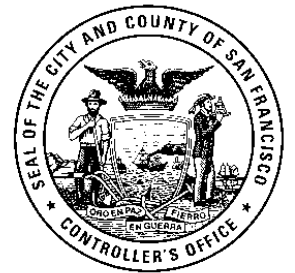


The San Francisco Public Utilities Commission Spent Revenue Bond Funds for Allowable Purposes but Should Improve Its Controls Over Reporting and Quality Assurance

San Francisco Public Utilities Commission



February 9, 2022

City & County of San Francisco
Office of the Controller
City Services Auditor

About the Audits Division

The City Services Auditor (CSA) was created in the Office of the Controller through an amendment to the Charter of the City and County of San Francisco (City) that voters approved in November 2003. Within CSA, the Audits Division ensures the City's financial integrity and promotes efficient, effective, and accountable government by:

- Conducting performance audits of city departments, contractors, and functions to assess efficiency and effectiveness of service delivery and business processes.
- Investigating reports received through its whistleblower hotline of fraud, waste, and abuse of city resources.
- Providing actionable recommendations to city leaders to promote and enhance accountability and improve the overall performance and efficiency of city government.

Team:

Massanda D'Johns, *Principal Auditor*
Hunter Wang, *Audit Manager*

Mark de la Rosa
Director of Audits
Office of the Controller
City and County of San Francisco
(415) 554-7574

Consultants:

HKA Global, Inc.
Yano Accountancy Corporation

For media inquiries, please contact
con.media@sfgov.org.



<http://www.sfcontroller.org>



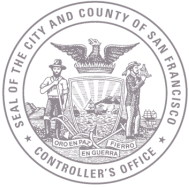
@sfcontroller



LinkedIn Office of the Controller

Audit Authority

This audit was conducted under the authority of the San Francisco Charter, Section 3.105 and Appendix F, which requires that CSA conduct periodic, comprehensive financial and performance audits of city departments, services, and activities.



OFFICE OF THE CONTROLLER
CITY AND COUNTY OF SAN FRANCISCO

Ben Rosenfield
Controller
Todd Rydstrom
Deputy Controller

February 9, 2022

San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102

Mr. Dennis Herrera
General Manager
San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102

Public Utilities Revenue Bond Oversight Committee
San Francisco Public Utilities Commission
525 Golden Gate Avenue, 2nd Floor
San Francisco, CA 94102

Dear Commissioners, Mr. Herrera, and Committee members:

The Office of the Controller (Controller), City Services Auditor (CSA), Audits Division, presents its audit report of the revenue bond program administered by the San Francisco Public Utilities Commission (SFPUC). The Public Utilities Revenue Bond Oversight Committee (RBOC) engaged CSA, which, in turn, engaged HKA Global, Inc. (HKA) and, as its subcontractor, Yano Accountancy Corporation (YAC) to conduct the audit. The audit had as its objectives to determine whether revenue bond funds were spent in accordance with the stated purposes and permissible use of such bonds.

The audit concluded that revenue bond expenditures were spent appropriately. The report includes two recommendations for SFPUC to coordinate with RBOC to determine the most effective method to comprehensively report project expenditures by funding source and uses of revenue bond proceeds, as well as to comply with its policies regarding quality assurance audits. The SFPUC's response is attached as Appendix B. CSA will work with the department to follow up every six months on the status of the open recommendations made in this report.

CSA, HKA, and YAC appreciate the assistance and cooperation of all staff involved in this audit. For questions about the report, please contact me at mark.p.delarosa@sfgov.org or 415-554-7574 or CSA at 415-554-7469.

Respectfully,

A handwritten signature in black ink, appearing to read "Mark de la Rosa".

Mark de la Rosa
Director of Audits

cc: Board of Supervisors
Budget Analyst
Citizens Audit Review Board
City Attorney
Civil Grand Jury
Mayor
Public Library



REVENUE BOND OVERSIGHT COMMITTEE

San Francisco Public Utilities Commission

PERFORMANCE AUDIT OF SELECT REVENUE BOND EXPENDITURES

DECEMBER 23, 2021

CONTENTS

1	EXECUTIVE SUMMARY	2
1.1	Introduction	2
1.2	Summary of Findings and Recommendations	2
1.3	Restriction on Use	3
2	SAN FRANCISCO PUBLIC UTILITIES COMMISSION.....	4
2.1	Enterprise and Support Bureau Descriptions	5
2.2	Enterprise Construction Programs	9
3	PARTIES INVOLVED WITH THE PERFORMANCE AUDIT.....	12
3.1	Revenue Bond Oversight Committee.....	12
3.2	City Services Auditor – Audits Unit	12
3.3	The Audit Team.....	12
4	THE PERFORMANCE AUDIT.....	13
4.1	Scope and Objectives	13
4.2	Overall Methodology	13
4.3	Risk Assessment	15
4.4	Bond Series Selected for the Performance Audit.....	15
4.5	Evaluation of SFPUC Infrastructure Division	24
4.6	Accounting for Expenditures.....	28
4.7	Follow-Up on Previously-Issued Reports.....	33
5	FINDINGS APPLICABLE TO ALL SFPUC ENTERPRISES	34
5.1	Finding 1: The Revenue Bond Oversight Committee Does Not Have Adequate Visibility Over Bond Proceeds	34
5.2	Finding 2: The Quality Assurance Audit Function Was Not Operational From June 2017 Through November 2020	36
6	CONCLUSION	39
7	APPENDIX A.....	40
7.1	Previously Issued Reports Relevant to the Performance Audit	40
7.2	Bonds Subject to RBOC Oversight	41
7.3	QA Audit Reports Provided.....	422
7.4	Suggested RBOC Reporting.....	433
8	APPENDIX B DEPARTMENT RESPONSE.....	466

1 EXECUTIVE SUMMARY

1.1 Introduction

The San Francisco Public Utilities Commission ("SFPUC"), a department of the City and County of San Francisco ("City"), has embarked on multiple construction programs in its Water, Wastewater, and Power enterprises. The voters approved Proposition A and Proposition E in 2002, which authorized SFPUC to issue bonds to fund the costs of the construction programs, which currently have total forecasted expenditures in excess of \$18 billion; actual program expenditures through June 30, 2021, are approximately \$8.197 billion. Funding of the expenditures through June 30, 2021, includes roughly \$6.094 billion in bond proceeds from bond issuances authorized by Propositions A and E. The remaining \$2.103 billion is funded by a combination of investment earnings on unexpended proceeds, Federal and state loans and grants, commercial paper, and SFPUC revenues.

The voters also passed Proposition P in 2002, which created City Administrative Code Section 5A.30-5A.36, which in turn authorized the establishment of the Public Utilities Revenue Bond Oversight Committee ("RBOC"). RBOC's authorities under City Administrative Code 5A.31(b)(6) include the *"...independent review and evaluation of the disbursement and expenditure of the proceeds of such revenue bonds by accessing any funds set aside for this purpose...to retain outside auditors, inspectors and necessary experts to conduct such independent review..."* RBOC retained the Office of the Controller's City Services Auditor ("CSA") to conduct a performance audit of bond-funded expenditures to determine whether expenditures were allowable under bond resolutions, properly supported, and assigned or allocated to the correct project(s) within bond series, and to evaluate the effectiveness of internal control over the allowability, and assignment of expenditures.

CSA engaged HKA Global, Inc. ("HKA") and Yano Accountancy Corporation ("YAC") to conduct a performance audit of six SFPUC bond series subject to RBOC oversight. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

1.2 Summary of Findings and Recommendations

Except for SFPUC informing us that support was no longer available for \$156.7 million of labor, benefits and overhead expenses incurred between June 1, 2003, and June 30, 2008, we found no instances of expenditures that were not allowable under the bond resolutions, not properly supported, or not properly assigned or allocated to project(s) within a bond series. According to the department, the support for these expenses were unavailable due to the decommissioning of its legacy system and associated record retention policy. We identified two areas where we believe internal control could be improved. In addition, other auditors who performed audits on SFPUC enterprise financial statements identified a material weakness in internal control over financial reporting. The material weakness identified by these auditors is also a material weakness in internal control over the allowability of expenditures under bond resolutions and the assignment or allocation of expenditures to project(s) within a bond series.

Summary of Our Findings and Recommendations

The Revenue Bond Oversight Committee Does Not Have Adequate Visibility over Bond Proceeds

RBOC does not receive any information on actual bond proceeds available for expenditure, nor does it receive information on expenditures by bond series by project. Total expenditures reported to RBOC as of June 30, 2021, are \$8.197 billion, but total proceeds available for expenditures from the official statements are only \$6.094 billion. Without such accountability, RBOC's oversight role in evaluating whether bond proceeds have been spent solely for the uses, purpose, and projects authorized in the bond resolutions may be impaired.

Although RBOC does not have responsibilities for overseeing project expenditures funded by other sources, diversion of other sources may indirectly cause expenditures of bond proceeds to be spent for uses and purposes not authorized in the bond resolutions.

RBOC, therefore, should receive information on bond proceeds available for expenditure, as well as on other funds used for project expenditures. RBOC also should receive summaries of expenditures by project and funding source.

See Finding 1 in Section 5.1.

The Quality Assurance Audit Function Was Not Operational From June 2017 Through November 2020

SFPUC did not conduct infrastructure quality assurance audits between June 2017 through November 2020, compromising SFPUC's ability to meet project budgets and schedules. Among other things, this issue also causes the department to have less assurance that bond funds are spent appropriately.

Previously-issued QA Audit reports are not retained in an organized manner, making it difficult for SFPUC to evaluate the effectiveness of the QA Audit function, a component of the overall Quality Management program.

SFPUC should comply with its existing project management procedures to perform QA Audits during all four main phases of a project's lifecycle.

See Finding 2 in Section 5.2.

1.3 Restriction on Use

The purpose of this performance audit is solely to evaluate SFPUC's compliance with and internal control over allowability of expenditures in accordance with bond provisions, support for expenditures, assignment or allocation of expenditures to correct projects within a bond series. Accordingly, this performance audit is not suitable for any other purpose.

2 SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SFPUC is a department of the City responsible for the maintenance, operation, and development of three utility enterprises: the Water Enterprise (“Water”), the Wastewater Enterprise (“Wastewater”), and the Power Enterprise (“Power”) – a component of Hetch Hetchy Water and Power System. SFPUC operates and manages the enterprises as separate financial entities with different enterprise funds, and each enterprise is led by an Assistant General Manager.

- Water provides drinking water to Retail Customers in the City, specific Retail Customers outside the City, and Wholesale Customers in three other Bay Area counties.
- Wastewater provides wastewater and stormwater collection, treatment, and disposal services for the City.
- Hetch Hetchy Water and Power services include operating dams (including O’Shaughnessy Dam), reservoirs (including Hetch Hetchy Reservoir), hydroelectric generation and transmission facilities, and water transmission facilities from Hetch Hetchy Valley to the connection with Water (collectively, the “Hetch Hetchy Project”). In addition, Power services include providing hydroelectric, solar, and other power for municipal and public infrastructure, services, and facilities in the City.

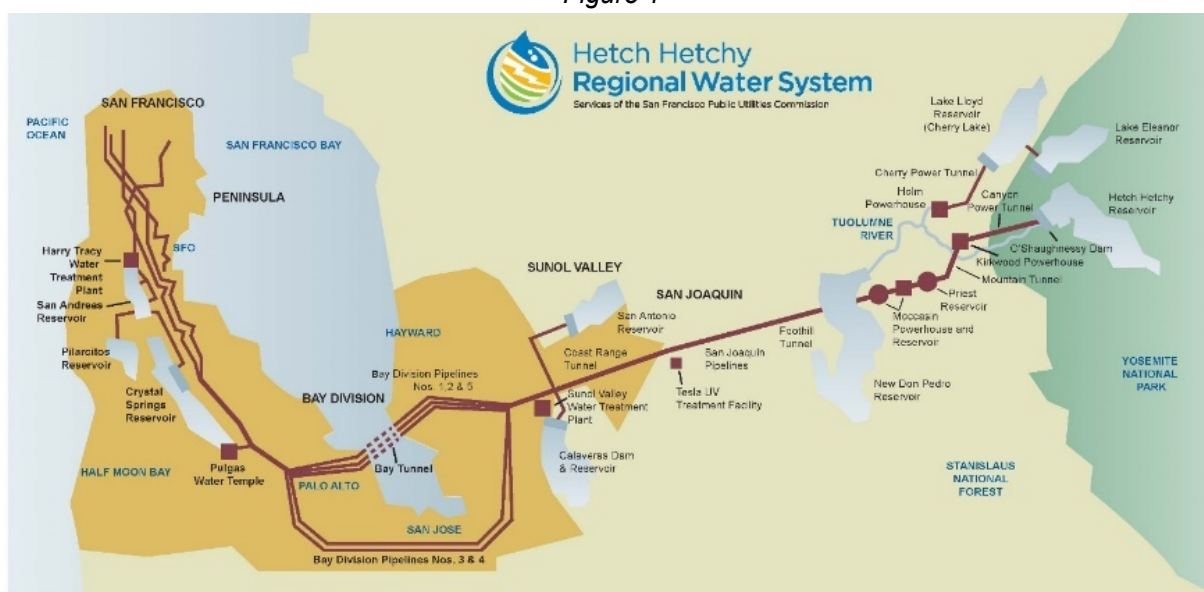
2.1 Enterprise and Support Bureau Descriptions

Water Enterprise

Water operates the Hetch Hetchy Regional Water System, consisting of over 389 miles of pipeline, 74 miles of tunnels, 11 reservoirs, 13 groundwater wells, 5 pump stations, and 3 water treatment plants located outside the City limits. Water also operates over 1,235 miles of pipeline, 11 reservoirs, six groundwater wells, 8 storage tanks, 24 pump stations, 8 hydropneumatic stations, and 17 chlorination stations located within the City limits.

SFPUC serves as the retail water supplier for the City and is responsible for water deliveries to residents and institutions within the City limits and several retail accounts outside City limits. In addition, SFPUC sells water to 27 Wholesale Customer entities in San Mateo, Alameda, and Santa Clara counties. Altogether, nearly 2.7 million people rely on water supplied by the Water Enterprise.

Figure 1



Wastewater Enterprise

Wastewater provides collection, treatment, and disposal services to residential, commercial, and industrial customers in the City limits and three municipal sewer service providers for residents and businesses in northern San Mateo County.

The City's collection system is a network of sewers that collect and transport both sanitary flow and stormwater runoff – commonly referred to as wastewater. Ninety-two percent of San Francisco is served by a combined sanitary and stormwater system that consists of 24,800 manholes, 25,000 catch basins, 27 pump stations, and approximately 1,000 miles of sewers ranging from 8-inch diameter pipes to large transport structures measuring up to 45 feet deep by 25 feet wide.

Flows are conveyed from the collection system through the transport/storage boxes to two centralized all-weather treatment plants, the Southeast Water Pollution Control Plant (“SEP”) and the Oceanside Water

Pollution Control Plant (OSP). These are respectively located in the southeast and southwest sections of the City. During wet weather, additional flows are conveyed the North Point Wet-Weather Facility, located in the northeast section of the City. The collection system storage capacity is over 200 million gallons, comprised of predominantly grey infrastructure. The maximum daily treatment capacity of the existing system is 575 million gallons or 40 billion gallons annually.

Figure 2

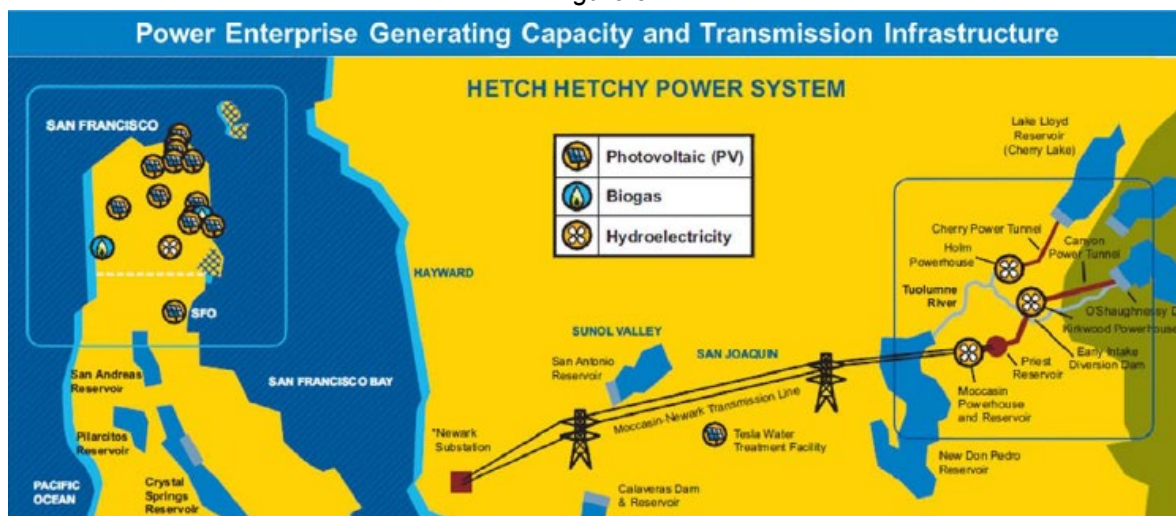


Hetch Hetchy Water and Power/Hetch Hetchy Project

Hetch Hetchy Water and Power operates the Hetch Hetchy Project, which consists of Hetchy Water and Hetchy Power. Hetchy Water collects, stores, purifies, and delivers water between the Sierra mountains to the eastern Alameda County, where it connects with the Water enterprise. Hetch Hetchy Power operates the Power Enterprise ("Power"), which generates, schedules, purchases, sells, and distributes electricity to meet the needs of approximately 2,400 customers, including 17% of the total electricity consumed within the City.

Power customers include all municipal departments, tenants in City-owned properties, including the Port and SFO, Phase I of the Hunters Point Shipyard redevelopment projects, and tenants of the Treasure Island Development Authority on Treasure Island and Yerba Buena Island.

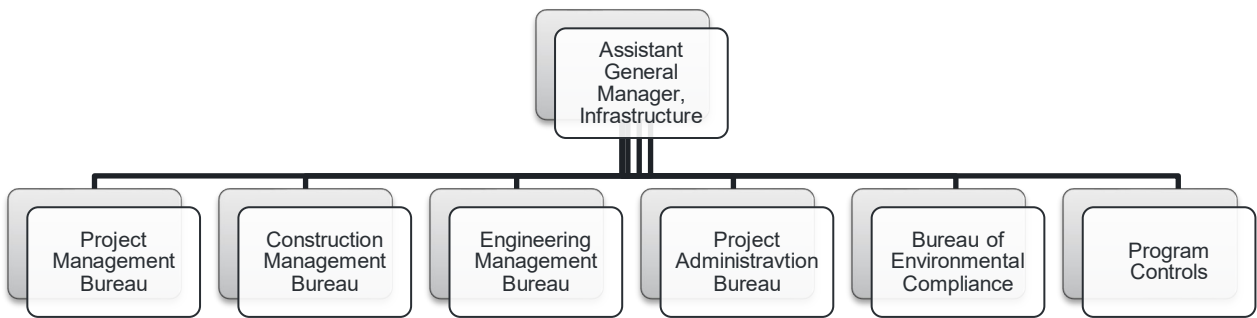
Figure 3



Support Divisions and Bureaus

In addition to the Assistant General Manager who oversees the three enterprises, as of June 30, 2021, two Assistant General Managers oversee the support divisions and bureaus. One Assistant General Manager oversees department-wide business services, such as finance, human resources, information technology, customer service, external affairs, project management and other department-wide programs.

Another Assistant General Manager leads SFPUC's Infrastructure Division ("Infrastructure"), responsible for management of all SFPUC construction programs. The following is a summary of Infrastructure's organization:



2.2 Enterprise Construction Programs

SFPUC recognized years ago that major water, wastewater, and power construction programs were necessary to upgrade existing facilities due to age and changing regulatory requirements. The City's voters recognized this with the passage of Propositions A and E in 2002, authorizing SFPUC to issue revenue bonds to fund the costs of major construction programs. SFPUC is also authorized to issue commercial paper for interim funding of programs – and multiple bond series have identified all or part of the bond proceeds to defease commercial paper used for interim funding.

Construction program expenditures also receive funding from other sources. These other sources include revenues, investment earnings on unexpended bond proceeds, post-issuance releases of debt service reserves, and Federal and state loans and grants. The following summarizes cumulative program expenditures and related program funding as of June 30, 2021:

*Table 2.2.1
Construction Program Expenditures
and Program Funding*

SFPUC Enterprise	Construction Program Expenditures	Program Funding	
		Bond Proceeds at Issuance	All Other Funding Sources
Water	\$ 5,560,830	\$ 4,456,148	\$ 1,104,682
Wastewater	2,489,480	1,497,773	991,707
Power	147,100	140,275	6,825
TOTAL	\$ 8,197,410	\$ 6,094,196	\$ 2,103,214

Note: Dollar amounts are in thousands.

Source: SFPUC Quarterly Construction Reports as of June 30, 2021, and Bond Series Official Statements

The following subsections summarize the construction programs of Water and Hetchy Water, Wastewater, and Power.

Water and Hetchy Water Construction Programs

The Water construction program is driven by the fact that certain of its facilities are near the end of their useful life. Long-lived facilities result in decreased reliability due to unplanned outages and place a greater maintenance burden on SFPUC operations. In addition, the vulnerabilities of the Hetch Hetchy Regional Water System are increased by its linear nature and limited redundancy. Outages at critical points could disrupt delivery to large portions of the Hetch Hetchy Regional Water System. For example, construction on certain portions of the system currently in operation started as early as 1917.

The Water construction program consists of the Water System Improvement Program ("WSIP") and non-WSIP projects. Regional and local projects in the WSIP program are ~99% complete. Non-WSIP projects include regional and local projects, along with Hetchy Water-related projects. Hetchy Water-related projects include those projects that benefit both Water and Power, such as tunnels that transmit water through hydroelectric power generation facilities.

The following table identifies the Water WSIP and non-WSIP programs, including forecast costs and expenditures as of June 2021 for each:

*Table 2.2.2
Water Enterprise
Program Forecast Costs and Expenditures
June 2003 to June 2021*

Water Enterprise	Program Forecast Cost	Expenditures to Date
WSIP		
Regional Projects	\$ 3,802,600	\$ 3,686,000
Local Projects	331,900	332,000
Local Water Supply	281,300	209,000
Financing	372,000	372,000
Subtotal WSIP	4,787,800	4,599,000
Non-WSIP		
Regional Water CIP	918,790	153,470
Local Water CIP	1,755,360	605,130
Hetch Water CIP	546,280	138,810
Hetchy Water Renewal and Replacement	222,580	64,420
Subtotal Non-WSIP	3,443,010	961,830
TOTAL WATER	\$ 8,230,810	\$ 5,560,830

Note: Dollar amounts are in thousands. Program Forecast Costs are unaudited.

Source: Water Enterprise Construction Program Reports as of June 30, 2021

Wastewater Construction Programs

The Wastewater construction program consists of three separate capital programs: the Renewal & Replacement Program, Facilities & Infrastructure Program and the Sewer System Improvement Program ("SSIP"). In general, the former two programs include projects that do not fall within the SSIP.

The SSIP is a citywide investment to upgrade SFPUC's aging infrastructure to ensure a reliable, sustainable, and seismically safe sewer system. It contains a series of major capital improvement projects necessary to bring the City's wastewater and stormwater system into a state of good repair and meet the Commission-endorsed goals and levels of service. SSIP projects are scheduled over a 20-year period to maintain ratepayer affordability and minimize impacts throughout the City. The Commission's authorization of the SSIP specified that the program would be implemented in three phases, with the highest priority and best-defined projects to be included in Phase 1. As of June 2021, the Phase 1 program has over 70 projects and is approximately 46% complete.

The following table identifies the Wastewater SSIP and non-SSIP programs, including forecast costs and expenditures as of June 2021 for each:

*Table 2.2.3
Wastewater Enterprise
Program Forecast Costs and Expenditures
June 2003 to June 2021*

Wastewater Enterprise	Program Forecast Cost	Expenditures to Date
SSIP		
Phase 1	\$ 3,655,300	\$ 1,566,500
Phase 2	3,140,000	8,910
Phase 3	926,000	-
Subtotal SSIP	7,721,300	1,575,410
Non-SSIP		
Renewal and Replacement Program (R&R)	946,480	765,400
Facilities and Infrastructure Program	662,610	148,670
Subtotal Non-SSIP	1,609,090	914,070
TOTAL WASTEWATER	\$ 9,330,390	\$ 2,489,480

Note: Dollar amounts are in thousands. Program Forecast Costs are unaudited.

Source: Wastewater Enterprise Construction Program Reports as of June 30, 2021

Power Construction Programs

Hetch Hetchy Joint Water and Power

A portion of Hetch Hetchy's operating budget, capital program, and assets benefit both Hetchy Power and Hetchy Water and are commonly referred to as joint costs and assets. Hetchy Power's portfolio consists of hydroelectric generation, onsite solar at SFPUC and other City facilities, power generation using bio-methane produced at Wastewater treatment facilities, and third-party purchases.

*Table 2.2.4
Power Enterprise
Program Forecast Costs and Expenditures
June 2003 to June 2021*

Power Enterprise	Program Forecast Cost	Expenditures to Date
Hetch Hetchy CIP	\$ 187,360	\$ 57,590
Hetch Hetchy R&R	39,590	89,510
TOTAL POWER	\$ 226,950	\$ 147,100

Note: Dollar amounts are in thousands. Program Forecast Costs are unaudited.

Source: Power Enterprise Construction Program Reports as of June 30, 2021

3 PARTIES INVOLVED WITH THE PERFORMANCE AUDIT

In addition to SFPUC as auditee, RBOC, CSA and the team of HKA and YAC (referred to as the “Audit Team”) all have significant roles and responsibilities on the performance audit.

3.1 Revenue Bond Oversight Committee

The City's voters approved Propositions A, E, and P in 2002. Propositions A and E gave SFPUC the authority to issue revenue bonds to fund construction programs. Proposition P created Administrative Code Section 5A.30-36 and authorized the establishment of RBOC. Administrative Code Section 5A.36 charges RBOC with providing independent oversight of the expenditure of public utility revenue bond proceeds issued under the authority of Proposition A or E for capital improvements. RBOC helps ensure an uninterrupted supply of water, power, and wastewater treatment services by SFPUC to its customers. Further, RBOC helps ensure that public dollars are spent according to the authorizing bond resolution and applicable laws.

RBOC engaged CSA to oversee the performance audit to determine whether SFPUC expenditures of bond proceeds were in accordance with bond provisions, adequately supported, and properly assigned or allocated to project(s) within a bond series and evaluate internal control over these expenditures.

3.2 City Services Auditor – Audits Unit

The CSA - Audits Unit (“CSA”) is the City's internal auditor, providing performance, financial, and compliance auditing and managing the City's Whistleblower program. CSA produces a wide range of audit reports and performance reports relating to the City's revenue, spending, service delivery, and outcomes. RBOC has contracted with the CSA to oversee this performance audit, which in turn has contracted with HKA Global Inc. (“HKA”) with Yano Accountancy Corporation (“YAC”) as subcontractor (and collectively referred to as the “Audit Team”) to conduct the Revenue Bond Performance Audit.

3.3 The Audit Team

HKA is a global consultancy company with over 40 years of experience and has completed numerous performance audits on some of the largest and most complex programs/projects in the world. YAC is a regional CPA and consulting firm and has worked directly with the City and County of San Francisco and the San Francisco Public Utilities Commission for over 25 years performing audits in accordance with GAGAS and other relevant auditing and assurance standards.

4 THE PERFORMANCE AUDIT

4.1 Scope and Objectives

The Audit Team conducted a performance audit of capital expenditures funded by proceeds from public utility revenue bonds. As of June 30, 2021, thirty-one revenue bonds were issued under the authority of Propositions A or E.

The objectives of this performance audit were to determine whether expenditures from project funds were:

- Allowable under the bond resolutions, laws, and regulations.
- Properly supported.
- Assigned or allocated to the correct project(s) within a bond series; and
- Subjected to appropriate cost control measures.

Statement of Compliance with Generally Accepted Government Auditing Standards

Except as explained in the following section, we conducted this performance audit under generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. Except as explained in the following section, we believe we have obtained sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions.

Limitation on the Scope of the Performance Audit

SFPUC could not provide payroll information for periods before July 1, 2008, which encompassed the entire period funded by Water bond 2006 Series A. According to the department, the support for these expenses were unavailable due to the decommissioning of its legacy system and associated record retention policy. Because of this scope limitation, we were unable to evaluate whether \$156.7 million of SFPUC labor, benefits, and related allocated overhead funded bond Water 2006 Series A were spent in accordance with bond resolutions and relevant legal and regulatory requirements.

Information Not Subject to Any Performance Audit Procedures

We were not engaged to perform, and did not perform, any performance audit procedures on forecasted information included in this report. Such forecasted information is identified as unaudited. Accordingly, our audit conclusions do not extend to any forecasted information.

4.2 Overall Methodology

The Audit Team approached the audit in three separate stages, enabling us to develop our findings and recommendations to the RBOC. These three stages encompass a high-level review for each of the audit planning and survey, fieldwork, and reporting stage.

Stage 1 – Audit Planning and Survey Phase

Upon receiving notice to proceed, the Audit Team conducted an entrance meeting with RBOC and CSA to identify any particular areas of concern jointly. From this meeting, we established the audit objectives, methodology, information needs, and engagement timeline.

Next, the Audit Team performed a preliminary assessment on all revenue bonds subject to RBOC oversight. This assessment included an analysis of capital project expenditures funded by the various bond proceeds for the Water, Wastewater, and Power. The Audit Team used this information to identify six bonds to include within the Phase 1 audit scope.

The Audit Team presented the preliminary bond assessment to CSA, including the six bonds selected that address the performance audit's scope and objectives.

Stage 2 – Audit Fieldwork

The Audit Team developed an audit plan using information obtained during the audit planning and survey stage. This plan served as our framework and approach for completing the audit fieldwork. The Audit Team engaged multiple SFPUC Infrastructure and SFPUC Financial Services departments to request bond documentation, capital project files, and other related documentation. Additionally, we held several discussions with each SFPUC department relevant to our scope and objectives.

The Audit Team's fieldwork yielded the audit evidence used to formulate our findings, conclusions, and ultimately our recommendations to the RBOC.

Stage 3 - Reporting

Based upon the information collected during our fieldwork, the Audit Team developed a preliminary list of observations and distributed this information for SFPUC comment. We revised our initial observations and held follow-up meetings with each department to confirm our understanding of the information further provided to us.

The Audit Team's periodically met with CSA to provide progress updates and coordinate audit fieldwork. Also, the Audit Team provided updates to RBOC during their monthly public meetings. The culmination of our audit fieldwork is represented throughout this performance audit report, including the Audit Team's findings and recommendations to the RBOC.

4.3 Risk Assessment

SFPUC Finance provided the Audit Team with schedules for Water, Wastewater, and Power showing expenditures by bond series. The Audit Team used these schedules, along with SFPUC's general ledger, to summarize all debt-funded expenditures by project for Water and Wastewater. The Audit Team then analyzed this information to identify bonds that fit within RBOC's scope and objectives.

Attributes	
Revenue Bonds	<ul style="list-style-type: none"> • Large net proceeds available for capital expenditures • Potential record retention issues • Funds used to defease commercial paper. • Bonds associated with historically high-risk projects • Large spend across many projects • Significant spend in two or three projects
Capital Programs and Projects	<ul style="list-style-type: none"> • Project type (e.g., dam reconstruction, tunneling, piping, or seismic related) • Inherent project complexities (e.g., heavy civil construction and non-typical projects) • Projects with forecasted costs above baseline budgets • Projects with numerous construction schedule delays

4.4 Bond Series Selected for the Performance Audit

The Audit Team selected six bond series for our performance audit from the 31-bond series subject to RBOC oversight as of June 30, 2021 – three each from Water and Wastewater.

Water	Wastewater
2006 Series A	2010 Series B
2010 Series G	2013 Series B
2012 Series A	2016 Series A

Refer to Section 7.2 for a complete list of revenue bonds subject to RBOC oversight as of June 30, 2021.

The Official Statement for each bonds series identifies the amounts deposited to SFPUC's Capital Projects Fund and the defeasance of commercial paper issued to fund capital expenditures temporarily. Amounts in the Official Statement are adjusted for investment earnings on unexpended proceeds and other adjustments (typically adjustments to bond issuance and underwriter's fees, and transfers to RBOC) to determine total available proceeds.

The following table summarizes total available proceeds, expenditures, and unexpended proceeds by bond series for the three Water bond series subject to the performance audit.

Table 4.4.1
Available Proceeds, Expenditures
and Unexpended Bond Proceeds by Water Bond Series

	2006 Series A	2010 Series G	2012 Series A	Total
Proceeds from Official Statements				
Capital projects fund	\$ 338,601	\$ 288,252	\$ 530,000	\$ 1,156,853
Commercial paper defeased	120,622	-	-	120,622
Subtotal proceeds from Official Statements	459,223	288,252	530,000	1,277,475
Post-issuance adjustments				
Investment earnings on unexpended proceeds	19,489	7,389	10,590	37,468
Other Adjustments	(220)	-	(308)	(528)
Subtotal post-issuance adjustments:	19,269	7,389	10,282	36,940
TOTAL AVAILABLE PROCEEDS	478,492	295,641	540,282	1,314,415
EXPENDITURES	(478,492)	(295,583)	(540,282)	(1,314,357)
UNEXPENDED PROCEEDS	\$ -	\$ 58	\$ -	\$ 58

Note: Dollar amounts are in thousands. Unexpended proceeds of \$58K are deemed to be insignificant.

Source: SFPUC General Ledger.

Not included in Water 2006 Series A and 2012 Series A are available proceeds of \$44.0 million in Debt Service Reserve ("DSR") releases that funded construction projects. These DSR releases occurred when Water 2015 Series A bonds, not subject to RBOC oversight, were issued. Since these DSR releases can be traced back to bonds subject to RBOC oversight, DSR releases used for project funding should be considered available proceeds, either as part of the originating bond series or reported separately.

The following table summarizes total available proceeds, expenditures, and unexpended proceeds by bond series for the three Wastewater bond series subject to the performance audit.

Table 4.4.2
Available Proceeds, Expenditures
and Unexpended Proceeds by Wastewater Bond Series

	2010 Series B	2013 Series B	2016 Series A	Total
Proceeds from Official Statements				
Capital projects fund	\$ 111,429	\$ 252,610	\$ 205,123	\$ 569,162
Commercial paper defeased	54,500	85,000	53,440	192,940
Subtotal proceeds from Official Statements	459,223	288,252	530,000	1,277,475
Post-issuance adjustments				
Investment earnings on unexpended proceeds	-	-	-	-
Other Adjustments	13,519	165	151	13,835
Subtotal post-issuance adjustments:	13,519	165	151	13,835
TOTAL AVAILABLE PROCEEDS	179,448	337,775	258,714	775,937
EXPENDITURES	(179,448)	(337,775)	(258,714)	(775,937)
UNEXPENDED PROCEEDS	\$ -	\$ -	\$ -	\$ -

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger

We understand that RBOC has not seen any reports showing available proceeds, expenditures, or unexpended proceeds for any Water, Wastewater, or Power bonds subject to RBOC oversight. (Refer to Section 5.1, Finding 1.)

Bond Expenditure Categories and Assignment to Bonds

SFPUC establishes expenditure categories for bond-funded expenditures. Water bond-funded expenditures are classified as WSIP regional, WSIP regional (green), WSIP local, non-WSIP regional, and non-WSIP local. Wastewater cost categories are SSIP, SSIP (green), non-SSIP and non-SSIP (green).

Certain Water and Wastewater bond series are identified as green bonds and can only fund green projects. Other bond series are designated to fund specific groups of expenditures. Water series 2010 Series A bonds are designated to fund local WSIP and non-WSIP projects. Water 2010 Series EFG bonds are designated to fund specific projects.

SFPUC's general rule is to assign funding of expenditures within any cost category with the available cash deposited on the earliest date into the City's treasury accounts. Bond proceeds that defeased outstanding commercial paper are deemed to have the deposit date of the original commercial paper issuance.

This general rule is modified for Federal and state grants and loans ("Government Awards"), which fund specific expenditures. Depending on the award agreement, expenditures initially funded by bonds can have their funding source(s) changed to Government Awards. When such funding changes occur, bond proceeds from earlier bond issuances become available after a future series has been used to fund expenditures. Such newly available bond proceeds keep their original deposit date.

Accordingly, this first-in, first-out ("FIFO") by expenditure category method results in proceeds from later bonds being expended while proceeds from earlier bond series are still available. An example is Water 2010 Series A bonds which are designated solely to local projects and Water 2010 Series C bonds, which are designated solely for regional projects. Water 2010 Series A and 2010 Series C simultaneously funded local and regional projects, respectively. All Water 2010 Series C bond proceeds were expended before Water 2010 Series A, so Water 2010 Series D and later bonds funded regional expenditures while Water 2010 Series A continued to fund local projects.

Another example is Wastewater 2013 Series B and 2016 Series A bonds. Wastewater 2016 Series A bonds were designated for SSIP projects. Proceeds from Wastewater 2013 Series B bonds funded both non-SSIP and SSIP projects until the issuance of Wastewater 2016 Series A bonds. After the issuance of Wastewater 2016 Series A bonds, Wastewater 2013 Series B bonds funded only non-SSIP projects.

Government Awards also affected the final expenditure dates for both Water 2012 Series A and Wastewater series 2013 Series B available proceeds. Without the Government Awards, the available proceeds from these two bond series would have been expended by June 30, 2017. Because of Government Awards replacing the funding of certain expenditures originally assigned to these two bond series, available proceeds from these two bond series were not completely expended until fiscal years 2018-19 and 2019-20, respectively.

Bond Funded Expenditures

As part of the audit risk analysis procedures, we summarized bond-funded expenditures by cost category identified and described below:

Expenditure Category	Description
Labor-related	Labor and benefits charged by City employees, and related overhead on labor.
Consultants	Expenditures to consultants such as program management, project management, construction management, environmental services, specialty inspection services, systems consulting, other management consulting services.
Construction contracts	Expenditures to contractors for construction labor and materials.
Land acquisition	Expenditures for additional land.
Fees, licenses, and permits	Expenditures to Federal, state, and local government agencies to comply with regulatory and other requirements.
Construction materials	Construction materials purchased directly by SFPUC.
Other allocations	Allocations from within SFPUC that are not based on labor expenditures.
Legal and related	Expenditures under the control of the Office of the City Attorney.
Commercial paper-related	Expenditures for commercial paper fees and interest.
Intra-City charges	Expenditures to other City departments other than labor, benefits and related overhead, and expenditures to the Office of the City Attorney.
All other	All other non-labor expenditures not classified above.

The following summarizes the journal entries to transfer expenditures from the Water expenditure pool to reflect amounts funded by Water bonds subject to the performance audit:

Table 4.4.3
Water Bond-Funded Expenditures by Expenditure Classification

Expenditure Classification	2006 Series A	2010 Series G	2012 Series A	Total
Labor-related and consultants				
Labor-related	\$ 156,735	\$ 17,931	\$ 54,233	\$ 228,899
Consultants	119,855	32,298	62,824	214,977
Subtotal Labor-related and consultants	276,590	50,229	117,057	443,876
Construction contracts	170,108	238,567	390,537	799,212
Subtotal labor-related, consultants, and construction contracts	446,698	288,796	507,594	1,243,088
Other expenditures				
Land acquisition	-	-	4	4
Fees, licenses, and permits	2,478	4	-	2,482
Construction materials	1,434	55	256	1,745
Other allocations	5,019	5,356	13,449	23,824
Legal and related	7,263	383	5,301	12,947
Commercial paper related	4,945	-	878	5,823
Intra-City charges	289	115	2,032	2,436
All other	10,366	874	10,768	22,008
Subtotal other expenditures	31,794	6,787	32,688	71,269
TOTAL EXPENDITURES	\$ 478,492	\$ 295,583	\$ 540,282	\$ 1,314,357

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger

The amounts in Table 4.4.3 do not tie directly to specific expenditures recorded in the general ledger, because funding sources could change during the middle of a month. Therefore, identifying particular expenditures to specific funding sources is impracticable.

SFPUC could not provide labor detail to support the \$156.7 million of labor-related expenditures funded by Water 2006 Series A bonds, which were expended by September 30, 2007 (see the Limitation on the Scope of the Performance Audit in Section 4.1).

The following table summarizes Water bond-funded expenditures by expenditure classification as a percentage of total expenditures:

Table 4.4.4
Water Bond-Funded Expenditures by Expenditure Classification
as a Percentage of Total Expenditures

Expenditure Classification	2006 Series A	2010 Series G	2012 Series A	Total
Labor-related and consultants				
Labor-related	32.8%	6.1%	10.0%	17.4%
Consultants	25.0%	10.9%	11.6%	16.4%
Subtotal Labor-related and consultants	57.8%	17.0%	21.6%	33.8%
Construction contracts	35.6%	80.7%	72.3%	60.8%
Subtotal labor-related, consultants, and construction contracts	93.4%	97.7%	93.9%	94.6%
Other expenditures				
Land acquisition	0.0%	0.0%	0.0%	0.0%
Fees, licenses, and permits	0.5%	0.0%	0.0%	0.2%
Construction materials	0.3%	0.0%	0.0%	0.1%
Other allocations	1.0%	1.8%	2.5%	1.8%
Legal and related	1.5%	0.1%	1.0%	1.0%
Commercial paper related	1.0%	0.0%	0.2%	0.4%
Intra-City charges	0.1%	0.1%	0.4%	0.2%
All other	2.2%	0.3%	2.0%	1.7%
Subtotal other expenditures	6.60%	2.30%	9.70%	5.40%
TOTAL EXPENDITURES	100.0%	100.0%	100.0%	100.0%

Source: SFPUC General Ledger

We note the following:

1. Labor-related, consultant, and construction costs accounted for 94.6% of total expenditures for all three Water bonds audited.
2. Labor-related and consultant expenditures were higher in 2006 Series A compared to 2010 Series G and 2012 Series A because the WSIP was in the early programmatic planning stages.

We were provided with assignments of Wastewater project costs to funding sources only at the project level, but not at the account level. These assignments are documented on spreadsheets and not in SFPUC's general ledger. All expenditures in fiscal years 2009-10 through 2016-17 were summarized by authority (consisting of multiple projects) and the general ledger sub-fund in which they were recorded. These summaries were not provided by fiscal year. All bond proceeds from all Wastewater revenue bond series used to defease commercial paper included as a separate funding source and not assigned to the applicable bond series. Wastewater's accounting for defeased commercial paper differs from Water's, which assigned expenditures funded by defeased commercial paper to the applicable bond series. We agree with Water's treatment of defeased commercial paper as the preferred method to account for expenditures funded by defeased commercial paper.

Accordingly, to ensure that we included at least all Wastewater expenditures subject to the performance audit, our summarization of Wastewater expenditures includes expenditures funded by bonds other than those subject to the performance audit. The following table summarizes, by auditor-selected periods,

Wastewater bond-funded expenditures by expenditure classification for the periods that funded Wastewater expenditures funded by bonds subject to the performance audit.

Table 4.4.5
Wastewater Bond-Funded Expenditures
by Expenditure Classification

Expenditure Classification	Nov 2009 - Jun 2013	Jul 2013 - Jun 2016	Jul 2016 - Aug 2019	Total
Labor-related and consultants				
Labor-related	\$ 38,021	\$ 85,780	\$ 59,056	\$ 182,857
Consultants	40,230	135,602	79,549	255,381
Subtotal Labor-related and consultants	78,251	221,382	138,605	438,238
Construction contracts	151,441	155,460	53,124	360,025
Subtotal labor-related, consultants, and construction contracts	229,692	376,842	191,729	798,263
Other expenditures				
Land acquisition	17,344	145	8,724	26,213
Fees, licenses, and permits	1,391	6,368	2,662	10,421
Construction materials	776	432	162	1,370
Other allocations	-	-	19	19
Legal and related	-	704	1,043	1,747
Commercial paper related	35	120	-	155
Intra-City charges	275	18,591	33,759	52,625
All other	6,309	2,174	3,176	11,659
Subtotal other expenditures	26,130	28,534	49,545	104,209
TOTAL EXPENDITURES	\$ 255,822	\$ 405,376	\$ 241,274	902,472

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger

The \$902.5 million of expenditures shown is \$126.5 million greater than total Wastewater bond-funded expenditures subject to the performance audit of \$775.6 million. The following is a reconciliation between this expenditure summary and the summary of expenditures included in the table of available proceeds, expenditures, and unexpended proceeds:

Table 4.4.6
Reconciliation Between Total Expenditures
Subject to Testing and Total Expenditures by Wastewater Bond Series

	Total
Commercial Paper Defeased by 2010 Series A and 2016 Series B Bonds	\$ 39,863
Expenditures from Capital Projects Fund for Expenditures Funded by:	
2010 Series A	733
2016 Series B	67,789
2018 Series A	15,644
2018 Series C	2,164
Other Items, Net	342
TOTAL	\$ 126,535

Note: Dollar amount in thousands

Source: SFPUC General Ledger

The following table summarizes Wastewater bond-funded expenditures by expenditure classification as a percentage of total expenditures:

Table 4.4.7
Wastewater Bond-Funded Expenditures by Expenditure Classification
as a Percentage of Total Expenditures

Expenditure Classification	Nov 2009 - Jun 2013	Jul 2013 - Jun 2016	Jul 2016 - Aug 2019	Total
Labor-related and consultants				
Labor-related	14.9%	21.2%	24.5%	20.3%
Consultants	15.7%	33.5%	33.0%	28.3%
Subtotal Labor-related and consultants				
	30.6%	54.7%	57.5%	48.6%
Construction contracts	59.2%	38.3%	22.0%	39.9%
Subtotal labor-related, consultants, and construction contracts				
	89.8%	93.0%	79.5%	88.5%
Other expenditures				
Land acquisition	6.8%	0.0%	3.6%	2.9%
Fees, licenses, and permits	0.5%	1.6%	1.1%	1.1%
Construction materials	0.3%	0.1%	0.1%	0.2%
Other allocations	0.0%	0.0%	0.0%	0.0%
Legal and related	0.0%	0.2%	0.4%	0.2%
Commercial paper related	0.0%	0.0%	0.0%	0.0%
Intra-City charges	0.1%	4.6%	14.0%	5.8%
All other	2.5%	0.5%	1.3%	1.3%
Subtotal other expenditures				
	10.2%	7.0%	20.5%	11.5%
TOTAL EXPENDITURES				
	100.0%	100.0%	100.0%	100.0%

Source: SFPUC General Ledger

SFPUC labor-related expenditures as a percentage of total expenses increased throughout the entire period. This increase reflects the transition of labor from Water projects, particularly as the WSIP program progressed, to Wastewater projects. Construction contracts were a higher percentage of total expenditures in the November 2009 – June 2013 period compared to the next two periods. This reflects earlier bond series that funded repair and replacement construction projects before the start of the SSIP. Expenditures subject to the performance audit after June 30, 2017, are primarily to replace expenditures that had their funding transferred from revenue bonds to Government Awards.

The intra-City expenditures include transfers to the City's general fund for land transferred from other City departments and agencies.

Identification and Evaluation of Internal Control Significant to the Audit Objectives

We identified the following elements of SFPUC's system of internal controls to be significant to our audit objectives. We therefore evaluated these elements to the extent necessary to meet our performance audit objectives:

- Bidding and contractor selection
- Project cost control
- Claims and change order control process
- Allocation of program management costs to projects
- Assignment of project costs to bond series

Material Weakness Identified by Other Auditors

Other auditors performed the audits of SFPUC's major funds as of and for the year ended June 30, 2020, in accordance with generally accepted government auditing standards. Those auditors issued a report dated February 26, 2021, which identified a material weakness in internal control over financial reporting. This material weakness was a result of alleged participation in a bribery and corruption scheme by SFPUC's former General Manager, who held this position from September 2012 to November 2020. The former General Manager was also Assistant General Manager – Infrastructure from March 2003 to September 2012.¹

All expenditures subject to RBOC oversight from June 2004 to November 2020 were under the control of this individual as either General Manager or Assistant General Manager – Infrastructure. We therefore concluded that the material weakness identified by the other auditors is also a material weakness in internal control over allowability of expenditures under bond resolutions and allowability or allocability to project(s) within a bond series for all contracts awarded prior to December 1, 2020. We considered this material weakness in the determination of our performance audit procedures.

¹ Letter dated February 26, 2021, from KPMG LLP to the Honorable Mayor and the Board of Supervisors, which includes SFPUC's response to the findings.

4.5 Evaluation of SFPUC Infrastructure Division

SFPUC's Infrastructure Division is responsible for various aspects of the capital process, including but not limited to engineering & design, environmental compliance, project & construction management, and cost control functions.

The Infrastructure Division provided us with current and previous versions of internally prepared Project Management ("PM") and Construction Management ("CM") procedures. We reviewed these documents to understand how these procedures are implemented at each phase of a project's lifecycle.

Project and Construction Management Procedures

SFPUC's procedures are prepared to provide guidance and expectations for the various construction functions as well as the roles and responsibilities of consultants and SFPUC staff for the three Water, Wastewater, and Power enterprises. PM and CM procedures are designed as a roadmap so that a consistent approach is implemented across the broader construction program.

The Audit Team requested and received project documentation that was contemporaneously prepared and memorialized throughout the construction process. Such documentation included but was not limited to risk management plans, pay applications, change orders, consultant monitoring reports, construction progress reports, lessons learned, and contract closeout packages for both Water and Wastewater. The Audit Team analyzed these documents against the deliverables according to applicable PM and CM procedures.

We gained an understanding of the City's Office of Labor Standards and Enforcement ("OLSE") activities to monitor City-wide prevailing wage compliance and related follow-up on potential non-compliance. We also performed tests of OLSE's monitoring and follow-up activities.

Except as identified in the following section, we did not identify any reportable observations with SFPUC's ability to comply with the PM and CM procedures.

Quality Assurance Program

Section 6 of SFPUC's PM procedure was developed to address the implementation of an internal Quality Assurance ("QA") management program. These procedures apply to all capital improvement projects managed by the Project Management Bureau regardless of the work being produced internally by SFPUC, other City departments, or consultants. PM Section 6 is further broken down into three separate subsections:

- 6.01 Quality Assurance Program
- 6.02 Quality Assurance Audits
- 6.03 Lessons Learned

Section 6.02 Quality Assurance Audits identifies the organizational responsibilities and describes the QA auditing process across all SFPUC major capital projects. Additionally, this procedure includes an overview of the QA audit function and the construction phases subject to QA audit involvement. QA audit deliverables consist of a corrective action report containing a list of non-compliance observations provided to the project manager. These issues are to be corrected by the project management team within ten working days of receipt.

The following table is an overview of a project's major phases within the QA audit scope.

Table 4.5.1
QA Audits Performed During a Project's Lifecycle.

Phase	Deliverables		Quality Assurance Audits
Project Management			N/A
Planning	<ul style="list-style-type: none"> Needs Assessment Report Alternate Analysis Report 	<ul style="list-style-type: none"> Environmental Checklist Conceptual Engineering 	●
Environmental Review	<ul style="list-style-type: none"> Hazardous Material, Health & Safety Initial Study and Mitigation Measures 	<ul style="list-style-type: none"> Project Approval Traffic Impact Planning 	●
Right of Way	<ul style="list-style-type: none"> Encroachment Assessment, Notice to Property Owners Assessment of ROW Requirements 	<ul style="list-style-type: none"> Written Offers for Purchase ROW Certification 	N/A
Design	<ul style="list-style-type: none"> Complete Design Criteria Conceptual Engineering Design Submittals (35%, 65%, 95% and 100%) 	<ul style="list-style-type: none"> Geotechnical Cost Estimate and Project Budgeting 	●
Bid & Award	<ul style="list-style-type: none"> Issue Bid Documents Receive Bids from Contractors 	<ul style="list-style-type: none"> Award Contract Notice to Proceed 	N/A
Construction Management	<ul style="list-style-type: none"> Critical Path / Contractual Milestones Pay Applications, Change Orders, and Contractor Claims Submittal of contractor's contract deliverables Issue Substantial and Final Completion 	<ul style="list-style-type: none"> Complete System Activation, Testing, and Training Client Acceptance of Project Facilities Final Payment / Certification of Completion 	●
Project Closeout	<ul style="list-style-type: none"> Complete As-Built CAD Drawings by EMB Complete Job Dossier/Closeout Report and upper management project presentation 	<ul style="list-style-type: none"> Transmit Project Records to Document Control Close out of Project Chart of Accounts Turnover Warranty Issues to Operators 	N/A

Source: SFPUC Project and Construction Management Procedures

Refer to Section 5.2, Finding 2 of this report for more detail on our observation and recommendation to SFPUC. With the exception of Finding 2, we did not have any other reportable observations with the QA audit function.

Water and Wastewater Competitive Bid Analysis

The Audit Team requested and received bid tabulation summaries for each project identified during the risk analysis. We combined contractor bidding information with the ending change order values and compared this total to SFPUC's engineering estimate. Except for one Water and one Wastewater project, the variance between the engineering estimate and the total project cost is reasonable.

As a follow-up to the two projects with cost overruns, we received supplementary documentation and held discussions with the relevant SFPUC personnel to understand the driving force behind variances. Based on our follow-up review, we did not have any reportable issues with these two cost variations. This information is summarized in the following tables:

Table 4.5.2
Water Project Value Variance Analysis

Water Project	No. of Bids	Winning Bid Value	Total Change Order Value	Total Project Value	Engineer's Estimate (EE)	Variance btw. Total Project Value & EE
Calaveras Dam Upgrade	5	\$ 259,572	\$ 309,209	\$ 568,781	\$ 250,000	\$ (318,781)
HTWTP – Long Term Improvements	5	174,029	22,655	196,684	220,000	23,316
SJPS - Eastern	9	45,259	8,654	53,913	52,000	(1,913)
SJPS - Western	11	48,444	1,749	50,193	63,000	12,807
SJPS - Crossovers	7	11,724	3,843	15,567	21,000	5,433
CSSA Transmission Upgrade	4	99,763	32,896	132,659	100,000	(32,659)
New Irvington Tunnel	4	226,658	38,861	265,519	253,202	(12,317)
Peninsula Pipeline	5	20,767	3,161	23,928	22,500	(1,428)
BDPL Reliability Upgrade Tunnel	4	215,295	4,602	219,897	230,000	10,103
Seismic Upgrade of BDPL No. 3 & 4	7	31,320	5,738	37,058	49,000	11,942
San Antonio Backup Pipeline	5	31,372	1,592	32,964	34,000	1,036
BDPL Reliability Upgrade East Bay	8	61,558	26,385	87,943	88,000	57
BDPL Reliability Upgrade Peninsula	6	52,183	6,723	58,906	62,000	3,094
BDPL Reliability Upgrade Cordilleras	5	5,251	468	5,719	5,800	81
SVWTP Expansion & TWR	9	83,102	20,922	104,024	109,000	4,976
TOTAL		\$ 1,366,297	\$ 487,458	\$ 1,853,755	\$ 1,559,502	\$ (294,253)

Note: Dollar amounts are in thousands.

Source: Bid Tabulations and Contractor Payment Applications.

Table 4.5.3
Wastewater Project Value Variance Analysis

Wastewater Project	No. of Bids	Winning Bid Value	Total Change Order Value	Total Project Value	Engineer's Estimate (EE)**	Variance Total Project Value & EE
North Shore to Channel Force Main Improvement*	5	\$ 15,488	\$ 21,728	\$ 37,216	\$ 13,000	\$ (24,216)
SEP 521/522 and Disinfection Upgrades	5	25,750	4,661	30,411	22,000	(8,411)
SEP Primary & Secondary Clarifier Upgrades	4	23,588	2,207	25,795	27,500	1,705
TOTAL		\$ 64,826	\$ 28,596	\$ 93,422	\$ 62,500	\$ (30,922)

Note: Dollar amounts are in thousands.

Source: Bid Tabulations and Contractor Payment Applications. Dollar amounts are in thousands.

*Nonresponsive bid of \$14m rejected. We inspected the submitted proposal and agreed with its non-responsiveness.

**Represents the lowest estimate available.

Wastewater Construction Manager / General Contractor

SFPUC adopted a Construction Manager / General Contractor ("CMGC") contracting method for the New Headworks Facility and Biosolids Digester projects. During the CMGC bidding process, prospective contractors submit competitive bids for the cost of construction and a Quality Technical written response, and an in-person interview with the SFPUC scoring panelists. Community Benefits makes up the remaining scoring category. The following table shows the maximum for each of the main and sub-categories.

*Table 4.5.4
CMGC Bid Scoring Summary*

Category	Maximum Score Value (Points)
Price	400
Quality Technical - Written	
Proposer Qualification	65
Key Individuals	100
Project Approach and Plan	60
Construction Plan	60
Subtotal Quality Technical - Written	285
Quality Technical - Oral	
Oral Presentation	30
Question 1	45
Question 2	45
Question 3	45
Question 4	45
Question 5	45
Question 6	45
Subtotal Quality Technical - Oral	300
Community Benefits	15
TOTAL	1,000

Source: CMGC Bid Tabulation

SFPUC used a panel of experienced in-house construction professionals to score each contractor based on their responses to the CMGC bid package. Panelists' raw scores are averaged and then weighted based on each category's maximum value. The contractor with the highest score is awarded the CMGC contract.

The Audit Team reviewed each of the panelists' score sheets and found no issues.

*Table 4.5.5
Wastewater CMGC Bid Scoring Summary*

Wastewater Project	No. of Bids	Maximum Score Value (Points)	Winning Score (Points)	2 nd Highest Score (Points)	3 rd Highest Score (Points)
SEP New Headworks Facility	3	1,000.00	977.52	970.99	902.34
SEP Biosolids Digester Facility	2	1,000.00	1,000.00	906.26	N/A

Source: Bid Tabulations

4.6 Accounting for Expenditures

Implementation of Accounting for Expenditures

Water and Wastewater implemented different approaches to documenting how costs are ultimately assigned to bond funding sources. Water primarily used Proposition A and Proposition E funds (which were deemed fungible with each other) to accumulate all project expenditures funded by bonds and other specific funding sources. Periodic summary journal entries transferred the costs incurred by bond series, project, and account from the two fungible funds to the ultimate funding sources.

Wastewater's use of "funds" in the general ledger is significantly different than what is used by Water. Expenditures by each project are summarized, analyzed, and assigned to ultimate bond or funding sources.

Matching Specific Debt-Funded Expenditures to Funding Sources

Matching specific expenditures to ultimate funding sources is a multi-step process. Specific expenditures must be compared to total expenditures by each project by period to determine the project's ultimate funding source(s).

*Table 4.6.1
Water Expenditures by Funding Source*

Water Projects	2006 Series A	2010 Series G	2012 Series A	Total
Calaveras Dam Replacement	\$ 24,373	\$ 174,618	\$ 184,012	\$ 383,003
HTWTP – Long Term Improvements	4,837	57,224	64,860	126,921
San Joaquin Pipeline System (SJPS)	15,047	61,716	3,626	80,389
CSSA Transmission Upgrade	7,219	-	41,068	48,287
New Irvington Tunnel	15,058	-	24,365	39,423
Peninsula Pipeline	-	-	30,876	30,876
BDPL Reliability Upgrade Tunnel	-	-	28,181	28,181
Seismic Upgrade of BDPL Nos. 3 & 4	2,462	-	23,925	26,387
San Antonio Backup Pipeline	1,817	-	16,283	18,100
BDPL Reliability Upgrade Pipeline	8,796	-	3,132	11,928
SVWTP Expansion & TWR	3,444	-	238	3,682
TOTAL	\$ 83,053	\$ 293,558	\$ 420,566	\$ 797,177

*Note: Dollar amounts are in thousands.
Source: SFPUC General Ledger.*

Table 4.6.2
Wastewater Expenditures by Funding Source

Wastewater Projects	Nov 2009 - Jun 2013	Jul 2013 - Jun 2016	Jul 2016 - Aug 2019	Total
SEP Biosolids Digester Facilities	\$ 28,266	\$ 43,939	\$ 41,026	\$ 113,231
SEP Northshore to Channel Force Main Improvement and Pavement Reno.	18,210	27,332	9,521	55,063
SEP New Headworks Replacement	3,129	6,860	17,592	27,581
SEP 521/522 & Disinfection Upgrades	536	10,718	3,807	15,061
SEP Primary & Secondary Clarifier Upgrades	1,623	19,405	(11,372)	9,656
TOTAL	\$ 51,764	\$ 108,254	\$ 60,574	\$ 220,592

Note: Dollar amounts are in thousands. The negative amounts between July 2016 and August 2019 reflect transfers of expenditures from revenue bonds to government loans and grant funding.

Source: SFPUC General Ledger.

Labor, Benefits, and Related Overhead Expenditures

SFPUC, San Francisco Department of Public Works (“Public Works”), and San Francisco Municipal Transportation Agency (“SFMTA”) all charged labor-related expenditures to projects funded by bonds that are subject to RBOC oversight. This treatment is reasonable given that the City’s water distribution and wastewater systems are often directly below City streets and transit lines. Also, because of the joint benefit nature of certain projects, especially Wastewater projects, Public Works provided direct construction management of a number of projects with only minimal high-level SFPUC involvement.

The following summarizes labor, benefits, and overhead by Water bond series subject to our performance audit:

Table 4.6.3
Direct Labor, Benefits and Overhead
Water Revenue Bonds

Expenditure Classification	2006 Series A	2010 Series G	2012 Series A	Total
Direct labor	\$ 60,367	\$ 5,225	\$ 20,991	\$ 86,583
Benefits on direct labor	13,211	1,815	7,789	22,815
Subtotal direct labor and benefits	73,578	7,040	28,780	109,398
Overhead	83,157	10,891	25,453	119,501
TOTAL	\$ 156,735	\$ 17,931	\$ 54,233	\$ 228,899

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger.

SFPUC could not provide the labor detail to support the \$156.7 million of labor-related expenditures funded by Water 2006 Series A, which were expended by September 30, 2007 (see the Limitation on the Scope of the Performance Audit in Section 4.1).

We were provided with assignments of Wastewater project costs to funding sources only at the project level, not at the account level. These assignments are documented on spreadsheets and not in SFPUC's general ledger. All expenditures in fiscal years 2009-10 through 2016-17 were summarized by authority (consisting of multiple projects) and the general ledger sub-fund in which they were recorded. These summaries were not provided by fiscal year. All bond proceeds from all Wastewater revenue bond series used to defease commercial paper included as a separate funding source and not assigned to the applicable bond series. Wastewater's accounting for defeased commercial paper differs from Water's, which assigned expenditures funded by defeased commercial paper to the applicable bond series. We agree with Water's treatment of defeased commercial paper as the preferred method to account for expenditures funded by defeased commercial paper.

Accordingly, to ensure that we included at least all Wastewater expenditures subject to the performance audit, our summarization of Wastewater expenditures includes expenditures funded by bonds other than those subject to the performance audit. The following table summarizes, by auditor-selected periods, Wastewater bond-funded labor-related expenditures by expenditure classification for sub-funds and periods that funded Wastewater expenditures funded by bonds subject to the performance audit.

*Table 4.6.4
Direct Labor, Benefits and Overhead
Wastewater Revenue Bonds*

Expenditure Classification	Nov 2009 - Jun 2013	Jul 2013 - Jun 2016	Jul 2016 - Aug 2019	Total
Direct labor	\$ 25,635	\$ 35,559	\$ 9,924	\$ 71,118
Benefits on direct labor	9,361	12,895	17,173	39,429
Subtotal direct labor and benefits	34,996	48,454	27,097	110,547
Overhead	29,200	46,845	-	76,045
TOTAL	\$ 64,196	\$ 95,299	\$ 27,097	\$ 186,592

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger.

We took an overall approach to testing labor and benefits because of the labor detail information available. We reconciled 100% of SFPUC labor details and selected Public Works labor details for fiscal years 2011-12 to 2016-17 to the payroll general ledger entries. Substantially all labor detail totals by fiscal year, project, and account matched the amounts recorded in the general ledger; preliminary differences were deemed insignificant and not investigated. SFPUC could not provide labor detail for Water 2006 Series A bonds (see Limitation on the Scope of the Performance Audit in Section 4.1).

We performed computer matching of pay rates by job classification, and medical and dental benefits to published pay and benefit rates. We also calculated and evaluated the reasonableness of the employer retirement contributions and payroll taxes. Significant preliminary differences were explained to our satisfaction.

Labor-Related Expenditures by Department

As indicated above, SFPUC, Public Works, and SFMTA all charge labor, benefits, and overhead to bond-funded projects. We compared benefits and overhead as a percentage of direct labor by department for the following periods:

- July 2004 to September 2008 (approximate period of Water 2006 Series A expenditures);
- August 2011 to January 2014 (approximate period of Water 2010 Series G expenditures); and
- June 2014 to June 2016 (approximate period of Water 2012 Series A expenditures).

The following summarizes the results of these procedures:

*Table 4.6.5
Comparative Benefits and Overhead Rates
Water Bonds Subject to Audit Selected Periods as Shown*

July 2004 – September 2008						Subject to Performance Audit	
	SFPUC	Public Works	SFMTA	Total	Amount	Bond	
Total Labor-related expenditures	\$ 139,956	\$ 15,668	\$ 505	\$ 156,129	\$ 156,735	2006 Series A	
Direct labor	100.0%	100.0%	100.0%	100.0%			
Benefits	22.0%	23.5%	24.2%	22.1%			
Overhead	144.6%	144.6%	94.2%	144.4%			
TOTAL	266.6%	268.1%	218.4%	266.5%			

August 2011 – January 2014						Subject to Performance Audit	
	SFPUC	Public Works	SFMTA	Total	Amount	Bond	
Total Labor-related expenditures	\$ 128,607	\$ 6,134	\$ 769	\$ 135,510	\$ 17,931	2010 Series G	
Direct labor	100.0%	100.0%	100.0%	100.0%			
Benefits	34.8%	37.6%	49.0%	35.0%			
Overhead	132.0%	126.5%	80.9%	131.4%			
TOTAL	266.8%	264.1%	229.9%	266.4%			

June 2014 – June 2016						Subject to Performance Audit	
	SFPUC	Public Works	SFMTA	Total	Amount	Bond	
Total Labor-related expenditures	\$ 69,998	\$ 8,098	\$ 554	\$ 78,650	\$ 54,233	2012 Series A	
Direct labor	100.0%	100.0%	100.0%	100.0%			
Benefits	37.1%	40.3%	37.9%	37.4%			
Overhead	122.2%	130.1%	47.5%	122.2%			
TOTAL	259.3%	270.4%	185.4%	259.6%			

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger

As noted previously, total labor-related expenditures assigned to the three Water bonds audited did not include a City department identification that incurred such costs. Total SFMTA labor-related expenditures during the three periods were \$1.8m, significantly less than SFPUC or Public Works in the three periods.

Total expenditures between August 2011 and January 2014 of \$135.5 million significantly exceeded the \$17.9 million assigned to 2010 Series G because 2010 Series EFG were issued at the same time and were deemed to be "fungible" with each other.

SFPUC benefits increased by 15.1% between the period ended September 2007 and June 2016. The largest contributor to the increase was the employer contribution to the employees' defined benefit pension plan from ~6% in fiscal years 2004-05 to ~19% in 2016-17. Because City employees have an average of 37 paid days off each year, the real effect of a 13% increase in benefits on salaries is an approximate 15.5% increase of benefits on direct labor.

The following summarizes labor, benefits, and overhead by each City department charged to the selected groups of Wastewater expenditures from November 2009 to August 2018 and comparative benefit and overhead rates as a percentage of direct labor.

Table 4.6.6
Comparative Benefits and Overhead Rates
Water Bonds Subject to Audit Selected Periods as Shown

From	To	SFPUC	Public Works	SFMTA	Total
Nov 2009	Jun 2013	\$ 19,639	\$ 17,039	\$ 1,343	\$ 38,021
Jul 2013	Jun 2016	47,678	35,474	2,628	85,780
Jul 2016	Aug 2019	41,245	17,471	340	59,056
TOTAL		\$ 108,562	\$ 69,984	\$ 4,311	\$ 182,857

November 2009 – June 2013				
	SFPUC	Public Works	SFMTA	Total
Direct labor	100.0%	100.0%	100.0%	100.0%
Benefits	34.6%	36.3%	43.2%	35.7%
Overhead	104.5%	128.3%	71.7%	113.0%
TOTAL	239.1%	264.6%	214.9%	248.7%

July 2013 – June 2016				
	SFPUC	Public Works	SFMTA	Total
Direct labor	100.0%	100.0%	100.0%	100.0%
Benefits	36.0%	38.8%	33.0%	37.0%
Overhead	130.1%	128.4%	43.4%	125.5%
TOTAL	266.1%	267.2%	176.4%	262.5%

July 2016 – August 2019				
	SFPUC	Public Works	SFMTA	Total
Direct labor	100.0%	100.0%	100.0%	100.0%
Benefits	35.9%	36.8%	40.3%	36.1%
Overhead	133.6%	136.1%	54.6%	133.7%
TOTAL	269.5%	272.9%	194.9%	269.8%

Note: Dollar amounts are in thousands.

Source: SFPUC General Ledger.

Public Works is charged a higher percentage of labor-related expenditures on Wastewater projects than on Water projects. This is reasonable, given the dollars spent on WSIP Regional projects occurring well outside City limits. The second and third periods tested for Water (2010G and 2012A) are comparable to the first two periods tested for Wastewater. In comparing these sets of overall percentages as a percentage of direct labor, we did not see any significant variance with either SFPUC or Public Works. SFMTA only charged \$4.3 million, or 2.4% of the \$182.8 million total labor-related expenditures during the selected periods. Test

4.7 Follow-Up on Previously-Issued Reports

Generally accepted government auditing standards require auditors to consider the results of previously-issued audit reports as part of our evaluation of relevant internal control and determination of audit procedures. Section 7.1 identifies previously-issued reports that are relevant to our performance audit.

5 FINDINGS APPLICABLE TO ALL SFPUC ENTERPRISES

5.1 Finding 1: The Revenue Bond Oversight Committee Does Not Have Adequate Visibility Over Bond Proceeds

<p>Summary</p>	<p>RBOC does not receive any information on actual bond proceeds available for expenditure, nor does it receive information on expenditures by bond series by project. Total expenditures reported to RBOC as of June 30, 2021, are \$8.197 billion, but total proceeds available for expenditures from the official statements are only \$6.094 billion. Without such accountability, RBOC’s oversight role in evaluating whether bond proceeds have been spent solely for the uses, purpose, and projects authorized in the bond resolutions may be impaired.</p> <p>Although RBOC does not have responsibilities for overseeing project expenditures funded by other sources, diversion of other sources may indirectly cause expenditures of bond proceeds to be spent for uses and purposes not authorized in the bond resolutions.</p> <p>RBOC, therefore, should receive information on bond proceeds available for expenditure, as well as on other funds used for project expenditures. RBOC also should receive summaries of expenditures by project and funding source.</p>
<p>Criteria</p>	<p>Administrative Code Section 5A.31(b) states in part that one of RBOC's responsibilities is to ensure that bond proceeds <i>"...are expended solely for uses, purposes and projects authorized in the bond resolution...."</i> In addition, Administrative Code Section 5A.31(c)(5)(iv) states in part that an RBOC responsibility is reviewing efforts by the City to maximize bond proceeds by <i>"...accessing other sources of infrastructure funding, excluding bond refunding...."</i></p> <p>The proper accounting for expended bond proceeds by project and unexpended bond proceeds is a critical element of RBOC's legislatively mandated functions.</p> <p>As part of accounting for expenditures of bond proceeds, RBOC needs to know all funding sources used by SFPUC to fund project expenditures. A possibility exists that project expenditures could be paid with bond proceeds instead of other non-bond funding sources. The use of bond proceeds under this scenario is unauthorized, according to bond resolutions.</p>
<p>Observations</p>	<p>RBOC has not received a report from SFPUC showing expended and unexpended proceeds by funding source – including bond proceeds subject to RBOC oversight, federal and state grants and loans, commercial paper, or other funding sources. Total expenditures reported to RBOC as of June 30, 2021, are \$8.197 billion, but the total proceeds available for expenditures from the official statements are only \$6.094 billion. RBOC does not receive adequate information on the funding of \$2.103 billion of reported expenditures.</p> <p>RBOC does receive reports of actual expenditures by project, together with comparisons to original and revised budgets. These reports are not adequate for RBOC oversight because they do not identify project funding by funding source.</p> <p>RBOC also receives information on the par value and outstanding principal of outstanding bond issuances. Such information is not within RBOC's legislatively mandated purview. The information that is within RBOC's purview is proceeds from revenue bonds, which has the following components:</p>

	<ul style="list-style-type: none"> • amounts deposited into capital project funds upon bond issuance, • commercial paper defeased as part of the bond issuance, • Debt Service Reserve (DSR) releases, and • investment earnings on unexpended bond proceeds used for capital expenditures. <p>SFPUC prepares an annual "green bond series" report for each of the three enterprises. Information in these reports shows the Estimated Use of Proceeds broken out by the recent fiscal year and prior fiscal years' spending. However, the methodology used to calculate bond expenditures in the green bond report differs from the methods used to calculate expenditures by project reported to the RBOC. The green bond reports, therefore, are not helpful for RBOC reporting.</p>
Effect	<p>Because RBOC does not receive information on the proceeds of revenue bonds, its oversight role in evaluating whether bond proceeds have been spent solely for the uses, purpose, and projects authorized in the bond resolutions may be impaired. Expenditures that are not authorized by the bond resolutions could occur without RBOC knowledge.</p>
Cause	<p>According to SFPUC staff, the department has concentrated on providing expenditures by project, with comparisons to original and revised budgets. These expenditures by project include multiple funding source, and not only proceeds from revenue bonds.</p>
Recommendation	<p>1. The SFPUC should coordinate with RBOC to provide a comprehensive report of project expenditures by each funding source to facilitate compliance with Administrative Code Sections 5A.30-5A.36:</p> <ul style="list-style-type: none"> a. revenue bonds by bond series, b. federal and state grants and loans, c. commercial paper to be refinanced, and d. other funding sources. <p>The amounts should reconcile to the Estimated Uses of Bond Proceeds included in each bond series' Official Statement.</p> <p>In addition, SFPUC should coordinate with RBOC to provide a report showing the uses of bond proceeds for each bond series, including:</p> <ul style="list-style-type: none"> a. amounts deposited into capital project funds, b. commercial paper defeased, c. Debt Service Reserve (DSR) releases (included with either the original bond series or as separately identified bond proceeds), d. investment earnings on unexpended bond proceeds used for capital expenditures, and e. other uses of bond proceeds. <p>See Section 7.4 for our recommended format to present project funding sources and uses of bond proceeds.</p>

5.2 Finding 2: The Quality Assurance Audit Function Was Not Operational From June 2017 Through November 2020

<p>Summary</p>	<p>SFPUC did not conduct infrastructure quality assurance audits between June 2017 through November 2020, compromising SFPUC's ability to meet project budgets and schedules. Among other things, this issue also causes the department to have less assurance that bond funds are spent appropriately.</p> <p>Previously-issued QA Audit reports are not retained in an organized manner, making it difficult for SFPUC to evaluate the effectiveness of the QA Audit function, a component of the overall Quality Management program.</p> <p>SFPUC should comply with its existing project management procedures to perform QA Audits during all four main phases of a project's lifecycle.</p>
<p>Criteria</p>	<p>SFPUC Infrastructure Divisions Procedures Manual, Program & Project Management, Section 6 Quality Assurance, Procedure PM 6.01 Quality Assurance Program, states in part:</p> <p>"A successful Quality Management program results in facilities that work and are operable and maintainable. To maximize the ability to meet budgets and schedules, the Project Team, including Operations, must support and comply with the requirements and conditions of the program. The QA and Quality Control (QA/QC) activities described in this procedure apply to all capital improvements projects managed by Project Managers (PMs) from the Project Management Bureau (PMB), regardless of the work performed internally by EMB, by other SFPUC Divisions, other City Departments, or consultants. The extent of these activities for the program as a whole, determined by the Infrastructure Division Bureau Managers, or for each individual project must be identified in the Project Management Plan. The way the QA and QA activities are identified, and schedule, budget, and resources can be agreed on."</p> <p>and</p> <p>"2.2. <u>Quality Assurance (QA)</u> Those Functions of quality management that are focused on providing confidence that the QC requirements are being fulfilled. The goal of QA is to achieve and maintain technical excellence through the establishment of organizational responsibilities and implementation of approaches to verify that QC activities are occurring in accordance with procedures implemented by each Project Team. QA Activities ensure the delivery of projects that will meet the requirements of the Operations Division and applicable regulatory agencies.</p> <p>2.3 <u>Quality Assurance Audits (QA Audits)</u>: QA Audits are planned and systematic verifications necessary to provide sufficient confidence that each Project Team consistently implements procedures, follows QC requirements, and properly documents QC activities."</p> <p>and</p> <p>"3.4 <u>Quality Assurance Manager (QAM)</u>: is responsible for managing the Infrastructure Division QA Section (IQA). IQA is responsible for QA audits, administration of the Infrastructure Division Procedures, QA training and assistance for QA support, and verification of the official Project Reviews as listed in Attachments 1.0, 1.1 and 2.</p>

	<p>Further, PM 6.02 Quality Assurance Audits, states in part:</p> <p>"3.8.3 Quality Assurance Audit Team (Audit Team with one Lead Auditor and typically one Auditor) conducts QA Audits for projects in Planning, Environmental, Design and Construction Phases to verify compliance of the requirements of project reviews, Infrastructure Procedures, Project QA Plan, and other policies and procedures as determined by the Audit Team and Project Team. Audit Team will conduct internal QA Audits of the Project Teams, and external QA Audits of other City departments and consultants."</p>																																																																																					
<p>Observation</p>	<p>The Infrastructure Division QA Section (IQA) did not perform any Quality Assurance Audit (QA Audit) from June 2017 through November 2020.</p> <p>In May 2019 the Construction Bureau Manager initiated planning efforts for an interim audit function for projects in the construction phase. SFPUC informed us that the consultant appointed to lead these audits had other, ongoing responsibilities, including the effects of the effects of the pandemic, and that actual audit work did not commence until November 2020.</p> <p>Section 7.3 is a list of QA Audit reports that were provided to us for review. We identified numerous gaps in the sequencing of auditing reports for each year. We cannot verify the actual number of reports; however, management verbally represented to us that approximately 150 QA Audit reports were performed from the inception of the QA Program to the present. In addition, SFPUC cannot attest to whether all QA Audit reports through June 30, 2021, have been made available to the Audit Team.</p> <p>The following summarizes the last known report number for each year that QA Audit reports were provided, together with the number of reports made available to us and related sequence gaps.</p> <table border="1" data-bbox="495 1094 1435 1795"> <thead> <tr> <th>Year</th> <th>Enterprise</th> <th>Last Known Report Number</th> <th>Reports Available</th> <th>Sequence Gaps</th> </tr> </thead> <tbody> <tr><td>2006</td><td>Water</td><td>9</td><td>3</td><td>6</td></tr> <tr><td>2007</td><td>Water</td><td>11</td><td>5</td><td>6</td></tr> <tr><td>2008</td><td>Water</td><td>15</td><td>7</td><td>8</td></tr> <tr><td>2009</td><td>Water</td><td>8</td><td>4</td><td>4</td></tr> <tr><td>2010</td><td>Water</td><td>9</td><td>3</td><td>6</td></tr> <tr><td>2011</td><td>Water</td><td>9</td><td>4</td><td>5</td></tr> <tr><td>2012</td><td>Water</td><td>5</td><td>5</td><td>0</td></tr> <tr><td>2013</td><td>Water</td><td>6</td><td>5</td><td>1</td></tr> <tr><td>2014</td><td>Water</td><td>N/A</td><td>0</td><td>N/A</td></tr> <tr><td>2015</td><td>Water</td><td>4</td><td>4</td><td>N/A</td></tr> <tr><td>2016</td><td>Water & Wastewater</td><td>2</td><td>2</td><td>N/A</td></tr> <tr><td>2017</td><td>Wastewater</td><td>2</td><td>2</td><td>1</td></tr> <tr><td>2018</td><td>Wastewater</td><td>N/A</td><td>0</td><td>N/A</td></tr> <tr><td>2019</td><td>Wastewater</td><td>N/A</td><td>0</td><td>N/A</td></tr> <tr><td>2020</td><td>Wastewater</td><td>N/A</td><td>1</td><td>N/A</td></tr> <tr><td>2021</td><td>Wastewater</td><td>N/A</td><td>1</td><td>N/A</td></tr> </tbody> </table>	Year	Enterprise	Last Known Report Number	Reports Available	Sequence Gaps	2006	Water	9	3	6	2007	Water	11	5	6	2008	Water	15	7	8	2009	Water	8	4	4	2010	Water	9	3	6	2011	Water	9	4	5	2012	Water	5	5	0	2013	Water	6	5	1	2014	Water	N/A	0	N/A	2015	Water	4	4	N/A	2016	Water & Wastewater	2	2	N/A	2017	Wastewater	2	2	1	2018	Wastewater	N/A	0	N/A	2019	Wastewater	N/A	0	N/A	2020	Wastewater	N/A	1	N/A	2021	Wastewater	N/A	1	N/A
Year	Enterprise	Last Known Report Number	Reports Available	Sequence Gaps																																																																																		
2006	Water	9	3	6																																																																																		
2007	Water	11	5	6																																																																																		
2008	Water	15	7	8																																																																																		
2009	Water	8	4	4																																																																																		
2010	Water	9	3	6																																																																																		
2011	Water	9	4	5																																																																																		
2012	Water	5	5	0																																																																																		
2013	Water	6	5	1																																																																																		
2014	Water	N/A	0	N/A																																																																																		
2015	Water	4	4	N/A																																																																																		
2016	Water & Wastewater	2	2	N/A																																																																																		
2017	Wastewater	2	2	1																																																																																		
2018	Wastewater	N/A	0	N/A																																																																																		
2019	Wastewater	N/A	0	N/A																																																																																		
2020	Wastewater	N/A	1	N/A																																																																																		
2021	Wastewater	N/A	1	N/A																																																																																		

	<p>The available QA Audit reports documented areas inspected, findings, and planned corrective actions. We also reviewed QA reports that document follow-up actions on planned corrective actions. However, the large number of sequence gaps does not facilitate a proper evaluation of the effectiveness of the Quality Management function.</p>
<p>Effect</p>	<p>The absence of an active QA Audit function compromises SFPUC's ability to succeed in their stated objectives to achieve a "...successful Quality Management Program..." and "...maximize the ability to meet budgets and schedules...."</p> <p>The QA Manager is not able to discharge their responsibility to "...provide sufficient confidence that each Project Team consistently implements procedures, follows QC requirements, and properly documents QC activities." Furthermore, the QA Manager is not able to update existing SFPUC procedures to reflect programmatic changes in circumstances.</p> <p>An impaired QA Audit function reduces SFPUC's assurance that it has strong internal controls in place to ensure bond funds, subject to RBOC oversight, are spent appropriately.</p>
<p>Cause</p>	<p>A robust QA Program was implemented during the inception of WSIP as a component of, and a significant upgrade to, the existing SFPUC project and construction management procedures. As a direct result of the QA Program, a dedicated QA Audit team was formed consisting of one QA Manager, two full-time City employees, and two part-time City employees.</p> <p>The QA Manager retired in May 2014, which led to the appointment of a second QA Manager to continue the QA Audit function. At the time of this transition, the QA Audit team consisted of one QA Manager and one part-time City employee.</p> <p>The second QA Manager retired in June 2017, reducing the QA Audit team to zero staff.</p> <p>In April 2018, 10 months after the previous manager retired, the current QA Manager was hired to fill the vacant position. Because of this gap, the current QA Manager did not have an opportunity to receive adequate training or a transfer of knowledge from the previous QA Manager. In addition, a position to support the current QA Manager was not filled until September 2021.</p> <p>In May 2019 the Construction Bureau Manager appointed an existing program consultant to perform audits on high-risk SSIP projects. This interim audit function focused exclusively on the projects in the construction phase, which is the last of four audit phases identified in PM 6.02 Quality Assurance Audits. A complementary interim audit function did not exist for projects in the planning, design, and environmental phase.</p>
<p>Recommendation</p>	<p>2. SFPUC should comply with the existing PM Procedure, 6.02 Quality Assurance Audits, to perform Quality Assurance Audits during the four main phases of a project's lifecycle.</p>

CONCLUSION

Except for SFPUC not being able to support \$156.7 million of labor-related expenditures funded by Water 2006 Series A bonds, we met our performance audit objectives. We found no instances in which expenditures were not allowable under the bond resolutions, were not properly supported, or were not assigned or allocated to the correct project(s) within a bond series. We found areas where SFPUC could improve its internal controls over accounting for available proceeds and quality assurance.

APPENDIX A

Previously Issued Reports Relevant to the Performance Audit

Report Date	Report Title	Prepared by
February 26, 2021	San Francisco Public Utilities Commission – Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With <i>Government Auditing Standards</i>	KPMG LLP
October 22, 2015	<i>Construction Management Services - RBOC Evaluation of Lessons Learned Water System Improvement Program (WSIP) Project CS-363 Final Report</i>	RW Block Consulting, Inc.
May 9, 2013	<i>Evaluation of the Water System Improvement Program (WSIP) Project CS-254</i>	RW Block Consulting, Inc.
January 19, 2012	<i>Review of the Independent Review Panel's Final Report dated December 28, 2011</i>	Professor William Ibbs
December 28, 2011	<i>Independent Review of the Water System Improvement Project (WSIP) Construction Management Program</i>	Gary Griggs, MSCE., PE, Panel Chair Glenn Singley, PE, Panel Member Don Russell, CCM., FCMAA, Panel Member Galyn Rippentrop, Panel Member
December 10, 2009	<i>Review of Sunset Reservoir - North Basin Project - Final Report to the Public Utilities Revenue Bond Oversight Committee</i>	Robert Kuo Consulting, RW Block Consulting, Lawrence Doyle
November 21, 2007	<i>Financial Review of Aspects of the Water System Improvement Program</i>	Robert Kuo Consulting, LLC with Lawrence Doyle, Shannon Gaffney Consulting, EPC Consultants, Inc.
July 17, 2006	<i>Review of Water System Improvement Program Expenditures Under SFPUC's Commercial Paper Program</i>	Robert Kuo Consulting, LLC & Lawrence Doyle

Bonds Subject to RBOC Oversight

SFPUC Enterprise	Proceeds at Issuance
Water and Hetchy Water	\$ 4,456,148
Wastewater	1,497,773
Power	140,275
GRAND TOTAL	\$ 6,094,196

SFPUC Enterprise	Proceeds at Issuance
Water and Hetchy Water	
2006 Series A	\$ 459,223
2009 Series A	369,073
2009 Series B	377,778
2010 Series A	58,748
2010 Series B	364,757
2010 Series D	72,243
2010 Series E	300,446
2010 Series F	149,728
2010 Series G	288,252
2011 Series A	525,000
2011 Series C	33,772
2012 Series A	530,000
2016 Series C	256,960
2017 Series A	125,766
2017 Series B	150,000
2020 Series A	180,000
2020 Series B	69,644
2020 Series C	94,988
2020 Series D	49,770
TOTAL	4,456,148
Wastewater	
2010 Series A	50,000
2010 Series B	165,929
2013 Series B	337,610
2016 Series A	258,563
2016 Series B	72,891
2018 Series A	241,013
2018 Series B	201,047
2018 Series C	170,720
TOTAL	1,497,773
Power	
2011 Series B	27,710
2015 Series A	30,200
2015 Series B	7,100
2017 Series C	75,265
TOTAL	140,275
GRAND TOTAL	\$ 6,094,196

Note: Dollar amounts are in thousands. Amount of Proceeds at Issuance excludes adjustments to the Official Statement amounts, investment earnings, and post-issuance debt service reserve releases.

Source: Bond Official Statements.

QA Audit Reports Provided

Water Project	Planning Phase	Environmental Phase	Design Phase	Construction Phase
Calaveras Dam Replacement	✓	-	✓	✓
HTWTP Long Term Improvements	✓	-	✓	✓
San Joaquin Pipeline System	✓	-	✓	✓
CSSA Transmission Upgrade	-	-	✓	✓
New Irvington Tunnel	-	-	✓	-
Peninsula Pipeline	-	-	-	-
BDPL No. 5 Tunnel	-	-	✓	-
Seismic Upgrade BDPL 3 & 4	-	-	✓	✓
San Antonio Backup Pipeline	-	-	✓	✓
BDPL No. 5 East Bay, Peninsula Reaches, Cordilleras Micro Tunnel	-	-	✓	✓
SVWTP Expansion & TWR	✓	-	✓	-

Wastewater Project	Planning Phase	Environmental Phase	Design Phase	Construction Phase
SEP Biosolids Digester Facilities Project	✓	✓	✓	✓
Northshore to Channel Force Main Improvement & Pavement Renovation	-	-	-	-
SEP Primary & Secondary Clarifier Upgrades	-	-	-	-
SEP New Headworks Replacement	-	-	-	✓
SEP 521-522 & Disinfection Upgrades	-	-	-	-

Suggested RBOC Reporting

*Summary of Available Proceeds,
Capital Expenditures, and Unexpended Proceeds*

Funding Source	Available Proceeds	Capital Expenditures	Unexpended Proceeds
Water and Hetchy Water			
<i>Bond series no.</i>	\$	\$	\$
<i>Bond series no.</i>			
<i>Federal grants</i>			
<i>Federal loans</i>			
<i>State grants</i>			
<i>State loans</i>			
<i>Other loans</i>			
<i>SFPUC revenues</i>			
TOTAL			
Wastewater			
<i>Bond Series No.</i>			
<i>Bond Series No.</i>			
<i>Federal grants</i>			
<i>Federal loans</i>			
<i>State grants</i>			
<i>State loans</i>			
<i>Other loans</i>			
<i>SFPUC revenues</i>			
TOTAL			
Power			
<i>Bond Series No.</i>			
<i>Bond Series No.</i>			
<i>Federal grants</i>			
<i>Federal loans</i>			
<i>State grants</i>			
<i>State loans</i>			
<i>Other loans</i>			
<i>SFPUC revenues</i>			
TOTAL			
GRAND TOTAL	\$	\$	\$

Note: This schedule should be representative of all bonds under RBOC's purview

Proceeds Available for Capital Expenditures

	Official Statements	Adjustments	Actual Deposits	Debt Service Reserve Releases	Net Investment Earnings	Available Proceeds
Water and Hetchy Water						
<i>Bond Series No.</i>	\$	\$	\$	\$	\$	\$
<i>Bond Series No.</i>						
<i>Federal grants</i>						
<i>Federal loans</i>						
<i>State grants</i>						
<i>State loans</i>						
<i>Other loans</i>						
<i>SFPUC revenues</i>						
TOTAL						
Wastewater						
<i>Bond Series No.</i>						
<i>Bond Series No.</i>						
<i>Federal grants</i>						
<i>Federal loans</i>						
<i>State grants</i>						
<i>State loans</i>						
<i>Other loans</i>						
<i>SFPUC revenues</i>						
TOTAL						
Power						
<i>Bond Series No.</i>						
<i>Bond Series No.</i>						
<i>Federal grants</i>						
<i>Federal loans</i>						
<i>State grants</i>						
<i>State loans</i>						
<i>Other loans</i>						
<i>SFPUC revenues</i>						
TOTAL						
GRAND TOTAL	\$	\$	\$	\$	\$	\$

Note: This schedule should be representative of all bonds under RBOC's purview.

Project Capital Expenditures by Funding Source

	Bond Series No.	Bond Series No.	Federal grants	Federal loans	State grants	State loans	Other loans	SFPUC revenues	Total
Water and Hetchy Water									
<i>Project Name</i>	\$	\$	\$	\$	\$	\$	\$	\$	\$
<i>Project Name</i>									
<i>Project Name</i>									
TOTAL									
Wastewater									
<i>Project Name</i>									
<i>Project Name</i>									
<i>Project Name</i>									
TOTAL									
Power									
<i>Project Name</i>									
<i>Project Name</i>									
<i>Project Name</i>									
TOTAL									
GRAND TOTAL	\$	\$	\$	\$	\$	\$	\$	\$	\$

Note: This schedule should be representative of all bonds under RBOC's purview.

Appendix B

Department Response



525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
T 415.554.3155
F 415.554.3161
TTY 415.554.3488

December 21, 2021

Mark de la Rosa
Director of Audits
City Hall, Room 476
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Subject: Management's Response to Audit Report: The San Francisco Public Utilities Commission Spent Revenue Bond Funds For Allowable Purposes But Should Improve Its Controls Over Reporting and Quality Assurance

Dear Mr. de la Rosa,

Thank you for providing us the opportunity to review the results of the audit report prepared by the Controller's Office City Services Auditor, HKA Global, Inc., and Yano Accountancy Corporation. Attached are the SFPUC's Management Responses to the recommendations detailed in the audit report.

We appreciate the time your staff dedicated to this work and are pleased it noted that revenue bond expenditures were spent appropriately.

We partially concurred with the two audit recommendations noted in the audit report and provided rationale in our management responses. The SFPUC is committed to continuous improvement and transparency. We will continue to work with the RBOC to identify and develop reporting needs for oversight of expenditure of revenue bond proceeds.

If you have any questions or need additional information, please contact me at (415) 554-1600.

Sincerely,

A handwritten signature in blue ink that reads "D.J. Herrera".

Dennis J. Herrera
General Manager

cc: Michael Carlin, Deputy General Manager
Ronald P Flynn, Chief of Staff
Eric Sandler, AGM Business Services/CFO
Charles Perl, Deputy Chief Financial Officer
Nancy Hom, Deputy Chief Financial Officer
Alan Johanson, Acting AGM Infrastructure

London N. Breed
Mayor

Anson Moran
President

Newsha Ajami
Vice President

Sophie Maxwell
Commissioner

Tim Paulson
Commissioner

Ed Harrington
Commissioner

Dennis J. Herrera
General Manager

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.



Recommendations and Responses

For each recommendation, the responsible agency should indicate in the column labeled *Agency Response* whether it concurs, does not concur, or partially concurs and provide a brief explanation. If it concurs with the recommendation, it should indicate the expected implementation date and implementation plan. If the responsible agency does not concur or partially concurs, it should provide an explanation and an alternate plan of action to address the identified issue.

Recommendation	Agency Response	CSA Use Only
		Status Determination*
The San Francisco Public Utilities Commission should:		
<p>1. Coordinate with the Public Utilities Revenue Bond Oversight Committee (RBOC) to provide a comprehensive report project expenditures by each funding source to facilitate compliance with Administrative Code Sections 5A.30-5A.36:</p> <ul style="list-style-type: none"> a. revenue bonds by bond series, b. federal and state grants and loans, c. commercial paper to be refinanced, and d. other funding sources. <p>The amounts should reconcile to the Estimated Uses of Bond Proceeds included in each bond series' Official Statement.</p> <p>In addition, SFPUC should coordinate with RBOC to provide a report showing the uses of bond proceeds for each bond series, including:</p> <ul style="list-style-type: none"> a. amounts deposited into capital project funds, b. commercial paper defeased, 	<p><input type="checkbox"/> Concur <input type="checkbox"/> Do Not Concur <input checked="" type="checkbox"/> Partially Concur</p> <p>Management concurs with the recommendation to provide the RBOC a comprehensive report of project expenditures by each funding source to comply with Administrative Code Sections 5A.30-5A.36. We will communicate with the committee to plan and develop appropriate available reporting.</p> <p>Management notes the Administrative Code Sections 5A.30-5A.36 specifically address RBOC's oversight of only revenue bonds and does not address other revenue sources as mentioned (e.g., federal and state grants and loans, commercial paper, and other revenue funding sources). If these funding sources impact revenue bond funds, SFPUC will ensure complete reporting and include related financial data.</p> <p>The SFPUC remains committed to accuracy and transparency, and will continue to work with the RBOC to identify and develop reporting needs for oversight of uses of bond proceeds. The SFPUC will work with RBOC to address this recommendation by end of calendar year 2022.</p>	<p><input checked="" type="checkbox"/> Open</p> <p><input type="checkbox"/> Closed</p> <p><input type="checkbox"/> Contested</p>

* Status Determination based on audit team's review of the agency's response and proposed corrective action.

Recommendation	Agency Response	CSA Use Only Status Determination*
<ul style="list-style-type: none"> c. Debt Service Reserve (DSR) releases (included with either the original bond series or as separately identified bond proceeds), d. investment earnings on unexpended bond proceeds used for capital expenditures, and e. other uses of bond proceeds. 		
<p>2. Comply with the existing PM Procedure, 6.02 Quality Assurance Audits, to perform quality assurance audits during the four main phases of a project’s lifecycle.</p>	<p> <input type="checkbox"/> Concur <input type="checkbox"/> Do Not Concur <input checked="" type="checkbox"/> Partially Concur The PM Procedure 6.02 was specifically written in association with the larger and more complex WSIP Regional projects. Overall SFPUC projects vary in size and complexity. To address this portfolio, Infrastructure plans to revise PM Procedure 6.02 to require a yearly audit plan which will be developed by Infrastructure management. The revised PM Procedure will be implemented by the end of Fiscal Year 2021-22. </p>	<p> <input checked="" type="checkbox"/> Open <input type="checkbox"/> Closed <input type="checkbox"/> Contested </p>

* Status Determination based on audit team’s review of the agency’s response and proposed corrective action.