviewing the CEQA documents.</p>

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWSIPTPOP01	Oceanside Plant	<p>The Oceanside Water Pollution Control Plant (OSP) treats wastewater/stormwater flows from the westside of the City. OSP has a wet weather treatment capacity of 65 million gallons per day (MGD), and dry weather capacity of 17 MGD. Improvements are needed to ensure that the OSP-related facilities maintain permit compliance, operate reliably, and meet the Commission endorsed levels of service (LOS). It is anticipated that immediate improvements will be needed to sustain the facility and ensure reliable operation, safety and regulatory compliance, as the larger SSIP OSP projects are planned, designed and constructed. The areas of large scale improvements that have been identified include;</p> <ul style="list-style-type: none"> - Containment and treatment of odors, such that no odors are present past the facility fence line; - Architectural and landscape; - Structural, mechanical, corrosion, instrumentation and seismic upgrades; - Security, safety and access; - Improvement of the pretreatment/grit removal processes; - Oxygen generation upgrades; - Improvements to the existing digester system to reliably produce Class A Biosolids; and, - Energy recovery system including a new gas handling processes and waste gas burners. <p>The FY 14 funds will address the Planning and Design phases of these groups of projects.</p>
CWWSIPCT01	Central Bayside System Improvements	<p>The proposed Central Bayside System Improvements Project (CBSIP) will provide collection system enhancement to the Channel Drainage Basin, including needed redundancy for the existing 66-inch Channel Force Main, hydraulic improvements to sewers/pump stations, and improvements to stormwater management through elements of both grey and green infrastructure. An analysis will be conducted to quantify the current and future anticipated stormwater flows and run-off that must be managed. Major components of the project consist of a tunnel to transport, via gravity, dry and wet-weather flows from the Channel and North Shore Drainage Basins to the Southeast Water Pollution Control Plant (SEP), connector tunnels to satellite pump stations, and a large all-weather pump station to lift the flows in to the SEP. The requested funding in FY 14 will provide for environmental review, completion of planning, and the pre-design initiation efforts.</p>

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FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWSIPCSSR	Collection System – Large Sewers/Tunnels/Odor Control and Interdepartmental Projects	<p>This set of projects is part of the Collection System Reliability Subprogram within the SSIP. As part of San Francisco’s combined sewer system, there are almost 1,000-miles of sewer pipes and tunnels throughout the City to collect, store and transport sewage and stormwater to the wastewater treatment plants for treatment before the water can be discharged into the Bay or Ocean. This set of projects will address improvements/rehabilitations to large-diameter sewers (greater than 36-inches in diameter) and sewer tunnels to meet the SSIP LOS. Some of the large sewers and tunnels may have odors issues, which impact neighborhoods; therefore, odor control measures are also included in this set of projects. In addition, this group of projects would provide funding for SFPUC to partner with other city agencies (such as DPW or SFMTA) on roadway or transit improvements projects to include sewer improvements or relocations if their facilities are located above or near sewers, which conforms with one of the LOS.</p> <p>FY 14 funds will address the condition assessment, planning and design phases of some of the projects, and include construction funds for one to two projects.</p>
CWWSIPCSCD	Collection System – Combined Sewer Discharge (CSD) Structures and Transport/Storage Boxes	<p>This set of projects is part of the Collection System Reliability Subprogram within the SSIP. As part of San Francisco’s combined sewer system, the Transport/Storage (T/S) Boxes are essential facilities that first capture all combined sewage from upstream sewers and allow the sewage to settle out the solids and hold back floatable materials with baffles. When there are intense rainstorms, the T/S boxes could fill up completely and the treatment plants would operate at maximum capacity, instead of allowing excess water to back-up through the sewers and into homes and streets, water is discharged into the Bay or Ocean through one of the 36 Combined Sewer Discharge (CSD) structures. After the storm, the remaining volume within the T/S Boxes is then pumped to the wastewater treatment plants for treatment and disposal. The projects will address various deficiencies of these structures to meet the LOS, including structural and corrosion protection improvements (coating and concrete repair) and operational improvements. Operational improvements may include backflow prevention, which prevents or minimizes bay water from entering the CSD structures into the collection and treatment systems. Currently, salt water occasionally enters the collection system through the CSD structures, and finally into the wastewater treatment plants, which is detrimental to the biological wastewater treatment process. This phenomenon may become more frequent due to storm surges and sea level rise as a result of climate change.</p> <p>FY 14 funds will include work for condition assessment, planning, environmental review, and design phases of some of the projects.</p>

ATTACHMENT A
WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWSIPCSPS	Collection System – Pump Stations and Force Main Improvements	<p>This set of projects is part of the Collection System Reliability Subprogram within the SSIP. Located throughout the City are 27 pump stations and miles of force mains. These pump stations and force mains are critical components of the collection system because they convey wastewater flows to the treatment facilities where conveyance by gravity is not possible. In order to meet the LOS, improvements to the pump stations and force mains are required to manage catastrophic events, reduce odor and visual impacts, and enhance overall reliability and redundancy.</p> <p>FY14 funds will include conditions assessment, planning, environmental review, and design phases of some of the projects.</p>
CWWSIPFCDB	Early Implementation Projects	<p>The SSIP will utilize an integrated watershed management approach to investigate the health of each of the City's drainage basins (watersheds) and identify potential opportunities for stormwater capture and reuse to address issues of combined sewer discharges and flooding. These projects will provide watershed-wide improvements identified in the SSIP. The green infrastructure Early Implementation Projects (EIP) will demonstrate the performance of green infrastructure across variable conditions found in the City, with at least one EIP for each of the eight watersheds. The EIPs are currently in planning and design work will begin towards the end of the fiscal year. Triple bottom line will be used to communicate the benefits of project alternatives, with an extensive public outreach effort throughout all phases. Incremental flood management will also be provided in the 17th and Folsom neighborhood with wet weather storage. The budget for FY 2013-14 will fund all phases of work for the 17th and Folsom wet weather storage project; planning is currently underway.</p>
CWWSIPUW	Urban Watershed Assessment	<p>The SSIP Urban Watershed Assessment and Planning project will evaluate alternatives that balance the use of grey versus green infrastructure for collection system improvements. The SSIP will utilize an integrated watershed management approach to investigate the health of the City's watersheds. In addition to evaluating grey solutions, this approach will identify potential opportunities for stormwater capture and reuse to address issues of flooding. The Watershed Assessment process will evaluate existing land use, soil type, topography and in filtration rates to inform the alternative analysis process so that an appropriate mix of grey and green infrastructure is proposed. The work will address life cycle costs and detailed maintenance requirements. The Watershed Assessment effort will result in the identification of project alternatives for each of the eight drainage basins. Project implementation will require the hydraulic analysis of each drainage basin and will include: identification of various solutions to each basin's unique set of flooding challenges; evaluation of the alternatives that meet the endorsed Levels of Service with a triple bottom line tool that addresses the social,</p>

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWSIPFCRP	Advanced Rainfall Prediction	<p>environmental, and economic implications; and the optimization and prioritization of projects for each basin. The budget will fund the planning efforts.</p> <p>This SSIP project will provide the SFPUC with better rainfall forecasting capabilities, especially 4 to 8 hours in advance of an event, which will be beneficial in managing wet weather flows in the combined collection system. This is accomplished through two major steps. The first step focuses on improving the spatial, temporal, and volumetric accuracy of rainfall prediction in partnership with National Oceanic and Atmospheric Administration (NOAA). NOAA would install three new radar stations outside the City of San Francisco, develop rainfall prediction models tailored to San Francisco, verify model performance using existing rain gages, and deliver real-time rainfall prediction data. In the second step, the rainfall prediction data will be coupled with WWE's collection system hydraulic model to project the likely impact of approaching storms and generate specific operational recommendations for managing flows. This Operational Decision System will rely on the strategy and concepts for real-time control being developed under the SSIP, providing portions of the system architecture needed to implement system-wide real-time control. The budget for FY 2013-14 will fund planning, design, and environmental review for the new radar systems, project management, and integration of real-time decision support for a small portion of the collection system to begin testing. Construction, and construction management phases will occur in subsequent fiscal years.</p>

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
RENEWAL AND REPLACEMENT (R&R)		
CWWRNRSCA	Collection System – Condition Assessment	<p>The sewer collection program includes Sewer System Improvement Program (SSIP), Capital Improvement Program (CIP), and Renewal and Replacement Program (R&R); together, the respective programs address long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Program Collection System Condition Assessment projects consist of cleaning and inspection of large diameter sewers, transport/storage boxes and collection system discharge/overflow structures. The results of the inspection program will inform the R&R Spot Repair and Collection System Sewer Improvements Programs, as well as the SSIP. Projects consist of cleaning/inspection of large diameter sewers, transport/storage boxes and outfall structures throughout San Francisco. The budget will fund design, environmental review, project management and construction costs.</p>
CWWRNRCSSR	Collection System - Sewer Improvements	<p>The purpose of the WWE Renewal and Replacement Program (R&R) Collection System Sewer Improvements project is to maintain the existing functionality of the sewage collection system and address planned and emergency projects for repair and replacement of structurally inadequate sewers. This project in combination with the WWE Renewal and Replacement Program (R&R) Spot Sewer Repair replaces aging failed portions of the sewer collection system.</p> <p>The R&R Collection System Sewer Improvements projects are identified and prioritized utilizing an asset management based approach, which factors in physical condition, age, location, risk factors tied to the consequences and likelihood of failures, public safety, paving schedule and various other factors. Projects in FY 13/14 will consist of replacing approximately 12-13 miles of structurally inadequate main sewers throughout San Francisco. The budget will fund design, environmental review, project management and construction costs.</p>
CWWRNRCSSS	Collection System – Spot Sewer	<p>The purpose of the WWE Renewal and Replacement Program (R&R) Spot Sewer Repair Project is to address short segments of failed sewers due to age and condition. The R&R Collection System Spot Sewer Repair Project collectively with the Collection System R&R Projects, and the Sewer System improvement Program Collection System Projects addresses the long-term planning and immediate/ongoing needs to support the sewer collection system. The R&R Collection System Spot Sewer Repair Project will address collapse sections of pipe, voids and holes and other deficiencies. Deficiencies are identified based on visible failures reported by the public and the results of the sewer condition assessment program by means of CCTV. The R&R Program Collection System Spot Sewer Repair projects address failures</p>

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWRRNRF00	Treatment Plant Improvements	<p>based on criticality. Currently there are approximately 2,300 outstanding sewer spot repair work orders. The rate of discovery is currently twice the rate of repair. Projects in FY 13/14 will repair approximately 700 individual spot sewer locations to meet the targeted levels of service goals. It is anticipated that this base rate of spot repair will continue for the next several years and would ultimately decrease as the overall R&R program continues to be implemented. The end result of this increased investment in spot repairs will be an overall decrease in the number of emergency repairs occurring due to sewer mainline failures. The budget will fund design, environmental review, project management and construction costs.</p> <p>The purpose of the Wastewater Enterprise (WWE) Repair and Replacement (R&R) Program Treatment Plant Improvement projects is to maintain the capacity and reliable performance of the wastewater treatment facilities owned/operated by the Wastewater Enterprise. This is a continuing annual program to extend the useful life of the WWE treatment assets. Treatment Facility Wastewater Enterprise Assets include: Transport Boxes, Discharge Structures, Pump Stations, Force Mains, Tunnels and Treatment Plants. The R&R Treatment Facilities projects are prioritized based upon regulatory compliance, condition assessments, Operation staff recommendations and Level Of Service goals. Planned WWE R&R Program Treatment Plant Improvement projects will address aging infrastructure at the wastewater enterprise treatment facility assets. Planned WWE R&R Program Treatment Plant Improvement projects are prioritized based on risk to permit compliance, safety and urgency.</p>

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
WASTEWATER FACILITIES AND INFRASTRUCTURE (WF&I)		
CWP110F01	Treasure Island - New Wastewater Treatment Facility	<p>The aged, unreliable wastewater treatment facilities at Treasure Island require replacement. A two million gallon per day (MGD) tertiary wastewater treatment facility has been proposed for the Treasure Island/Yerba Buena Island service area to replace the decrepit existing facility.</p> <p>The new treatment facility would include influent screening, a combined primary/secondary treatment process (such as membrane bioreactors), anaerobic sludge digestion, sludge dewatering and truck load-out, disinfection, odor control and tertiary treatment enabling water reuse on the island. The planning and design of this new wastewater treatment facility will begin once City ownership is established. Construction of the wastewater treatment plant will be coordinated with the development of Treasure Island/Yerba Buena Island.</p>
CWWFAC-01	Collection System Division Consolidation	<p>The WWE Collection System Division Facilities Consolidation Project will serve multiple functions to address the present and future operational needs of the Wastewater Enterprise's Collection System Division. This project will focus on consolidating the Collection System Division Administrative and Sewer Operations staff to a centralized location, improving the Collection System Division's ability to inspect and maintain the City's sewer collection system for the long-term. The consolidation efforts under this project will include: new office spaces to consolidate Collection System Division administrative staff and Sewer Operations staff; a secure warehouse facility to store Collection System Division equipment and materials; and vehicle and equipment parking areas.</p>
CWWFAC-02	Ocean Beach Protection	<p>This Project will facilitate the planning and implementation of long-term shoreline protection measures along Ocean Beach, between Sloat and Skyline Boulevards, in an effort to protect the integrity of critical wastewater assets that were planned, built, permitted and constructed to protect public health and the environment. The wastewater assets that are jeopardized by the on-going shoreline erosion include: Lake Merced Transport Tunnel, the Westside Pump Station, the Westside Transport and the Oceanside Water Pollution Control Plant. The Lake Merced Transport Tunnel has a storage capacity of up to 10 million gallons for combined sewage and stormwater flows, and is located closest to the section of Ocean Beach most severely impacted from, and most vulnerable to, continued bluff erosion. The tunnel could become structurally compromised if sudden bluff retreat is experienced during a design storm event, resulting in significant environmental and public health impacts. This 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, and to mitigate potential impacts to the Lake Merced Tunnel and other critical wastewater assets at this location.</p>

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WASTEWATER ENTERPRISE REVENUE BONDS AND OTHER FORMS OF INDEBTEDNESS
FY 2013-2014 CAPITAL IMPROVEMENT PROJECTS

Project Number	Project Title	Project Description
CWWFAC-03	Southeast Community Center Improvements	<p>The Southeast Community Facility (SECF) was built as community mitigation as part of the 1970's Clean Water Program, when Southeast Plant was expanded. There have been very limited capital improvements. The building structure (roof, windows) and the mechanical and electrical systems (HVAC, electrical, security, energy management, energy conservation) require immediate attention. The Southeast Community Facility Improvements Project will focus on evaluating and improving the functional and operational reliability of the existing Southeast Community Facility by providing infrastructure improvements via a combination of: energy efficiency improvement (natural gas and power), stormwater management, roofing and evaluation of solar compatibility, structural/seismic upgrades, spatial planning upgrades (path of travel/ADA), safety and security improvements, improvements to the greenhouse buildings and parking areas, and other essential improvements to modernize and bring this facility up to current standards. FY 13-14 funds will be used for design and construction of these improvements.</p>

ATTACHMENT B
WASTEWATER ENTERPRISE FY 2013-14 CAPITAL IMPROVEMENT PROGRAM

Program	Project Number	Project Title	FY 2013-14 Budget
Sewer System Improvement Program (SSIP)	CWWSIPRPL	Program Wide Efforts	\$62,000,000
SSIP	CWWSIPDP	Biosolids Digester Facilities Project	\$0
SSIP	CWWSIPSE02	Southeast Plant-New 250 MGD Grit Improvements	\$3,000,000
SSIP	CWWSIPSE00	Southeast Plant	\$22,500,000
SSIP	CWWSIPTNP	North Point Facility	\$7,250,000
SSIP	CWWSIPTPOP02	Westside PS Redundant Force Main Improvements	\$2,400,000
SSIP	CWWSIPTPOP01	Oceanside Plant	\$2,700,000
SSIP	CWWSIPT01	Central Bayside System Improvements	\$6,300,000
SSIP	CWWSIPCSSR	Collection System – Large Sewers/Tunnels/Odor Control and Interdepartmental Projects	\$10,600,000
SSIP	CWWSIPCSCD	Collection System – Combined Sewer Discharge (CSD) Structures and Transport/Storage Boxes	\$2,000,000
SSIP	CWWSIPCSPS	Collection System – Pump Stations and Force Main Improvements	\$370,000
SSIP	CWWSIPFCDB	Early Implementation Projects	\$10,000,000
SSIP	CWWSIPUW	Urban Watershed Assessment	\$3,000,000
SSIP	CWWSIPFCRP	Advanced Rainfall Prediction	\$2,830,000
Renewal and Replacement (R&R)	CWWRNRSCA	Collection System – Condition Assessment	\$3,000,000
R&R	CWWRNRCSSR	Collection System - Sewer Improvements	\$42,339,000

ATTACHMENT B
WASTEWATER ENTERPRISE FY 2013-14 CAPITAL IMPROVEMENT PROGRAM

Program	Project Number	Project Title	FY 2013-14 Budget
R&R	CWWRNRCSSS	Collection System – Spot Sewer	\$18,600,000
R&R	CWWRNRFT00	Treatment Plant Improvements	\$11,849,000
Wastewater Facilities & Infrastructure (WF&I)	CWP110F01	Treasure Island - New Wastewater Treatment Facility	\$4,370,000
	CWWFAC-01	Collection System Division Consolidation	\$10,000,000
WF&I	CWWFAC-02	Ocean Beach Protection	\$1,500,000
WF&I	CWWFAC-03	Southeast Community Center Improvements	\$15,000,000
TOTAL CIP			\$241,608,000



San Francisco Public Utilities Commission



Wastewater Enterprise Financial Projections

October 29, 2013



BARTLE WELLS ASSOCIATES
INDEPENDENT PUBLIC FINANCE ADVISORS

SFPUC Wastewater Enterprise Financial Projections
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Table 1
SFPUC Wastewater Enterprise
Cash Flow Projections

	2013/14	2014/15	2015/16	2016/17	2017/18
ASSUMPTIONS	Adopted	Projected	Projected	Projected	Projected
Rate Increases	5.0%	5.0%	5.0%	6.0%	11.0%
Change in Wastewater Sales	0.0%	0.0%	0.0%	0.0%	0.0%
Interest Earnings Rate	1.0%	1.0%	1.5%	1.5%	2.0%
Salary & Benefit Cost Escalator	3.0%	3.0%	3.0%	3.0%	3.0%
O&M Cost Escalator	3.0%	3.0%	3.0%	3.0%	3.0%
Beginning Undesignated Fund Rsrvs	78,000,000	97,516,000	122,472,000	143,831,000	177,181,500
Other/Encumbered Fund Rsrvs (est.)	50,000,000	25,000,000	25,000,000	25,000,000	25,000,000
REVENUES					
Sewer Service Charges	253,133,000	265,790,000	279,080,000	295,825,000	328,366,000
Interest Income	1,280,000	1,225,000	2,212,000	2,532,000	4,044,000
Other/Miscellaneous	2,900,000	2,900,000	2,900,000	2,900,000	2,900,000
Total	257,313,000	269,915,000	284,192,000	301,257,000	335,310,000
Debt Proceeds (Net)	322,167,000	248,655,000	474,336,000	334,887,000	1,214,074,000
EXPENSES					
<u>Operating & Maintenance</u>					
Salaries & Benefits	64,100,000	66,023,000	68,004,000	70,044,000	72,145,000
Non-Personnel Services	14,700,000	15,141,000	15,595,000	16,063,000	16,545,000
Materials & Supplies	9,400,000	9,682,000	9,972,000	10,271,000	10,579,000
Equipment	700,000	1,379,000	1,420,000	1,463,000	1,507,000
Light/Heat/Power	8,459,000	8,713,000	8,974,000	9,243,000	9,520,000
SFPUC Admin Svcs	25,200,000	25,956,000	26,735,000	27,537,000	28,363,000
Services of Other Depts	25,578,000	26,345,000	27,135,000	27,949,000	28,787,000
Incremental O&M for SSIP	303,000	365,000	431,000	501,000	2,036,000
Subtotal	148,440,000	153,604,000	158,266,000	163,071,000	169,482,000
<u>Debt Service</u>					
Outstanding Bonds (Net)	48,663,000	48,605,000	59,758,000	48,514,000	46,756,000
Less Interest on Outstanding Rsrvs	(493,000)	(493,000)	(493,000)	(493,000)	(493,000)
Projected New Debt Service	4,726,000	22,553,000	40,455,000	66,243,000	105,705,000
Less Capitalized Interest	(4,726,000)	(22,553,000)	(40,455,000)	(56,790,500)	(72,591,500)
Subtotal	48,170,000	48,112,000	59,265,000	57,473,500	79,376,500
<u>Non-Operating</u>					
Repair & Replacements (Pay-Go)	37,000,000	39,000,000	41,000,000	43,000,000	45,000,000
Programmatic Projects	2,181,000	2,217,000	2,254,000	2,292,000	2,331,000
Programmatic 525GG Lease & Operations	2,006,000	2,026,000	2,048,000	2,070,000	2,093,000
Subtotal	41,187,000	43,243,000	45,302,000	47,362,000	49,424,000
Total Expenses	237,797,000	244,959,000	262,833,000	267,906,500	298,282,500
Revenues Less Expenses	19,516,000	24,956,000	21,359,000	33,350,500	37,027,500
Ending Undesignated Fund Rsrvs	97,516,000	122,472,000	143,831,000	177,181,500	214,209,000
Net Revenues	108,873,000	116,311,000	125,926,000	138,186,000	165,828,000
With Ending Available Fund Rsrvs	186,873,000	213,827,000	248,398,000	282,017,000	343,009,500
Debt Service Coverage	2.26	2.42	2.12	2.40	2.09
With Available Fund Reserves	3.88	4.44	4.19	4.91	4.32

Table 2
 SFPUC Wastewater Enterprise
 Debt-Financed Capital Improvement Projects
Costs Escalated into Future Dollars

	2013/14	2014/15	2015/16	2016/17	2017/18
Sewer System Improvement Program (SSIP)					
SSIP Phase 1	252,729,000	190,771,000	351,063,000	184,173,000	1,021,909,000
SSIP Phase 2	2,237,000	4,354,000	31,624,000	71,736,000	105,455,000
SSIP Phase 3	<u>7,921,000</u>	<u>1,875,000</u>	<u>11,083,000</u>	<u>23,381,000</u>	<u>29,736,000</u>
Subtotal	262,887,000	197,000,000	393,770,000	279,290,000	1,157,100,000
Renewal & Replacement	59,280,000	51,655,000	80,566,000	55,597,000	56,974,000
Total	322,167,000	248,655,000	474,336,000	334,887,000	1,214,074,000
Cumulative Total	322,167,000	570,822,000	1,045,158,000	1,380,045,000	2,594,119,000

Source: SFPUC Wastewater Enterprise 10-Year Financial Model FY13Q4V1

Table 3
SFPUC Wastewater Enterprise
Outstanding Debt Service

	2013/14	2014/15	2015/16	2016/17	2017/18
Series 2010A Bonds	2,276,200	2,276,200	2,276,200	9,037,825	9,042,075
Series 2010B Bonds (BABs)	10,685,426	10,685,426	10,685,426	10,685,426	10,685,426
Less 35% Federal Int Reimb	(3,739,899)	(3,739,899)	(3,739,899)	(3,739,899)	(3,739,899)
Less Capitalized Interest	<u>(129,534)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net 2010B Bonds	6,815,993	6,945,527	6,945,527	6,945,527	6,945,527
Series 2013A Refunding Bonds	39,570,625	36,978,700	36,108,500	18,102,500	16,340,800
Series 2013B Bonds	15,790,644	14,428,000	14,428,000	14,428,000	14,428,000
Less Capitalized Interest	<u>(15,790,644)</u>	<u>(12,023,333)</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net 2013B Bonds	0	2,404,667	14,428,000	14,428,000	14,428,000
Total	48,662,818	48,605,094	59,758,227	48,513,852	46,756,402

Table 4
 SFPUC Wastewater Enterprise
 Estimated Bond Debt Service
 Per \$100 Million of Project Funding

Repayment Term		30 Years
Cap I Term		2.75 Years
Funding Target		\$100,000,000
Assumed Issuance & Payment Dates		
Bond Issuance Date		Jan-1
First Interest Payment		Apr-1
Principal & Second Interest Payment		Oct-1
Total Debt Issue		\$117,350,000
Project Funding		\$100,000,000
Issuance Costs & Reserve Requirement		
Underwriter Discount	0.75%	\$880,000
Issuance Costs	Est.	300,000
Reserve Requirement		0
Capitalized Interest*		16,137,000
Rounding/Contingency		<u>33,000</u>
Total		17,350,000
Financing Terms		
Term (Years)		30
Interest Only (Years)		2.75
Principal Amortization (Years)		27
Est. Average Interest Rate		5.00%
Annual Debt Service		
Interest Only Period		5,868,000
Principal Amortization Period		8,014,000

* Assumes Cap I funds annual interest payments for 2.75 years.
 Financing costs and interest rates estimated for financial planning purposes.

Table 5
SFPUC Wastewater Enterprise
Projected Debt Service

Debt Issuance by FY	2013/14	2014/15	2015/16	2016/17	2017/18
Bond Series	Series 2014	Series 2015	Series 2016	Series 2017	Series 2018
Total Issue Size	378,060,000	291,800,000	556,630,000	392,990,000	1,424,720,000
CIP Project Funding Target	322,167,000	248,655,000	474,336,000	334,887,000	1,214,074,000
Capitalized Interest (2.75 Yrs)	51,988,000	40,126,000	76,543,000	54,041,000	195,916,000
Issuance Date	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Interest Payments	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1	Apr-1 & Oct-1
Principal Payments (starting year 3)	Oct-1	Oct-1	Oct-1	Oct-1	Oct-1
Debt Service per \$100M					
Interest Only Period	5,868,000	5,868,000	5,868,000	5,868,000	5,868,000
Principal Amortization Period	8,014,000	8,014,000	8,014,000	8,014,000	8,014,000
Annual Debt Service					
Interest Only Period	18,905,000	14,591,000	27,834,000	19,651,000	71,242,000
Principal Amortization Period	25,818,000	19,927,000	38,013,000	26,838,000	97,296,000
<i>Cumulative MADS</i>	<i>25,818,000</i>	<i>45,745,000</i>	<i>83,758,000</i>	<i>110,596,000</i>	<i>207,892,000</i>
Projected Gross Debt Service by Fiscal Year					
<i>Assumes bonds issued Jan-1 of each year; Apr-1 interest pymt; Oct-1 principal & interest payment</i>					
Series 2014 Bonds	4,726,000	18,905,000	18,905,000	18,905,000	25,818,000
Series 2015 Bonds		3,648,000	14,591,000	14,591,000	14,591,000
Series 2016 Bonds			6,959,000	27,834,000	27,834,000
Series 2017 Bonds				4,913,000	19,651,000
Series 2018 Bonds					17,811,000
Total	4,726,000	22,553,000	40,455,000	66,243,000	105,705,000

Table 6
 SFPUC Wastewater Enterprise
 Projected Capitalized Interest Drawdown

Debt Issuance by FY	Total Cap I	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Capitalized Interest Drawdown on Projected New Debt									
Series 2014 Bonds	51,988,500	4,726,000	18,905,000	18,905,000	9,452,500				
Series 2015 Bonds	40,125,500		3,648,000	14,591,000	14,591,000	7,295,500			
Series 2016 Bonds	76,544,000			6,959,000	27,834,000	27,834,000	13,917,000		
Series 2017 Bonds	54,040,500				4,913,000	19,651,000	19,651,000	9,825,500	
Series 2018 Bonds	195,916,000					17,811,000	71,242,000	71,242,000	35,621,000
Subtotal	418,614,500	4,726,000	22,553,000	40,455,000	56,790,500	72,591,500	104,810,000	81,067,500	35,621,000

Table 7
 SFPUC Wastewater Enterprise
 Net Debt Service Payments on Future Debt

Debt Issuance by FY	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Total Debt Service								
Series 2014 Bonds	4,726,000	18,905,000	18,905,000	18,905,000	25,818,000	25,818,000	25,818,000	25,818,000
Series 2015 Bonds	-	3,648,000	14,591,000	14,591,000	14,591,000	19,927,000	19,927,000	19,927,000
Series 2016 Bonds	-	-	6,959,000	27,834,000	27,834,000	27,834,000	38,013,000	38,013,000
Series 2017 Bonds	-	-	-	4,913,000	19,651,000	19,651,000	19,651,000	26,838,000
Series 2018 Bonds	-	-	-	-	17,811,000	71,242,000	71,242,000	71,242,000
Subtotal	4,726,000	22,553,000	40,455,000	66,243,000	105,705,000	164,472,000	174,651,000	181,838,000
Capitalized Interest								
Series 2014 Bonds	4,726,000	18,905,000	18,905,000	9,452,500	0	0	0	0
Series 2015 Bonds	-	3,648,000	14,591,000	14,591,000	7,295,500	0	0	0
Series 2016 Bonds	-	-	6,959,000	27,834,000	27,834,000	13,917,000	0	0
Series 2017 Bonds	-	-	-	4,913,000	19,651,000	19,651,000	9,825,500	0
Series 2018 Bonds	-	-	-	-	17,811,000	71,242,000	71,242,000	35,621,000
Subtotal	4,726,000	22,553,000	40,455,000	56,790,500	72,591,500	104,810,000	81,067,500	35,621,000
Net Debt Service								
<i>Gross debt service less capitalized interest</i>								
Series 2014 Bonds	0	0	0	9,452,500	25,818,000	25,818,000	25,818,000	25,818,000
Series 2015 Bonds	-	0	0	0	7,295,500	19,927,000	19,927,000	19,927,000
Series 2016 Bonds	-	-	0	0	0	13,917,000	38,013,000	38,013,000
Series 2017 Bonds	-	-	-	0	0	0	9,825,500	26,838,000
Series 2018 Bonds	-	-	-	-	0	0	0	35,621,000
Subtotal	0	0	0	9,452,500	33,113,500	59,662,000	93,583,500	146,217,000

Table 8
SFPUC Wastewater Enterprise
Estimated Interest Income on Debt Reserve Funds

	Reserve Fund	Rate	2011/12	2012/13	2013/14	2014/15	2015/16
Outstanding Debt Issues							
Series 2010A	3,874,000	2.5%	97,000	97,000	97,000	97,000	97,000
Series 2010B	15,853,000	2.5%	396,000	396,000	396,000	396,000	396,000
Series 2013A	No Reserve	n/a	0	0	0	0	0
Series 2013B	No Reserve	n/a	0	0	0	0	0
Subtotal			493,000	493,000	493,000	493,000	493,000
Projected Debt Issues							
Series 2014	No Reserve	n/a	0	0	0	0	0
Series 2015	No Reserve	n/a	0	0	0	0	0
Series 2016	No Reserve	n/a	0	0	0	0	0
Series 2017	No Reserve	n/a	0	0	0	0	0
Series 2018	No Reserve	n/a	0	0	0	0	0
Subtotal			0	0	0	0	0
Total Reserve Interest Income			493,000	493,000	493,000	493,000	493,000