San Francisco Public Utilities Commission

PROGRAMMATIC POST-ISSUANCE VERIFICATION LETTER

WATER INFRASTRUCTURE CRITERIA OF THE CLIMATE BONDS STANDARD

Type of engagement: Assurance Engagement
Period engagement was carried out: September 2019
Approved verifier: Sustainalytics
Contact address for engagement: 125 Maiden Lane, Suite 602, New York NY 10038, U.S.A.
Post-Issuance Engagement Leader: Ankita Shukla, ankita.shukla@sustianalytics.com, + 1 (617) 603 3329
Post-Issuance Engagement Support: Tina Ghaemmaghami, tina.ghaemmaghami@sustainalytics.com, + 1 (647) 264 6680

Scope and Objectives

In 2016 and 2017, San Francisco Public Utilities Commission ("SFPUC") issued green bonds aimed at financing or refinancing projects within the Water System Improvement Program (WSIP). In September 2019, SFPUC engaged Sustainalytics to review the projects funded through the issued green bonds and provide an assessment as to whether the projects met the Post-Issuance Requirements (Part A, Part B and Part C) of the Climate Bonds Standard.[1]

Green bonds include:[2]

- Water Revenue Bond 2016 Series C (Green Bonds)
- Water Revenue Bonds 2017 Series A (Green Bonds)
- Water Revenue Bonds (Refunding) (Green Bonds) 2017 Series D
- Water Revenue Bonds (Refunding) (Green Bonds) 2017 Series G

Schedule 1 provides details of the green bond projects and Disbursement of Proceeds.

Compliance Evaluation Criteria

Post-issuance requirements under Climate Bonds Standards Version 2.1:

- Part A: General Requirements - All the requirements in Part A shall be met to be eligible for post-issuance certification.
- Part B: Eligible Projects & Assets - Part B requirements shall be met based on the projects & assets associated with the bond and the specified eligibility criteria.
- Part C: Requirements for Specific Bond Types - Part C requirements shall be met to be eligible for post-issuance certification and are used selectively, depending on the type of bond in question.

Issuing Entity's Responsibility

SFPUC is responsible for providing accurate information and documentation relating to the details of the projects that have been funded, including description of projects, total development cost of each projects, and disbursed amounts.

Independence and Quality Control

Sustainalytics, a leading provider of ESG and corporate governance research and ratings to investors, conducted the verification of SFPUC's green bond, issued to finance eligible projects, and provided an

---

[1] Pre-Issuance Verification Letter available here:
https://www.climatebonds.net/files/files/Verification%20Letter_SFPUC_WSIP.pdf
[2] Water Enterprise Green Bonds Annual Report available here:
https://www.sfwater.org/modules/showdocument.aspx?documentid=13671

independent opinion informing SFPUC as to the conformance of the green bond with the Post-Issuance requirements and Water Infrastructure criteria of the Climate Bonds Standard.

Sustainalytics has relied on the information and the facts presented by SFPUC with respect to the Nominated Projects. Sustainalytics is not responsible nor shall it be held liable if any of the opinions, findings, or conclusions it has set forth herein are not correct due to incorrect or incomplete data provided by SFPUC.

Sustainalytics makes all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight over the assessment of the bond.

Verifier's Responsibility

Sustainalytics conducted the verification in accordance with the Climate Bonds Standard Version 2.1 and with International Standard on Assurance Engagements 3000 (ISAE 3000) – Assurance Engagements other than Audits or Reviews of Historical Information.

The work undertaken as part of this engagement included conversations with relevant SFPUC employees and review of relevant documentation to confirm the conformance of SFPUC's green bonds with the Programmatic Post-Issuance Requirements (Part A, Part B and Part C) of the Climate Bonds Standard Version 2.1.

Exceptions

No exceptions were identified.
All projects aligned with the Post-Issuance requirements of the Climate Bonds Standard and were in conformance to the Water Infrastructure criteria.

Conclusion

Based on the limited assurance procedures conducted, nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the allocation of the following SFPUC green bonds, issued to fund eligible green water enterprise projects, is not in conformance with the Post-Issuance requirements of the Climate Bonds Standard:

- USD 256,821,634 from 2016 Series C
- USD 125,500,000 from 2017 Series A
- USD 335,588,236 from 2017 Series D
- USD 26,744,612 from 2017 Series G

Detailed Findings

Eligibility Criteria	Procedure Performed	Factual Findings	Error or Exceptions Identified
Compliance to Part A: General Requirements	Verification of 87 projects by the 2016 Water Series C and 2017 Water Series A, D and G green bonds to determine if Part A: General Requirements were met (See Schedule 2A and 2B).	All 87 projects reviewed complied with the General Requirements.	None
Compliance to Part B: Eligible Projects & Assets	Verification of 87 projects funded by the green bond in 2016 Water Series C and 2017 Water Series A, D and G green bonds to determine if projects fall into (i) one of the investment areas of the Climate Bonds Taxonomy (ii) meet the Water Infrastructure technical criteria.	All 87 projects fall under the Water Infrastructure criteria and meet the requirements of the Water Infrastructure technical criteria.	None

Compliance to Part C: Requirements for Specific Bond Types	Bond Type Applicable: Use of Proceeds Bond.	The requirements of Project Holding, Settlement Period and Earmarking have been met.	None

Schedule 1: Detailed Overview of Nominated Projects and Assets

San Francisco Public Utilities Commission Green Series Snapshot (as of June, 2018)	
2016 Series C Projects	
Project[3]	**Total Bond Amount**
1. Groundwater Storage and Recovery	$9,752,541
2. Upper Alameda Creek Filter Gallery	$1,856,862
3. Seismic Upgrade of BDPL at Hayward Fault	$3,181,724
4. New Crystal Springs Bypass Tunnel	$170
5. Adit Leak Repairs	$19,471,358
6. New Irvington Tunnel	$3,534,658
7. Alameda Siphon #4	$74,987
8. Security System Upgrades	$1,225,367
9. HTWTP Long Term Improvements	$35,659,426
10. BDPL Reliability Upgrade-Trans Bay Tunnel	$83,385,032
11. BDPL Reliability Upgrade-Pipeline	$42,522,804
12. Calaveras Dam Replacement	$32,848,192
13. San Antonio Backup Pipeline	$41,041
14. Program Environmental Impact Report	$66,883
15. Mitigation Planning	$1,155,323
16. Vegetation Restoration WSIP Sites	$32,940
17. Habitat Reserve Program	$18,914,745
18. EBMUD Intertie	$173
19. Program Management Services	-
20. Watershed Environmental Improvement Program	-
21. WSIP Financing Costs Project	$3,084,618
22. Peninsula Pipeline Seismic Upgrade	$1,109
23. Crystal Springs/San Andreas Transmission Upgrade	$11,682
2016 Series C Total	**$256,821,634**
2017 Series A Projects	
24. Regional Groundwater Storage & Recovery	$11,831,464
25. Recycled Water Project - Eastside	$19,703

[3] Eligible projects include all WSIP Projects, subset only listed

26. Lake Merced Pump Station Upgrade	$630,939
27. Sutro Res - Rehab/Seismic Upgrade	$23,855
28. Seismic BDPL @ Hayward Fault Ph 2	$4,345,357
29. New Irvington Tunnel 4,792,673	$4,792,673
30. Security Systems Upgrades	$2,069,680
31. HTWTP Long Term Improvements	$18,158,415
32. Peninsula Pipeline Seismic Upgrade	$321,836
33. BDPL Reliability Upgrade - Tunnel	$1,282,153
34. BDPL Reliability - Pipeline	$259,886
35. Crystal Springs Ps & Cs-Sa Pl	$51,297
36. San Joaquin Pipeline System	163,320
37. Calaveras Dam Replacement	73,965,437
38. San Antonio Backup Pipeline	83,650
39. Habitat Reserve Program	2,349,645
40. Vegetation Restoration WSIP Sites	21,163
41. Watershed Environmental Improve Program	532,628
42. Bay Division Pipeline Upgrade	1,589,685
43. Peninsula Water System Improvements	2,098,561
44. San Joaquin Water System Improve Projects	490,141
45. Sunol Valley Water System Improvements	878,913
46. Alameda Creek Recapture Project	-
47. Other WSIP Projects[4]	8,177
2017 Series A Total	**$125,500,000**
2017 Series D Projects (Refunding)	
WSIP Financing Costs Project	$ 6,186,666
Lake Merced Water Level Restoration	$76,065
San Francisco Groundwater Supply	$5,861,124
Regional Groundwater Storage & Recovery	$11,662,612
Recycled Water Project	$224,619
Harding Park Recycled Water Project	$397,958
Recycled Water Project - Eastside	$403,721
Lake Merced Pump Station Upgrade	$2,337,855
East/West Transmission Main	$28,069
Forest Hill Pump Station Upgrade	$1,112,242
Forest Knolls Pump Station Upgrade	$7,470
Mclaren Park Pump Station Upgrade	$5,353
Sutro Res - Rehab/Seismic Upgrade	$11,590,033
Le Grande Pump Station Upgrade	$45,522
Upper Alameda Creek Filter Gallery	$1,142,093
Seismic Bdpl @ Hayward Fault Ph 2	$17,176,100
Lower Crystal Springs Dam Improvements	$815,302
New Crystal Springs Bypass Tunnel	$20,647
Sunset Res - Upgrade/Rehab North Basin	$17,096

[4] Other WSIP Projects include eligible projects with less than 1% of total net proceeds allocated from 2017 Series A

New Irvington Tunnel	$57,937,418
Alameda Siphon #4	$631,907
Structural Rehab (Roof) - Pulgas Phase 3	$181,583
Existing Dechlor Mods - Pulgas Phase 5	$89,584
Installation Of Scada System Ph Ii	$249,506
Security Systems Upgrades	$2,120,548
Lawrence Livermore Water Quality Improve	$10,107
HTWTP Long Term Improvements	$20,044,784
Peninsula Pipeline Seismic Upgrade 8,758,742	$8,758,742
BDPL Reliability Upgrade - Tunnel 35,714,358	$35,714,358
BDPL Reliability - Pipeline	$7,502,792
Crystal Springs Ps & Cs-Sa Pl	$36,587,850
U Mound Res - Upgrade (North Basin)	$147,093
San Joaquin Pipeline System	$1,618,466
Rehab Existing San Joaquin Pipelines	$96,453
Calaveras Dam Replacement	$48,044,405
San Antonio Backup Pipeline	$14,976,671
Crystal Springs Pl #2 Replace (In City)	$6,524,771
San Andreas #3 Pipeline Installation	$53,518
BDPL No 3&4 Cross Connection	$1,330,315
SVWTP Expansion/Treated Water Reservoir	$12,423,360
Tesla Treatment Facility	$2,208,334
San Antonio Pump Station Upgrade	$14,076
Habitat Reserve Program	$17,745,619
Vegetation Restoration WSIP Sites	$585,228
SFPUC/EBMUD Intertie	$80,161
Baden And San Pedro Valve Lot	$86,134
Watershed Environmental Improve Program	$687,129
Other WSIP Projects[5]	$26,780
2017 Series D Total	**$335,588,236**
2017 Series G Projects (Refunding)	
WSIP Financing Costs	$495,370
Lake Merced Water Level Restoration	$5,683
San Francisco Groundwater Supply	$150,924
Regional Groundwater Storage & Recovery	$394,643
Recycled Water Project	$27,564
Harding Park Recycled Water Project	$48,825
Recycled Water Project - Eastside	$47,845
Lake Merced Pump Station Upgrade	$254,280
Forest Hill Pump Station Upgrade 135,593	$135,593
Sutro Res - Rehab/Seismic Upgrade	$1,010,822
Le Grande Pump Station Upgrade	$5,586
Upper Alameda Creek Filter Gallery	$37,483
Seismic BDPL @ Hayward Fault Ph 2	$1,451,902
Lower Crystal Springs Dam Improvements	$99,659
New Irvington Tunnel	$6,441,819

[5] Other WSIP Projects include eligible projects with less than 1% of total net proceeds allocated from 2017 Series D (Refunding)

Alameda Siphon #4	$77,519
Structural Rehab (Roof) - Pulgas Phase 3	$22,283
Existing Dechlor Mods - Pulgas Phase 5	$10,993
Installation Of Scada System Ph Ii	$30,618
Security Systems Upgrades	$183,153
HTWTP Long Term Improvements	$681,830
Peninsula Pipeline Seismic Upgrade	$228,439
BDPL Reliability Upgrade - Tunnel	$3,610,135
BDPL Reliability - Pipeline	$834,831
Crystal Springs Ps & Cs-Sa Pl	$3,364,069
University Mound Res - Upgrade (North Basin)	$18,050
San Joaquin Pipeline System	$99,222
Rehab Existing San Joaquin Pipelines	$10,081
Calaveras Dam Replacement	$851,556
San Antonio Backup Pipeline	$1,391,486
Crystal Springs Pl #2 Replace (In City)	$788,021
San Andreas #3 Pipeline Installation 6,567	$6,567
BDPL No 3&4 Cross Connection 157,346	$157,346
SVWTP Expansion/Treated Water Reservoir	$1,517,992
Tesla Treatment Facility	$244,012
Habitat Reserve Program	$1,865,984
Vegetation Restoration WSIP Sites	32,319
SFPUC/EBMUD Intertie	$9,837
Baden And San Pedro Valve Lot	$10,570
Watershed Environmental Improve Program	$73,839
Other WSIP Projects[6]	$15,865
2017 Series G Total	**$26,744,612**
Green Series Totals	**$744, 654, 482**

[6] Other WSIP Projects include eligible projects with less than 1% of total net proceeds allocated from 2017 Series G (Refunding)

Schedule 2A: Post-Issuance General Requirements of the Climate Bonds Standard

Nominated Projects & Assets	***4.1*** Statement on the environmental objectives of the bond ***4.2*** Nominated Projects meet the Climate Bonds criteria ***4.3*** Confirmation that Nominated Projects and Assets will not be nominated to other Climate Bonds
Use of Proceeds	***5.1*** Net Proceeds of the bond allocated to the Nominated Projects ***5.2*** Funds allocated to Nominated Projects within 24 months of issuance of the bond ***5.3*** Estimate of the share of the Net Proceeds used for financing and re-financing ***5.4*** Net Proceeds of the bond shall be tracked by the Issuer following a formal internal process ***5.5*** Net Proceeds of the bond shall be no greater than the total investment or the total Fair Market Value of the Nominated Projects & Assets at the time of issuance
Non-Contamination of Proceeds	***6.1*** Tracking of proceeds ***6.2*** Managing of unallocated proceeds ***6.3*** In the case of a Force Majeure, the Issuer may apply to the Climate Bonds Standard Board for an extension to the asset allocation period
Confidentiality	***7.1*** Information about the Nominated Projects & Assets provided to the Verifier and to the Climate Bonds Standard Board ***7.2*** Issuer should disclose information about the bond and the Nominated Projects & Assets to the market
Reporting Post-Issuance	***8.1*** Report containing the list of Nominated Projects & Assets to which proceeds of the bond have been allocated

SUSTAINALYTICS

Schedule 2B: Conformance to the Post-Issuance Requirements of the Climate Bonds Standard

Procedure Performed	Factual Findings	Error or Exceptions Identified
Verification of Nominated Projects & Assets	***4.1*** The objective of the bond is to primarily use proceeds to finance or refinance projects within the Water System Improvement Program (WSIP). ***4.2*** SFPUC's management confirms that the nominated projects meet the Eligibility Criteria. ***4.3*** SFPUC's management confirms that the projects shall not be nominated to other Climate Bonds.	None
Verification of requirements specified under Use of Proceeds	***5.1*** Net Proceeds of the bond have been allocated to the 87 Nominated Projects. ***5.2*** SFPUC's management has confirmed that funds have been allocated to Nominated Projects within 24 months of the issuance. ***5.3*** The shares of the Net Proceeds used for financing and re-financing are: USD 256,821,634 from 2016 Series C *(29,441,077 remain unallocated)* USD 125,500,000 from 2017 Series A *(fully allocated)* USD 335,588,236 from 2017 Series D (Refunding) USD 26,744,612 from 2017 Series G (Refunding) ***5.4*** SFPUC's management has confirmed that Net Proceeds of the bond has be tracked by the Issuer following a formal internal process. ***5.5*** SFPUC's management has confirmed that the Net Proceeds of the bond is no greater than the total investment in the Nominated Projects or the Total Development Cost of the Nominated Projects.	None
Verification of requirements specified under Non-Contamination of Proceeds	***6.1*** SFPUC's management confirms that the proceeds have been segregated and tracked in a systematic manner and were exclusively used to finance Nominated Projects. ***6.2*** SFPUC's management confirms that pending the investment of proceeds, they have be held in temporary investment instruments (i) that are cash, or cash equivalent instruments, within a Treasury function; or (ii) that do not include greenhouse gas intensive projects which are inconsistent with the delivery of a low carbon and climate resilient economy.	None

	6.3 N/A	
Verification of requirements specified under Confidentiality	***7.1*** SFPUC's management confirms that all relevant information about the Nominated Projects has been provided to the Verifier and to the Climate Bonds Standard Board to support the assessment of conformance with the Climate Bonds Standard. ***7.2*** SFPUC's management confirms that all relevant information about the bond and the Nominated Projects has been disclosed to the market.	None
Verification of requirements specified under Reporting Post-Issuance	***8.1*** SFPUC's management has provided a report containing the list of Nominated Projects to which proceeds of the bond have been allocated (See Schedule 1).	None

Disclaimer

As the information herein is based on information made available by the issuer, the information is provided "as is" and, therefore Sustainalytics does not warrant that the information presented in this deliverable is complete, accurate or up to date, nor assumes any responsibility for errors or omissions and Sustainalytics will not accept any form of liability for the substance of the deliverable and/or any liability for damage arising from the use of this deliverable and/or the information provided in it. Any reference to third party names is for appropriate acknowledgement of their ownership and does not constitute a sponsorship or endorsement by such owner.

Nothing contained in this deliverable shall be construed as to make a representation or warranty on the part of Sustainalytics, express or implied, regarding the advisability to invest in companies, selection of projects or make any kind of business transactions. It shall not be construed as an investment advice (as defined in the applicable jurisdiction), nor be interpreted and construed as an assessment of the issuer's economic performance, financial obligations nor its creditworthiness.

The issuer is fully responsible for certifying and ensuring the compliance with its commitments, for their implementation and monitoring.

Sustainalytics

Sustainalytics is a leading independent ESG and corporate governance research, ratings and analytics firm that supports investors around the world with the development and implementation of responsible investment strategies. With 13 offices globally, the firm partners with institutional investors who integrate ESG information and assessments into their investment processes. Spanning 30 countries, the world's leading issuers, from multinational corporations to financial institutions to governments, turn to Sustainalytics for second-party opinions on green and sustainable bond frameworks. Sustainalytics has been certified by the Climate Bonds Standard Board as a verifier organization, and supports various stakeholders in the development and verification of their frameworks. In 2015, Global Capital awarded Sustainalytics "Best SRI or Green Bond Research or Ratings Firm" and in 2018 and 2019, named Sustainalytics the "Most Impressive Second Party Opinion Provider. The firm was recognized as the "Largest External Reviewer" by the Climate Bonds Initiative as well as Environmental Finance in 2018, and in 2019 was named the "Largest Approved Verifier for Certified Climate Bonds" by the Climate Bonds Initiative. In addition, Sustainalytics received a Special Mention Sustainable Finance Award in 2018 from The Research Institute for Environmental Finance Japan the Minister of the Environment Award in the Japan Green Contributor category of the Japan Green Bond Awards in 2019.

For more information, visit www.sustainalytics.com

Or contact us info@sustainalytics.com