NEW ISSUE
BOOK-ENTRY ONLY

RATINGS: S&P: AAA
Fitch: AA+
(See "Ratings" herein)

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the Board of Water Supply, based upon an analysis of existing laws, regulations, rulings, and court decisions and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Series 2021A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986. In the further opinion of Bond Counsel, the interest on the Series 2021A Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Bond Counsel is of the opinion that the Series 2021 Bonds and the income therefrom are exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate, and certain franchise taxes. Bond Counsel observes that interest on the Series 2021B Bonds is not excluded from gross income for federal income tax purposes. Bond Counsel expresses no opinion regarding any other tax consequences related to the ownership or disposition of, or the amount, accrual, or receipt of interest on, the Series 2021 Bonds. See "TAX MATTERS" in this Official Statement.

$93,535,000
BOARD OF WATER SUPPLY
City and County of Honolulu
Water System Revenue Bonds

$50,020,000	$43,515,000
Series 2021A (Tax-Exempt)	**Series 2021B (Taxable)**

Dated: Date of Delivery **Due: As shown on inside cover**

The above-referenced Series 2021A Bonds and Series 2021B Bonds (collectively, the "Series 2021 Bonds") are issuable in fully registered form in the denomination of $5,000 or any integral multiple thereof, and when initially issued will be registered in the name of Cede & Co., or its registered assigns, as nominee of The Depository Trust Company ("DTC"), New York, New York. So long as DTC or its nominee is the registered owner of the Series 2021 Bonds, purchases of the Series 2021 Bonds will be made in book-entry form only, through brokers and dealers who are, or who act through, DTC participants; beneficial owners of the Series 2021 Bonds will not receive physical delivery of bond certificates; payment of the principal of and interest and any premium on the Series 2021 Bonds will be made by the Board of Water Supply ("BWS") of the City and County of Honolulu (the "City and County") directly to DTC or its nominee; and disbursement of such payments to DTC participants will be the responsibility of DTC and disbursement of such payments to the beneficial owners will be the responsibility of DTC participants.

Interest on the Series 2021 Bonds is payable on January 1 and July 1 of each year, commencing on July 1, 2021. The Series 2021 Bonds are subject to optional redemption prior to the stated maturity thereof as described herein.

The Series 2021 Bonds will be issued by the BWS under a Water System Revenue Bond Resolution, adopted April 26, 2001 by the BWS, as supplemented and amended (the "Resolution"), and will be payable and secured on a parity with the outstanding bonds issued and additional bonds to be issued (collectively, with the Series 2021 Bonds herein described, the "Bonds") under and pursuant to the Resolution to the extent provided in the Resolution as described herein. As discussed herein (see "SECURITY FOR THE BONDS – Proposed Amendments to Resolution"), certain amendments to the Resolution have been proposed that require the consent of the holders of a majority of the Bonds Outstanding. **By purchasing beneficial interests in the Series 2021 Bonds, the owners of such beneficial interests will be deemed to have consented to the proposed amendments.**

The proceeds of the Series 2021 Bonds will be used: (i) to fund or reimburse the BWS for the costs of certain improvements, betterments, and extensions of the Water System; (ii) to refund certain outstanding Water System Revenue Bonds heretofore issued by the BWS pursuant to the Resolution; and (iii) to pay the costs of issuance of the Series 2021 Bonds.

All Bonds issued under and pursuant to the Resolution, including the Series 2021 Bonds, are special obligations of the BWS payable solely from and secured by a pledge of proceeds of such Bonds held or set aside under the Resolution, the Net Revenues, and certain funds and accounts held under the Resolution, and are equally and ratably payable and secured except to the extent permitted in the Resolution. The BWS has no taxing power. Bonds issued under and pursuant to the Resolution, including the Series 2021 Bonds, are not a general or moral obligation of the State of Hawaii or any political subdivision thereof, including the City and County, and the faith and credit of the State of Hawaii or any political subdivision thereof, including the City and County, are not pledged to the payment of the principal of or interest or any premium on the Bonds, and no holder of such Bonds shall have the right to compel the exercise of the taxing power of the State of Hawaii or any political subdivision thereof, including the City and County, in connection with any default with respect to such Bonds.

The Series 2021 Bonds are offered when, as, and if issued and received by the Underwriters, and are subject to the approval of legality by Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the BWS. Certain legal matters will be passed upon for the Underwriters by their counsel, McCorriston Miller Mukai MacKinnon LLP, Honolulu, Hawaii. It is expected that the Series 2021 Bonds in definitive form will be available for delivery to DTC in New York, New York, on or about March 25, 2021.

BofA Securities **Stifel**

Dated: March 9, 2021

MATURITY SCHEDULE

$93,535,000
Board of Water Supply
City and County of Honolulu
Water System Revenue Bonds

$50,020,000
Series 2021A (Tax-Exempt)

Maturity Date (July 1)	Principal Amount	Interest Rate	Yield	Price	CUSIP† (438689)
2022	$ 855,000	5.000%	0.120%	106.174%	LX7
2023	900,000	5.000	0.210	110.825	LY5
2024	945,000	5.000	0.330	115.160	LZ2
2025	995,000	5.000	0.460	119.159	MA6
2026	1,045,000	5.000	0.590	122.834	MB4
2027	1,100,000	5.000	0.740	126.038	MC2
2028	1,155,000	5.000	0.890	128.857	MD0
2029	1,215,000	5.000	1.040	131.288	ME8
2030	1,275,000	5.000	1.150	133.747	MF5
2031	1,340,000	5.000	1.260	135.909	MG3
2032	1,410,000	5.000	1.300	135.451*	MH1
2033	1,480,000	5.000	1.350	134.880*	MJ7
2034	1,540,000	3.000	1.760	111.598*	MK4
2035	1,595,000	4.000	1.640	122.213*	ML2
2036	1,660,000	4.000	1.690	121.686*	MM0
2037	1,720,000	3.000	1.930	109.920*	MN8
2038	1,785,000	4.000	1.770	120.848*	MP3
2039	1,855,000	4.000	1.810	120.432*	MQ1
2040	1,930,000	4.000	1.850	120.017*	MR9
2041	2,000,000	3.000	2.090	108.367*	MS7

$11,235,000 4.000% Term Bonds due July 1, 2046, Priced: 118.374%* to yield 2.010%, CUSIP 438689MT5.

$10,985,000 5.000% Term Bonds due July 1, 2050, Priced: 129.220%* to yield 1.860%, CUSIP 438689MU2.

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* *Priced to call at par on July 1, 2031.*

† *Copyright, American Bankers Association. CUSIP Global Services ("CGS") is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. Copyright, CUSIP Global Services. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP numbers are provided for convenience of reference only. None of the Board, the Underwriters, or their agents or counsel assumes responsibility for the accuracy of such numbers.*

$43,515,000
Series 2021B (Taxable)

Maturity Date (July 1)	Principal Amount	Interest Rate	Yield	Price	CUSIP[†] (438689)
2021	$ 60,000	0.160%	0.160%	100.000%	MV0
2023	3,430,000	0.360	0.360	100.000	MW8
2024	3,445,000	0.520	0.520	100.000	MX6
2025	990,000	0.950	0.950	100.000	MY4
2026	1,000,000	1.160	1.160	100.000	MZ1
2027	7,700,000	1.450	1.450	100.000	NA5
2028	6,890,000	1.600	1.600	100.000	NB3
2029	7,965,000	1.820	1.820	100.000	NC1
2030	8,155,000	1.970	1.970	100.000	ND9
2031	3,880,000	2.070	2.070	100.000	NE7

Board of Water Supply
City and County of Honolulu

630 South Beretania Street
Honolulu, Hawaii 96843

BOARD OF DIRECTORS

Bryan P. Andaya, Chairman
Kapuaʻala Sproat, Vice Chair
Ray Soon
Max Sword
Naʻalehu Anthony
Jade Butay, Director, Department of Transportation, *Ex-Officio*
Roger Babcock, Jr., Chief Engineer and Director, Department of Facility Maintenance, *Ex-Officio*

Principal Officers

Ernest Y.W. Lau, Manager and Chief Engineer
Ellen E. Kitamura, Deputy Manager and Chief Engineer
Joseph Cooper, Waterworks Controller
Barry Usagawa, Program Administrator, Water Resources Division
Kathleen Elliott-Pahinui, Information Officer, Communications Office

Auditor

N&K CPAs, Inc.
Honolulu, Hawaii

Acting Corporation Counsel

Paul S. Aoki

Bond Counsel

Orrick, Herrington & Sutcliffe LLP
San Francisco, California

INFORMATION CONCERNING OFFERING RESTRICTIONS IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES

REFERENCES IN THIS SECTION TO THE "ISSUER" MEAN THE BOARD OF WATER SUPPLY OF THE CITY AND COUNTY OF HONOLULU AND REFERENCES TO "SERIES 2021 BONDS" OR "SECURITIES" MEAN THE BOARD OF WATER SUPPLY OF THE CITY AND COUNTY OF HONOLULU WATER SYSTEM REVENUE BONDS.

THE INFORMATION UNDER THIS CAPTION HAS BEEN FURNISHED BY THE UNDERWRITERS, AND THE ISSUER MAKES NO REPRESENTATION AS TO THE ACCURACY, COMPLETENESS OR ADEQUACY OF THE INFORMATION UNDER THIS CAPTION.

COMPLIANCE WITH ANY RULES OR RESTRICTIONS OF ANY JURISDICTION RELATING TO THE OFFERING, SOLICITATION AND/OR SALE OF THE SERIES 2021 BONDS IS THE RESPONSIBILITY OF THE UNDERWRITERS, AND THE ISSUER SHALL NOT HAVE ANY RESPONSIBILITY OR LIABILITY IN CONNECTION THEREWITH. NO ACTION HAS BEEN TAKEN BY THE ISSUER THAT WOULD PERMIT THE OFFERING OR SALE OF THE SERIES 2021 BONDS, OR POSSESSION OR DISTRIBUTION OF THIS OFFICIAL STATEMENT OR ANY OTHER OFFERING OR PUBLICITY MATERIAL RELATING TO THE SERIES 2021 BONDS, OR ANY INFORMATION RELATING TO THE PRICING OF THE SERIES 2021 BONDS, IN ANY NON-U.S. JURISDICTION WHERE ACTION FOR THAT PURPOSE IS REQUIRED.

MINIMUM UNIT SALES

THE SERIES 2021 BONDS WILL TRADE AND SETTLE ON A UNIT BASIS (ONE UNIT EQUALING ONE SERIES 2021 BOND OF US $5,000 PRINCIPAL AMOUNT). FOR ANY SALES MADE OUTSIDE THE UNITED STATES, THE MINIMUM PURCHASE AND TRADING AMOUNT IS 30 UNITS (BEING 30 SERIES 2021 BONDS IN AN AGGREGATE PRINCIPAL AMOUNT OF US $150,000.00).

NOTICE TO PROSPECTIVE INVESTORS IN CANADA

THE SERIES 2021 BONDS MAY BE SOLD ONLY TO PURCHASERS PURCHASING, OR DEEMED TO BE PURCHASING, AS PRINCIPAL THAT ARE ACCREDITED INVESTORS, AS DEFINED IN NATIONAL INSTRUMENT 45-106 *PROSPECTUS EXEMPTIONS* OR SUBSECTION 73.3(1) OF THE *SECURITIES ACT* (ONTARIO), AND ARE PERMITTED CLIENTS, AS DEFINED IN NATIONAL INSTRUMENT 31-103 *REGISTRATION REQUIREMENTS, EXEMPTIONS AND ONGOING REGISTRANT OBLIGATIONS*. ANY RESALE OF THE SERIES 2021 BONDS MUST BE MADE IN ACCORDANCE WITH AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE PROSPECTUS REQUIREMENTS OF APPLICABLE SECURITIES LAWS.

SECURITIES LEGISLATION IN CERTAIN PROVINCES OR TERRITORIES OF CANADA MAY PROVIDE A PURCHASER WITH REMEDIES FOR RESCISSION OR DAMAGES IF THIS OFFICIAL STATEMENT (INCLUDING ANY AMENDMENT THERETO) CONTAINS A MISREPRESENTATION, PROVIDED THAT THE REMEDIES FOR RESCISSION OR DAMAGES ARE EXERCISED BY THE PURCHASER WITHIN THE TIME LIMIT PRESCRIBED BY THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY. THE PURCHASER SHOULD REFER TO ANY APPLICABLE PROVISIONS OF THE SECURITIES LEGISLATION OF THE PURCHASER'S PROVINCE OR TERRITORY FOR PARTICULARS OF THESE RIGHTS OR CONSULT WITH A LEGAL ADVISOR.

PURSUANT TO SECTION 3A.3 (OR, IN THE CASE OF SECURITIES ISSUED OR GUARANTEED BY THE GOVERNMENT OF A NON-CANADIAN JURISDICTION, SECTION 3A.4) OF NATIONAL INSTRUMENT 33-105 *UNDERWRITING CONFLICTS* ("NI 33-105"), THE UNDERWRITERS ARE NOT REQUIRED TO COMPLY WITH THE DISCLOSURE REQUIREMENTS OF NI 33-105 REGARDING UNDERWRITER CONFLICTS OF INTEREST IN CONNECTION WITH THIS OFFERING.

NOTICE TO PROSPECTIVE INVESTORS IN THE EUROPEAN ECONOMIC AREA AND THE UNITED KINGDOM

THIS OFFICIAL STATEMENT HAS BEEN PREPARED ON THE BASIS THAT ALL OFFERS OF THE SECURITIES TO ANY PERSON THAT IS LOCATED WITHIN A MEMBER STATE OF THE EUROPEAN ECONOMIC AREA ("EEA") OR THE UNITED KINGDOM WILL BE MADE PURSUANT TO AN EXEMPTION UNDER ARTICLE 1(4) REGULATION (EU) 2017/1129 (THE "PROSPECTUS REGULATION") FROM THE REQUIREMENT TO PRODUCE A PROSPECTUS FOR OFFERS OF THE SECURITIES. ACCORDINGLY, ANY PERSON MAKING OR INTENDING TO MAKE ANY OFFER TO ANY PERSON LOCATED WITHIN A MEMBER STATE OF THE EEA OR THE UNITED KINGDOM OF THE SECURITIES SHOULD ONLY DO SO IN CIRCUMSTANCES IN WHICH NO OBLIGATION ARISES FOR THE ISSUER OR ANY OF THE INITIAL PURCHASERS TO PRODUCE A PROSPECTUS OR SUPPLEMENT FOR SUCH AN OFFER. NEITHER THE ISSUER NOR THE INITIAL PURCHASERS HAVE AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF SECURITIES THROUGH ANY FINANCIAL INTERMEDIARY, OTHER THAN OFFERS MADE BY THE INITIAL PURCHASERS, WHICH CONSTITUTE THE FINAL PLACEMENT OF THE SECURITIES CONTEMPLATED IN THIS OFFICIAL STATEMENT.

THE OFFER OF ANY SECURITIES WHICH IS THE SUBJECT OF THE OFFERING CONTEMPLATED BY THIS OFFICIAL STATEMENT IS NOT BEING MADE AND WILL NOT BE MADE TO THE PUBLIC IN ANY MEMBER STATE OF THE EEA OR THE UNITED KINGDOM, OTHER THAN: (A) TO ANY LEGAL ENTITY WHICH IS A "QUALIFIED INVESTOR" AS SUCH TERM IS DEFINED IN THE PROSPECTUS REGULATION; (B) TO FEWER THAN 150 NATURAL OR LEGAL PERSONS (OTHER THAN "QUALIFIED INVESTORS" AS SUCH TERM IS DEFINED IN THE PROSPECTUS REGULATION); OR (C) IN ANY OTHER CIRCUMSTANCES FALLING WITHIN ARTICLE 1(4) OF THE PROSPECTUS REGULATION, SUBJECT TO OBTAINING THE PRIOR CONSENT OF THE RELEVANT UNDERWRITER FOR ANY SUCH OFFER; PROVIDED THAT NO SUCH OFFER OF THE SECURITIES SHALL REQUIRE THE ISSUER OR THE INITIAL PURCHASERS TO PUBLISH A PROSPECTUS PURSUANT TO

ARTICLE 3 OF THE PROSPECTUS REGULATION OR A SUPPLEMENT TO A PROSPECTUS PURSUANT TO ARTICLE 23 OF THE PROSPECTUS REGULATION.

FOR THE PURPOSES OF THIS PROVISION, THE EXPRESSION AN "OFFER OF SECURITIES TO THE PUBLIC" IN RELATION TO THE SECURITIES IN ANY MEMBER STATE OF THE EEA OR THE UNITED KINGDOM MEANS THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE SECURITIES TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE THE SECURITIES.

EACH SUBSCRIBER FOR OR PURCHASER OF THE SERIES 2021 BONDS IN THE OFFERING LOCATED WITHIN A MEMBER STATE OR THE UNITED KINGDOM WILL BE DEEMED TO HAVE REPRESENTED, ACKNOWLEDGED AND AGREED THAT IT IS A "QUALIFIED INVESTOR" AS DEFINED IN THE PROSPECTUS REGULATION. THE ISSUER AND EACH UNDERWRITER AND OTHERS WILL RELY ON THE TRUTH AND ACCURACY OF THE FOREGOING REPRESENTATION, ACKNOWLEDGEMENT AND AGREEMENT.

PROHIBITION OF SALES TO EEA OR THE UNITED KINGDOM RETAIL INVESTORS – THE SERIES 2021 BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN THE EEA OR IN THE UNITED KINGDOM. FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "MIFID II"); OR (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE (EU) 2016/97 (THE "INSURANCE DISTRIBUTION DIRECTIVE"), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II. CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 (THE "PRIIPS REGULATION") FOR OFFERING OR SELLING THE NOTES OR OTHERWISE MAKING THEM AVAILABLE TO RETAIL INVESTORS IN THE EEA OR IN THE UNITED KINGDOM HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE NOTES OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE EEA OR IN THE UNITED KINGDOM MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

NOTICE TO PROSPECTIVE INVESTORS IN THE UNITED KINGDOM

THIS OFFICIAL STATEMENT IS FOR DISTRIBUTION ONLY TO, AND IS DIRECTED SOLELY AT, PERSONS WHO (I) ARE OUTSIDE THE UNITED KINGDOM, (II) ARE INVESTMENT PROFESSIONALS, AS SUCH TERM IS DEFINED IN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005, AS AMENDED (THE "FINANCIAL PROMOTION ORDER"), (III) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A) TO (D) OF THE FINANCIAL PROMOTION ORDER, OR (IV) ARE PERSONS TO WHOM AN INVITATION OR INDUCEMENT TO ENGAGE IN INVESTMENT ACTIVITY (WITHIN THE MEANING OF SECTION 21 OF THE FINANCIAL SERVICES AND MARKETS ACT 2000) IN CONNECTION WITH THE ISSUE OR SALE OF ANY SERIES 2021 BONDS MAY OTHERWISE BE LAWFULLY COMMUNICATED OR CAUSED TO BE COMMUNICATED (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). THIS OFFICIAL STATEMENT IS DIRECTED ONLY AT RELEVANT PERSONS AND MUST NOT BE ACTED ON OR RELIED ON BY PERSONS WHO ARE NOT RELEVANT PERSONS. ANY INVESTMENT OR INVESTMENT ACTIVITY TO WHICH THIS OFFICIAL STATEMENT RELATES IS AVAILABLE ONLY TO RELEVANT PERSONS AND WILL BE ENGAGED IN ONLY WITH RELEVANT PERSONS. ANY PERSON WHO IS NOT A RELEVANT PERSON SHOULD NOT ACT OR RELY ON THIS OFFICIAL STATEMENT OR ANY OF ITS CONTENTS.

NOTICE TO PROSPECTIVE INVESTORS IN SWITZERLAND

THE SERIES 2021 BONDS MAY NOT BE PUBLICLY OFFERED, DIRECTLY OR INDIRECTLY, IN SWITZERLAND WITHIN THE MEANING OF THE SWISS FINANCIAL SERVICES ACT (THE "FINSA"), AND NO APPLICATION HAS BEEN OR WILL BE MADE TO ADMIT THE SERIES 2021 BONDS TO TRADING ON ANY TRADING VENUE (EXCHANGE OR MULTILATERAL TRADING FACILITY) IN SWITZERLAND. NEITHER THIS OFFICIAL STATEMENT NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE SERIES 2021 BONDS (1) CONSTITUTES A PROSPECTUS PURSUANT TO THE FINSA OR (2) HAS BEEN OR WILL BE FILED WITH OR APPROVED BY A SWISS REVIEW BODY PURSUANT TO ARTICLE 52 OF THE FINSA, AND NEITHER THIS OFFICIAL STATEMENT NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE SERIES 2021 BONDS MAY BE PUBLICLY DISTRIBUTED OR OTHERWISE MADE PUBLICLY AVAILABLE IN SWITZERLAND.

NOTICE TO PROSPECTIVE INVESTORS IN HONG KONG

WARNING. THE CONTENTS OF THIS OFFICIAL STATEMENT HAVE NOT BEEN REVIEWED BY ANY REGULATORY AUTHORITY IN HONG KONG. YOU ARE ADVISED TO EXERCISE CAUTION IN RELATION TO THE OFFER OF THE SERIES 2021 BONDS. IF YOU ARE IN ANY DOUBT ABOUT ANY OF THE CONTENTS OF THIS DOCUMENT, YOU SHOULD OBTAIN INDEPENDENT PROFESSIONAL ADVICE.

THIS DOCUMENT HAS NOT BEEN, AND WILL NOT BE, REGISTERED AS A PROSPECTUS IN HONG KONG NOR HAS IT BEEN APPROVED BY THE SECURITIES AND FUTURES COMMISSION OF HONG KONG PURSUANT TO THE SECURITIES AND FUTURES ORDINANCE (CHAPTER 571 OF THE LAWS OF HONG KONG) ("SFO"). THE SERIES 2021 BONDS MAY NOT BE OFFERED OR SOLD IN HONG KONG BY MEANS OF THIS DOCUMENT OR ANY OTHER DOCUMENT, AND THIS DOCUMENT MUST NOT BE ISSUED, CIRCULATED OR DISTRIBUTED IN HONG KONG, OTHER THAN TO "PROFESSIONAL INVESTORS" AS DEFINED IN THE SFO AND ANY RULES MADE THEREUNDER. IN ADDITION, NO PERSON MAY ISSUE OR HAVE IN ITS POSSESSION FOR THE PURPOSES OF ISSUE, WHETHER IN HONG KONG OR ELSEWHERE, ANY ADVERTISEMENT, INVITATION OR DOCUMENT RELATING TO THE SERIES 2021 BONDS, WHICH IS DIRECTED AT, OR THE CONTENTS OF WHICH ARE LIKELY TO BE ACCESSED OR READ BY, THE PUBLIC OF HONG KONG (EXCEPT IF PERMITTED

TO DO SO UNDER THE SECURITIES LAWS OF HONG KONG) OTHER THAN WITH RESPECT TO SERIES 2021 BONDS WHICH ARE OR ARE INTENDED TO BE DISPOSED OF ONLY (A) TO PERSONS OUTSIDE HONG KONG, OR (B) TO "PROFESSIONAL INVESTORS" AS DEFINED IN THE SFO AND ANY RULES MADE THEREUNDER.

NOTICE TO PROSPECTIVE INVESTORS IN JAPAN

THE SERIES 2021 BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED UNDER ARTICLE 4, PARAGRAPH 1 OF THE FINANCIAL INSTRUMENTS AND EXCHANGE ACT OF JAPAN (ACT NO.25 OF 1948, AS AMENDED THE "FIEA"). IN RELIANCE UPON THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS SINCE THE OFFERING CONSTITUTES THE PRIVATE PLACEMENT TO QUALIFIED INSTITUTIONAL INVESTORS ONLY AS PROVIDED FOR IN "I" OF ARTICLE 2, PARAGRAPH 3, ITEM 2 OF THE FIEA. A TRANSFEROR OF THE SERIES 2021 BONDS SHALL NOT TRANSFER OR RESELL THEM EXCEPT WHERE A TRANSFEREE IS A QUALIFIED INSTITUTIONAL INVESTOR AS DEFINED UNDER ARTICLE 10 OF THE CABINET OFFICE ORDINANCE CONCERNING DEFINITIONS PROVIDED IN ARTICLE 2 OF THE FIEA (THE MINISTRY OF FINANCE ORDINANCE NO.14 OF 1993, AS AMENDED).

NOTICE TO PROSPECTIVE INVESTORS IN SOUTH KOREA

THIS OFFICIAL STATEMENT IS NOT, AND UNDER NO CIRCUMSTANCES IS TO BE CONSIDERED AS, A PUBLIC OFFERING OF SECURITIES IN SOUTH KOREA FOR THE PURPOSES OF THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT OF KOREA. THE SERIES 2021 BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED WITH THE FINANCIAL SERVICES COMMISSION OF SOUTH KOREA FOR PUBLIC OFFERING IN SOUTH KOREA UNDER THE FINANCIAL INVESTMENT SERVICES AND CAPITAL MARKETS ACT AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY, THE "FSCMA"). THE SERIES 2021 BONDS MAY NOT BE OFFERED, REMARKETED, SOLD OR DELIVERED, DIRECTLY OR INDIRECTLY, OR OFFERED, REMARKETED OR SOLD TO ANY PERSON FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, IN SOUTH KOREA OR TO ANY RESIDENT OF SOUTH KOREA (AS DEFINED IN THE FOREIGN EXCHANGE TRANSACTIONS LAW OF SOUTH KOREA AND ITS SUBORDINATE DECREES AND REGULATIONS (COLLECTIVELY, THE "FETL")) WITHIN ONE YEAR OF THE ISSUANCE OF THE SERIES 2021 BONDS, EXCEPT AS OTHERWISE PERMITTED UNDER APPLICABLE SOUTH KOREAN LAWS AND REGULATIONS, INCLUDING THE FSCMA AND THE FETL.

NOTICE TO PROSPECTIVE INVESTORS IN TAIWAN

THE SERIES 2021 BONDS HAVE NOT BEEN AND WILL NOT BE REGISTERED OR FILED WITH, OR APPROVED BY THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN, THE REPUBLIC OF CHINA ("TAIWAN") AND/OR OTHER REGULATORY AUTHORITY OR AGENCY OF TAIWAN PURSUANT TO RELEVANT SECURITIES LAWS AND REGULATIONS OF TAIWAN AND MAY NOT BE ISSUED, OFFERED, OR SOLD IN TAIWAN THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES WHICH CONSTITUTE AN OFFER WITHIN THE MEANING OF THE SECURITIES AND EXCHANGE ACT OF TAIWAN OR RELEVANT LAWS AND REGULATIONS THAT REQUIRES A REGISTRATION, FILING OR APPROVAL OF THE FINANCIAL SUPERVISORY COMMISSION AND/OR OTHER REGULATORY AUTHORITY OR AGENCY OF TAIWAN. THE SERIES 2021 BONDS MAY BE MADE AVAILABLE OUTSIDE TAIWAN FOR PURCHASE OUTSIDE TAIWAN BY INVESTORS RESIDING IN TAIWAN DIRECTLY, BUT MAY NOT BE OFFERED OR SOLD IN TAIWAN EXCEPT TO QUALIFIED INVESTORS VIA A TAIWAN LICENSED INTERMEDIARY TO THE EXTENT PERMITTED BY APPLICABLE LAWS OR REGULATIONS.

The information contained in this Official Statement has been obtained from the Board of Water Supply of the City and County of Honolulu and other sources deemed reliable. No guaranty is made, however, as to the accuracy or completeness of such information. The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information. This Official Statement, which includes the cover page and appendices, does not constitute an offer to sell the Series 2021 Bonds in any state to any person to whom it is unlawful to make such offer in such state. No dealer, salesman or other person has been authorized to give any information or to make any representations, other than those contained in this Official Statement, in connection with the offering of the Series 2021 Bonds, and if given or made, such information or representations must not be relied upon. The information contained herein is subject to change without notice and neither the delivery of this Official Statement nor any sale hereunder at any time implies that the information contained herein is correct as of any time subsequent to its date.

THE SERIES 2021 BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, IN RELIANCE UPON AN EXEMPTION CONTAINED IN SUCH ACT. THE SERIES 2021 BONDS HAVE NOT BEEN REGISTERED OR QUALIFIED UNDER THE SECURITIES LAWS OF ANY STATE.

TABLE OF CONTENTS

OFFICIAL STATEMENT

$93,535,000
Board of Water Supply
City and County of Honolulu
Water System Revenue Bonds

$50,020,000 Series 2021A Bonds (Tax-Exempt)	$43,515,000 Series 2021B Bonds (Taxable)

INTRODUCTORY STATEMENT

This Official Statement, which includes the cover page, the immediately preceding pages and the appendices hereto, provides certain information in connection with the issuance by the Board of Water Supply ("BWS") of the City and County of Honolulu (the "City and County" or "Honolulu") of $93,535,000 aggregate principal amount of Water System Revenue Bonds, Series 2021A (the "Series 2021A Bonds") and Series 2021B (the "Series 2021B Bonds" and, together with the Series 2021A Bonds, the "Series 2021 Bonds"). The Series 2021 Bonds are to be issued under and secured by the Water System Revenue Bond Resolution adopted by the BWS on April 26, 2001 (the "Bond Resolution"), and the series resolution adopted by the BWS on February 22, 2021 (the "2021 Series Resolution"). The Bond Resolution, as previously supplemented and amended, as supplemented and amended by the 2021 Series Resolution, and as it may be further supplemented and amended, is referred to herein as the "Resolution." Terms not specifically defined herein shall have the meanings given to such terms in the Resolution. A summary of certain of such definitions is set forth under "Certain Definitions" in Appendix E.

The proceeds of the Series 2021 Bonds will be used: (i) in the case of the Series 2021A Bonds, to fund or reimburse the BWS for the costs of certain improvements, betterments, and extensions of the Water System; (ii) in the case of the Series 2021B Bonds, to refund certain outstanding Water System Revenue Bonds heretofore issued by the BWS pursuant to the Resolution; and (iii) to pay the costs of issuance of the Series 2021 Bonds. See "PLAN OF FINANCE" and "SOURCES AND USES OF PROCEEDS" herein.

The Series 2021 Bonds are the twelfth and thirteenth series of Water System Revenue Bonds (collectively, including the Series 2021 Bonds, the "Bonds") issued under and pursuant to the Resolution and will be secured by and entitled to the protection of the Resolution, under which $250,580,000 of Bonds are currently outstanding. All Bonds issued under and pursuant to the Resolution, including the Series 2021 Bonds, are special obligations of the BWS payable solely from and secured by a pledge of proceeds of such Bonds held or set aside under the Resolution, the Net Revenues, and certain funds and accounts established by the Resolution, and are equally and ratably payable and secured without priority, except that the BWS may afford a particular Series of Bonds or particular Bonds additional or different security through a Support Facility, escrow funds, or the establishment of separate funds and accounts with respect to a particular series of Bonds funded from sources other than Revenues. **The BWS has no taxing power. The Bonds issued under and pursuant to the Resolution are not a general or moral obligation of the State of Hawaii or any political subdivision thereof, including the City and County, and the faith and credit of the State of Hawaii or any political subdivision thereof, including the City and County, are not pledged to the payment of the principal of or interest or any premium on the Bonds, and no holder of the Bonds shall have the right to compel the exercise of the taxing power of the State of Hawaii or any political subdivision thereof, including the City and County, in connection with any default with respect to the Bonds. See "SECURITY FOR THE BONDS."**

The BWS was created pursuant to the Revised Charter of the City and County (the "City Charter"). Pursuant to the City Charter, the BWS has full and complete authority to manage, control and operate the Water System, including all properties used or useful in connection with the Water System. The BWS has been in existence since 1929. The City Charter and Hawaii Revised Statutes (as amended, "Hawaii Revised Statutes" or "HRS"), Chapter 49 (the "Act"), empower the BWS, subject to the provisions of the Act and the City Charter, to issue revenue bonds in its name for the purposes of the Water System.

The BWS, under the City Charter, has the power to fix and adjust reasonable rates and charges for the furnishing of water and for water services so that the revenues derived therefrom shall be sufficient to make the Water System self-supporting. Such rates are not subject to regulation by any governmental body or authority, including the City and County. See also "FINANCIAL INFORMATION—Recent Legislation and Legislative Proposals" herein. The BWS has approved a schedule of rate increases to become effective in each of the Fiscal Years 2019-2023. See "FINANCIAL INFORMATION—Rates and Charges" herein for further information regarding such rate increases.

The Water System services 170,694 separate accounts and an estimated residential population of 980,080 on the island of Oahu. The service area is approximately 597 square miles, and the customer base is 92.8% residential, 6.7% commercial and industrial, and 0.5% agricultural.

The BWS is responsible only for the Water System. The City and County's Department of Facility Maintenance is responsible for managing, operating, and maintaining the City and County's Stormwater System. The City and County's Department of Environmental Services is responsible for managing, operating, and maintaining the City and County's Wastewater System.

This Official Statement contains brief descriptions of the BWS, the Water System, the BWS's Capital Improvement Program, the terms of the Series 2021 Bonds, the Resolution, and other information. The description of the Book-Entry Only System has been obtained from The Depository Trust Company. The summaries of and references to all documents, statutes, reports, and other instruments referred to herein do not purport to be complete and each such document, statute, report, or instrument is qualified in its entirety by reference to each such document, statute, report or instrument, copies of which are available from the BWS. All references to the Series 2021 Bonds are qualified in their entirety by reference to the definitive forms thereof and the information with respect thereto contained in the Resolution. The capitalization of any word herein not conventionally capitalized indicates that such word is defined in the Resolution or this Official Statement.

COVID-19 EMERGENCY

The worldwide pandemic involving a highly contagious, upper respiratory tract illness caused by a novel strain of coronavirus ("COVID-19") has caused significant adverse health and financial impacts throughout the world, including in the State and the City and County. The Governor and the Mayor have each declared states of emergency. Since the first case was reported on February 17, 2020, there have been over 25,154 confirmed cases of COVID-19 in the State and over 20,435 confirmed cases of COVID-19 on the island of Oahu through January 25, 2021.

Through the invocation of various laws and statutes relating to the state of emergency caused by this global pandemic, the Governor has issued 18 Supplemental Emergency Proclamations as of February 12, 2021, with the current disaster declaration running through April 13, 2021. Effective September 24, 2020, a new City and County Order was issued implementing Honolulu's COVID-19 Recovery Framework. This plan for reducing the spread of COVID-19 in the City and County contains criteria for loosening and tightening restrictions on businesses and activities to keep the residents of Honolulu healthy. The foundation of the framework rests on four tiers and each tier is based on the level of community spread of COVID-19 within the City and County, which is determined using two criteria: (1) the number of daily cases reported; and (2) the positivity rate, using seven-day averages for both metrics over two- or four-week periods. The four tiers are:

- Tier 1 — representing a high level of community spread that is testing the limits of the public health system to test, contact trace, and isolate/quarantine; and puts some strain on the healthcare system.
- Tier 2 — representing a level of community spread that is substantial, but still allows the public health system to adequately test, contact trace, and isolate/quarantine; and does not overburden the healthcare system.
- Tier 3 — representing a moderate level of community spread that allows the public health system to fully test, contact trace, and isolate/quarantine; and does not overburden the healthcare system.

- Tier 4 — representing a low level of community spread that is easily handled by the public health system and healthcare system.

Effective February 25, 2021, the City and County transitioned to Tier 3. These Orders have allowed parks, beaches, retail businesses, and restaurants to reopen with restrictions. All businesses and operations permitted to reopen have been ordered to comply with social distancing requirements by requiring employees and patrons to wear face masks and observe social distancing by staying six feet apart.

The State's pre-travel testing program began on October 15, 2020. The program allows travelers who have taken an FDA-approved nucleic acid amplification test (NAAT) within 72 hours of their flight and received a negative test result to avoid the otherwise mandatory 10-day quarantine upon arrival. Effective November 6, 2020, visitors from Japan are also able to bypass the mandatory quarantine with a negative COVID-19 test taken within 72 hours of departure. Additionally, the Centers for Disease Control and Prevention ("CDC") issued an Order, effective January 26, 2021, requiring all passengers arriving in the United States from a foreign country to either produce proof of a negative COVID-19 test or documentation of having recovered from COVID-19.

The State Department of Health submitted its COVID-19 vaccination plan to the CDC in mid-October 2020. The vaccination plan, consistent with CDC guidance, prioritizes vaccination for those who either come into direct contact with COVID-19 or are considered higher risk, with plans to eventually make the vaccine available to most, if not all, of the State's residents by Summer 2021. The first dose of the COVID-19 vaccine was administered on December 15, 2020. The City and County continues to deliver its allotment of the Pfizer and Moderna vaccines. As of February 26, 2021, over 350,000 residents in Hawaii have received at least one shot of the COVID-19 vaccine. Additionally, the BWS is participating in the City and County's program to immunize critical workers in the public sector.

As the Governor and Mayor continue to issue Emergency Proclamations and Emergency Orders with the purpose of keeping residents safe and healthy, the BWS continues to take this threat to its most important asset, its employees, seriously. When the first Emergency Orders came from the State and City and County, the BWS assessed its operations and facilities and began scheduling regular COVID-19 meetings within each program and amongst the senior management team.

As the operators of the City and County's critical water infrastructure, it was, and is, imperative that the BWS takes all necessary precautions to ensure the health and safety of its employees. If the BWS were to suffer a wave of illness among its staff, water operations could be negatively impacted, and customers would not have access to a safe and dependable potable water supply during the pandemic. One critical issue the BWS addressed and confirmed early on was the fact that transmission of COVID-19 did not occur through water. The American Water Works Association issued guidelines for all water agencies to effectively inform their communities that the water is safe to drink and to use.

In response to the pandemic, the BWS immediately implemented a variety of social distancing measures. Such measures included limiting gatherings to five people or fewer, placing a moratorium on all business-related travel, increasing capacity for virtual meetings and communication, instituting a visitor screening process, and modifying telework policies and protocols as well as work schedules to limit the number of staff in the workplace. The BWS also physically modified workstations and remodeled the customer lobby of the Public Service Building ("PSB") to protect its staff from unnecessary contact with the public.

Additionally, the BWS has taken numerous actions intended to slow the spread of COVID-19; it developed procedures and protocols for addressing sick employees and potential exposures, issued self-assessment kits to all staff members, which included thermometers, face coverings, and hand sanitizer, provided other fabric face coverings and personal protective equipment (PPE) to staff, enhanced its cleaning protocols and frequency, installed hand sanitizer stations throughout its facilities (and provided clean water and soap for use in the field when hand sanitizer isn't available), retrofitted its restroom facilities with touchless faucets, limited vehicle sharing to lessen the risk of exposure due to the sharing of fleet vehicles, and tried to keep crews working in bubbles to the greatest extent possible.

Despite the unprecedented economic impacts of COVID-19, residential and commercial delinquency rates remain low. That being said, the BWS has taken a proactive approach to addressing the economic impacts on its customers in several ways: the BWS discontinued water shutoffs through March 2021 so that customers would not have to worry about having access to clean, safe water; for customers experiencing financial hardship due to the pandemic, the BWS has been actively monitoring delinquency rates among the various customers classes and has dedicated staff members whose focus is on contacting customers with delinquent accounts to work with them on payment plans and options; and at the end of Fiscal Year 2020, the BWS contracted for an update to the Long Range Financial Plan ("LRFP"). The LRFP update was completed in February 2021 and focuses specifically on the impacts of the pandemic, allowing the BWS to make informed decisions about rates, operating costs, and capital program investments. The LRFP update also addresses the impacts that the pandemic has had on the BWS's revenues and BWS's need and/or ability to raise rates starting in July 2023. Additionally, the BWS took a conservative approach to budgeting and spending in Fiscal Years 2021 and 2022 in an effort to mitigate the economic impacts of the pandemic and has pressed forward with capital improvement projects that will support economic growth and keep the community working.

Management also worked on a comprehensive communications program to keep employees and customers informed about changes at BWS. For employees, management posted updates to the BWS intranet concerning City and County and State emergency orders, memoranda, and links to CDC and City and County resources for COVID-19 information, and kept employees informed about these updates through "News to Use" emails. Management also made sure to alert employees to occurrences of COVID-19 in the workplace while also protecting patient confidentiality. Signs reminding employees to wear masks and practice social distancing were also placed throughout the facilities. For customers, the BWS disseminated information on alternate ways to pay bills as well as other relevant information through news releases, signage, updates on the BWS's website, the BWS newsletter, and social media. The BWS also held a news conference when the BWS reopened the PSB lobby on November 30, 2020 to explain the new guidelines for public admission.

The BWS shall continue to make every effort to keep its employees safe throughout this pandemic. In an effort to balance the escalating cost of providing uninterrupted service to its customers with the new challenges presented by COVID-19, the BWS was able to obtain over $1 million in Coronavirus Aid, Relief, and Economic Security (CARES) Act funding through the City and County to purchase supplies, install physical improvements and obtain additional office space for its staff. The funding obtained through the federal CARES Act reduces the cost burden to customers while ensuring the BWS is able to continue full operations.

To date, the BWS has not experienced any material adverse impact on its operations or finances from COVID-19, and the BWS does not expect significant decreases in revenues as a result of the COVID-19 pandemic. As discussed above, the BWS is allowing payment deferrals and working with its customers to develop payment plans, but it is not waiving fees. Although the BWS believes COVID-19 will not materially adversely impact its operations or revenues, the ultimate impact of COVID-19 on the operations and finances of the City and County and the BWS is unknown at this time. Additionally, the BWS cannot predict to what extent additional customer assistance measures or deferrals, forbearances, adjustments, or other changes may be necessary in the future and the effect of any such measures on its operations or revenues. The BWS will consider the effects of the COVID-19 pandemic as it develops its budget for Fiscal Year 2022.

PLAN OF FINANCE

The Series 2021A Bonds are being issued to fund or reimburse the BWS for the costs of certain improvements, betterments, and extensions of the Water System. The Series 2021B Bonds are being issued to provide the funds needed to refund certain outstanding Water System Revenue Bonds previously issued by the BWS under the Resolution, as identified in the following table (the "Refunded Bonds").

REFUNDED BONDS

Series	Maturity	Principal Amount	Interest Rate	CUSIP (438689)
2012A	7/1/2023	$3,605,000	5.00%	HD6
2012A	7/1/2024	3,790,000	5.00	HE4
2014A	7/1/2027	6,810,000	5.00	HZ7
2014A	7/1/2028	6,215,000	5.00	JL6
2014A	7/1/2029	7,505,000	5.00	JB8
2014A	7/1/2030	7,930,000	5.00	JC6
2014A	7/1/2031	3,825,000	5.00	JM4

Upon the issuance of the Series 2021B Bonds, a portion of the proceeds thereof will be deposited into a Trust Fund (the "Escrow Fund") to be established with U.S. Bank National Association, as escrow agent (the "Escrow Agent"), for the purpose of refunding the Refunded Bonds. Such deposit will be made pursuant to an Escrow Agreement (the "Escrow Agreement") to be entered into by the BWS and the Escrow Agent, will be held by the Escrow Agent in the Escrow Fund for the sole benefit of the holders of the Refunded Bonds and will be used to pay the principal or redemption price of and interest on the Refunded Bonds. Pending such application, moneys on deposit in the Escrow Fund will be invested in certain non-callable direct obligations of the United States of America (the "Escrow Fund Investments") payable as to principal and interest at the times and in the amounts necessary to pay, when due, the interest on and principal of all Refunded Bonds.

In connection with the issuance of the Series 2021B Bonds and the refunding of the Refunded Bonds, the BWS will obtain a verification report from Causey, Demgen & Moore, independent certified public accountants, as to the mathematical accuracy of certain computations pertaining to the Escrow Fund and the Series 2021B Bonds. See "VERIFICATION OF MATHEMATICAL COMPUTATIONS" herein for a further discussion of such verification report.

SOURCES AND USES OF PROCEEDS

The estimated sources and uses of the proceeds of the Series 2021 Bonds are set forth below:

Sources of Funds:	**Series 2021A**	**Series 2021B**	**Total**
Par Amount of Series 2021 Bonds	$50,020,000.00	$43,515,000.00	$ 93,535,000.00
Plus Net Original Issue Premium	11,292,598.10	--	11,292,598.10
DSRF Release	--	2,178,164.50	2,178.164.50
Total Sources of Funds	**$61,312,598.10**	**$45,693,164.50**	**$107,005,762.60**
Uses of Funds:			
Deposit to Project Fund[1]	$61,000,000.00	$ --	$ 61,000,000.00
Deposit to Escrow Fund[2]	--	45,442,807.78	45,442,807.78
Costs of Issuance[3]	312,598.10	250,356.72	562,954.82
Total Uses of Funds	**$61,312,598.10**	**$45,693,164.50**	**$107,005,762.60**

1 *To be used to fund or reimburse the BWS for the costs of certain improvements, betterments, and extensions of the Water System.*

2 *To be used to refund the Refunded Bonds.*

3 *Includes Underwriters' discount and other legal and financial costs incurred in connection with the issuance and delivery of the Series 2021 Bonds.*

THE SERIES 2021 BONDS

General

The Series 2021 Bonds will be dated the date of their issuance and delivery and will mature, subject to the redemption provisions described below, in the amounts and on the dates set forth on the inside cover of this Official Statement. Interest will accrue on the Series 2021 Bonds from the date of their issuance and will be due and payable semiannually on January 1 and July 1 of each year, commencing July 1, 2021. The Series 2021 Bonds will be issued in fully registered form.

Principal of the Series 2021 Bonds will be payable at the office of U.S. Bank National Association, as paying agent (the "Paying Agent"). Interest on the Series 2021 Bonds will be payable to Holders thereof registered as of the close of business on the Record Date, which, for the Series 2021 Bonds is the fifteenth (15^{th}) day (whether or not a Business Day) of the month preceding an interest payment date.

As described below under "Book-Entry System," and in Appendix F – "Book-Entry System and Global Clearance Procedures," when issued, the Series 2021 Bonds will be registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"), New York, New York. So long as DTC, or its nominee, Cede & Co., is the registered owner of all of the Series 2021 Bonds, all payments on the Series 2021 Bonds will be made directly to DTC. One fully-registered bond certificate will be issued for each maturity of the Series 2021 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC. Beneficial interests in the Series 2021 Bonds may be held through DTC, Clearstream Banking, S.A. or Euroclear Bank SA/NV as operator of the Euroclear System, directly as a participant or indirectly through organizations that are participants in such system. See Appendix F – "Book-Entry System and Global Clearance Procedures" for a description of DTC, Clearstream Banking, S.A., Euroclear Bank SA/NV as operator of the Euroclear System, and certain of their responsibilities, and the provisions for registration and registration of transfer of the Series 2021 Bonds if the book-entry-only system of registration is discontinued.

The BWS may deem and treat the person in whose name any Series 2021 Bonds shall be registered upon the books of the BWS as the absolute owner thereof, whether such Series 2021 Bonds shall be overdue or not, for the purpose of receiving payment of, or on account of, the principal of, the premium, if any, and the interest on, the Series 2021 Bonds and for all other purposes, and all such payments shall be valid and effectual to satisfy and discharge the liability upon such Series 2021 Bonds to the extent of the sums so paid and the BWS shall not be affected by any notice to the contrary.

Mandatory Redemption

The Series 2021 Bonds identified below are subject to redemption prior to maturity, in part, on each of the dates and in the respective principal amounts set forth below, at a Redemption Price of 100% of the principal amount thereof, plus accrued interest to the date of redemption, from mandatory Sinking Fund Installments which are required to be made in amounts sufficient to redeem the principal amount of Series 2021 Bonds specified for July 1 of each of the years shown below:

Series 2021A Bonds
Maturing July 1, 2046

Year (July 1)	Principal Amount
2042	$2,070,000
2043	2,155,000
2044	2,245,000
2045	2,335,000
2046*	2,430,000

* *Final Maturity.*

Series 2021A Bonds
Maturing July 1, 2050

Year (July 1)	Principal Amount
2047	$2,545,000
2048	2,675,000
2049	2,810,000
2050*	2,955,000

* *Final Maturity*.

Optional Redemption

The Series 2021 Bonds maturing on and after July 1, 2032 are subject to redemption prior to maturity at the option of the BWS, on or after July 1, 2031, in any order of maturity, as a whole or in part at any time, and, if in part, by lot within a maturity, at a redemption price equal to 100% of the principal amount thereof, without premium, plus accrued interest to the date of redemption.

In addition, the Series 2021B Bonds are subject to redemption prior to their stated maturities at the option of the BWS, in whole or in part (and if in part, on a pro rata basis), on any date at a redemption price equal to the greater of:

(i) 100% of the principal amount of the Series 2021B Bonds to be redeemed; or

(ii) the sum of the present value of the remaining scheduled payments of principal and interest to the maturity date of such Series 2021B Bonds to be redeemed, not including any portion of those payments of interest accrued and unpaid as of the date on which such Series 2021B Bonds are to be redeemed, discounted to the date on which such Series 2021B Bonds are to be redeemed on a semi-annual basis, assuming a 360-day year consisting of twelve 30-day months, at the Comparable Treasury Yield (defined herein) plus 5 basis points;

plus, in each case, accrued interest on such Series 2021B Bonds to be redeemed to the redemption date.

For purposes of the foregoing with respect to the 2021B Bonds, the following terms shall have the meanings set forth below:

"Calculation Agent" means a commercial bank or an investment banking institution of national standing that is a primary dealer of United States government securities in the United States and designated by the BWS (which may be one of the institutions that served as underwriter for the Series 2021B Bonds).

"Comparable Treasury Issue" means the United State Treasury security selected by the Calculation Agent as having a maturity comparable to the remaining term to maturity of the Series 2021B Bonds being redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term to maturity of the Series 2021B Bonds being redeemed.

"Comparable Treasury Price" means, with respect to any date on which a Series 2021B Bond or portion thereof is being redeemed, either (a) the average of five Reference Treasury Dealer quotations for the date fixed for redemption, after excluding the highest and lowest such quotations, and (b) if the Calculation Agent is unable to obtain five such quotations, the average of the quotations that are obtained. The quotations will be the average, as determined by the Calculation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of principal amount) quoted in writing to the Calculation Agent, at 5:00 p.m. New York City time on the third business day preceding the date fixed for redemption.

"Comparable Treasury Yield" means the yield that represents the weekly average yield to maturity for the preceding week appearing in the most recently published statistical release designated "H.15(519) Selected Interest Rates" under the heading "Treasury Constant Maturities," or any successor publication selected by the Calculation Agent that is published weekly by the Board of Governors of the Federal Reserve System and that establishes yields on actively traded United States Treasury securities adjusted to constant maturity, for the maturity corresponding to the remaining term to maturity of the Series 2021B Bond, as applicable, being redeemed. The Comparable Treasury Yield will be determined as of the third business day immediately preceding the applicable date fixed for redemption. If the H.15(519) statistical release sets forth a weekly average yield for United States Treasury securities that have a constant maturity that is the same as the remaining term to maturity of the Series 2021B Bonds being redeemed, then the Comparable Treasury Yield will be equal to such weekly average yield. In all other cases, the Comparable Treasury Yield will be calculated by interpolation on a straight-line basis between the weekly average yields on the United States Treasury securities that have a constant maturity (i) closest to and greater than the remaining term to maturity of the Series 2021B Bond being redeemed; and (ii) closest to and less than the remaining term to maturity of the Series 2021B Bond being redeemed. Any weekly average yields calculated by interpolation will be rounded to the nearest 1/100th of 1%, with any figure of 1/200th of 1% or above being rounded upward. If, and only if, weekly average yields for United States Treasury securities for the preceding week are not available in the H.15(519) statistical release or any successor publication, then the Comparable Treasury Yield will be the rate of interest per annum equal to the semiannual equivalent yield to maturity of the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price (each as defined herein) as of the date fixed for redemption.

"Reference Treasury Dealer" means a primary dealer of United States Government securities in the United States (which may be one of the institutions that served as underwriters for the Series 2021B Bonds) appointed by the BWS and reasonably acceptable to the Calculation Agent.

Selection of Bonds for Redemption

If fewer than all of the Bonds of a series are called for redemption, the BWS will designate the maturities from which the Bonds of such series are to be redeemed. For so long as the Bonds are registered in book-entry form and DTC or a successor securities depository is the sole registered owner of such Bonds, if fewer than all of the Bonds of the same maturity and bearing the same interest rate are to be redeemed, the particular Bonds to be redeemed will be selected by lot, in the case of the Series 2021A Bonds, and on a pro rata pass-through distribution of principal basis in accordance with DTC procedures in the case of the Series 2021B Bonds; provided that, so long as the Bonds are held in book-entry form, the selection for redemption of the Bonds will be made in accordance with the operational arrangements of DTC then in effect, and, if the DTC operational arrangements do not allow for redemption on a pro rata pass-through distribution of principal basis, all Bonds will be selected for redemption in accordance with DTC procedures by lot; provided further that any such redemption must be performed such that all Bonds remaining outstanding will be in authorized denominations. See Appendix F – "Book-Entry System and Global Clearance Procedures."

In connection with any repayment of principal of the Series 2021B Bonds, including payments of scheduled mandatory sinking fund payments, the Paying Agent will direct DTC to make a pass-through distribution of principal to the owners of the Series 2021B Bonds. A form of Pro Rata Pass-Through Distribution of Principal Notice will be provided to the Paying Agent that includes a table of factors reflecting the relevant scheduled redemption payments, based on the current schedule of mandatory sinking fund payments, which is subject to change upon certain optional redemptions, and DTC's currently applicable procedures, which are subject to change.

For purposes of calculating pro rata pass-through distributions of principal, "pro rata" means, for any amount of principal or interest to be paid, the application of a fraction to such amounts where (a) the numerator is equal to the amount due to the owners of the Series 2021B Bonds on a payment date and (b) the denominator is equal to the total original par amount of the Series 2021B Bonds.

It is the BWS's intent that redemption allocations made by DTC with respect to the Series 2021B Bonds will be made on a pro rata pass-through distribution of principal basis as described above. However, neither the BWS nor the Underwriters can provide any assurance that DTC, DTC's direct and indirect participants, or any other intermediary will allocate the redemption of these Bonds on such basis.

If the Series 2021 Bonds are not registered in the book-entry form and if fewer than all of the Series 2021 Bonds of the same maturity and bearing the same interest rate are to be redeemed, the particular Series 2021A Bonds of such maturity and bearing such interest rate to be redeemed will be selected by lot, and the particular Series 2021B Bonds of such maturity and bearing such interest rate to be redeemed will be selected on a pro rata basis, provided that any such redemption must be performed such that all Series 2021 Bonds remaining outstanding will be in authorized denominations.

Notice of Redemption

The Paying Agent will mail notice of redemption not fewer than 30 days prior to the redemption date, by registered, certified or regular first-class mail, to the Holder of such Bond of record as of the 45th day (whether or not a Business Day) next preceding the date fixed for redemption at his address as it appears on the Bond Registry. Except as otherwise provided in the Resolution, at the sole option of the BWS, such notice may also be published in an Authorized Newspaper as provided in the Resolution not fewer than 30 days prior to the redemption date. Failure to receive such notice by any Holder of a Bond, or any defect in any notice so mailed, shall not affect the sufficiency of the proceedings for the redemption of any such Bonds.

Any notice of redemption may state that such redemption may be conditional upon the receipt by the Paying Agent on the date fixed for redemption of moneys sufficient to pay in full the redemption price of the Series 2021 Bonds proposed to be redeemed. If the notice contains such condition, and moneys sufficient to pay in full the redemption price of the Series 2021 Bonds proposed to be redeemed shall not be received on or prior to the date fixed for redemption, such notice of redemption shall be null and void and of no force and effect and the BWS shall not redeem or be obligated to redeem any Series 2021 Bonds. In the event of the failure to redeem, all Series 2021 Bonds surrendered for redemption shall be promptly returned to the holder or holders by the Paying Agent.

See Appendix F – "Book-Entry System and Global Clearance Procedures" for information regarding notices of redemption while DTC is acting as securities depository for the Series 2021 Bonds.

Book-Entry System

The Series 2021 Bonds will be delivered in book-entry form only, in denominations of $5,000 or any integral multiple thereof, and, when issued and authenticated, will be registered in the name of Cede & Co., as nominee of DTC, which will act as securities depository for the Series 2021 Bonds. Individual purchases of the Series 2021 Bonds will be made only in book-entry form. Purchasers of the Series 2021 Bonds will not receive physical certificates representing their ownership interests in the Series 2021 Bonds purchased. Principal of and interest on the Series 2021 Bonds are payable directly to DTC by the Paying Agent. Upon receipt of payments of principal and interest, DTC will distribute such payments to brokers and dealers who are DTC participants who, in turn, will distribute payments to the beneficial owners of the Series 2021 Bonds. See Appendix F – "Book-Entry System and Global Clearance Procedures" attached hereto.

SECURITY FOR THE BONDS

General

The Bonds issued under and pursuant to the Resolution, including the Series 2021 Bonds, are special obligations of the BWS secured by and entitled to the protection of the Resolution, and are equally and ratably payable and secured without priority, except that the BWS may afford a particular Series of Bonds or particular Bonds additional or different security through a Support Facility, escrow funds, a separate reserve account, or the establishment of other separate funds and accounts with respect to a particular Series of Bonds funded from sources other than Net Revenues. **The Bonds are not a general or moral obligation of the State of Hawaii or any political subdivision thereof, including the City and County, and the faith and credit of the State of Hawaii or any political subdivision thereof, including the City and County, are not pledged to the payment of the principal of or interest or any premium on the Bonds, and no holder of the Bonds shall have the right to compel the exercise of the taxing power of the State of Hawaii or any political subdivision thereof, including**

the City and County, in connection with any default with respect to the Bonds. The BWS has no taxing power.

Pursuant to the Resolution the BWS has pledged, for the security and payment of the Bonds, proceeds of the Bonds held or set aside under the Resolution, the Net Revenues, and all funds and accounts held under the Resolution other than the Rebate Account, the Subordinate Obligation Fund, the Reimbursable Obligation Fund, any Series Reserve Account (in the case of any Bonds not entitled to the security of such Account), and the Common Reserve Account (in the case of any Bonds not entitled to the security of such Account). "Net Revenues" under the Resolution means the Revenues during any period less the amounts required to pay Operation and Maintenance Expenses. "Revenues" under the Resolution means the moneys, including any moneys collected from the City and County or any department thereof except the BWS, derived by the BWS from the rates, rentals, fees, and charges prescribed for the use and services of, and the facilities and commodities furnished by, the Water System, including all income, receipts, profits, and other moneys derived from the sale of water and from the furnishing or supplying of the services, facilities, and commodities through the Water System; all income from investments of moneys held under the Resolution including investment income on the Improvement Fund but not including any earnings on the Rebate Account, the Subordinate Obligation Fund and the Reimbursable Obligation Fund; all payments made by Counterparties pursuant to Interest Rate Exchange Agreements; and moneys and Investment Securities transferred from the Rate Stabilization Account to the Operating Fund within 90 days following the end of a Fiscal Year. Certain other items do not constitute Revenues, such as contributions in-aid-of construction and assessment, impact and other similar fees and gifts, grants, and donations.

The pledge for the security and payment of the Bonds under the Resolution is superior to any pledge and security interest for Subordinate Obligations and Reimbursable Obligations. "Subordinate Obligations" are any bonds, notes or other evidences of indebtedness of the BWS payable from Net Revenues, other than the Bonds and Reimbursable Obligations, issued in accordance with and complying with applicable provisions of the Resolution. "Reimbursable Obligations" are reimbursable general obligation bonds issued and delivered or to be hereafter issued and delivered by the City and County to finance certain costs related to the Water System, the debt service on which the BWS is required by State law to reimburse the City and County's General Fund. The BWS currently has approximately $110,827,638 of outstanding Subordinate Obligations, which consist solely of State revolving fund loans. No Reimbursable Obligations are currently outstanding.

The Series 2021 Bonds will constitute Bonds under the Resolution and, notwithstanding the time of their authentication and delivery or maturity, all Bonds will be secured equally by the pledges created by and covenants of the BWS made in the Resolution, without preference, priority, or distinction of any such Bond over any other such Bond, except as expressly provided in or permitted by the Resolution. Bonds are currently outstanding under the Resolution in the aggregate principal amount of $250,580,000. The BWS does not have any immediate expectation to issue additional Bonds under the Resolution on a parity with the Outstanding Bonds and the Series 2021 Bonds.

Funds and Accounts

The various funds and accounts established under the Resolution, the flow of Revenues through such funds and accounts, the rights and remedies of Bondholders under the Resolution, and other related matters are summarized in Appendix E – "Summary of Certain Provisions of the Resolution."

The City and County has previously established in its Treasury the Board of Water Supply Operating Fund (the "Operating Fund"), into which all Revenues collected by the BWS have been and will continue to be deposited, and from which operating expenses of the BWS have been and will continue to be paid. The Resolution creates in the Operating Fund a Rate Stabilization Account, and a Rebate Account, and also creates, in addition to the Operating Fund, the following Funds and Accounts:

- Debt Service Fund, and the Payment Account, the Common Reserve Account and any Series Reserve Account therein;
- Subordinate Obligation Fund;

- Reimbursable Obligation Fund;
- Renewal and Replacement Fund;
- General Fund; and
- Improvement Fund, and any Series Improvement Account and any Series Capitalized Interest Account therein.

The Rate Stabilization Account, the Payment Account, the Renewal and Replacement Fund, the General Fund and the Improvement Fund are pledged as security for the payment of debt service on all Bonds, subject to the terms and provisions of and the exceptions provided in the Resolution. The Common Reserve Account is pledged as additional security for the payment of debt service on the Bonds of any Series designated at the time of issuance to be entitled to the benefit of the Common Reserve Account; and each Series Reserve Account is pledged as additional security for the payment of debt service on the Bonds of a Series designated at the time of issuance to be entitled to the benefit of such Series Reserve Account.

Debt service on Bonds is payable from the Payment Account in the Debt Service Fund. In the event of a deficiency in the Payment Account, debt service on a Bond is payable from the Common Reserve Account or the applicable Series Reserve Account, but only to the extent such Bond is entitled to the benefit of such reserve account, as more fully described below under "Reserve Accounts."

Moneys deposited and retained in the Operating Fund may be maintained in an amount which is reasonably necessary for working capital and reserves. The Rate Stabilization Account is to be maintained in the amount provided for in the Annual Budget, is to be used to stabilize the rates and charges of the Water System, and is to be funded (i) from Net Revenues (after payment and provision for Operation and Maintenance Expenses), but only after all transfers to the other Funds and Accounts required by the Resolution, and (ii) from transfers from the General Fund. The Renewal and Replacement Fund is to be maintained in an amount provided for in the Annual Budget and is to be used to pay the costs of improvements and repairs to and renewals and replacements of the Water System, as provided in the Resolution, and to meet deficiencies in certain other Funds and Accounts. Amounts in the General Fund are to be used to meet deficiencies in certain other Funds and Accounts, to pay the Costs of Improvements, for transfer to the Rate Stabilization Account, to purchase Bonds, or for any other lawful purpose of the BWS.

The Rebate Account, the Subordinate Obligation Fund and the Reimbursable Obligation Fund are not pledged as security for the Bonds. Amounts in the Rebate Account are to be used to pay required amounts to the Department of the Treasury of the United States in respect of the Bonds. Amounts in the Subordinate Obligation Fund and the Reimbursable Obligation Fund are to be used to pay debt service on Subordinate Obligations and Reimbursable Obligations, respectively.

Amounts on deposit in the Improvement Fund are to be applied to pay Costs of Improvements to the Water System and to pay capitalized interest on the Bonds. The Resolution permits the establishment within the Improvement Fund of one or more Series Improvement Accounts and one or more Series Capitalized Interest Accounts. Proceeds of Bonds are to be deposited in the Improvement Fund or a Series Improvement Account pending application to pay the Costs of Improvements; provided that such proceeds which are to be used to pay capitalized interest on such Bonds must be deposited in a Series Capitalized Interest Account.

Reserve Accounts

As discussed below, the Resolution establishes a Common Reserve Account and authorizes the establishment of Series Reserve Accounts for Bonds that are not secured by the Common Reserve Account. The Common Reserve Account secures all outstanding series of Bonds. No Series Reserve Account has been established for any series of outstanding Bonds. The Series 2021 Bonds will not be secured by the Common Reserve Account, and no Series Reserve Account will be established for the Series 2021 Bonds.

Common Reserve Account. The Resolution establishes a Common Reserve Account and permits the BWS to designate one or more Series of Bonds to be entitled to the benefit of such Account. No Series 2021 Bonds will be entitled to the benefit of the Common Reserve Account. As of December 30, 2020, the balance in the Common Reserve Account was $8,227,884. Upon the refunding of the Refunded Bonds, which are currently secured by the Common Reserve Account, funds in the Common Reserve Account allocable to the Refunded Bonds, in the amount of $2,178,164.50 will be released from such Account.

The Common Reserve Account is required to be maintained in an amount not less than the "Common Reserve Account Requirement," which is an amount equal to one-half (1/2) of the greatest amount of Aggregate Debt Service for the then current or any future Fiscal Year on all Outstanding Bonds entitled to the benefit of the Common Reserve Account; provided, however, that if, upon issuance of a Series of Bonds entitled to the benefit of the Common Reserve Account, such amount would require moneys to be deposited in the Common Reserve Account from such Bond proceeds in an amount in excess of the maximum amount permitted under the Code, the Common Reserve Account Requirement shall mean an amount equal to the sum of the Common Reserve Account Requirement immediately preceding issuance of such Bonds and the maximum amount permitted under the Code to be deposited therein from the proceeds of such Bonds, as certified by an Authorized Officer of the BWS. The Resolution further provides that in determining the Common Reserve Account Requirement with respect to Bonds which bear variable interest rates ("Variable Rate Bonds"), Aggregate Debt Service shall be computed by using the Assumed Long-Term Fixed Rate applicable thereto.

In lieu of cash or securities, the Resolution permits the BWS to satisfy the Common Reserve Account Requirement in part or in whole by causing to be deposited into the Common Reserve Account a Support Facility (which may be any instrument entered into or obtained in connection with a Series of Bonds such as a letter of credit, insurance policy, surety bond, loan agreements, standby purchase agreement, guaranty or similar instrument, or any combination of the foregoing, and issued by a bank or banks, or other financial institution or institutions, or any combination of the foregoing) in an amount equal to the difference between the Common Reserve Account Requirement and the sums then on deposit in the Common Reserve Account, if any. Any Support Facility deposited in the Common Reserve Account or the long-term debt of the issuer of any Support Facility deposited in the Common Reserve Account must, in each case, be rated in one of the two highest Rating Categories of any of the Rating Agencies at the time of initial deposit thereof. If a disbursement is made pursuant to a Support Facility deposited in the Common Reserve Account, the BWS must (i) reinstate the full amount of such Support Facility, and (ii) if necessary, deposit Net Revenues in the Common Reserve Account in the amount of the disbursement made under such Support Facility, in either case such that the amount in the Common Reserve Account equals the Common Reserve Account Requirement within a period of time not longer than would be required to restore the Common Reserve Account by application of moneys in the Operating Fund.

If at any time the amounts on deposit in the Payment Account are insufficient to pay Bondholders the principal or Redemption Price of and interest on the Bonds entitled to the benefit of the Common Reserve Account, moneys in the Common Reserve Account would be applied to the deficiency by the BWS and if a deficiency were to still exist, draws or claims would be made under any Support Facility held in the Common Reserve Account.

Series Reserve Accounts. The Resolution permits the establishment of a Series Reserve Account to provide additional security for the Bonds of a Series which is not entitled to the benefit of the Common Reserve Account. In the event of a deficiency in the Payment Account to pay debt service on Bonds of a Series entitled to the benefit of a Series Reserve Account, the amounts held in such Series Reserve Account are to be used exclusively to pay such debt service. The amount to be maintained in any such Series Reserve Account for a Series of Bonds, and the credit quality of a Support Facility to be deposited in any such Series Reserve Account, are to be determined at the time such Bonds are authorized or sold. No Series Reserve Account has been established for the Series 2021 Bonds.

Transfers to Reserve Accounts. The Resolution requires that in each month, after paying and setting aside an amount sufficient to pay the Operation and Maintenance Expenses for such month, and after transfer to the Payment Account an amount equal to debt service to accrue on the Bonds in such month, amounts remaining on deposit in the Operating Fund are to be transferred pro rata to the Common Reserve Account and each Series Reserve Account in such amounts as are required so that the balances in such Accounts equal their respective reserve account requirements, or, at the election of the BWS, an amount sufficient to eliminate at least one-sixth of the deficiency in each such Account.

Rate Covenant

The BWS is required by the Resolution, among other things, to fix, charge, and collect such rates and other charges as are required in order that in each Fiscal Year the Net Revenues shall be not less than the Net Revenue Requirement for such Fiscal Year (the "Rate Covenant"). The Net Revenue Requirement means with respect to any Fiscal Year or any other period, an amount equal to the greater of: (i) the sum of the Aggregate Debt Service in such Fiscal Year or such period and the deposits required by the Resolution to be made into the Common Reserve Account, each Series Reserve Account, the Subordinate Obligation Fund and the Reimbursable Obligation Fund and to pay Support Facility Reimbursement Obligations in such Fiscal Year or such period, or (ii) 1.20 times the maximum Aggregate Debt Service in such Fiscal Year or such period plus 1.00 times the aggregate Support Facility Reimbursement Obligations outstanding at the end of such Fiscal Year or such period. Aggregate Debt Service means, for any period and as of any date of computation, the sum of the amounts of Debt Service for such period with respect to all Series of Bonds. Support Facility Reimbursement Obligations are obligations of the BWS to reimburse the issuer of a Support Facility or the counterparty of an Interest Rate Exchange Agreement for amounts paid under such Support Facility or such agreement. See Appendix E – "Summary of Certain Provisions of the Resolution" and "Certain Definitions" therein.

The Manager and Chief Engineer of the BWS (the "Manager") is required under the Resolution prior to the end of each Fiscal Year to complete a review of the financial condition of the BWS for the purpose of estimating whether the Net Revenues for such Fiscal Year and for the next succeeding Fiscal Year will be sufficient to comply with the Rate Covenant and must by Written Certificate make a determination with respect thereto. If the Manager determines that the Revenues may not be so sufficient, the Manager or the BWS shall forthwith make, or cause a consulting engineer to make, a study for the purpose of determining a schedule of fees, rates and charges which, in the opinion of the Manager, the BWS or the consulting engineer, will cause sufficient Revenues to be collected in the following Fiscal Year to comply with the Rate Covenant and will cause additional Revenues to be collected in such following and later Fiscal Years sufficient to eliminate the amount of any deficiency at the earliest practicable time. The BWS will as promptly as practicable, but no later than 120 days following such determination by the Manager or the BWS, or receipt of the consulting engineer's recommendation, adopt and place in effect such schedule of fees, rates and charges as so determined or recommended. Failure by the BWS to comply with the Rate Covenant in any Fiscal Year will not constitute an Event of Default under the Resolution, so long as the BWS promptly adopts the schedule of rates and charges as so determined or recommended. See "FINANCIAL INFORMATION—Historical and Projected Revenue, Expenses and Debt Service Coverage" for a discussion of the BWS's projected rates, revenues and expenses and rate-setting procedures.

Additional Bonds and Refunding Bonds

The Resolution permits the issuance of additional Series of Bonds (exclusive of Refunding Bonds) ("Additional Bonds") for any lawful use or purpose relating to the Water System, including, without limitation, payment of all or a portion of the Costs of Improvements, but only upon compliance as to each such Series with the conditions set forth in the Resolution, which conditions are summarized in Appendix E under "Additional Bonds and Refunding Bonds." Among other things, such conditions require delivery to the Director of Budget and Fiscal Services of a Written Certificate of the BWS demonstrating the satisfaction of certain Net Revenue requirements.

The Resolution also permits the issuance of Bonds to refund all or any part of: (i) a Series of Outstanding Bonds; (ii) Subordinate Obligations; or (iii) Reimbursable Obligations ("Refunding Bonds"). Refunding Bonds may be issued by the BWS upon satisfaction of the same conditions as required for the issuance of Additional Bonds, except that the Written Certificate described in the preceding paragraph need not be provided if the maximum annual Debt Service in any Fiscal Year on the Refunding Bonds proposed to be issued does not exceed the maximum annual Debt Service in any Fiscal Year on the refunded Bonds by more than 10%.

Additional Bonds and Refunding Bonds, when issued, will constitute Bonds under the Resolution and will be secured equally without preference, priority or distinction of any such Bond over any other such Bond except as expressly provided in or permitted by the Resolution by the pledges created by and covenants of the BWS made in the Resolution.

Bonds may be issued as Variable Rate Bonds, Fixed Rate Bonds, Capital Appreciation Bonds, Deferred Interest Bonds, and Option Bonds which provide the right to the owners thereof to tender their Bonds for redemption or purchase prior to maturity, or any combination thereof. Bonds may be issued or outstanding from time to time with or without credit enhancement provisions. See "Certain Definitions" in Appendix E.

The Resolution also permits the issuance of notes in anticipation of a Series of Bonds if the BWS has theretofore authorized the issuance of such Bonds. The principal of such notes may be paid from the proceeds of such notes (or any renewal thereof) or from the proceeds of the Bonds in anticipation of which such notes are issued. The interest on such notes may be secured by a lien on and pledge of, and be paid from, the Net Revenues on a parity with the lien on and pledge of the Net Revenues for the payment and security of the Bonds. A more detailed description of the provisions for security for payment of such notes and other requirements relating to the issuance of notes is set forth in Appendix E under "Bond Anticipation Notes."

Proposed Amendments to Resolution

The BWS proposes to amend the Resolution to redefine the terms "Debt Service" and "LIBOR," add new defined terms, and make other related changes to allow for certain subsidy payments received by the federal government to be deducted from the calculation of Debt Service, provide the BWS flexibility in calculating Debt Service for certain types of balloon indebtedness, and provide an effective replacement for the LIBOR index upon phase-out of such index. Such proposed amendments, which require the consent of the Holders of not less than a majority of all then Outstanding Bonds, read as follows:

> "*"Debt Service"* means, as of any particular date of computation, with respect to any Bonds and with respect to any period, the aggregate of the amounts to be paid or set aside in such period for the payment (or retirement) of the principal and Redemption Price (if any) of, and interest on, such Bonds; provided, however, that the term "Debt Service" shall not include interest on Bonds to the extent it is to be paid from amounts credited to a Series Capitalized Interest Account, from amounts credited to the Payment Account or from any other source provided for such payment; provided further, however, that in determining the amount of interest coming due during any applicable period on any Series of Bonds that are issued as Interest Subsidy Bonds, amounts equal to Refundable Credits the Board is scheduled to receive during such period shall be deducted from such interest."
>
> "*"LIBOR"* means the rate for deposits in U.S. dollars with one month maturity as published by Reuters (or such other service as may be nominated by the Intercontinental Exchange, for the purpose of displaying London interbank offered rates for U.S. dollar deposits) as of 11:00 a.m., London time, two London Banking Days prior to the Index Reset Date. If at any time LIBOR is permanently or indefinitely unavailable or unascertainable, or ceases to be published by the LIBOR administrator or its successor, a commercially reasonable taxable short-term index generally accepted by interest rate swap market participants as a replacement for LIBOR as a short-term taxable index, shall be used. As part of such substitution, the Calculation Agent will, in its discretion, after consultation with the Board and Bond Counsel, make any technical, administrative or operational changes (including changes to the definitions for each interest rate period hereunder, timing and frequency of determining rates and making payments of interest and other administrative matters), as well as the business day convention, interest determination dates and related provisions and definitions, in each case that are consistent with accepted market practice for the use of such Alternative Rate for the Bonds. Any replacement rate must be an interest based index, variations in the value of which can reasonably be expected to measure contemporaneous variations in the costs of newly borrowed funds in United States Dollars."
>
> "*"Balloon Indebtedness"* means indebtedness having an original maturity greater than one year or renewable at the option of the Board for a period of greater than one year from the date of original incurrence or issuance thereof, 25% or more of the original principal of which becomes due (either by maturity or mandatory redemption) or may be tendered for purchase or payment at the option of the holder during any period of 12 consecutive months, which portion of the principal is not

required by the documents governing such indebtedness to be amortized below 25% by mandatory redemption prior to such date."

"*"Build America Bonds"* means any bonds or other obligations issued as Build America Bonds under Section 54AA of the Code, or under any other provision of the Code that creates a substantially similar direct-pay subsidy program."

"*"Calculation Agent"* means, for the purposes of the definition of "LIBOR," any Person, financial institution or financial advisory firm appointed by the Board to serve as Calculation Agent for the applicable Series of Bonds."

"*"Interest Subsidy Bonds"* means (a) Build America Bonds, (b) Recovery Zone Economic Development Bonds, or (c) any other any bonds or other obligations issued under any provision or provisions of the Code that create substantially similar direct-pay subsidy programs to such programs with respect to Build America Bonds and Recovery Zone Economic Development Bonds."

"*"Person"* means an association, corporation, firm, partnership, trust, or other legal entity or group of entities, including a governmental entity or any agency or political subdivision thereof."

"*"Refundable Credits"* means (a) with respect to a Series of Bonds issued as Build America Bonds under Section 54AA of the Code, the amounts which are payable by the Federal government under Section 6431 of the Code, which the Board has elected to receive under Section 54AA(g)(1) of the Code, (b) with respect to a Series of Bonds issued as Recovery Zone Economic Development Bonds under Section 1400U-2 of the Code, the amounts which are payable by the Federal government under Section 6431 of the Code, which the Board has elected to receive under Section 1400U-2 of the Code, and (c) with respect to a Series of Bonds issued as any other type of Interest Subsidy Bonds, the amounts which are payable by the Federal government under provisions of the Code governing a direct-pay subsidy program or programs substantially similar to such programs with respect to Build America Bonds and Recovery Zone Economic Development Bonds."

"*"Recovery Zone Economic Development Bonds"* means any bonds or other obligations issued as Recovery Zone Economic Development Bonds under Section 1400U-2 of the Code, or under any other provision of the Code that creates a substantially similar direct-pay subsidy program."

"*Section 3.04(E)*. In determining Debt Service on Balloon Indebtedness then Outstanding and Balloon Indebtedness then proposed to be issued for purposes of the Additional Bonds Requirement, the Board, at its option, may assume that such Balloon Indebtedness is to be amortized over thirty (30) years beginning on the date of maturity of such Balloon Indebtedness or such earlier date as may be specified by the Board, assuming level debt service and the rate of interest on such Balloon Indebtedness."

Under the terms of the Resolution, the proposed amendments will not go into effect until such time as the BWS has obtained the consents of the Holders of a majority of the Bonds then Outstanding. See Appendix E – "SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION—Amending and Supplementing of Resolution—*Amendment of Resolution With Consent of Holders of Bonds.*" **BY PURCHASING SERIES 2021 BONDS, THE HOLDERS THEREOF SHALL BE DEEMED TO HAVE CONSENTED TO THE PROPOSED AMENDMENTS, AND SUCH CONSENT WILL BE BINDING ON ALL SUCCESSIVE HOLDERS OF THE SERIES 2021 BONDS.** Upon the issuance of the Series 2021 Bonds, there will be \$304,435,000 of Bonds Outstanding, of which \$199,370,000 (including the Series 2021 Bonds) will be deemed to have consented to the proposed amendments. Accordingly, the proposed amendments to the Resolution described above will become effective immediately upon the issuance of the Series 2021 Bonds.

DEBT SERVICE REQUIREMENTS FOR THE BONDS

Fiscal Year Ending June 30[1]	Outstanding Bonds Debt Service[2]	Series 2021A Bonds			Series 2021B Bonds			Total Bonds Debt Service	Subordinate Lien Obligations[3]	Total Debt Service
		Principal	Interest	Debt Service	Principal	Interest	Debt Service			
2021	$ 18,874,086	$ --	$ --	$ --	$ --	$ --	$ --	$ 18,874,086	$ 6,837,141	$ 25,711,228
2022	18,412,372	--	1,682,987	1,682,987	60,000	505,328	565,328	20,660,686	6,910,350	27,571,036
2023	18,595,776	855,000	2,173,825	3,028,825	--	659,090	659,090	22,283,691	6,885,975	29,169,666
2024	15,298,280	900,000	2,129,950	3,029,950	3,430,000	652,916	4,082,916	22,411,145	6,861,565	29,272,710
2025	15,283,702	945,000	2,083,825	3,028,825	3,445,000	637,785	4,082,785	22,395,312	6,837,118	29,232,430
2026	19,162,145	995,000	2,035,325	3,030,325	990,000	624,125	1,614,125	23,806,595	6,812,634	30,619,229
2027	19,164,648	1,045,000	1,984,325	3,029,325	1,000,000	613,623	1,613,623	23,807,595	6,788,113	30,595,709
2028	12,517,737	1,100,000	1,930,700	3,030,700	7,700,000	551,998	8,251,998	23,800,435	6,763,555	30,563,990
2029	13,437,438	1,155,000	1,874,325	3,029,325	6,890,000	441,053	7,331,053	23,797,815	6,738,960	30,536,776
2030	12,485,059	1,215,000	1,815,075	3,030,075	7,965,000	313,451	8,278,451	23,793,585	6,714,327	30,507,912
2031	12,474,288	1,275,000	1,752,825	3,027,825	8,155,000	160,643	8,315,643	23,817,755	6,689,657	30,507,412
2032	16,866,525	1,340,000	1,687,450	3,027,450	3,880,000	40,158	3,920,158	23,814,133	6,664,948	30,479,081
2033	16,682,452	1,410,000	1,618,700	3,028,700	--	--	--	19,711,152	6,640,202	26,351,353
2034	16,682,429	1,480,000	1,546,450	3,026,450	--	--	--	19,708,879	6,615,871	26,324,750
2035	12,600,244	1,540,000	1,486,350	3,026,350	--	--	--	15,626,594	4,415,465	20,042,059
2036	12,510,306	1,595,000	1,431,350	3,026,350	--	--	--	15,536,656	4,108,850	19,645,506
2037	12,603,606	1,660,000	1,366,250	3,026,250	--	--	--	15,629,856	3,955,543	19,585,399
2038	3,213,606	1,720,000	1,307,250	3,027,250	--	--	--	6,240,856	3,555,550	9,796,406
2039	3,215,078	1,785,000	1,245,750	3,030,750	--	--	--	6,245,828	3,061,627	9,307,455
2040	3,213,550	1,855,000	1,172,950	3,027,950	--	--	--	6,241,500	629,707	6,871,207
2041	3,213,475	1,930,000	1,097,250	3,027,250	--	--	--	6,240,725	--	6,240,725
2042	3,212,850	2,000,000	1,028,650	3,028,650	--	--	--	6,241,500	--	6,241,500
2043	3,212,025	2,070,000	957,250	3,027,250	--	--	--	6,239,275	--	6,239,275
2044	3,213,875	2,155,000	872,750	3,027,750	--	--	--	6,241,625	--	6,241,625
2045	3,213,325	2,245,000	784,750	3,029,750	--	--	--	6,243,075	--	6,243,075
2046	3,210,375	2,335,000	693,150	3,028,150	--	--	--	6,238,525	--	6,238,525
2047	3,214,875	2,430,000	597,850	3,027,850	--	--	--	6,242,725	--	6,242,725
2048	3,211,750	2,545,000	485,625	3,030,625	--	--	--	6,242,375	--	6,242,375
2049	3,211,000	2,675,000	355,125	3,030,125	--	--	--	6,241,125	--	6,241,125
2050	3,212,475	2,810,000	218,000	3,028,000	--	--	--	6,240,475	--	6,240,475
2051	--	2,955,000	73,875	3,028,875	--	--	--	3,028,875	--	3,028,875
Total[4]	$303,435,352	$50,020,000	$39,489,937	$89,509,937	$43,515,000	$5,200,166	$48,715,166	$443,644,455	$114,487,159	$558,131,614

1 *Based on payments not on accruals.*
2 *Amounts shown exclude debt service on the Refunded Bonds.*
3 *Consists of outstanding SRF loans.*
4 *Totals may not equal sum due to rounding.*

THE BOARD OF WATER SUPPLY

Purpose and Powers

Board of Water Supply. Pursuant to the City Charter, the BWS consists of the board of directors, the Manager and Chief Engineer (the "Manager"), and the necessary staff. All water systems owned and operated by the BWS and/or the City and County, including all City and County water rights and water sources, together with all materials, supplies and equipment and all real and personal property used in connection with such water systems are under the control of the BWS. The City and County's Department of Facility Maintenance controls the Stormwater System, and the City and County's Department of Environmental Services controls the Wastewater System.

Board of Directors. The board of directors of the BWS (the "Board") consists of seven members. The Chief Engineer of the Department of Facility Maintenance of the City and County and the Director of Transportation of the State of Hawaii are *ex-officio* members of the Board and serve as such for the respective terms of their offices. The other five members of the Board are appointed by the Mayor of the City and County and confirmed by the Council of the City and County. Pursuant to the City Charter, the Board has the power, among other things: (i) to appoint and remove the Manager; (ii) to fix the salary of the Manager; (iii) to create and abolish positions; (iv) to determine the policy for construction, additions, extensions and improvements to the Water System of the City and County, including a long range capital improvement program; (v) to acquire by eminent domain, purchase, lease or otherwise, in the name of the City and County, all real property or any interest therein necessary for the construction, maintenance, repair, extension or operation of the Water System of the City and County; (vi) to recommend to the Council the sale, exchange or transfer of real property or interest therein which is under the control of the BWS; (vii) to enter into arrangements and agreements, as it deems proper for the joint use of poles, conduits, towers, stations, aqueducts and reservoirs, for the operation of any of the properties under its management and control; (viii) to issue revenue bonds under the name of the "board of water supply"; (ix) to modify, if necessary, and approve and adopt annual operating and capital budgets submitted by the Manager; (x) to prescribe and enforce rules and regulations having the force and effect of law to carry out the provisions of this article of the City Charter; and (xi) to hear appeals from the order of the Manager refusing, suspending or revoking permits for the sinking, drilling or reopening of any well or shaft for the development of underground water supply. The Board is the governing body of the BWS.

General; Rates and Charges. The City Charter requires that the revenues of the BWS be kept in a separate fund and be such as to make the Water System self-supporting. Consistent with such requirement, the BWS is budgeted as a self-sustaining enterprise fund for the purpose of determining costs associated with providing water services. Through the process of adopting an annual operating budget, the revenue requirements and water rates are reviewed to determine the adequacy of revenues to meet needs.

The adoption, amendment, and repeal of all rules of the Board, including rates and charges of the Water System, are pursuant to the City Charter. The Board, pursuant to the City Charter, has the power to fix and adjust reasonable rates and charges for the furnishing of water and for water services so that the revenues derived therefrom shall be sufficient to make the Water System self-supporting. Rates and charges are determined on the basis of a recommendation by the Manager, subject to approval by the Board. Such rates are not subject to regulation by any governmental body or authority, including the City and County.

Guiding Principles

The BWS's vision is Ka Wai Ola, Water for Life. This vision, the motivating force behind the BWS's planning policies and actions, captures the critical need of water—that water is the basis for life. With this vision comes the responsibility of the BWS's stewardship of and the duty to manage our natural water resources for both present and future generations. The ancient Hawaiians valued water as one of nature's greatest gifts and they lived in harmony with water. Land divisions (ahupuaʻa) mirrored the natural ecosystem—land was divided according to watershed boundaries, spanning from the mountain tops through upland forests to flatlands and the shore. Formal rules governed the use of water and regulations were established and enforced to cultivate the resources in each ahupuaʻa, to conserve as much as possible to lower the stress on the resources and to ensure that a pure supply was available to everyone whether they lived in the mountains or close to the sea.

In the State of Hawaii ("Hawaii" or the "State"), water is a public trust resource and the BWS serves its customers with this trust in mind. The mission of the BWS is to provide a safe, dependable, and affordable supply of water now and into the future.

Resource Sustainability (Safe) addresses the multiple areas of individual and community needs. Water must meet all statutory and regulatory compliance standards in providing water for consumption and other uses. Water must provide for public health and safety such as for firefighting and sanitation needs.

Operational Sustainability (Dependable) relies upon three factors:

- Sources of water must be sufficient and available now and into the future. The BWS ensures this through management of the watershed and groundwater supply, long range planning, and possible development of alternative sources of water.

- A Water System that is designed, constructed, and operated with system redundancy that continues delivery of water even with disruptions in the system.

- Employees of the BWS who are committed to providing their customers with high quality water and excellent service.

Financial Sustainability (Affordable) recognizes that affordable water delivery is primary. The BWS establishes programs for efficiency in water use through conservation, infrastructure installation, and Water System operations and maintenance. The BWS continually implements changes to its systems to deliver water at the most responsible cost to the customer.

To continue to efficiently and effectively fulfill this important mission, the BWS developed a three-year Strategic Plan in 2014. An updated five-year plan was developed in 2018 (the "Strategic Plan"). The Strategic Plan provides an internal and external perspective of the commitment of the BWS employees to deliver its mission through focus on three strategic goals—resource, operational, and financial sustainability. These three strategic goals are interrelated and coordinated with the three main points of the BWS's mission.

Resource Sustainability

Protect, conserve, and manage Oahu's water supplies and watersheds now and into the future through adaptive and integrated strategies.

Operational Sustainability

Build an effective organization that continuously works to improve dependable service.

Financial Sustainability

Implement sound fiscal strategies to provide safe, dependable and affordable water service.

In addition to the Strategic Plan, the BWS developed the Water Master Plan ("WMP"), a comprehensive program that looks ahead 30 years to evaluate the entire Water System, quantify future demands and source options, identify necessary improvements, and balance needs and costs of providing water to the community. The WMP's evaluations and recommendations are direct efforts to support the BWS's goals of resource sustainability and operational sustainability and to inform sustainable financial planning.

The 30-Year Infrastructure Investment Plan ("IIP") was developed to put the WMP into action. The IIP provides an analysis-based strategy for when specific water infrastructure projects should be implemented and prioritizes renewal and replacement of portions of the Water System, based on risk.

To provide both a near-term detailed assessment and a long-term trajectory, a Long-Range Financial Plan ("LRFP") was developed utilizing two time horizons—short-term and long-term. The short-term plan incorporated a 10-year horizon, covering Fiscal Year 2018 to Fiscal Year 2028. The long-term plan covered the subsequent period from Fiscal Year 2029 to Fiscal Year 2047. The short-term model was used to determine the revenue requirements for the five-year rate study completed in Fiscal Year 2018 with a new rate structure that was adopted and implemented in Fiscal Year 2019. The BWS recently completed an update to the LRFP that focused specifically on the impacts of the pandemic. The update will allow the BWS to make informed decisions about rates, operating costs, and capital program improvements.

Board Members

The following are brief biographies of the members of the Board.

Bryan P. Andaya – Chairman. Mr. Andaya was appointed to the Board in September 2015, and became Chair of the Board in September 2016. Mr. Andaya serves as President and Chief Operating Officer of L & L Franchise, Inc., which has 200 restaurant locations in 15 states and multiple international locations. In his position, he oversees all day-to-day operations of the franchise, including 7 functional departments: Accounting and Finance, Real Estate, Procurement and Purchasing, Human Resources, Marketing and Advertising, Franchise Development, and Franchisee Relations and Training. He is also Chairman of the board of directors of Goodwill Industries of Hawaii. Mr. Andaya holds an official staff position in the Office of U.S. Senator Brian Schatz, as Field Representative for the Island of Oahu. He has received various awards including the Pacific Business News Young Business Leader of the Year in 2011, and Hawaii Business Magazine's *Twenty to Watch for the Next 20 Years* in 2010. Mr. Andaya received his undergraduate degree from Portland State University and his Juris Doctor from DePaul University.

Kapua'ala Sproat – Vice Chair. Ms. Sproat was appointed to the Board in May 2015, and became Vice Chair of the Board in August 2017. Ms. Sproat is an Associate Professor of Law at the University of Hawaii William S. Richardson School of Law and the Director of Ka Huli Ao Center for Excellence in Native Hawaiian Law. Ka Huli Ao is an academic center that promotes education, scholarship, community outreach, and collaboration on issues of law, culture, and justice for Native Hawaiians and other Pacific and Indigenous Peoples. Ms. Sproat also directs the law school's Environmental Law Clinic and teaches doctrinal and clinical courses in Native Hawaiian and environmental law and legal writing. In 2014, she received the Board of Regents' Medal for Excellence in Teaching, the University of Hawaii's highest teaching award. Her areas of scholarship and interest include Native Hawaiian law, water law, indigenous rights, climate justice, the public trust doctrine, and natural resource protection and management. In 2015, the International Union for the Conservation of Nature's Academy of Environmental Law named her the 2015 Environmental Law Education Award "Emerging Scholar." Ms. Sproat has a special interest in empowering and supporting Kānaka Maoli (Native Hawaiian) culture and people and works to preserve the resources necessary to perpetuate her culture. Ms. Sproat received her BA from Mills College in political, legal, and economic analysis and Juris Doctor from the University of Hawaii William S. Richardson School of Law.

Ray Soon – Member. Mr. Soon was appointed to the Board in October 2017. He is an independent planning consultant specializing in land management and business management. He joined the Board in 2017 after retiring from public service, most recently working as the Chief of Staff to the Mayor of the City and County. Mr. Soon has extensive background in land development and land management in both private and public sectors and brings a wealth of knowledge and connectivity to the Board. Mr. Soon also serves on the boards of the Research Corporation of the University of Hawaii, Solutions Pacific, LLC, and Makai Ocean Engineering. He has an undergraduate degree from the University of Hawaii in City and Regional Planning and a Master of City Planning degree from Harvard University.

Max Sword – Member. Mr. Sword was appointed to the Board in October 2018. He is president of the government and community affairs consulting firm Max J. Sword & Associates, LLC, and a member of numerous boards and commissions. After 30 years with Outrigger Hotels & Resorts, Mr. Sword retired in 2017 as Vice President of Industry Affairs for Outrigger Enterprises Group. He has continued to handle government and community affairs as a consultant. Over the past four-plus decades he has built a strong network through his interaction with government officials, community leaders, business operators, and others, to serve and strengthen the visitor industry, as well as the community in general. He has been directly involved in passing many legislative measures that have shaped tourism today. Mr. Sword attended Punahou School and Peru State College in Peru, Nebraska.

Na'alehu Anthony – Member. Na'alehu Anthony was appointed to the Board in January 2021. Mr. Anthony attended Kamehameha Schools and received his BA in Hawaiian Studies and his MBA from the University of Hawaii. He is the director of the Hawaii Covid Collaborative, an award-winning independent filmmaker, and a strong proponent of education, land issues, and democratic governance. Mr. Anthony is a long time crew member of the Hokule'a and was the director of photography for the Malama Honua Worldwide Voyage.

Jade Butay – Director, Department of Transportation, Ex-Officio. Jade T. Butay has served as Director of the State of Hawaii, Department of Transportation, since 2017. Previously, Mr. Butay served as Deputy Director of Administration at the State of Hawaii, Department of Transportation, from 2011 to 2013 and again from 2015 to 2017. Between his time serving as Deputy Director of Administration, Mr. Butay served as Deputy Director at the State of Hawaii, Department of Labor and Industrial Relations. Prior to commencing his service in state government, Mr. Butay served in various leadership positions in the private sector. He received his Bachelor of Arts degree in Business Administration from the University of Hawaii and his Master of Business Administration degree from Babson College.

Roger Babcock, Jr. – Chief Engineer and Director, Department of Facility Maintenance, Ex-Officio. Roger Babcock, Jr., Ph.D., PE is the Chief Engineer and Director of the Department of Facility Maintenance for the City and County of Honolulu. Beginning in January 2021, Dr. Babcock is on leave as a Professor of Civil & Environmental Engineering in the College of Engineering and the Water Resources Research Center at the University of Hawaii at Manoa. Born and raised in California, he went to high school in Oakland. He obtained his Ph.D. in Civil Engineering from University of California, Los Angeles (UCLA) in 1991, worked for Carollo Engineers in the early 1990s in California, and started as a professor at the University of Hawaii in 1995. He has Professional Engineering licenses in California and Hawaii. Dr. Babcock has conducted research in several areas, including activated carbon adsorption, water recycling, biological wastewater treatment, membrane bioreactors, innovative primary treatment for carbon diversion, thermal hydrolysis pre-treatment of sludges, anaerobic digestion, co-digestion of FOG (fat, oil, and grease), food waste, and bioplastics, sludge dewatering, on-site wastewater treatment including passive denitrifying absorption systems and constructed wetlands, groundwater infiltration into sewers, stormwater runoff management including green roofs and biofiltration systems. He is a past president of the Hawaii Section of the American Society of Civil Engineers (ASCE) and the Hawaii Water Environment Association, serves on the Board of Certification of Wastewater Treatment Plant Operators, and is director of Hawaii's Statewide Wastewater Operator Training Center. Dr. Babcock was the 2019 Engineer of the Year for Hawaii.

Principal Officers

The BWS consists of nine divisions (Capital Projects, Customer Care, Field Operations, Finance, Information Technology, Land, Water Quality, Water Resources, and Water System Operations) and three support offices (Communications Office, Executive Support Office, and Human Resources Office) as a part of the Office of the Manager and Chief Engineer (OMCE) under the direction of the Manager.

The Manager is appointed and evaluated by the Board and may be removed by the Board. The Manager must be a registered engineer and must have a minimum of five years of training and experience in waterworks activities or related fields, at least three of which must have been in a responsible administrative capacity. The powers, duties and functions of the Manager include: (i) administering the affairs of the BWS, including the rules and regulations adopted by the Board; (ii) granting, suspending or revoking permits under conditions prescribed by the rules and regulations of the BWS; (iii) unless otherwise provided by the City Charter, signing all necessary contracts for the BWS; (iv) appointing and removing members of the staff; (v) making recommendations to the Board to create or abolish positions; (vi) preparing bills, collecting, and, by appropriate means including the discontinuance of service and civil action, enforcing the collection of charges for the furnishing of water and for water services; (vii) preparing payrolls and pension rolls; (viii) maintaining proper accounts in such manner as to show the true and complete financial status of the BWS and the results of management and operation thereof; (ix) preparing annual operating and capital budgets; (x) prescribing rules and regulations as are necessary for the organization and internal management of the BWS; and (xi) recommending rules and regulations for adoption by the Board.

The following are brief biographies of the BWS's Manager and Chief Engineer, Deputy Manager and Chief Engineer, Waterworks Controller, Water Resources Division Program Administrator, and Communications Office, Information Officer.

Ernest Y.W. Lau – Manager and Chief Engineer. Mr. Lau is the tenth manager and chief engineer of the BWS. As manager, he is responsible for the overall strategic direction and management of the BWS, with a focus on furthering the BWS's mission to provide a safe, dependable, and affordable water supply, now and into the future. Mr. Lau assumed this position on February 1, 2012. He previously served as the administrator of the Public Works Division under the State Department of Accounting and General Services, where he oversaw the planning, coordinating, directing, and controlling of a statewide program of engineering, architectural, and construction services. Mr. Lau previously worked as Deputy Director of the State Commission on Water Resource Management, Department of Land and Natural Resources. He also served as the Manager and Chief Engineer of the Kauai Department of Water from 1996 to 2003 and as Deputy Manager from 1995 to 1996. Prior to his time with the Kauai Department of Water, he worked for the BWS for more than 14 years as an engineer in Long Range Planning and Water Systems Planning.

Ellen E. Kitamura – Deputy Manager and Chief Engineer. Ms. Kitamura was appointed as the Deputy Manager and Chief Engineer of the BWS as of March 16, 2012. In this capacity, she oversees the BWS's support operations, with a focus on the agency's divisions that are directly involved with finance, customer care, information technology and land administration. Ms. Kitamura has been a BWS employee since 1982, where she worked her way up the ranks from Civil Engineer I to Civil Engineer VI in the Technical Engineering Projects Branch of the Information Technology Division before being promoted to her current position. Prior to her employment with the BWS, Ms. Kitamura worked for two years at a private civil engineering consulting firm and also spent a few years with the Hawaii National Energy Institute at University of Hawaii at Manoa, where she was involved with the start-up of the geothermal project in Puna on the island of Hawaii. She earned her Bachelor of Science degree in Civil Engineering from the University of Hawaii at Manoa and is a licensed Professional Engineer.

Joseph J. Cooper – Waterworks Controller. Mr. Cooper assumed the position of Waterworks Controller for the BWS in December 2013. He is responsible for overseeing the financial and accounting functions of the BWS including financial auditing, the cost of service study, the rate making process, investments, the State Revolving Loan program, and issuing municipal bonds. Prior to joining the BWS, he directed the preparation financial statements, federal contracting, cash management, and implementation of accounting systems at various companies. Most recently he was Chief Financial Officer for Archinoetics, LLC, a federal contractor conducting research in wearable sensors for the U.S. Department of Defense. Mr. Cooper has a Master of Business Administration from the University of Washington, a Bachelor of Arts from Rhodes College, and is licensed as a Certified Public Accountant by the state of Washington.

Barry Usagawa – Program Administrator, Water Resources Division. Barry Usagawa is the Program Administrator for the Water Resources Division of the Honolulu Board of Water Supply. He administers the Water Systems Planning, Water Conservation, Recycled Water, Long Range Planning, Hydrology-Geology and Project Review functions of the department. Water Resources conducts long-range water resource and capital planning for Oahu to ensure sustainable water resources and dependable water systems for current and future customers. Barry has led the development of Oahu's eight regional Watershed Management Plans for resource protection and water use and development. Barry is a member of the Hawaii Community Foundation's Freshwater Council which developed the State Freshwater Blueprint for water conservation, reuse and recharge targets to ensure 100 mgd of resilient water by 2030. Barry is leading the development of the One Water Collaboration for Climate Resilience in coordination with the City and County's Office of Climate Change, Sustainability and Resiliency. Barry has worked for 35 years at the BWS in long range planning, Water Systems analysis, environmental, CIP, water resource management, conservation, reuse and water rights. He is a licensed professional engineer in Hawaii and has a Bachelor of Science in Civil Engineering from the University of Hawaii at Manoa.

Kathleen Elliott-Pahinui – Information Officer, Communications Office. Originally from Chicago and a graduate of the University of Illinois at Chicago, Kathleen moved to Hawaii in the late 1980s. She has worked in sales, marketing, and publishing, and has managed a few restaurants. Most recently she worked at Anthology Advertising as a Vice President in Account Services managing clients in the tourism, health care, retail, banking, and insurance industries. At the BWS, she brings a wealth of marketing experience that has assisted the BWS with expanding their reach and message, including rendering the BWS more transparent and accessible to customers. She manages a sharp team of marketing professionals with skills in strategic planning, social media, website creation and management, video production, and writing. She is dedicated to the North Shore community and has been involved in many efforts to preserve open space, promote agriculture and provide solutions for the homeless community.

Work Force

The BWS employs approximately 552 persons in various managerial, clerical, engineering, information technology, and operational positions. Of these employees, 43 are excluded from collective bargaining and four are appointed and exempt from civil service. The remaining employees are represented by five recognized bargaining units ("BU"): BU 01 (blue collar non-supervisory employees), BU 02 (blue collar supervisory employees), BU 03 (white collar non-supervisory employees), BU 04 (white collar supervisory employees), and BU 13 (professional and scientific employees).

The Hawaii Constitution grants public employees in the State the right to organize for the purpose of collective bargaining. HRS Chapter 89 provides for 14 recognized BUs for all employees throughout the State. Each BU has a designated exclusive representative and negotiates with the relevant public employer(s), consisting of representatives from the State, the City and County, the counties of Hawaii, Maui and Kauai, and the Judiciary.

For BU 01, if an impasse exists over terms of a renewed agreement, the parties may participate in voluntary resolution. If the impasse continues for more than 20 days, the parties must attend mediation. If the matter is not resolved after the 50th day of impasse, either party may take any lawful action to end the dispute, which could include an employee strike.

For BUs 02, 03, 04, and 13, if any impasse exists over terms of a renewed agreement, the parties must attend mediation during the first 20 days after impasse. If the impasse continues beyond 20 days, a three-member arbitration panel is appointed and the matter is resolved through final and binding arbitration. Any item requiring the expenditure of monies must be subject to appropriation through the respective employers' legislative bodies.

The status of negotiations and awards for wages and health benefits of BWS employees for the period of July 1, 2019 to June 30, 2021, and for the period from July 1, 2021 to June 30, 2023, are as follows:

BU 01 (blue-collar workers): The UPW and the employer reached a four-year (July 1, 2017 – June 30, 2021) agreement that was ratified in August 2017. The last two years of the agreement provide for across-the-board increases of 2% effective July 1, 2019 and July 1, 2020. An agreement for additional across-the-board increases of 1.2%, effective January 1, 2020 and January 1, 2021, was ratified in April 2019. Initial proposals for a successor agreement were exchanged on September 30, 2020. No negotiation meetings have been scheduled at this time.

BU 02 (blue-collar supervisors): The current contract expires on June 30, 2021. The agreement was ratified by the Hawaii Government Employees Association ("HGEA") on October 24, 2019, providing for a $2,000 lump sum payment for all employees on July 1, 2019; across-the-board increases and/or step adjustments of 5.29% effective July 1, 2020; and an across-the-board increase of 1.20% effective January 1, 2021. The agreement also provides for adjustments to uniform allowances and meal allowances. Funding for the agreement was approved by the county councils and State legislature and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged on June 30, 2020. No negotiation meetings have been scheduled at this time.

BU 03 (white-collar workers): The current contract expires June 30, 2021. The agreement was ratified by HGEA on January 8, 2020, providing a $2,800 lump sum payment for all employees on July 1, 2019. The agreement also provides for a one-step adjustment for most employees or an equivalent lump sum payment for employees not eligible for the step movement on July 1, 2020. Also, on July 1, 2020, the lowest step on the salary schedule is being eliminated and the lowest five ranges of the salary schedule are to be increased 2% - 10.1%. Effective January 1, 2021, an across-the-board increase of 3.46% is provided. The agreement also provides for adjustments to standby pay and time off for certain instances of overtime worked. The agreement also provides for adjustments to uniform allowances and meal allowances. Funding for the agreement was approved by the county councils and State legislature and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged on June 30, 2020. No negotiation meetings have been scheduled at this time.

BU 04 (white-collar supervisors): The current contract expires June 30, 2021. The agreement was ratified by HGEA on March 3, 2020, providing a 5.98% lump sum payment for all employees on July 1, 2019. The agreement also provides for the elimination of the lowest step on the salary schedule and an across-the-board increase of 3.60% effective July 1, 2020. Effective January 1, 2021, an across-the-board increase of 3.74% is provided. The agreement also provides for adjustments to standby pay and time off for certain instances of overtime worked. Funding for the agreement was approved by the county councils and State legislature and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged on June 30, 2020. No negotiation meetings have been scheduled at this time.

BU 13 (professional and scientific employees): The current contract expires on June 30, 2021. An agreement was ratified by HGEA on October 11, 2019, providing for across-the-board increases of 2.15% effective July 1, 2019 and 2.03% effective July 1, 2020, step movements for eligible employees, and a $750 lump sum payment each year for employees not eligible for step movements during the contract. The agreement also provides for adjustments to standby pay, uniform allowances, meal allowances, and time off for certain instances of overtime worked. Funding for the agreement was approved by the county councils and State legislature and the Governor signed the funding bill for the State into law. Initial proposals for a successor agreement were exchanged on June 30, 2020. No negotiation meetings have been scheduled at this time.

The BWS continues to strive toward improving customer service and achieving greater operational efficiencies, responsiveness, and effectiveness. The BWS is committed to ensuring the sustainability of Oahu's water resources and its organization. Toward these ends, the BWS continues to establish a performance and accountability culture at all levels of the organization.

Reference is made to "FINANCIAL INFORMATION – Employee Benefits" herein for a discussion of health care benefits, pension benefits and other post-employment benefits for which BWS employees are eligible.

THE WATER SYSTEM

The Water System services 170,694 separate accounts and an estimated residential population of 980,080 on the island of Oahu. The service area is approximately 597 square miles. The customer base includes the residential population, businesses and industries, and agricultural users located in the supply area. Of the total accounts, 158,369 are residential (92.8%), representing 62.1% of the total amount received from water revenue in Fiscal Year 2020; 11,389 are commercial and industrial (6.7%), representing 37.1% of the total amount received from water revenue in Fiscal Year 2020; and 936 are agricultural (0.5%), representing 0.8% of the total amount received from water revenue in Fiscal Year 2020. The BWS's uncollectible accounts from operating revenues in Fiscal Year 2020 were $795,382 or approximately 0.3% of total operating revenues. All numbered tables provided herein have been compiled by the BWS unless otherwise stated.

General Description of Existing Systems

The City and County consists of the island of Oahu and waters adjacent thereto and a number of outlying islands. The island of Oahu is divided by the BWS into the following seven water use districts for administrative and planning purposes: Honolulu, Windward, Waialua-Kahuku, Wahiawa, Pearl Harbor, Ewa, and Waianae. The BWS is primarily a drinking water utility. Wastewater and stormwater are the responsibility of other departments within the City and County, the Departments of Environmental Services and Facilities Maintenance, respectively.

Water use district boundaries generally coincide with the boundaries of judicial districts. Additionally, under the State Water Code (HRS Chapter 174C), certain geographic areas, sometimes encompassing several water use districts and sometimes portions thereof, have been designated as "Water Management Areas" which requires management of ground water resources. Currently, all water use districts, except the Waianae water use district, fall within a designated Water Management Area.

Descriptions of the geographic areas of the water use districts are as follows:

Honolulu. The Honolulu water use district includes the coastal plain of southeastern Oahu upon which the City of Honolulu is located and stretches from Makapuu Point at its eastern extremity to the western boundary of the Moanalua drainage divide. Bounded on the north by the crest of the Koolau Range, the area comprises a total of 88 square miles. This area is coextensive with the Honolulu Judicial District and has been designated the Honolulu Water Management Area.

Windward. The Windward water use district, located along the east coast of Oahu, comprises 104 square miles and extends north from Makapuu Point to Malaekahana Stream at Laie. The northerly half of this district is characterized by rugged mountains, deep valleys, and a narrow coastal plain. The district has been designated the Windward Water Management Area.

Waialua-Kahuku. The Waialua-Kahuku water use district comprises 140 square miles of north-northwestern Oahu. Its ocean boundary traces an arc from the town of Kahuku north to Kahuku Point, then southwestward past Waimea Bay and Waialua Bay to Kaena Point. Its inland boundaries range from Malaekahana Valley and the crest of the Koolau Range in the east, along the boundary of the Waialua and Wahiawa Judicial Districts on the south, and westerly along the crest of the Waianae Range to Kaena Point. The Waialua Judicial District portion of this water use district has been designated the North Water Management Area.

Wahiawa. The Wahiawa water use district, located in central Oahu, is a 40 square mile landlocked rectangle, stretching west from the crest of the Koolau Range across the apex of the Schofield Plateau to the crest of the Waianae Range. The area has been designated the Central Water Management Area and is coextensive with the Wahiawa Judicial District.

Pearl Harbor. The Pearl Harbor water use district, in south-central Oahu, contains 105 square miles. The district extends from the crest of the Koolau Range westerly to Kunia Road and the shoreline of Pearl Harbor. It is bounded by the Wahiawa and Honolulu water use districts to the north and south. This district and the Ewa water use district together have been designated the Pearl Harbor Water Management Area.

Ewa. Located in the southwest quadrant of Oahu, the Ewa water use district covers an area of 69 square miles. Except for the southern slopes of the Waianae Range, which extend into the area, much of the land is gently sloping or nearly level. The Pearl Harbor and Ewa water use districts together have been designated the Pearl Harbor Water Management Area.

Waianae. The Waianae water use district, located on the west coast of Oahu, comprises 63 square miles and includes all of the area west of the crest of the Waianae Range to the sea coast. It terminates on the north at Kaena Point and includes Nanakuli Valley at its southernmost boundary. This area coincides with the Waianae Judicial District. This district is the only water use district that has not been designated a Water Management Area.

Description of Existing Facilities by Type

The Water System is comprised of source, storage, transmission, and distribution facilities for potable, non-potable, and recycled water.

Potable Water. The existing source facilities for potable water consist of 82 active potable water source stations with 196 source pumps. The current State-authorized permitted use of these facilities is 182.59 million gallons per day ("mgd"). The average pumpage, current permitted use, and pump capacity for each water use district for Fiscal Year 2020 are listed in the following table:

Table 1

Source Facilities
Fiscal Year 2020
(volumes in mgd)

Water Use District	Average Pumpage	Current Permitted Use	Pump Capacity
Honolulu	66.61	89.63	178.79
Windward	17.66	19.51	28.34
Pearl Harbor	38.29	56.27	136.84
Ewa	7.05	8.22	15.37
Waianae	3.84	0.00*	10.08
Wahiawa	3.02	4.27	14.62
Waialua-Kahuku	3.20	4.69	11.59
Total Oahu	139.67	182.59	395.63

* *Waianae has no permitted use because the district is not designated as a water management area.*

The existing potable water storage facilities, exclusive of dams and reservoirs, consist of 172 separate structures built principally of concrete and steel. The aggregate storage capacity is 201 million gallons.

The existing transmission and distribution facilities for potable water consist of approximately 2,114 miles of various types and sizes of water mains. Water main diameters vary from 4 inches to 42 inches and are either cast iron, ductile iron, concrete cylinder, polyvinyl chloride, asbestos cement, or polyethylene.

The existing booster pump stations for potable water consist of 87 pump stations with 192 booster pumps. There are also 13 granular activated carbon potable water treatment facilities at existing pump stations that treat more than 32 mgd.

Non-Potable and Recycled Water. The existing brackish non-potable water facilities consist of six sources, three storage facilities, and 14 miles of transmission and distribution mains ranging in diameter from 6 inches to 24 inches. The existing recycled water facilities consist of a reclamation facility at the Honouliuli Wastewater Treatment Plant (operated via a contract by Veolia Water North America), four storage facilities, and 45 miles of transmission and distribution mains ranging in diameter from 8 inches to 24 inches. In 2019-2020, the BWS expanded the recycled water treatment capacity of the Honouliuli Water Recycling Facility from 10 mgd to 12 mgd of R-1 irrigation supply. The addition of disk filters and energy efficient ultraviolet light disinfection has reduced power and chemical use. Further, with the addition of one more disk filter, the R-1 treatment capacity can be increased to 16 mgd. As the Ewa district grows, more R-1 supply will be made available for irrigation and on-site reuse preserving freshwater resources for drinking. Coupled with the 2 mgd of demineralized reverse osmosis (RO) supply for power plants and refineries, the BWS is providing affordable recycled water and reducing potable water use. The East Kapolei 215’ 3.0 MG R-1 reservoir is being designed to provide the first elevated R-1 reservoir for Ewa, which will provide sufficient volume and pressure for irrigation. When completed, the BWS expects R-1 water use to noticeably increase.

Number of Meters by Meter Size and Services by Class

The following two tables list historical information regarding the average number of meters and services of the Water System by meter size and class during Fiscal Years 2016 through 2020. As shown, the majority of the customers of the BWS’s water services were residential and used either a 5/8” or 3/4” meter size.

Table 2

Number of Meters by Meter Size
Fiscal Years 2016-2020

	Number of Meters				
Meter Size	**2016**	**2017**	**2018**	**2019**	**2020**
5/8"...	71,846	70,735	70,153	69,049	68,427
3/4"...	81,716	83,927	84,861	86,627	87,717
1"..	8,146	8,186	8,202	8,234	8,258
1-1/2"	3,249	3,269	3,280	3,291	3,301
2"	4,246	4,331	4,316	4,335	4,295
3"	471	477	478	468	468
4"	752	762	767	779	787
6"	841	864	880	909	934
8"	1,058	1,093	1,111	1,146	1,167
10"...	-	-	-	-	-
12"...	11	11	11	11	9
Total	172,336	173,655	174,059	174,849	175,363

Table 3

Number of Services by Customer Class
Fiscal Years 2016-2020

Customer Class	**2016**	**2017**	**2018**	**2019**	**2020**
Residential	156,802	157,128	157,591	157,986	158,369
Commercial/Industrial	11,290	11,340	11,365	11,415	11,389
Agricultural	924	925	930	928	936
Total	169,016	169,393	169,886	170,329	170,694

Table 4

Water Sales and Revenues by Customer Class
Fiscal Years 2016-2020

	2016	2017	2018	2019	2020
Water Sales (thousand gallons)					
Residential	27,194,012	26,562,451	26,568,411	26,231,973	26,495,208
Commercial	17,745,779	17,029,710	16,922,454	17,012,583	17,557,556
Industrial	3,317,485	3,117,211	2,948,688	3,386,715	3,010,469
Agricultural*	1,139,663	1,138,214	1,054,659	884,591	857,787
Total	49,396,940	47,847,586	47,494,212	47,515,862	47,921,020
Water Revenues					
Residential	$141,977,265	$139,435,485	$139,810,918	$137,863,583	$141,738,646
Commercial	84,011,758	81,856,358	81,913,044	81,576,287	78,603,592
Industrial	5,807,796	5,892,969	5,650,072	6,665,531	6,190,239
Agricultural*	2,357,120	2,349,425	2,140,887	1,814,757	1,774,146
Total	$234,153,939	$229,534,237	$229,514,922	$227,920,157	$228,306,623

* *Agriculture decrease due to non-renewals of Ag contracts and increased scrutiny of Ag qualifications resulting in fewer agreements.*

Rainfall Data

The table below lists the average annual rainfall for various areas served by the Water System.

Table 5

Rainfall Stations
Annual Rainfall (inches)
Calendar Years 2016-2020

Station	2016	2017	2018	2019	2020	10-Year Average (2011-2020)
Beretania Station	22	25	28	23	22	24
Haiku	81	72	118	57	54	78
Kaimuki Station	18	23	29	22	18	21
Upper Kalihi Valley	122	96	121	67	84	106
Kalihi Shaft	33	29	39	32	31	34
Wilder	27	29	37	24	24	29
Lower Luakaha	133	84	136	79	104	107
Moanalua	75	64	74	47	40	67
Nuuanu Pali	120	67	158	79	85	97
Nuuanu Reservoir No. 4	117	101	153	74	97	109
Nuuanu Reservoir No. 1	80	67	66	72	70	73
Pacific Heights	57	49	59	50	50	54
Palolo Valley	143	78	161	76	91	108
Pauoa Flats	79	128	195	125	56	131
Waihee Valley	74	84	113	72	54	82
Wilhelmina Rise	31	38	42	32	31	37
Total	1,216	1,031	1,526	931	910	1,157

Selected Statistics

Listed below is certain selected statistical information concerning the Water System.

Table 6

Selected Statistics of the Water System
Fiscal Years 2016-2020

	2016	2017	2018	2019	2020
Annual Pumpage (Gallons)	50,310,590,000	49,821,169,000	50,938,838,576	49,775,995,394	50,040,482,240
Peak Day Pumpage (Gallons) (Single Day)	169,520,000	154,680,000	165,288,308	160,709,715	160,440,366
Total Capacity of Well Pumping (Gallons Per Day)	386,446,200	386,446,200	384,559,200	395,632,800	395,632,800
Storage Capacity (Gallons)	196,526,000	196,526,000	196,526,000	195,526,000	200,526,000

Operation and Maintenance

The municipal Water System is integrated island-wide for system flexibility and redundancy. The BWS's two largest divisions, the Field Operations Division and Water Systems Operations Division, are dedicated to the operation and maintenance of the Water System. All pump stations, reservoirs, and treatment plants have supervisory and/or automatic float control with oversight from a 24/7 operational control center. Pump operations balance meeting maximum day and peak hour water demands, sustainable sources of supply and energy efficiency. Permanent and portable emergency generators are available if power outages occur.

The BWS performs routine preventive maintenance and provides trouble call response and emergency repair services for main breaks. To decrease the incidence of main breaks and leaks, the BWS has budgeted $62.4 million in the Repair and Replacement Capital Improvement Program for Fiscal Year 2021, for the replacement of high-risk transmission and distribution pipelines, as determined by the recent condition assessment to reduce risk defined as the consequence of failure and the likelihood of failure. In addition, the BWS has budgeted $47.4 million for Fiscal Year 2021 for the maintenance of existing pump stations, treatment plants, reservoirs, and support facilities. The American Water Infrastructure Act of 2018 (AWIA), Risk and Vulnerability Assessment identified additional facility improvements to increase the Water System's resilience and security that will be addressed through the annual Repair and Replacement Capital Improvement Program.

The leak detection staff continuously surveys the Water System for leaks to reduce water loss and preventative repairs are conducted before those leaks become a disruptive main break. The BWS is in the process of replacing the water meter transponders for all water meters in the system to ensure meter reads continue to be accurate and timely. Maintenance performance metrics exist for the regular servicing of fire hydrants, valves, meters and laterals, pumps, motor control centers, electrical and mechanical systems, telemetry, fleet maintenance, and other support facilities.

Water Loss Rate

The BWS has developed an infrastructure conservation program aimed at achieving resource sustainability by addressing non-revenue water loss (real and apparent) within the distribution system. Real losses refer to water lost from leaks and main breaks, while apparent losses come from meter inaccuracies. The program involves water auditing and water loss control which determines the amount of non-revenue water by water system. The WMP established a water loss performance metric that measures the percentage of water that is produced from potable sources, but not sold to a customer. The purpose of this metric is to track the amount of water lost from the system from leaks, main breaks, firefighting, hydrant and pipeline flushing operations and to evaluate the accuracy of source and revenue meter calibration, effectiveness of CIP pipeline replacement priorities to reduce main breaks and leak detection and repair operations.

A 2012 AWWA Benchmarking survey of water utilities listed a median non-revenue water of 8.2%. Because of inherent annual variations of source and metered consumption data, the WMP established a five-year average goal of <8%. The five-year non-revenue water loss for FY 2016-2020 was 11.49%, which is on an increasing trend. The following trend of water loss is provided for context:

5-Year Avg by FY	Potable Source Production Avg Day (mgd)	Potable Metered Consumption Avg Day(mgd)	Non-Revenue Water
2012-2016	139.70	128.83	7.78%
2013-2017	138.96	128.65	7.42%
2014-2018	138.49	126.67	8.54%
2015-2019	139.00	124.41	10.50%
2016-2020	137.85	122.01	11.49%

The BWS has undertaken several efforts to reverse the non-revenue water trend, which will take several years. In 2019, the BWS expanded its leak detection effectiveness through Utilis, an innovative zoning technology that utilizes satellite imagery that can detect leaking chlorinated water within 350-feet to efficiently use their correlator sounding and location equipment to locate leaks. Additionally, the BWS replacement of roughly 80,000 meter transponder units (MXU) in meter boxes will strengthen radio signals to increase drive-by meter reading accuracy and reduce the percentage of non-reads and estimated bills, resulting in more accurate and timely meter consumption data. The BWS will also be launching a new Customer Information System to improve the way customer information is calculated and support enhanced utility customer service processes. Lastly, the BWS will be funding a source meter calibration project to verify the accuracy of source production meters as a fundamental factor of the non-revenue water calculation.

State Water Use Authorization

The State Commission on Water Resource Management ("CWRM") established sustainable yields for Oahu's groundwater aquifers, whereby authorized uses and pumpage cannot be exceeded. Sustainable yield is defined by Chapter 174C, HRS, as the maximum rate at which water may be withdrawn from a source without impairing the utility or quality of the water source. State Water Use Authorization is a water resource management system that allocates water to various types of groundwater and surface water uses, such as municipal, agricultural, military and private uses. The authorized allocation or permitted use is based on average day demand and is the 12-month moving average production limit that cannot be exceeded for each water source. In 2019, the CWRM updated the State Water Resources Protection Plan, reducing the Oahu aquifer sustainable yields from 407 mgd to 393.5 mgd.

Of the 393.5 mgd of sustainable yield on Oahu, 283.92 mgd was permitted in 2020. The current authorized use for the BWS is 182.59 mgd and is sufficient to meet existing use and long-term growth on Oahu.

Water Quality

The Safe Drinking Water Act ("SDWA") is the principal federal law in the United States intended to ensure that the public has safe drinking water. The SDWA applies to all public water systems and requires the United States Environmental Protection Agency ("EPA") to set national standards for drinking water quality and enforce the implementation of those standards by all states. The standards consist of maximum limits for contaminants that may be found in drinking water and include specific monitoring, treatment, reporting, and enforcement requirements.

Public water system compliance with the national drinking water standards is administered primarily by states that have been given primary authority by the EPA to implement and enforce the SDWA within their jurisdictions. In Hawaii, the State Department of Health is the primary agency and the BWS is a public water system under the SDWA and State regulations.

Presently, the BWS complies with all federal and state drinking water regulations. Each year the BWS conducts more than 25,000 water quality tests on samples collected from its water sources, distribution system, and treatment facilities to ensure all water served is safe to drink. The BWS also monitors, assesses, and prepares for the impacts of proposed new regulations and keeps abreast of emerging contaminant issues of concern to its operations. Capital improvement projects, water treatment operations, design and construction of new water facilities are developed and implemented in consultation with the BWS's water quality division to ensure the BWS's compliance with the SDWA.

In January 2014, an estimated 27,000 gallons of jet fuel leaked from several small holes in an underground storage tank at the U.S. Navy's Red Hill Bulk Fuel Storage Facility. Following reports of the leak, the BWS found no signs of contamination in water wells at the nearby Halawa Shaft and Moanalua Wells, which provide about 25% of the drinking water for urban Honolulu. Laboratory tests conducted by the Navy indicate that drinking water from the Navy's Red Hill Shaft water source in the vicinity of the Red Hill tanks also meet SDWA and State standards. The State Legislature created a task force to study the effects of the release and to consider response strategies to mitigate the effects of any future leaks. The task force is required to report its findings and recommendations, including any proposed legislation, to the Legislature no later than 20 days before the beginning of each regular session of the State Legislature. The BWS continues to monitor the situation and will take action as appropriate.

On December 22, 2020, the EPA finalized its revisions to the Lead and Copper Rule (LCR) that were published in the Federal Register on January 15, 2021. The final rule is effective March 16, 2021 and requires compliance with the rule provisions by January 16, 2024. The rule requires testing water from and the replacement of lead service laterals ("LSL"). Galvanized laterals that is , or was at any time, downstream of a lead service line or currently downstream of a lateral of unknown material will require replacement. The rule requires water utilities to prepare an inventory of all service lines connected to the water system regardless of ownership; prepare and implement an LSL replacement and funding plan; conduct tap water sampling from residential and commercial properties with LSLs, and test water samples from schools and childcare facilities every five years. These requirements are expected to cause significant changes to the BWS's capital improvement, Water System operation, and water testing programs through the replacement and funding of galvanized laterals on the utility and customer side of the meter.

Presently, the BWS Water System has about 170,268 service connections. Of this number, the BWS estimates having 8,321 service laterals of unknown materials and 4,061 galvanized material service laterals. On Oahu, there are approximately 164 public schools (K-12), 51 private schools (K-12), and over 200 licensed childcare facilities. The BWS began a project to prepare its LSL inventory, develop a LSL replacement plan, and develop a testing plan for residential and commercial properties, including schools and day care facilities.

Water Conservation

The BWS has implemented a water conservation program that addresses the following five areas: (1) nonpotable water and alternate sources of water; (2) legislation, rules, and rates; (3) water audits, leak elimination, and technical services; (4) education and behavior modification; and (5) water conservation incentive programs. Since Fiscal Year 1990, when the BWS accelerated its emphasis on water conservation, the water conservation program has resulted in a decrease of 17.6% in the per capita consumption from 188 gallons per capita per day ("gpcd") in 1990 to 155 gpcd in 2020. The per capita demand factor will be recalculated once the 2020 census data on population is released.

Evaluation of Water System

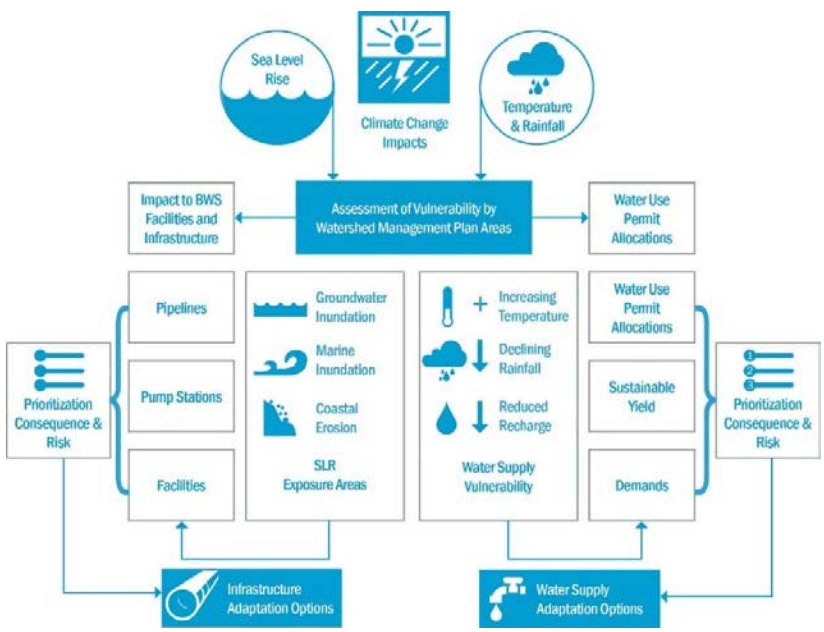
Following a comprehensive evaluation and outreach process, the BWS adopted the Water Master Plan in October 2016. This effort integrated multiple elements in formulating the plan recommendations, including consistency with the watershed management plans and development of strategies to ensure long-term sustainability in the face of growth, climate change, and other challenges. A thorough condition assessment of the BWS's infrastructure was performed along with hydraulic modeling for the entire Water System. The WMP (as defined herein), along with the 30-Year Infrastructure Investment Plan and Long-Range Financial Plan, provides the basis for identifying and prioritizing capital improvement projects and a sustainable financial program.

Climate Change and Natural Disasters

Utilities face unpredictable climate-related risks to their water supplies and infrastructure. Long-range water resource planning must account for a changing climate, in addition to historical weather patterns and population growth, to realistically plan for the future.

The State and the City and County have made considerable progress over the last several years planning and preparing for climate change mitigation, resilience, and adaptation. The BWS has been an active participant in these efforts. In 2016, the BWS adopted its Water Master Plan (WMP), a 30-year infrastructure and capital improvement program that evaluated the entire Water System in light of climate change, identified necessary improvements, and proposed contingency planning to address uncertainties. In 2018, the BWS adopted its Long-Range Financial Plan, which includes 10- and 30-year financial plans and strategies intended (among other objectives) to mitigate and manage the potential financial impacts of climate change on the BWS.

In 2019, the BWS and the Water Research Foundation undertook a vulnerability assessment to identify and mitigate climate change risks to: (1) water supply from forecasted temperature and precipitation changes, (2) groundwater quality from projected sea level rise, and (3) coastal Water System infrastructure from projected sea level rise. The study evaluated potential climate change impacts on current estimates of groundwater sustainable yield (the primary source of the BWS's water supply) and pipeline infrastructure assets, and identified a suite of strategies to address the anticipated changes.



Based on the most probable water demand projections through 2040 noted in the WMP, groundwater supplies would be available even during drought conditions. If growth proceeds in line with the high-demand projections noted in the WMP through 2040, however, existing groundwater supply during drought conditions may be limited, requiring more aggressive water conservation and the development of alternative sources, such as recycled water and desalination. This limitation does not account for climate change impacts and any potential reduction in sustainable yields. The current estimate of sustainable yield for Oahu is 393.5 mgd. Based on potential changes in rainfall and recharge, the projected low estimate of island-wide sustainable yield was 300.4 mgd. When compared against this lower estimate of sustainable yield, current island-wide WMP allocations totaling 276.5 mgd, inclusive of the BWS's permitted use, are still below the projected low estimate of 300.4 mgd.

The vulnerability assessment found that none of the BWS's groundwater wells, treatment systems, or pump stations are located within the sea level rise exposure area boundaries evaluated in this project. Of the pipeline infrastructure in the sea level rise exposure areas, approximately 0.1 percent was expected to be inundated at high tide by mid-century (from approximately 1 foot of sea level rise), and approximately 1 percent was expected to be inundated by 2100, or sooner (from approximately 3.2 feet of sea level rise). If sea levels continue to rise to 6 feet, the magnitude of infrastructure impacted will increase greatly.

The BWS was instrumental in new City climate change adaptation legislation in support of the City and County's Office of Climate Change, Sustainability and Resiliency. Adopted in December 2020, Chapter 2, Revised Ordinances of Honolulu now mandates discrete programs on energy, coastal and water, climate resilience and equity, food security and sustainability, zero waste, pre-disaster multi-hazard mitigation, long term disaster recovery, climate action and climate change adaptation. The climate change adaptation section is based on the One Water concept (integrated water resources of freshwater, stormwater, wastewater, recycled water, etc.) institutionalizing collaboration among city agencies and others, for example, to prioritize coastal infrastructure and elevate streets and private developments to adapt to forecasted sea level rise. Many progressive cities are embracing the One Water integrated resources framework, but this ordinance is the first in the nation to institutionalize collaboration for climate resilience because climate change adaptation is such a significant challenge that no one agency or entity can address alone. Only by working together and in manageable directed increments over the next several decades can Honolulu affordably adapt to sea level rise where nuisance flooding will become an issue by mid-century.

The BWS has completed the development of a risk and vulnerability assessment of each Water System and an update of its Emergency Response Plans in accordance with the American Water Infrastructure Act of 2018, ("AWIA"). The AWIA vulnerability assessment evaluated and prioritized strengths and threats to the entire Water System (aquifers, shafts, tunnels, wells & pumps, pumps, pipelines, reservoirs, GAC treatment, meters and services, hydrants, non-potable system), electrical and communications systems (business enterprise, financial system, process control, security systems), use, storage, and handling of chemicals, monitoring practices, financial infrastructure (financial programs and virtual network) operations and maintenance (base yards, Water System operations, field operations) including critical staffing and succession plans. The emergency response plans evaluated natural and man-made disasters, pandemics, climate change and sea level rise, cyber-attack and contamination. The vulnerability assessment found that the BWS's existing infrastructure has significant resilience components already built in. Additional risk management and resiliency goals and objectives were identified and programmed for mitigation and enhancement.

Security Measures

The BWS's emergency response plan was updated in September 2020 in compliance with AWIA. The BWS continues to review enhancements to harden its facilities. For example, the BWS budgeted $3.6 million for security fencing projects in Fiscal Year 2021. The BWS maintains 24-hour guard service at the two largest staffed facilities and spends over $2 million annually to regularly inspect and ensure its 300 plus facilities are secure.

Cybersecurity

As a semi-autonomous agency of the City and County within the National Critical Infrastructure, Water and Wastewater Systems Sector (as designated by the U.S. Department of Homeland Security), the BWS is bound by national policy to strengthen and maintain secure, functioning, and resilient systems. This includes ensuring cybersecurity actions are appropriate to support this policy. Furthermore, as a recipient and provider of personal, private, or sensitive information, cybersecurity incidents could result in adverse impacts to both its Information Technology systems (IT), as well as Operational Technology systems (OT), requiring timely response and remediation to mitigate consequences.

Cybersecurity incidents could result from unintentional actions or from targeted and deliberate attacks by individuals, entities or nation state actors attempting to gain access to BWS IT/OT, intent on disrupting operations, damaging assets, or impacting the BWS or customer finances. The attacks are often due to attempts at hacking, phishing, viruses, malware, social engineering, and even staff complacency.

To mitigate the risks to BWS IT/OT systems and operations, and the data contained within, the BWS invests in a layered cybersecurity defense program that includes technical toolsets, education and staff awareness, proactive threat monitoring, and appropriate policies. Additionally, in this layered cybersecurity defense posture is the inclusion of a cyber insurance policy encompassing first party costs of mitigation and loss due to business interruption, data recovery and/or cyber extortion, as well as third party loss resulting from claims due to an incident.

CAPITAL IMPROVEMENT PROGRAM

In October 2016, the BWS adopted the WMP and a 30-year IIP that evaluated the entire Water System, identifies necessary improvements and balances needs with costs of providing water to the BWS's customers. Based on the strategic initiatives, risk and condition assessments, and growth projections of the WMP, the BWS has proposed a five-year capital improvement program for Fiscal Years 2021 through 2025 to meet future user needs, comply with water quality regulations which are expected to take effect in the next several years, and provide adequate reliability of service to the Water System's users. The BWS regularly updates its capital improvement program as projects are implemented, based on the objectives and performance metrics and 30-year project priority listing adopted in the WMP, typically in December of each year, which will cause the figures presented in this discussion to change over time. The following discussion presents certain summary information regarding the BWS's capital improvement program.

The capital improvement program for Fiscal Years 2021 through 2025 is estimated to cost approximately $924 million, with adjustments. The new projects include approximately $365 million of pipeline projects and approximately $427 million in facilities projects and the adjustments are approximately $132 million, as set forth on the following table:

Table 7

Capital Improvement Program
New Projects Funded
Fiscal Years 2021-2025
(Dollars in Thousands)

Project Description	2021	2022	2023	2024	2025	Total
Potable Water Projects						
General*	$ 30,400	$ 21,470	$ 19,210	$ 20,725	$ 20,160	$111,965
Source	17,760	45,190	40,160	44,155	26,095	173,360
Storage	39,900	4,800	0	9,725	3,820	58,245
Transmission	75,175	57,175	66,370	71,755	94,235	364,710
Treatment	1,500	3,800	2,000	2,740	17,480	27,520
Subtotal	$164,735	$132,435	$127,740	$149,100	$161,790	$735,800
Non-Potable Water Projects	--	--	--	--	--	--
Recycled Water Projects	800	18,000	18,000	19,600	--	56,400
Total Estimated Costs	$165,535	$150,435	$145,740	$168,700	$161,790	$792,200
Construction Cost Index Adjustment	14,803	12,103	12,454	14,027	17,210	70,596
Contract Adjustment Account	17,300	11,000	11,000	11,000	11,000	61,300
Total (with Adjustments)	$197,638	$173,538	$169,194	$193,727	$190,000	$924,096

* *Includes research and development projects (e.g., monitoring wells, construction and project management, and master planning), facilities repair and replacement projects (e.g., transponder replacement, security fencing, slope stabilization, dam improvements, and building renovations), and facilities capital expenditures (e.g., desalination facility, xeriscape garden improvements, and building and parking structure).*

In addition to these new projects, the capital improvement program includes an additional $246.4 million of projects already in progress that are scheduled for completion during this five-year period, for a total of approximately $1.17 billion.

Based on the construction and payment cycles for the BWS's projects (typically, a four-year cycle), it is anticipated that a portion of the projects commenced during the Fiscal Year 2021-2025 period will not be fully completed during the period. As a result, it is expected that capital expenditures for the new and ongoing projects will total approximately $928 million during this period. The remaining project costs will be paid in subsequent years as the work on continuing projects proceeds to completion. The following table presents the BWS's anticipated capital improvement program expenditures over the five-year period.

Table 8

Capital Improvement Program
Projected Expenditures
Fiscal Years 2021-2025
(Dollars in Thousands)

Fiscal Year	Program Expenditures
2021	$162,540
2022	180,316
2023	193,831
2024	190,550
2025	200,805
Total:	$928,042

The costs associated with the new and ongoing projects will be funded by a combination of sources, including operating revenues, Water System revenue bonds, State revolving fund loans, and Water System Facilities Charges. The Debt and Working Capital Management Policies of the BWS adopted in 2017 target a Debt to Net Asset Ratio of no more than 50%.

The BWS has approved rate increases for Fiscal Years 2019-2023 to pay the principal of and interest on Bonds issued to finance the capital improvement program, to provide funds for operating, maintenance, and capital requirements, and to perform all acts required pursuant to the covenants in the Resolution. See "FINANCIAL INFORMATION—Rates and Charges" and "—Historical and Projected Revenues, Expenses and Debt Service Coverage" herein.

FINANCIAL INFORMATION

Major Users

The ten largest users served by the Water System, in terms of annual billings for the Fiscal Year ended June 30, 2020, are set forth in the table below. The BWS has not experienced any significant increases in delinquency rates with these customers or with its entire population of customers as a result of COVID-19.

Table 9

Ten Largest Users
(as of June 30, 2020)

Name of User	Estimated Revenues	% of Total Revenues	Annual Water Sales (1,000s gals.)	% of Total Water Sales
State of Hawaii	$ 12,403,760	5.43%	3,345,263	6.98%
City & County of Honolulu	13,383,641	5.86	2,634,668	5.50
United States Government	6,013,903	2.63	1,180,043	2.46
Hilton Hotels Corporation	1,535,870	0.67	305,677	0.64
Par Hawaii	1,094,753	0.48	241,971	0.50
GGP Ala Moana LLC	840,770	0.37	166,454	0.35
Marriott Resorts & Spas	758,626	0.33	164,332	0.34
Hawaii Cement	569,250	0.25	161,320	0.34
Kalaeloa Partners LP	897,304	0.39	152,269	0.32
Tesoro Hawaii	768,413	0.34	132,144	0.28
Total	$38,266,290	16.76%	8,484,441	17.71%

Rates and Charges

The BWS is budgeted as a self-sustaining enterprise fund for the purpose of determining costs associated with providing water services. Through the adoption of the annual operating budget process, the revenue requirements and water rates are reviewed to determine the adequacy of revenues. The BWS has the power to fix and adjust reasonable rates and charges for the furnishing of water and for water services so that the revenues derived therefrom are sufficient to make the Water System self-supporting. Rates and charges are determined on the basis of a recommendation by the Manager, subject to approval by the Board. Such rates are not subject to regulation by any governmental body or authority, including the City and County. See also "FINANCIAL INFORMATION—Recent Legislation and Legislative Proposals" herein.

The BWS completed a Cost of Service Study in July 2017 and a Long-Range Financial Plan in February 2018. Twenty-seven meetings of the Stakeholder Advisory Group were held to solicit feedback and gather input on the proposed changes to the water rates and charges. Five public hearings were held and testimony presented at the hearings and received in writing on the proposed revisions were given due consideration. These served as the basis for the Revision to the Schedule of Rates and Charges for the Furnishing of Water and Water Service, approved by the Board on August 27, 2018. This schedule is effective from September 10, 2018 through June 30, 2023, with rate increases of 2.0% in each of Fiscal Years 2020 and 2021 and 4.0% in each of Fiscal Years 2022 and 2023. This schedule adjusted the water rates to better align revenue with the costs to serve different customer classes, to incentivize efficient use of water, to provide affordable water to meet essential household needs, to support local agriculture, and to encourage the use of recycled and non-potable water resources. A Cost of Service Study is currently planned for Fiscal Year 2022, in anticipation of a revised Schedule of Rates and Charges to be effective from Fiscal Year 2024 to Fiscal Year 2028.

In addition, when total electricity costs to the BWS exceed the amount used in calculating the annual schedule of rates and charges, then the quantity charge may be increased $0.01 per 1,000 gallons for every $500,000 incremental overage, or any fraction thereof, in the following fiscal year rate. The quantity charge also may be increased $0.01 per 1,000 gallons for each $500,000 or fraction thereof of additional costs that the BWS is required to incur to comply with any federal or state environmental law or regulation. These adjustment factors are included in the BWS's schedule of rates and charges for Fiscal Years 2019 through 2023.

In support of ongoing efforts to provide affordable and homeless housing, the BWS may waive the Water System Facilities Charges and new meter costs for qualified on-site affordable and homeless dwelling units, up to 500 units per year. This waiver provision shall expire on June 30, 2023.

Current Rate Schedules

The following table describes the base rates in effect as of July 1, 2020 (effective through June 30, 2021) and the increased rates that will become effective on July 1, 2021. See "Rates and Charges" above for a discussion of the rate increases adopted by the BWS for the period from September 10, 2018 through June 30, 2023.

Table 10

Rate Schedules

	Currently Effective	Effective July 1, 2021
Billing Charge		
Based on meter size: Ranges from $10.42 (5/8" meter) to $541.31 (12" meter)	$10.80 to $560.18	$11.38 to $576.78
Quantity Charge		
Charge for all water drawn for each 1,000 gallons, effective as follows:		
Single Family Residential		
Monthly Charge Per Unit		
Essential needs First 2,000 gallons or any part thereof	3.91	4.17
Block 1 (Gallons) 2,001 to 6,000 or any part thereof	4.60	4.90
Block 2 (Gallons) 6,001 to 30,000 or any part thereof	5.20	5.50
Block 3 (Gallons) more than 30,000	8.60	8.90
Multi-Family Residential		
Monthly Charge per Unit		
Essential needs First 2,000 gallons or any part thereof	3.71	3.72
Block 1 (Gallons) 2,001 to 4,000 or any part thereof	4.36	4.38
Block 2 (Gallons) 4,001 to 10,000 or any part thereof	4.96	4.98
Block 3 (Gallons) more than 10,000	5.91	5.93
Non-Residential All usage	5.06	5.16
Agricultural		
Monthly Charge Per Unit		
Essential needs First 2,000 gallons or any part thereof	3.91	4.17
Block 1 (Gallons) 2,001 to 6,000 or any part thereof	4.60	4.90
Block 2 (Gallons) more than 6,000	1.98	2.05
Non-Potable All usage	2.62	2.75

Billing and Collection Practices

Customers pay a fixed billing charge each time a bill is rendered as well as quantity charges for the BWS's water services. Under the current rate schedule, residential customers are billed under an inverted block rate structure in which the quantity charge per 1,000 gallons increases as consumption moves through each of three usage blocks. Non-residential and non-potable customers are billed under a uniform rate structure. Agricultural customers are billed under a declining block rate structure.

Charges are billed to the consumer and are the responsibility of the consumer. The BWS performs all meter reading services in connection with the Water System. Meters are read and bills rendered monthly. Payment is delinquent if not made within 30 days after presentation of the bill to the consumer. Water service may be discontinued on delinquent accounts upon at least five business days' written notice to the consumer.

The BWS has a memorandum of understanding with the Department of Environmental Services to provide wastewater billing services.

Collections

The BWS's uncollectible accounts from operating revenues for the past five fiscal years, together with such accounts' percentage of total operating revenues, are reflected in the following table:

Table 11

Aggregate Dollar Amount of Uncollectible Accounts
Fiscal Years 2016-2020

Fiscal Year	Aggregate Dollar Amount of Uncollectible Accounts	Percentage of Total Operating Revenues
2016	$486,856	0.20%
2017	505,113	0.22
2018	463,343	0.20
2019	472,481	0.21
2020	795,382	0.34

Water Rates in the Four Counties

The following table shows the average monthly residential water bills in the four counties in the State based on rates in effect as of July 1, 2020. No conclusions regarding operations in a particular community or comparisons between communities should be drawn from such table.

Table 12

Average Residential Monthly Water Bills
in the Four Counties of the State

Kauai County	$61.95
Hawaii County	51.95
Maui County	45.65
City and County of Honolulu	52.62

Note: Assumes monthly consumption of 9,000 gallons.

Other Charges

Water System Facilities Charges are levied against all new developments requiring water supplies from the Water System or additional water supplies from existing water services except those where the developer installs, at its own cost, a complete water system including source, transmission, and daily storage facilities. Developers pay the Water System Facilities Charges before water services are made available to the developments. Such Water System Facilities Charges are deposited in the Special Expendable Fund and do not constitute Revenues subject to the pledge of the Resolution.

The following table sets forth a breakdown of Water System Facilities Charges levied against all new developments for the last five Fiscal Years.

Table 13

Breakdown of Water System Facilities Charges
Fiscal Years 2016-2020

Fiscal Year	Resource	Transmission	Storage	Total
2016	$5,527,000	$2,620,000	$4,489,000	$12,636,000
2017	5,649,000	2,666,000	4,759,000	13,074,000
2018	4,206,000	1,967,000	3,015,000	9,188,000
2019	2,783,540	1,313,586	2,330,572	6,427,698
2020	4,656,479	2,186,422	3,540,432	10,383,333

Water System Facilities Charges are levied for the following:

a. All additional fixture units. Credit is given for the fixture units removed based upon applicable use categories.

b. Additional buildings and/or units to be connected to existing services where additional demands or supplies are indicated. The charges are based upon all additional fixture units required and upon the established schedule of charges for the respective categories.

c. Changes in service categories such as from residential to commercial or industrial activities. Water system Facilities Charge credits may be given to new applicants for installation of ordered-off meters based on categories for which these meters were formerly used, provided that the water services were ordered-off (terminated) less than five years previously.

d. All services ordered-off for more than five years.

e. All irrigation services.

Water System Facilities Charges are not levied for the following:

a. Temporary construction meter service for contractors.

b. Services used exclusively for fire protection purposes.

c. Transfer of services.

d. Order-ons (commencement) of services where use categories and water demands remain the same, provided that the water services were ordered-off less than five years previously.

e. Segregation of services. Segregation means the installation of separate meters with no increase in water demand.

The BWS may negotiate Water System Facilities Charge agreements other than those above, if the BWS determines that the schedule of charges is inappropriate.

A Standby Charge will be negotiated by the Manager with private water systems contracting for inter-connection service. Such service shall be provided only for emergency or unscheduled service outages or supply reductions with the intent to protect against interrupted water service supporting normal private system requirements. Water drawn shall be charged at the applicable quantity rate for each thousand gallons or portion thereof.

Consumers may be assessed an On-Site Distribution Tariff for BWS maintenance of property piping if they elect to have the BWS provide such service. Maintenance shall be limited to repair and renewal of "after the meter" service appurtenances eligible for coverage.

Outstanding Debt

As of December 31, 2020, the Outstanding Bonds under the Resolution consisted of $85,195,000 of Series 2012A Bonds issued March 29, 2012, of which $22,795,000 remain outstanding, $144,985,000 of Series 2014A Bonds and Series 2014B Bonds, of which $121,950,000 remain outstanding, and $106,635,000 of Series 2020A Bonds and Series 2020B Bonds, of which $105,835,000 remain outstanding. The aggregate outstanding amount of Bonds issued under the Resolution as of December 31, 2020 was $250,580,000.

All previously issued general obligation bonds of the City and County which were reimbursable from revenues of the Water System have been paid or defeased, and all previously issued revenue bonds of the BWS, other than the Bonds currently outstanding under the Resolution, have been refunded and defeased. Except for approximately $110,827,638 of outstanding State revolving fund loans as of December 31, 2020, incurred as Subordinate Obligations, and approximately $773,318 of outstanding notes payable to other lenders, no other outstanding debt has been issued for purposes of the Water System. Interest rates are fixed for all of the BWS's outstanding debt and the BWS has no exposure to any auction rate, derivative or structured investments. The BWS currently has no outstanding private or direct placements or bank debt secured by revenues of the Water System.

The Resolution provides, as a condition to the incurrence of Subordinate Obligations (including State revolving fund loans), that the resolution, indenture or governing instrument for such Subordinate Obligations must contain a provision to the effect that, in the absence of bankruptcy, insolvency, or other similar proceedings with respect to the BWS or its property, if such Subordinate Obligations are declared due and payable prior to maturity as a result of an event of default or otherwise, the holders of Outstanding Bonds issued under the Resolution would be entitled to receive payment in full of all principal and interest on their Bonds before the holders of the Subordinate Obligations would be entitled to receive any accelerated payment of principal or interest on such Subordinate Obligations from the Net Revenues or any funds held under the Resolution. Resolution 741,2004 of the Board, which provides for the incurrence of State revolving fund loans as Subordinate Obligations, contains such a provision. The approximately $110,827,638 of outstanding State revolving fund loans referenced above are the only Subordinate Obligations currently outstanding.

Lease Obligations

The BWS has entered into a Space Lease dated as of September 16, 2005 with the University of Hawaii to operate and maintain a seawater cooling system for the provision of chilled water service to the University's John A. Burns School of Medicine and other customers. The term of the lease is 20 years, with the option to extend the lease for two additional periods of five years each. The BWS's annual rent obligation under the lease is $158,556. The BWS has no other capital lease obligations.

Employee Benefits

Set forth below is certain information regarding health care benefits, pension benefits, and other post-employment benefits for which BWS employees are eligible. The information included under the captions "Pensions" and "Other Post-Employment Benefits" below relies on information produced by the Employees' Retirement System of the State (the "System" or "ERS") and the Hawaii Employer-Union Health Benefits Trust Fund (the "Trust Fund" or "EUTF"), respectively. Actuarial assessments are "forward-looking" information that reflect the respective judgments of the fiduciaries of the System and the Trust Fund. Such actuarial assessments are based upon a variety of assumptions, one or more of which may prove to be inaccurate or be changed in the future, and will change with the future experiences of the System and the Trust Fund.

The Trust Fund operates as an agent multiple-employer plan, meaning separate accounts are maintained for each employer. Although assets are pooled for investment purposes, the contributions of each employer, such as the

BWS, may provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each employer to determine that employer's contribution rate.

The System, on the other hand, operates under a cost-sharing arrangement. The System's assets are used to pay benefits to retirees of any employer.

The COVID-19 pandemic has also had a negative impact on the national and international economy and has thrown U.S. and international financial markets into a downturn that could lead to a global recession. The impact of coronavirus on the financial markets may have a material adverse effect on the assets of ERS and EUTF. It is possible that a reduction in the value of these assets would have the effect of requiring an increase to the State's actuarially recommended contributions to these employee benefit plans in future years.

Health Care Benefits

All regular employees of the BWS are eligible for coverage under health plans provided through the Trust Fund, which was established in 2003 to design, provide, and administer health and other benefit plans for State and county employees, retirees, and their dependents. The Trust Fund is administered by a ten-member Board of Trustees (the "Trustees") appointed by the Governor comprised of five union representatives and five management representatives. The Trustees are responsible for determining the nature and scope of health plans offered by the Trust Fund, negotiating and entering into contracts with insurance carriers, ruling on eligibility and establishing management policies for the Trust Fund, and overseeing Trust Fund activities. The Trust Fund currently provides medical, prescription drug, dental, vision, chiropractic, and group life benefits. Benefits with respect to regular employees are funded by a combination of employer contributions set by collective bargaining agreement or by executive order (with respect to non-union employees) and employee contributions through payroll deductions. Benefits for retirees are funded by a statutory formula.

In recent years, public and private health plan providers nationwide and in Hawaii, including the Trust Fund, have experienced substantial increases in health care costs. In the case of the Trust Fund, the current fiscal situation faced by the State and county employers has made it extremely difficult for the employers to increase employer contributions for health benefits in order to maintain the historical employer-employee contribution ratio. In the past, the BWS has attempted to mitigate health plan rate increases by modifying benefits, and employees have been required to bear a larger share of the increased rates. The BWS cannot predict what actions will be taken (including changes to future plan benefits or employer-employee contribution rates) to address the impact of rising health care costs on the Trust Fund or what financial effects such changes may have on the BWS.

Other Post-Employment Benefits

Beginning with the fiscal year ending June 30, 2008, state and local governments are required to account for and report other post-employment benefits ("OPEBs") under Statement No. 45 ("GASB 45") issued by the GASB. OPEBs consist of certain health and life insurance benefits provided through the Trust Fund to retired State and county employees and their dependents, including retired BWS employees and their dependents. Beginning in Fiscal Year 2015, employer contributions to the Trust Fund for these benefits are determined by the Trust Fund based on an actuarial analysis of the amounts required to prefund the retiree benefits. The Trust Fund operates as an agent multiple-employer defined benefit plan; liabilities and contribution requirements are measured for each participating government employer and the assets of each employer are held in separate accounts, although pooled for investment purposes.

The following table describes the number of retired and active BWS employees receiving OPEBs at July 1, 2019 and July 1, 2020:

Table 14

Retiree Health Care Plan Membership

Category	July 1, 2019	July 1, 2020
Retirees	582	578
Deferred Inactives	54	55
Actives	579	570

Since July 1, 2017, the Trust Fund has been required to complete annual actuarial studies of the OPEB obligations of the State and each of the four counties. In the most recent actuarial valuation report as of July 1, 2019 ("2019 Valuation Report"), the Trust Fund's actuarial consultant calculated the Annual Required Contributions for the fiscal years ending June 30, 2021 and 2022 and provided an estimate of the actuarial accrued OPEB liabilities under GASB 45 for each participating employer. The BWS's actuarial accrued liability was estimated to be $161.4 million, its unfunded actuarial accrued liability was estimated to be $74.4 million, with a funded ratio of 53.9%. The actuarial calculations for the BWS assumed full prefunding of its obligation and a discount rate of 7%.

The BWS reported a net OPEB unfunded actuarial accrued liability of $74.4 million as of July 1, 2019, compared with $73.2 million as of July 1, 2018. Based on this valuation, the BWS's consulting actuary determined the BWS's annual required contribution ("ARC") is estimated to be approximately $8.5 million for fiscal year 2021 and $8.9 million for fiscal year 2022 with full prefunding, compared to $8.2 million for fiscal year 2020. The BWS's annual OPEB ARC was $8.9 million for fiscal year 2019 and $8.5 million for fiscal year 2018.

Transfers to the Trust Fund to prefund the BWS's OPEB obligations are determined on a year-by-year basis. For fiscal years 2015-2019, the BWS transferred the following respective amounts to the Trust Fund for this purpose: $10.8 million, $11.7 million, $11.7 million, $8.9 million, and $7.9 million.

Act 268, Session Laws of Hawaii 2013, requires the Trust Fund to establish and administer a separate trust fund account for each public employer for the purpose of receiving irrevocable employer contributions to prefund OPEB benefit costs. The BWS's previous pre-funding contributions and related net investment earnings were transferred to its OPEB Trust account. Act 268 requires all public employers within the State to contribute annually to the Trust Fund the full amount of their actuarially-determined contributions beginning in fiscal year 2019, and obligates the State finance director to use the transient accommodations tax and other revenues collected by the State on behalf of a county to supplement deficient county contributions. The Act's full-funding requirement was phased in over a five-year period, with employers required to contribute 20% of their actuarially-determined contributions in fiscal year 2015, 40% in fiscal year 2016, 60% in fiscal year 2017, 80% in fiscal year 2018 and 100% in fiscal year 2019. The Trust actuary determines the contributions required under Act 268 by first establishing the amount of the full actuarially-determined Annual Required Contribution ("ARC'), then deducting the amount estimated to be paid by the employer to cover pay-as-you-go benefits, then applying the required payment percentage (e.g. 80% for FY 2018) to the remaining portion of the full ARC.

The following table shows the BWS's ARC, actual contributions, and contribution requirements of Act 268 for Fiscal Years 2012 to 2020.

Table 15

History of OPEB Contributions
(Dollars in Thousands)

Fiscal Year	OPEB ARC	Benefit Payment (Pay-Go)	EUTF Trust Deposit	Total BWS Contribution	% of ARC Paid	Act 268 Minimum Percentage	Act 268 Minimum Contribution[1]
2012	$10,750	$5,211	$5,539	$10,719	99.7%	N/A	N/A
2013	8,674	5,620	6,054	12,733	147	N/A	N/A
2014	8,977	6,046	2,935	11,983	133	N/A	N/A
2015	8,528	5,278	3,250	10,750	126	20%	$ 650
2016	8,826	5,711	3,115	11,729	133	40	1,246
2017	8,181	6,276	1,905	11,725	143	60	1,143
2018	8,467	6,801	1,666	8,855	105	80	1,333
2019	7,945	N/A	N/A	7,945	100	100	7,945
2020	8,165	N/A	N/A	8,165	100	100	8,165

(1) *During the phase-in years (FY15-FY18), the Act 268 OPEB trust phase-in contributions are based on the difference between ARC and the projected benefit costs. Beginning in FY19 the employer pays the entire ARC.*

The following table sets forth the OPEB funding progress for the BWS since FY 2009:

Table 16

OPEB Funding Progress
(Dollars in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
July 1, 2009	$ 5,244	$143,333	$138,089	3.7%	$33,104	417.1%
July 1, 2011	14,557	127,154	112,597	11.4	29,900	376.6
July 1, 2013	25,638	122,886	97,248	20.9	31,677	307.0
July 1, 2015	50,689	137,018	86,329	37.0	34,218	252.3
July 1, 2017	71,668	146,390	74,722	49.0	37,138	201.2
July 1, 2018	79,800	153,015	73,215	52.2	37,500	194.8
July 1, 2019	87,001	161,438	74,427	53.9	39.569	188.1

The OPEB ARC, actuarial accrued liability, and unfunded actuarial accrued liability are provided by the Trust Fund's actuary, measured in the 2019 Valuation Report. Significant actuarial methods and assumptions utilized in the 2019 Valuation Report are as follows:

Amortization method	Level percentage, closed
Equivalent single amortization period	17.2 years
Asset valuation method	Smoothed
Actuarial assumptions	
Inflation rate	2.50%
Investment rate of return	7.00%
Projected salary increase	3.50%
Healthcare inflation rates	
PPO	8.00% initial, declining to 4.86% after 12 years
HMO	8.00% initial, declining to 4.86% after 12 years
Dental	5.00% for the first 2 years; then 4.00% for all future years

Vision	0.00% for the first 2 years; then 2.50% for all future years
Medicare Part B	5.00% initial, declining to 4.70% after 11 years
Life Insurance	0.00%

In June 2015, GASB approved new accounting and financial reporting standards for state and local government OPEB. Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74) applies to OPEB plans. Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75) applies to state and local employers that sponsor OPEB. Generally, the new OPEB standards parallel those applied to defined-benefit pension plans and participating employers by GASB 67 and 68, respectively. The new standards introduce new procedures for measuring OPEB liabilities and costs, require employers to report a net OPEB liability on their financial statements, and require more extensive disclosure in plan and employer financial statements. GASB 74 will be effective for plans with fiscal years beginning after June 15, 2016. The Trust Fund has implemented GASB 75 for fiscal years beginning July 1, 2016, and July 1, 2017, and has prepared its GASB 75 report for the fiscal year ended June 30, 2018. The BWS implemented Statement 75. The implementation resulted in a restatement of $1.7 million to the net position of the BWS for the fiscal year ended June 30, 2016.

Pensions

All eligible employees of the BWS are covered under the Employees' Retirement System of the State (the "System" or "ERS"), a cost-sharing, multiple-employer defined benefit pension plan that provides retirement, disability, and death benefits funded by employee contributions and by employer contributions. This section contains certain information relating to the System, derived primarily from information produced by the System, its independent accountant, and its actuary. The BWS has not independently verified the information provided by the System, its independent accountant, or its actuary and makes no representations nor expresses any opinion as to the accuracy of such information. The comprehensive annual financial report of the System and most recent valuation report of the System may be obtained by contacting the System. The comprehensive annual financial reports of the System are also available on the State's website at http://portal.ehawaii.gov, and other information about the System is available on the System's website at http://ers.ehawaii.gov. Such documents and other information are not incorporated herein by reference.

The System uses a variety of assumptions to calculate the total pension liability, net pension liability, annual pension expense, and other actuarial calculations and valuations of the System and, in turn, to attribute a share of its liabilities and costs to participating employers, including the BWS. No assurance can be given that any of the assumptions underlying such calculations and valuations will reflect the actual results experienced by the System. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the pension plans, and variances between the assumptions and actual results may cause an increase or decrease in, among other things, the System's total pension liability, net pension liability or funded ratio and, in turn, the BWS's share of the System's costs and liabilities. Actuarial assessments will change with the future experience of the pension plans. See "—*General Information*" and "—*Actuarial Valuation*" herein for more information on the actuarial assumptions used by the System.

General Information. The System began operation on January 1, 1926. The statutory provisions of HRS Chapter 88 govern the operation of the System. Responsibility for the general administration of the System is vested in a Board of Trustees, with certain areas of administrative control being vested in the State Department of Budget and Finance. The Board of Trustees consists of eight members: the Director of Finance of the State, ex officio; four members of the System (two general employees, one teacher, and one retiree) who are elected by the members of the System; and three citizens of the State (one of whom shall be an officer of a bank authorized to do business in the State, or a person of similar experience) who are appointed by the Governor and may not be employees of the State or any county. All contributions, benefits, and eligibility requirements are established by statute, under HRS Chapter 88, and may only be amended by legislative action.

The System provides retirement, disability, and death benefits that are covered by the provisions of the noncontributory, contributory, and hybrid retirement plans. The three plans provide a monthly retirement allowance equal to the benefit multiplier (generally 1.25% or 2%) multiplied by the average final compensation ("AFC") multiplied by years of credited service. The benefit multiplier decreased by 0.25% for new hybrid and contributory plan members hired after June 30, 2012. For members hired before January 1, 1971, AFC is the higher of the average salary earned during five highest paid years of service, including the payment of salary in lieu of vacation, or the three highest paid years of service excluding the payment of salary in lieu of vacation. For members hired on or after January 1, 1971 and before July 1, 2012, AFC is based on the three highest paid years of service, excluding the payment of salary in lieu of vacation. For members hired after June 30, 2012, AFC is based on the five highest paid years of service, excluding the payment of salary in lieu of vacation.

For members hired before July 1, 2012, the original retirement allowance is increased by 2.5% each July 1 following the calendar year of retirement. This cumulative benefit is not compounded and increases each year by 2.5% of the original retirement allowance without a ceiling (2.5% of the original retirement allowance the first year, 5.0% the second year, 7.5% the third year, etc.). For members hired after June 30, 2012, the post-retirement annuity increase was decreased to 1.5% per year.

Retirement benefits for certain groups, such as police officers, firefighters, some investigators, sewer workers, judges, and elected officials, vary from general employees. Further details of the benefits provisions of the pension plans may be found in the financial and actuarial reports of the System. The System is funded from contributions by employers and, for the contributory and hybrid plans, by employees as well. Employer contribution rates are set by statute.

BWS Pension Liabilities

This section contains certain historical information regarding the BWS's pension obligations at June 30, 2020, as set forth in the BWS's Annual Financial Report for Fiscal Year 2020. Such historical information is derived from the System's 2020 actuarial valuation report (the "2020 Valuation Report"), as the BWS's proportionate share of pension liability is based on the System's valuation at the end of the preceding Fiscal Year.

As of Fiscal Year 2015, the BWS's financial reporting for pensions conforms to GASB Statement No. 68 (GASB 68), Accounting and Financial Reporting for Pensions. GASB 68 requires government employers participating in cost sharing multi-employer plans such as the System to report a proportionate share of the net pension liability and pension expense of the plan. These measurements were provided by the System's consulting actuary, based on the actuarial valuation of the System.

At June 30, 2020, the BWS reported a liability of $114.8 million for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2019, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The System's net pension liability as of June 30, 2019 was $14.074 billion. The BWS's proportion of the net pension liability was based on the actual employer contributions to the pension plan relative to the contributions of all participating employers. At June 30, 2019, the BWS's proportion was 0.82%, compared to 0.90% at June 30, 2018.

For the fiscal year ended June 30, 2020, the BWS recognized pension expense of $16.6 million.

Contributions are established by HRS Chapter 88 and may be amended through legislation. The employer rate is set by statute based on the recommendations of the ERS actuary resulting from an experience study conducted every five years. Since July 1, 2005, the employer contribution rate is a fixed percentage of compensation, including the normal cost-plus amounts required to pay for the unfunded actuarial accrued liabilities. The contribution rates for fiscal years 2013-2020 are set forth in Table 17 below. Contributions to the System from the BWS for the fiscal years ended June 30, 2020, 2019, and 2018 were $9.4 million, $7.4 million, and 7.6 million, respectively.

The employer is required to make all contributions for members in the noncontributory plan. For contributory plan employees hired prior to July 1, 2012, general employees are required to contribute 7.8% of their salary and police and firefighters are required to contribute 12.2% of their salary. For contributory plan employees hired after June 30, 2012, general employees are required to contribute 9.8% of their salary and police and firefighters are required to contribute 14.2% of their salary. Hybrid plan members hired prior to July 1, 2012 are required to contribute 6.0% of their salary. Hybrid plan members hired after June 30, 2012 are required to contribute 8.0% of their salary.

Table 17

Schedule of Employer Pension Contributions

Fiscal Year (June 30)	Statutorily Required Contribution	Actual Contributions Recognized by the Plan	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a % of Covered Payroll
2013	$4,604,149	$7,387,857	$ --	$29,761,149	15.5%
2014	5,931,238	5,931,238	--	32,202,276	18.4
2015	6,686,641	6,686,641	--	33,412,761	20.0
2016	6,647,884	6,647,884	--	34,536,085	19.2
2017	6,885,401	6,885,401	--	35,912,898	19.2
2018	7,561,614	7,561,614	--	36,816,067	20.5
2019	7,387,857	7,387,857	--	38,390,927	19.2
2020	9,411,347	9,411,347	--	39,537,387	23.8

The following table presents the sensitivity of the BWS's proportionate share of the net pension liability, recorded at June 30, 2020, calculated using the discount rate of 7.00%, as well as the BWS's proportionate share of the net pension liability if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%):

Table 18

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
BWS's share of net pension liability ($000)	$148,949,943	$114,807,821	$90,226,450

The total pension liability in the 2020 Valuation Report was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Payroll growth rate	3.50% per annum
Investment rate of return	7.00% per annum

The same rates were applied to all periods. There were no changes to ad hoc postemployment benefits including COLA. Post-retirement mortality rates were based on the 2019 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2019 and with multipliers based on plan and group experience. Pre-retirement mortality rates were based on multiples of the RP 2014 mortality table.

The actuarial assumptions used in the 2020 Valuation Report were based on the results of the actuarial experience study dated July 30, 2019. ERS updates the experience study every five years.

The long-term expected rate of return on pension plan investments was determined using a "top down approach" of the Bespoke Client-Constrained Simulation-based Optimization Model (a statistical technique known as "re-sampling with replacement" that directly keys in on specific plan-level risk factors as stipulated by the ERS Board) in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The discount rates used to measure the net pension liability at June 30, 2020, 2019, and 2018 were all 7.00%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that contributions from the BWS will be made at statutorily required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Hawaii Employees' Retirement System

The BWS's pension expense and liability is directly dependent on the overall performance and condition of the ERS. This section provides additional information on the System. While the System has adopted GASB 67, and all of its participating employers, including the BWS, have adopted GASB 68, the System's actuary continues to provide an annual actuarial valuation report that is based on the provisions of Chapter 88 of the Hawaii Revised Statutes, as amended, and the actuarial assumptions adopted by the ERS Board of Trustees. This actuarial valuation report determines whether current employer contribution rates are adequate to ensure that the Unfunded Actuarial Accrued Liability ("UAAL") can be funded over a period not exceeding 30 years, describes the financial condition of the ERS, and analyzes changes in the ERS's condition. The information presented in this section is derived from the 2020 Valuation Report, presenting the actuarial condition of the ERS as of June 30, 2020.

The demographic data for each annual June 30 valuation is collected as of the March 31 preceding the valuation date. As of March 31, 2020, the contributory plan covered 608 active employees or 0.9% of all active members of the System, the noncontributory plan covered approximately 11,191 active employees or 16.8%, and the Hybrid Plan covered 50,011 active members or 74.9%. The Hybrid Plan membership will continue to increase in the future as most new employees will be required to join this plan.

As of March 31, 2020, the System's membership comprised approximately 66,750 active employees, 9,204 inactive vested members, and 51,153 pensioners and beneficiaries. The following table shows the number of active members, inactive vested members, and retirees and beneficiaries of the System as of March 31, 2018, 2019, and 2020:

Table 19

System Membership

Category	March 31, 2018	March 31, 2019	March 31, 2020
Active	66,271	66,383	66,750
Inactive, vested	9,249	9,321	9,204
Retirees and beneficiaries	48,569	49,885	51,153
Total	124,089	125,589	127,107

Funded Status

The statutory employee and employer contribution rates are intended to provide for the normal cost plus the amortization of the UAAL over a period not in excess of 30 years. Based on the current contribution rates of 31.00% for police and fire employees and 19.00% for all other employees, the future contribution rates established in statute (See "— Funding Policy" below), and the new benefit tier for employees hired after June 30, 2012, the actuary has determined that, as of the 2020 Valuation Report, the remaining amortization period is 26 years.

Based on the 2020 Valuation Report, the System's UAAL increased to $14.607 billion, compared to $14.074 billion in 2019. The financial market performed below the projected rate in Fiscal Year 2020 resulting in a return of 2.09% on the market value of assets for Fiscal Year 2020, which was below the ERS's benchmark of 7.0%. The funded ratio was 55.3% in Fiscal Year 2020 based on the actuarial value of assets. Based on the assumptions used in preparing the 2020 Valuation Report and the future contribution rates established by the Legislature effective July 1, 2017, the actuary determined that, as of the 2020 Valuation Report, the remaining amortization period is 26 years. Thus, the current contribution rate is sufficient to eliminate UAAL over a period of 30 years or less as mandated by Hawaii Revised Statutes Section 88-122(e)(1).

Funding Policy

Act 17, SLH 2017, which became effective July 1, 2017, established the employer contribution rates set forth below. These contributions rates were increased to bring the System's funding period within 30 years:

Table 20

Employer Contribution effective starting	Police Officers and Firefighters (% of total payroll)	Other Employees (% of total payroll)
July 1, 2017	28.0%	18.0%
July 1, 2018	31.0	19.0
July 1, 2019	36.0	22.0
July 1, 2020	41.0	24.0

Under the contributory plan, police officers, firefighters, and corrections officers are required to contribute 12.2% of their salary to the plan and most other covered employees are required to contribute 7.8% of their salary. Under the Hybrid Plan, covered employees are generally required to contribute 6.0% of their salary to the plan, with sewer workers in specified classifications, water safety officers and emergency medical technicians required to contribute 9.75% of their salary. Effective July 1, 2012, contribution rates for newly hired employees covered under the contributory and Hybrid Plan increased by 2% pursuant to Act 163, SLH 2011, such that the corresponding contribution rates for new employees as discussed in this paragraph became 14.2%, 9.8%, 8.0% and 11.75%, respectively. Employees covered under the noncontributory plan do not make contributions.

Actuarial Methods

The System's actuary uses the individual entry age normal cost method. The most recent valuation was performed for the fiscal year beginning July 1, 2019 and ending June 30, 2020.

Since the State statutes governing the System establish the current employee and employer contribution rates, the actuarial valuation determines the number of years required to amortize (or fund) the UAAL. For the June 30, 2020 valuation, this determination was made using an open group projection to reflect both the increasing contribution rates and the changes in benefits for members hired after June 30, 2012.

Because of this amortization procedure, any change in the unfunded actuarial accrued liability due to (i) actuarial gains and losses, (ii) changes in actuarial assumptions or (iii) amendments, affects the funding period.

On an aggregate basis with regard to the contributory, Hybrid, and noncontributory plans, the total normal cost for benefits provided by the System for the fiscal year ended June 30, 2020 was 14.12% of payroll, which was 18.27% of payroll less than the total contributions required by law (26.00% from employers plus 6.39% in the aggregate from employees). Since only 7.73% of the employers' 26.00% contribution is required to meet the normal cost (6.39% comes from the employee contribution), it is intended that the remaining 18.27% of payroll will be used to amortize any unfunded actuarial accrued liabilities over a period of years in the future, assuming that pay for new entrants increases by 3.50% per year. Due to the changes enacted in 2011 (increases in the employer contribution rates and new benefits and contribution rates for members hired after June 30, 2012), the percentage of payroll available to amortize the unfunded actuarial liabilities is expected to increase each year for the foreseeable future.

Actuarial Valuation

The actuarial value of assets is equal to the market value, adjusted for a four-year phase-in of actual investment return in excess of or below expected investment return. The actual return is calculated net of investment and administrative expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds. The actuarial value of assets has been based on a four-year smoothed valuation that recognizes the excess or shortfall of investment income over or under the actuarial investment yield rate assumption. The actuarial asset valuation method is intended to smooth out year to year fluctuations in the market return. The excess or shortfall in the actual return during the year, compared to the investment yield rate assumption, is spread over this valuation and the next three valuations.

The System's actuary uses certain assumptions (including rates of salary increase, probabilities of retirement, termination, death and disability, and an investment yield rate assumption) to determine the amount that an employer must contribute in a given year to provide sufficient funds to the System to pay benefits when due. The Board of Trustees periodically evaluates and revises the assumptions used by the System for actuarial valuations, including by commissioning experience studies to evaluate the actuarial assumptions to be used by the System. The current assumptions were adopted by the Board of Trustees based on the recommendations of the System's actuary in the most recent experience study dated July 30, 2019, and are reflected in the 2020 Valuation Report.

The actual investment returns of the System for Fiscal Years 2011 through 2020 shown below are market returns, net of investment and administrative expenses.

Table 21

Fiscal Year	Percentage
2011	21.25%
2012	-0.14
2013	12.57
2014	17.77
2015	4.23
2016	-0.78
2017	13.68
2018	7.89
2019	5.67
2020	2.09

Source: Report on Investment Activity for the ERS prepared The Northern Trust Company (2010 to 2013), and The Bank of New York Mellon (2014 to 2016), for 2017 as set forth in the Valuation Report for the year ending June 30, 2017, for 2018 as set forth in the Valuation Report for the year ending June 30, 2018, for 2019 as set forth in the Valuation Report for the year ending June 30, 2019, and for 2020 as set forth in the 2020 Valuation Report; and reported in the System's Comprehensive Annual Financial Reports.

The 2020 Valuation Report found that, as the percentage of employees hired on and after July 1, 2012, increases and the new funding policies impact the System, the UAAL will be fully amortized over a 26-year period. Assuming a constant employment base, the number of employees entitled to pre-2012 retirement benefits should equal the number of employees entitled to post-2012 retirement benefits in fiscal year 2023. The combination of the higher contribution policies and new benefit structure for future employees is expected to enable the System to absorb the prior adverse experience over the 26-year term.

Table 22 shows the System's funding progress for the ten most recent actuarial valuation dates. Table 23 shows the System's projected funding progress through the fiscal year ending June 30, 2049. The projection assumes no actuarial gains or losses in the actuarial liabilities or the actuarial value of assets. In addition, the projection reflects the changes made to the benefits and member contribution rates of employees hired after June 30, 2012, but does not take into account the increased employer contributions required by Act 17, SLH 2017.

<u>**Table 22**</u>

Schedule of Funding Progress
(Dollar amounts in millions)

Fiscal Year (June 30)	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b)–(a)	Funded Ratio (a)/(b)	Annual Covered Payroll (c)	UAAL as a Percentage of Payroll ((b)–(a))/(c)
2011*	$11,942.8	$20,096.9	$8,154.2	59.4%	$3,916.0	208.2%
2012	12,242.5	20,683.4	8,440.9	59.2	3,890.0	217.0
2013	12,748.8	21,243.7	8,494.9	60.0	3,906.7	217.4
2014	13,641.8	22,220.1	8,578.3	61.4	3,991.6	214.9
2015*	14,463.7	23,238.4	8,774.7	62.2	4,171.4	210.4
2016*	14,998.7	27,439.2	12,440.5	54.7	4,258.9	292.1
2017	15,720.6	28,648.6	12,928.0	54.9	4,265.0	303.1
2018	16,512.7	29,917.4	13,404.7	55.2	4,383.7	305.8
2019*	17,322.2	31,396.4	14,074.3	55.2	4,519.7	311.4
2020	18,084.4	32,691.8	14,607.4	55.3	4,630.2	315.5

* *New assumption effective on valuation date.*
Source: 2020 Valuation Report

Table 23

Projected Funding Progress*
(Dollar amounts in millions)

Fiscal Year (ending June 30)	Employer Contributions	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio
2020	$ 1,204	$ 32,692	$ 18,084	$ 14,607	55.3%
2021	1,234	33,931	19,176	14,755	56.5
2022	1,268	35,170	20,291	14,879	57.7
2023	1,303	36,411	21,434	14,978	58.9
2024	1,339	37,652	22,605	15,047	60.0
2025	1,377	38,891	23,808	15,084	61.2
2026	1,416	40,128	25,044	15,084	62.4
2027	1,456	41,361	26,317	15,044	63.6
2028	1,499	42,590	27,629	14,960	64.9
2029	1,545	43,816	28,989	14,827	66.2
2030	1,592	45,041	30,402	14,638	67.5
2031	1,642	46,264	31,875	14,390	68.9
2032	1,693	47,487	33,413	14,074	70.4
2033	1,747	48,710	35,025	13,685	71.9
2034	1,803	49,934	36,719	13,215	73.5
2035	1,862	51,163	38,505	12,658	75.3
2036	1,922	52,397	40,393	12,004	77.1
2037	1,986	53,640	42,395	11,246	79.0
2038	2,052	54,897	44,523	10,373	81.1
2039	2,121	56,171	46,794	9,377	83.3
2040	2,193	57,468	49,224	8,244	85.7
2041	2,268	58,796	51,831	6,965	88.2
2042	2,347	60,159	54,633	5,526	90.8
2043	2,428	61,564	57,651	3,913	93.6
2044	2,513	63,018	60,906	2,112	96.6
2045	2,601	64,527	64,419	109	99.8
2046	2,692	66,098	68,212	(2,114)	103.2
2047	2,786	67,736	72,311	(4,575)	106.8
2048	2,884	69,448	76,741	(7,292)	110.5
2049	2,986	71,242	81,529	(10,287)	114.4

* *Assumes all actuarial assumptions exactly met, including a 7.00% annual return on the current actuarial value of assets. No assurance can be given that any of such assumptions will reflect the actual results experienced by the System. Actuarial assessments are "forward-looking" information that reflect the judgment of the fiduciaries of the System, and variances between the assumptions and actual results may cause an increase or decrease in, among other things, the System's actuarial accrued liability, actuarial value of assets or funded ratio.*

Source: 2020 Valuation Report

The total assets of the System on a market value basis available for benefits amounted to approximately $14.1 billion as of June 30, 2016, $15.7 billion as of June 30, 2017, $16.6 billion as of June 30, 2018, $17.2 billion as of June 30, 2019, and $17.3 billion as of June 30, 2020. Actuarial certification of assets as of June 30, 2016 was $15.0 billion, as of June 30, 2017 was $15.7 billion, as of June 30, 2018 was $16.5 billion, as of June 30, 2019 was $17.3 billion, and as of June 30, 2020 was $18.1 billion.

The following table shows a comparison of the actuarial value of assets ("AVA") to the market values, the ratio of the AVA to market value and the funded ratio based on AVA compared to funded ration based on market value assets:

Table 24

Actuarial Value of Assets

Fiscal Year (ending June 30)	Actuarial Value of Assets (in millions)	Market Value of Assets (in millions)	Market Value as Percentage of AVA	Funded Ratio (AVA)	Funded Ratio (Market Value)
2011	$11,942.8	$11,642.3	97.5%	59.4%	57.9%
2012	12,242.5	11,285.9	92.2	59.2	54.6
2013	12,748.8	12,357.8	96.9	60.0	58.2
2014	13,641.8	14,203.0	104.1	61.4	63.9
2015	14,463.7	14,505.5	100.3	62.2	62.4
2016	14,998.7	14,070.0	93.8	54.7	51.3
2017	15,720.6	15,698.3	99.9	54.9	54.8
2018	16,512.7	16,598.4	100.5	55.2	55.5
2019	17,322.2	17,227.0	99.5	55.2	54.9
2020	18,084.3	17,385.5	96.1	55.3	53.2

Source: 2011-2020 Valuation Reports

As of June 30, 2020, the UAAL of the System was $14.607 billion, an increase from $14.074 billion as of June 30, 2019. The following table shows the normal cost (which means the annual cost of providing retirement benefits for services performed by today's members) as a percentage of payroll, employee contribution rate and effective employer normal cost rate for the two groups of covered employees for Fiscal Years 2019 and 2020:

Table 25

Normal Cost

	June 30,					
	2019			2020		
	Police and Firefighters	Other Employees	All Employees	Police and Firefighters	Other Employees	All Employees
Normal cost as % of payroll:	26.55%	12.46%	14.13%	26.38%	12.44%	14.12%
Employee contribution rate:	12.53	5.39	6.24	12.60	5.54	6.39
Effective employer normal cost rate:	14.02	7.07	7.89	13.78	6.90	7.73

Source: 2020 Valuation Report

The following table shows the annual actual contributions as of the last ten valuation dates. Employer contribution rates are set prospectively by the statute and, accordingly, may be greater or less than the ARC in any given year.

Table 26

Schedule of Employer Contributions
(Dollar amounts in thousands)

June 30,	Actual Contribution*
2011	$ 534,858
2012	548,353
2013	581,447
2014	653,128
2015	717,793
2016	756,558
2017	781,244
2018	847,595
2019	922,635
2020	1,098,589

* *Excludes BWS-paid employee contributions classified as employer contributions pursuant to IRC Section 414(h)(2).*

Asset Allocation

The following table shows the target and actual asset allocation of the System as of September 30, 2020:

Table 27

Asset Allocation
(as of September 30, 2020)

	Actual Allocation		Target Allocation		
Asset Type	Amount ($mm)	Percentage	Amount ($mm)	Percentage*	Allocation Difference
Broad Growth	$13,723.6	76.2%	$12,967.1	72.0%	4.2%
Diversifying Strategies	3,677.7	20.4	5,042.7	28.0	-7.6
Opportunities	23.1	0.1	0.0	0.0	0.1
Other	585.4	3.3	0.0	0.0	3.3
Total	$18,009.8	100.0%	$18,009.8	100.0%	

* *Target Percentages are the Risk-Based Policy Targets effective 1/1/2018. Numbers subject to changes and rounding errors.*

Source: Valuations provided by BNY Mellon - September 30, 2020; values unaudited.

Employer Contribution Rate.

The schedule which follows shows the total actuarially determined employer contribution rate for all employees based on the last five annual actuarial valuations.

Table 28

Employer Contribution Rates

Actuarial Valuation as of June 30	Total Calculated Employer Contribution Rate for all Employees (% of total payroll)*	Funding Period (Years)
2016	17.91	66.0
2017	19.16	26.0
2018	20.36	25.0
2019	23.61	26.0
2020	26.00	26.0

* *Reflects Act 181, SLH 2004, which amended Sections 88-105, 88-122, 88-123, 88-124, 88-125, 88-126, Hawaii Revised Statutes, and Act 163, SLH 2011.*

The increase in the funding period in the valuation as of June 30, 2016 was primarily due to the decrease in the investment return assumption from 7.65% to 7.00%. The decrease in funding period following the valuations as of June 30, 2017, June 30, 2018 and June 30, 2019 is primarily due to investment gains and mandated increase in employer contributions.

Summary of Actuarial Certification Statement.

A summary of the actuarial certification of the System as of June 30, 2019 and June 30, 2020 is set forth below:

Table 29

Employees' Retirement System of the State of Hawaii
Summary of Actuarial Certification as of June 30, 2019 and 2020
(Includes all counties)

ASSETS	2019	2020
Total current assets	$17,322,194,107	$18,084,382,899
Present value of future employee contributions	2,584,483,322	2,747,542,682
Present value of future employer normal cost contributions ..	2,757,121,922	2,757,950,458
Unfunded actuarial accrued liability	14,074,253,578	14,607,372,945
Present value of future employer Early Incentive Retirement Program contribution..	N/A	N/A
TOTAL ASSETS	$36,738,052,999	$38,197,248,984
LIABILITIES		
Present value of future benefits to current pensioners and beneficiaries	$16,871,118,207	$17,720,939,918
Present value of future benefits to active employees and inactive members	$19,866,934,792	$20,476,309,066
TOTAL LIABILITIES...	$36,738,052,999	$38,197,248,984

Source: Gabriel, Roeder, Smith & Company

Recent Developments

Act 19 Session Laws of Hawaii, 2018 ("Act 19") signed into law by Governor Ige on June 4, 2018, allows the State and counties to pay employer contributions to the ERS in advance of the fiscal year in which the contributions are required and to receive credit against future required payments. Act 19 does not require separate accounts to be established or maintained for each contributing entity that would restrict the use of such funds to only the particular employees of the contributing entity. Act 19 acknowledges that for purposes of the standards of the Government Accounting Standards Board, the ERS is a cost-sharing multiple-employer pension plan in which the pension obligations to the employees of the State and the counties are pooled and the assets of the ERS can be used to pay the pensions of all State and county employees who are members of the system.

The turmoil in the United States and international financial markets created by the COVID-19 pandemic resulted in a significant decline in ERS' asset values in the first quarter of 2020. Since that time, financial markets and asset values have appreciably recovered.

The first calendar quarter of 2020 stock market performance was the worst first quarter in history, while the second calendar quarter was one of the best second quarters. The System's Broad Growth Portfolio, which is exposed to United States Portfolio—designed to perform in periods of adverse market conditions, gained 10.9%. In the second calendar quarter, Broad Growth regained 6.2% and the entire System finished the Fiscal Year ended June 30, 2020, positive 1.26%. The Crisis Risk Offset Portfolio was able to redeploy performance gains back into the public equity markets to recapture some of the rally. The System maintained strong liquidity throughout the downturn and was not a forced seller of securities. The effects of the coronavirus negatively impacted institutional portfolios in their public markets portfolios in February and March, recovering in April through June. The impact to private markets, such as private real estate and private equity, demonstrated challenged performance towards the end of the Fiscal Year but will likely recover as global economies reopen.

ERS' long term view of expected returns has not changed. Long term returns continue to approximate ERS' 7% long term rate of return assumption. The ERS' annual stress test shows that ERS can withstand a -20% return in one year followed by 20 years with annual 5% returns (2 percentage points below the assumed rate) before returning to 7%, and will require only moderate rate increases to ensure that the funding period never extends beyond 30 years in any future annual valuation. At this time the BWS cannot predict what impact, if any, the COVID-19 pandemic and recovery will have on ERS, its assets, or the BWS's future funding obligations to ERS.

Historical and Projected Revenues, Expenses and Debt Service Coverage

The following table presents the BWS's revenues, expenses and debt service coverage ratios for the Fiscal Years ended June 30, 2016 through 2020. The information presented in the table is based on the BWS's audited financial statements for Fiscal Years 2016-2020.

Attached as Appendix B hereto are the BWS's audited financial statements for the Fiscal Years ended June 30, 2020 and 2019. Reference is made to such Appendix for further information regarding the BWS's financial condition as of June 30, 2020 and its results of operations for the Fiscal Year then ended.

Table 30

Historical Revenues, Expenses and Debt Service Coverage
Fiscal Years 2016-2020

	2016	2017	2018	2019	2020
Operating revenues:					
Water sales*	$ 234,725,808	$ 229,083,940	$ 229,526,599	$ 226,347,969	$ 228,467,575
Other operating revenues	4,277,747	2,629,361	3,303,197	2,697,545	3,565,485
Total operating revenues:	$ 239,003,555	$ 231,713,301	$ 232,829,796	$ 229,045,514	$ 232,033,060
Operating expenses (excluding depreciation):					
Administrative and general	$ 61,722,651	$ 63,860,738	$ 70,493,764	$ 72,030,601	$ 71,190,600
Maintenance	12,440,083	12,033,589	12,663,811	11,430,094	14,839,903
Power and pumping	30,189,514	29,899,130	32,064,982	35,139,272	35,044,263
CASE fees	3,300,000	3,300,000	3,300,000	3,300,000	3,300,000
Transmission and distribution	19,160,599	20,341,122	21,106,882	23,717,484	31,313,386
Customer accounting and collection	5,249,768	4,686,863	4,022,619	4,287,336	4,154,640
Water reclamation	4,553,447	3,975,033	5,164,896	5,313,092	4,986,298
Source of supply	27,037	50,032	4,418	--	384,146
Total operating expenses:	$ 136,643,099	$138,146,507	$148,821,372	$155,217,879	$165,213,236
Operating income:	$ 102,360,456	$ 93,566,794	$ 84,008,424	$ 73,827,635	$ 66,819,824
Non-operating revenues:					
Interest income	$ 4,150,911	$ 4,616,741	$ 6,097,077	$ 7,549,495	$ 7,994,046
Total non-operating revenues:	$ 4,150,911	$ 4,616,741	$ 6,097,077	$ 7,549,495	$ 7,994,046
Net revenues:	$ 106,511,367	$ 98,183,535	$ 90,105,501	$ 81,377,130	$ 74,813,870
Annual debt service:**					
Senior debt (revenue bonds)	$ 17,890,708	$ 17,787,071	$ 17,844,248	$ 17,875,798	$ 18,464,913
Junior debt (SRF loans)***	4,182,716	18,992,332	13,803,000	3,984,946	5,126,292
Debt Service Coverage:					
Senior debt coverage	5.95	5.52	5.05	4.55	4.05
All-In Coverage	4.83	2.67	2.85	3.72	3.17

* *Water rates increased by 9.65% in Fiscal Year 2016; 0.0% in Fiscal Years 2017, 2018, and 2019; and 2.0% in Fiscal Year 2020.*

** *The BWS's fiscal year begins on July 1 and ends on June 30. Debt service payments are due on January 1 and July 1 each year and it is the BWS's practice to set aside and reserve amounts due monthly in advance. Accordingly, annual debt service totals shown in the table above include amounts reserved for payment in the fiscal year indicated but not actually paid until July 1 of the following fiscal year, and similarly exclude amounts reserved for payment in the prior fiscal year but not actually paid until July 1 of the indicated fiscal year.*

*** *The debt service for SRF loans in Fiscal Years 2017 and 2018 includes an early retirement payment of principal and interest of $15,654,000 and $9,756,000, respectively.*

The following table sets forth the BWS's projected revenues, expenses, and debt service coverage ratios for the Fiscal Years ended June 30, 2021 through 2025. The information presented in the table is based on the updated Financial Plan and Rate model for Fiscal Year 2021. This model includes the projected current and future debt issues and the financial impacts of the COVID-19 pandemic.

Table 31

Projected Revenues, Expenses and Debt Service Coverage
Fiscal Years 2021-2025
(Dollars in Thousands)

	2021	2022	2023	2024	2025
Operating revenues:					
Water sales*	$ 235,604	$ 244,463	$ 256,383	$ 267,510	$ 280,052
Other operating revenues	2,992	3,021	3,051	3,081	3,112
Total operating revenues:	$ 238,596	$ 247,484	$ 259,434	$ 270,591	$ 283,164
Operating expenses (excluding depreciation):					
Administrative and general	$ 77,130	$ 78,864	$ 79,808	$ 80,844	$ 82,173
Maintenance	14,414	14,738	14,915	15,108	15,357
Power and pumping	36,874	37,703	38,154	38,649	39,285
CASE fees	3,771	3,856	3,902	3,952	4,017
Transmission and distribution	26,075	26,661	26,980	27,330	27,780
Customer accounting and collection	5,136	5,251	5,314	5,383	5,472
Water reclamation	5,447	5,569	5,636	5,709	5,803
Source of supply	98	100	101	103	104
Total operating expenses:	$ 168,945	$172,742	$174,810	$177,078	$179,991
Operating income:	$ 69,651	$ 74,742	$ 84,624	$ 93,513	$103,173
Non-operating revenues:					
Interest income	$ 3,372	$ 3,372	$ 3,068	$ 2,938	$ 2,968
Total non-operating revenues:	$ 3,372	$ 3,372	$ 3,068	$ 2,938	$ 2,968
Net revenues:	$ 73,023	$ 78,114	$ 87,692	$ 96,451	$106,141
Annual debt service:					
Senior debt (revenue bonds)	$ 18,874	$ 23,713	$ 27,431	$ 31,454	$ 37,714
Junior debt (SRF loans)	7,299	8,074	8,703	9,856	10,935
Debt Service Coverage:					
Senior debt coverage	3.87	3.29	3.20	3.07	2.81
All-In Coverage**	2.79	2.46	2.43	2.33	2.18

* *Reflects BWS-approved rate increases of 2.0% in Fiscal Year 2021, 4.0% in Fiscal Year 2022, 4.0% in Fiscal Year 2023, and projected increases of 4.5% in Fiscal Year 2024 and 5.0% in Fiscal Year 2025.*

** *All-In Coverage includes projected bond issues during the periods shown, but does not reflect refunding of the Refunded Bonds.*

Management's Discussion of Financial Performance

This section presents management's discussion and analysis of the BWS's financial condition and activities for the Fiscal Year ended June 30, 2020. This information should be read in conjunction with the financial statements.

Operating revenues for the fiscal year ended June 30, 2020 were $231.1 million, an increase of $2.4 million or 1.1% from the fiscal year ended June 30, 2019. This was mainly due to the increase in water consumption rates for the single-family and multi-family residential customer class. Operating revenues for the fiscal year ended June 30, 2019 were $228.7 million, a decrease of $3.7 million or 1.6% from the fiscal year ended June 30, 2018. This was mainly due to a decrease in agriculture and single-family residential water consumption.

Total operating expenses increased by $8.7 million in Fiscal Year 2020. Factors contributing to this change are explained below:

- Power and pumping remained relatively consistent in Fiscal Year 2020 at $35.0 million compared to Fiscal Year 2019 at $35.1 million. Administrative and general also remained relatively consistent in Fiscal Year 2020 at $71.2 million compared to Fiscal Year 2019's $72.0 million.

- Other operating expenses increased by $11.1 million during Fiscal Year 2020 mainly due to the increase in transmission and distribution, and maintenance costs.

- Contributions in aid of construction result from Water System Facilities Charges (WSFC) that are levied against all new developments and residential properties requiring water from the BWS's systems, except those developments that have paid for and installed a complete water system, including sources, transmission, and daily storage facilities. In addition, contributions of capital assets from governmental agencies, developers, and customers are recorded as contributions in aid of construction at their cost. The BWS realized contributions in aid of construction of $27.9 million in Fiscal Year 2020 compared to $13.0 million in Fiscal Year 2019. The increase was primarily due to increases in WSFC revenue of $5.1 million, increases in contributions by private developers of $4.4 million, and SRF debt principal forgiveness of $2.9 million. During the fiscal year ended June 30, 2020, the major developments were Kapolei 215' Reservoir No. 2, Kapolei Business Park West Phase I, and Honolulu Rail Transit Utility Relocation.

The BWS's current assets were 3.4, 3.7, and 3.0 times its related current liabilities as of June 30, 2020, 2019, and 2018, respectively. The ratio decrease at June 30, 2020 was due to an increase in cash, cash equivalents, and investments that were offset by an increase in accounts and contracts payable. The ratio increase at June 30, 2019 was due to an increase in cash, cash equivalents, and investments. The BWS's unrestricted current assets at June 30, 2020 were 5.2 times its related current liabilities compared to 5.5 times at June 30, 2019.

Restricted and other assets increased by $51.4 million in Fiscal Year 2020. The increase is primarily due to the receipt of Series 2020A net bond proceeds of $65.3 million during Fiscal Year 2020. Restricted and other assets increased by $1.9 million in Fiscal Year 2019. The increase is primarily due to an increase in cash and cash equivalents.

Net position increased $56.9 million in Fiscal Year 2020, compared to the $46.2 million increase in Fiscal Year 2019. Total assets were $1.8 billion in Fiscal Year 2020 and $1.7 billion in Fiscal Year 2019, which exceeded liabilities by $1.2 billion and $1.1 billion at June 30, 2020 and 2019, respectively.

The BWS's debt to equity ratio was 30.5% and 25.5% at June 30, 2020 and 2019, respectively, indicating the continuance of capacity to issue additional debt.

Recent Legislation

Act 040, Session Laws of Hawaii (SLH) (2019) appropriates capital improvement projects for fiscal biennium 2019-2021. Act 040 appropriates $1,000,000 in general obligation bond funds to the Department of Land and Natural Resources under Item No. LNR141 (17) – Water and Land Development for the Honolulu Board of Water Supply. These bond funds shall offset the costs for the plans, design, construction, and equipment for an exploratory well in Kunia; ground and site improvements; new construction, infrastructure development, improvements, refurbishments, and development; equipment and appurtenances for one of four exploratory water wells proposed by the BWS for the proposed Kunia Wells IV pump station, which will provide additional water supply for growth, including diversified agriculture.

Due to new rules under the federal Food Safety Modernization Act, farmers informed the Legislature that they will need greater access to irrigation and potable water, the latter of which is required for washing leafy vegetable crops. In several areas of Oahu, access to the BWS municipal Water System is the only source of potable irrigation supply.

The BWS is prepared to pass the benefits of these appropriated funds to farmers throughout the municipal Water System in the form of affordable water system impact fees for new or larger water meters to support the agriculture industry on Oahu. The BWS cannot predict whether or in what form any legislative proposals affecting the BWS or its revenues and/or expenses may be enacted into law in the future. The enactment of any such legislation could have a material adverse impact on the BWS's financial condition.

INVESTMENTS

Cash collected by the BWS is deposited in separate accounts maintained by the Department of Budget and Fiscal Services of the City and County. Hawaii Revised Statutes provide for the City and County's Director of Budget and Fiscal Services to deposit the cash with any national or state bank or federally-insured savings and loan association authorized to do business in the State, provided that all deposits are fully insured or collateralized.

Statutes authorize the BWS to invest, with certain restrictions, in bonds or interest-bearing notes or obligations of the county, the State, United States, or of agencies of the United States for which the full faith and credit of the United States are pledged for the payment of principal and interest; federal land bank bonds; joint stock farm loan bonds; Federal Home Loan Bank notes and bonds; Federal Home Loan Mortgage Corporation bonds; Federal National Mortgage Association notes and bonds; securities of a mutual fund whose portfolio is limited to bonds or securities issued or guaranteed by the United States or an agency thereof, repurchase agreements fully collateralized by any such bonds or securities; bank savings accounts; time certificates of deposit; certificates of deposit open account; bonds of any improvement district of any county of the State; bank, savings and loan association, and financial services loan company repurchase agreements; and student loan resource securities.

The BWS has formulated a written investment policy to manage its investments which emphasizes: first, Safety, to preserve public funds; second, Liquidity, so that funds are available when needed; and third, Yield, but only after the first two considerations are met. The BWS does not engage in pooled investments, speculative investments or leveraged investments. The BWS's funds may only be deposited in federal banks or Hawaii financial institutions. Investment managers of the BWS's funds must comply with investment restrictions in the Resolution and the restrictions imposed by federal law and regulations resulting from the issuance of tax-exempt bonds. As of June 30, 2019, such investments are managed by two independent investment managers. The aggregate fair value of such investments as of December 31, 2020, was $497,519,974.

PENDING LITIGATION

In the normal course of business, claims and lawsuits are filed against the City and County and the BWS and their respective officers and employees. The BWS is insured for $15,000,000 (aggregate) which is in excess of a $750,000 self-retention limit. Claims against the City and County which are related to the Water System are chargeable against the BWS. In the Fiscal Year ended June 30, 2020, the BWS paid judgment claims in the amount of $241,068.

In the aggregate, lawsuits and claims pending as of January 31, 2021 made against the BWS have the potential to surpass the amount paid for claims in the Fiscal Year ending June 30, 2020. Ongoing cases filed against the BWS involve allegations that BWS water main breaks caused or contributed to landslides and erosion that damaged properties located in Palolo Valley. Another case involves a claim that the BWS breached a license agreement regarding usage of the BWS's abandoned water mains.

These cases are in various preliminary stages of litigation, and liability has not been established at this time. The BWS intends to vigorously defend itself in these cases.

In the opinion of BWS management, based on an analysis of the known claims and litigation, there is no present or pending litigation that would materially impair the financial position of the BWS.

The City and County's Department of the Corporation Counsel reports that there is no controversy or litigation now pending or, to the best of its actual knowledge, threatened, which seeks to restrain or enjoin the execution, issuance, sale, or delivery of the Series 2021 Bonds or that in any way contests the validity of the Series 2021 Bonds; or any proceedings of the BWS taken with respect to the authorization, sale, or issuance of the Series 2021 Bonds, the pledge or application of any moneys provided for the payment of or security for the Series 2021 Bonds.

FINANCIAL STATEMENTS

The City Charter provides that the accounts and financial status of the BWS shall be examined annually by a certified public accountant whose services shall be contracted for by the BWS. The BWS's current independent auditor is N&K CPAs, Inc. The financial statements of the BWS as of and for the Fiscal Year ended June 30, 2020, included in Appendix B to this Official Statement, have been audited by N&K CPAs, Inc., as stated in their report therein. N&K CPAs, Inc. has not performed any procedures relating to information included in this Official Statement.

VERIFICATION OF MATHEMATICAL COMPUTATIONS

In connection with the issuance of the Series 2021 Bonds and the refunding of the Refunded Bonds, Causey, Demgen & Moore, independent certified public accountants, will verify the mathematical accuracy of certain computations demonstrating the sufficiency of the Escrow Fund, including the moneys deposited therein and the anticipated receipts from the Escrow Fund Investments, to pay the principal or redemption price of and interest on such Refunded Bonds then outstanding. Such verification will be based in part on schedules and information provided by the Underwriters with respect to the foregoing computations.

RATINGS

Fitch Ratings ("Fitch") and S&P Global Ratings ("S&P") have assigned ratings of "AA+" (positive outlook) and "AAA" (stable outlook) respectively, to the Series 2021 Bonds. The rating agencies may have obtained and considered information and material which has not been included in this Official Statement. Generally, the rating agencies base their rating on information and material furnished and on investigations, studies and assumptions made by them.

Such ratings reflect only the respective views of such organizations, and an explanation of the significance of such ratings may be obtained from the rating agency furnishing the same, at the following addresses: Fitch, One State Street Plaza, New York, New York 10004; and S&P, One California Street, 31st Floor, San Francisco, California 94111. There is no assurance that such ratings will continue for any given period of time or that they will not be revised or withdrawn entirely by such rating agencies, if in the judgment of such rating agencies, circumstances so warrant. Any such downward revision or withdrawal of such ratings may have an effect on the market price of the Series 2021 Bonds.

UNDERWRITING

The Series 2021 Bonds are being purchased by BofA Securities, Inc. and Stifel, Nicolaus & Company, Incorporated, as Underwriters. The Underwriters have agreed to purchase the Series 2021 Bonds at an aggregate purchase price of $104,270,734.30 (equal to $93,535,000.00 principal amount of Series 2021 Bonds, plus an original issue premium of $11,292,598.10, less the underwriters' discount of $556,863.80). The bond purchase contract with respect to the Series 2021 Bonds provides that the Underwriters will purchase all the Series 2021 Bonds if any are purchased, the obligation to make such purchase being subject to certain terms and conditions set forth in the purchase contract, the approval of certain legal matters by Bond Counsel and certain other conditions. The initial public offering prices are set forth on the inside cover pages of this Official Statement. The Underwriters may offer and sell the Series 2021 Bonds to certain dealers (including depositing the Series 2021 Bonds into investment trusts) and others at prices lower than the initial public offering prices stated on the cover page hereof. The public offering prices may be changed from time to time by the Underwriters.

BofA Securities, Inc., an underwriter of the Series 2021 Bonds, has entered into a distribution agreement with its affiliate Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S"). As part of this arrangement, BofA Securities, Inc. may distribute securities to MLPF&S, which may in turn distribute such securities to investors through the financial advisor network of MLPF&S. As part of this arrangement, BofA Securities, Inc. may compensate MLPF&S as a dealer for their selling efforts with respect to the Series 2021 Bonds.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage services. The Underwriters and their affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the BWS, for which they received or will receive customary fees and expenses.

The BWS intends to use a portion of the proceeds from the Series 2021 Bonds to redeem the Refunded Bonds. To the extent an Underwriter or an affiliate thereof is an owner of Refunded Bonds, such Underwriter or its affiliate, as applicable, would receive a portion of the proceeds from the issuance of the Refunding Bonds contemplated herein in connection with the Refunded Bonds being redeemed by the BWS.

In the ordinary course of their various business activities, the Underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities, which may include credit default swaps) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the BWS.

The Underwriters and their affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

TAX MATTERS

Series 2021A Bonds

In the opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the BWS ("Bond Counsel"), based upon an analysis of existing laws, regulations, rulings and court decisions and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, interest on the Series 2021A is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986 (the "Code"). In the further opinion of Bond Counsel, interest on the Series 2021A Bonds is not a specific preference item for purposes of the federal alternative minimum tax. Bond Counsel is of the opinion that the Series 2021A Bonds and the income therefrom are exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes. A complete copy of the proposed forms of opinion of Bond Counsel is set forth in Appendix D hereto.

To the extent the issue price of any maturity of the Series 2021A Bonds is less than the amount to be paid at maturity of such Series 2021A Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Series 2021A Bonds), the difference constitutes "original issue discount," the accrual of which, to the extent properly allocable to each Beneficial Owner thereof, is treated as interest on the Series 2021A Bonds which is excluded from gross income for federal income tax purposes and State of Hawaii tax purposes. For this purpose, the issue price of a particular maturity of the Series 2021A Bonds is the first price at which a substantial amount of such maturity of the Series 2021A Bonds is sold to the public (excluding bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). The original issue discount with respect to any maturity of the Series 2021A Bonds accrues daily over the term to maturity of such Series 2021A Bonds on the basis of a constant interest rate compounded semiannually (with straight-line interpolations between compounding dates). The accruing original issue discount is added to the adjusted basis of such Series 2021A Bonds to determine taxable gain or loss upon disposition (including sale, redemption, or payment on maturity) of such Series 2021A Bonds. Beneficial Owners of the Series 2021A Bonds should consult their own tax advisors with respect to the tax consequences of ownership of Series 2021A Bonds with original issue discount, including the treatment of Beneficial Owners who do not purchase such Series 2021A Bonds in the original offering to the public at the first price at which a substantial amount of such Series 2021A Bonds is sold to the public.

Series 2021A Bonds purchased, whether at original issuance or otherwise, for an amount higher than their principal amount payable at maturity (or, in some cases, at their earlier call date) ("Premium Bonds") will be treated as having amortizable bond premium. No deduction is allowable for the amortizable bond premium in the case of the bonds, like the Premium Bonds, the interest on which is excluded from gross income for federal income tax purposes. However, the amount of tax-exempt interest received, and a Beneficial Owner's basis in a Premium Bond, will be reduced by the amount of amortizable bond premium properly allocable to such Beneficial Owner. Beneficial Owners of Premium Bonds should consult their own tax advisors with respect to the proper treatment of amortizable bond premium in their particular circumstances.

The Code imposes various restrictions, conditions and requirements relating to exclusion from gross income for federal income tax purposes of interest on obligations such as the Series 2021A Bonds. The BWS has made certain representations and covenanted to comply with certain restrictions, conditions and requirements designed to ensure that interest on the Series 2021A Bonds will not be included in federal gross income. Inaccuracy of these representations or failure to comply with these covenants may result in interest on the Series 2021A Bonds being included in gross income for federal income tax purposes, possibly from the date of original issuance of the Series 2021A Bonds. The opinion of Bond Counsel assumes the accuracy of these representations and compliance with these covenants. Bond Counsel has not undertaken to determine (or to inform any person) whether actions taken (or not taken), or events occurring (or not occurring), or any other matters coming to Bond Counsel's attention after the date of issuance of the Series 2021A Bonds may adversely affect the value of, or the tax status of interest on, the Series 2021A Bonds. Accordingly, the opinion of Bond Counsel is not intended to, and may not, be relied upon in connection with any such actions, events or matters.

Although Bond Counsel is of the opinion that interest on the Series 2021A Bonds is excluded from gross income for federal income tax purposes and that the Series 2021A Bonds and the income therefrom are exempt from taxation by the State or any political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes, the ownership or disposition of, or the accrual or receipt of amounts treated as interest on, the Series 2021A Bonds may otherwise affect a Beneficial Owner's federal, state or local tax liability. The nature and extent of these other tax consequences depends upon the particular tax status of the Beneficial Owner or the Beneficial Owner's other items of income or deduction. Bond Counsel expresses no opinion regarding any such other tax consequences.

Current and future legislative proposals, if enacted into law, clarification of the Code or court decisions may cause interest on the Series 2021A Bonds to be subject, directly or indirectly, in whole or in part, to federal income taxation or to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. The introduction or enactment of any such legislative proposals or clarification of the Code or court decisions may also affect, perhaps significantly, the market price for, or marketability of, the Series 2021A Bonds. Prospective purchasers of the Series 2021A Bonds should consult their own tax advisors regarding the potential impact of any pending or proposed federal or state tax legislation, regulations or litigation, as to which Bond Counsel is expected to express no opinion.

The opinion of Bond Counsel for the Series 2021A Bonds is based on current legal authority, covers certain matters not directly addressed by such authorities, and represents Bond Counsel's judgment as to the proper treatment of the Series 2021A Bonds for federal income tax purposes. It is not binding on the Internal Revenue Service ("IRS") or the courts. Furthermore, Bond Counsel cannot give and has not given any opinion or assurance about the future activities of the BWS, or about the effect of future changes in the Code, the applicable regulations, the interpretation thereof or the enforcement thereof by the IRS. The BWS has covenanted, however, to comply with the requirements of the Code.

Bond Counsel's engagement with respect to the Series 2021A Bonds ends with the issuance of the Series 2021A Bonds, and, unless separately engaged, Bond Counsel is not obligated to defend the BWS or the Beneficial Owners regarding the tax-exempt status of the Series 2021A Bonds in the event of an audit examination by the IRS. Under current procedures, parties other than the BWS and their appointed counsel, including the Beneficial Owners, would have little, if any, right to participate in the audit examination process. Moreover, because achieving judicial review in connection with an audit examination of tax-exempt bonds is difficult, obtaining an independent review of

IRS positions with which the BWS legitimately disagrees, may not be practicable. Any action of the IRS, including but not limited to selection of the Series 2021A Bonds for audit, or the course or result of such audit, or an audit of bonds presenting similar tax issues may affect the market price for, or the marketability of, the Series 2021A Bonds, and may cause the BWS or the Beneficial Owners to incur significant expense.

Series 2021B Bonds

In the opinion of Bond Counsel, based upon an analysis of existing laws, regulations, rulings and court decisions, and assuming, among other matters, the accuracy of certain representations and compliance with certain covenants, the Series 2021B Bonds (also defined herein as the "Taxable Bonds") and the income therefrom are exempt from all taxation by the State or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes. Bond Counsel observes that interest on the Taxable Bonds is not excluded from gross income for federal income tax purposes under Section 103 of the Code. Bond Counsel expresses no opinion regarding any other tax consequences relating to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Taxable Bonds. The proposed form of opinion of Bond Counsel is contained in Appendix D hereto.

The following discussion summarizes certain U.S. federal tax considerations generally applicable to holders of the Taxable Bonds that acquire their Taxable Bonds in the initial offering. The discussion below is based upon laws, regulations, rulings, and decisions in effect and available on the date hereof, all of which are subject to change, possibly with retroactive effect. Prospective investors should note that no rulings have been or are expected to be sought from the IRS with respect to any of the U.S. federal tax consequences discussed below, and no assurance can be given that the IRS will not take contrary positions. Further, the following discussion does not deal with U.S. tax consequences applicable to any given investor, nor does it address the U.S. tax considerations applicable to all categories of investors, some of which may be subject to special taxing rules (regardless of whether or not such investors constitute U.S. Holders), such as certain U.S. expatriates, banks, REITs, RICs, insurance companies, tax-exempt organizations, dealers or traders in securities or currencies, partnerships, S corporations, estates and trusts, investors that hold their Taxable Bonds as part of a hedge, straddle or an integrated or conversion transaction, or investors whose "functional currency" is not the U.S. dollar. Furthermore, it does not address (i) alternative minimum tax consequences, (ii) the net investment income tax imposed under Section 1411 of the Code, or (iii) the indirect effects on persons who hold equity interests in a holder. This summary also does not consider the taxation of the Taxable Bonds under state, local or non-U.S. tax laws. In addition, this summary generally is limited to U.S. tax considerations applicable to investors that acquire their Taxable Bonds pursuant to this offering for the issue price that is applicable to such Taxable Bonds (i.e., the price at which a substantial amount of the Taxable Bonds are sold to the public) and who will hold their Taxable Bonds as "capital assets" within the meaning of Section 1221 of the Code.

As used herein, "U.S. Holder" means a beneficial owner of a Taxable Bond that for U.S. federal income tax purposes is an individual citizen or resident of the United States, a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States or any state thereof (including the District of Columbia), an estate the income of which is subject to U.S. federal income taxation regardless of its source or a trust where a court within the United States is able to exercise primary supervision over the administration of the trust and one or more United States persons (as defined in the Code) have the authority to control all substantial decisions of the trust (or a trust that has made a valid election under U.S. Treasury Regulations to be treated as a domestic trust). As used herein, "Non-U.S. Holder" generally means a beneficial owner of a Taxable Bond (other than a partnership) that is not a U.S. Holder. If a partnership holds Taxable Bonds, the tax treatment of such partnership or a partner in such partnership generally will depend upon the status of the partner and upon the activities of the partnership. Partnerships holding Taxable Bonds, and partners in such partnerships, should consult their own tax advisors regarding the tax consequences of an investment in the Taxable Bonds (including their status as U.S. Holders or Non-U.S. Holders).

Notwithstanding the rules described below, it should be noted that certain taxpayers that are required to prepare certified financial statements or file financial statements with certain regulatory or governmental agencies may be required to recognize income, gain and loss with respect to the Taxable Bonds at the time that such income, gain or loss is recognized on such financial statements instead of under the rules described below (in the case of original issue discount, such requirements are only effective for tax years beginning after December 31, 2018).

Prospective investors should consult their own tax advisors in determining the U.S. federal, state, local or non-U.S. tax consequences to them from the purchase, ownership and disposition of the Taxable Bonds in light of their particular circumstances.

U.S. Holders

Interest. Interest on the Taxable Bonds generally will be taxable to a U.S. Holder as ordinary interest income at the time such amounts are accrued or received, in accordance with the U.S. Holder's method of accounting for U.S. federal income tax purposes.

To the extent that the issue price of any maturity of the Taxable Bonds is less than the amount to be paid at maturity of such Taxable Bonds (excluding amounts stated to be interest and payable at least annually over the term of such Taxable Bonds) by more than a de minimis amount, the difference may constitute original issue discount ("OID"). U.S. Holders of Taxable Bonds will be required to include OID in income for U.S. federal income tax purposes as it accrues, in accordance with a constant yield method based on a compounding of interest (which may be before the receipt of cash payments attributable to such income). Under this method, U.S. Holders generally will be required to include in income increasingly greater amounts of OID in successive accrual periods.

Taxable Bonds purchased for an amount in excess of the principal amount payable at maturity (or, in some cases, at their earlier call date) will be treated as issued at a premium. A U.S. Holder of a Taxable Bond issued at a premium may make an election, applicable to all debt securities purchased at a premium by such U.S. Holder, to amortize such premium, using a constant yield method over the term of such Taxable Bond.

Sale or Other Taxable Disposition of the Taxable Bonds. Unless a nonrecognition provision of the Code applies, the sale, exchange, redemption, retirement (including pursuant to an offer by the BWS) or other disposition of a Taxable Bond will be a taxable event for U.S. federal income tax purposes. In such event, in general, a U.S. Holder of a Taxable Bond will recognize gain or loss equal to the difference between (i) the amount of cash plus the fair market value of property received (except to the extent attributable to accrued but unpaid interest on the Taxable Bond, which will be taxed in the manner described above) and (ii) the U.S. Holder's adjusted U.S. federal income tax basis in the Taxable Bond (generally, the purchase price paid by the U.S. Holder for the Taxable Bond, decreased by any amortized premium, and increased by the amount of any OID previously included in income by such U.S. Holder with respect to such Taxable Bond). Any such gain or loss generally will be capital gain or loss. In the case of a non-corporate U.S. Holder of the Taxable Bonds, the maximum marginal U.S. federal income tax rate applicable to any such gain will be lower than the maximum marginal U.S. federal income tax rate applicable to ordinary income if such U.S. holder's holding period for the Taxable Bonds exceeds one year. The deductibility of capital losses is subject to limitations.

Defeasance of the Taxable Bonds. If the BWS defeases any Taxable Bond, the Taxable Bond may be deemed to be retired and "reissued" for U.S. federal income tax purposes as a result of the defeasance. In that event, in general, a holder will recognize taxable gain or loss equal to the difference between (i) the amount realized from the deemed sale, exchange or retirement (less any accrued qualified stated interest which will be taxable as such) and (ii) the holder's adjusted tax basis in the Taxable Bond.

Information Reporting and Backup Withholding. Payments on the Taxable Bonds generally will be subject to U.S. information reporting and possibly to "backup withholding." Under Section 3406 of the Code and applicable U.S. Treasury Regulations issued thereunder, a non-corporate U.S. Holder of the Taxable Bonds may be subject to backup withholding at the current rate of 24% with respect to "reportable payments," which include interest paid on the Taxable Bonds and the gross proceeds of a sale, exchange, redemption, retirement or other disposition of the Taxable Bonds. The payor will be required to deduct and withhold the prescribed amounts if (i) the payee fails to furnish a U.S. taxpayer identification number ("TIN") to the payor in the manner required, (ii) the IRS notifies the payor that the TIN furnished by the payee is incorrect, (iii) there has been a "notified payee underreporting" described in Section 3406(c) of the Code or (iv) the payee fails to certify under penalty of perjury that the payee is not subject to withholding under Section 3406(a)(1)(C) of the Code. Amounts withheld under the backup withholding rules may be refunded or credited against the U.S. Holder's federal income tax liability, if any, provided that the required information is timely furnished to the IRS. Certain U.S. holders (including among others, corporations and certain tax-exempt organizations) are not subject to backup withholding. A holder's failure to comply with the backup withholding rules may result in the imposition of penalties by the IRS.

Non-U.S. Holders

Interest. Subject to the discussions below under the headings "Information Reporting and Backup Withholding" and "FATCA," payments of principal of, and interest on, any Taxable Bond to a Non-U.S. Holder, other than (1) a controlled foreign corporation, a such term is defined in the Code, which is related to the BWS through stock ownership and (2) a bank which acquires such Taxable Bond in consideration of an extension of credit made pursuant to a loan agreement entered into in the ordinary course of business, will not be subject to any U.S. federal withholding tax provided that the beneficial owner of the Taxable Bond provides a certification completed in compliance with applicable statutory and regulatory requirements, which requirements are discussed below under the heading "Information Reporting and Backup Withholding," or an exemption is otherwise established.

Disposition of the Taxable Bonds. Subject to the discussions below under the headings "Information Reporting and Backup Withholding" and "FATCA," any gain realized by a Non-U.S. Holder upon the sale, exchange, redemption, retirement (including pursuant to an offer by the BWS or a deemed retirement due to defeasance of the Taxable Bonds) or other disposition of a Taxable Bond generally will not be subject to U.S. federal income tax, unless (i) such gain is effectively connected with the conduct by such Non-U.S. Holder of a trade or business within the United States; or (ii) in the case of any gain realized by an individual Non-U.S. Holder, such holder is present in the United States for 183 days or more in the taxable year of such sale, exchange, redemption, retirement (including pursuant to an offer by the BWS) or other disposition and certain other conditions are met.

U.S. Federal Estate Tax. A Taxable Bond that is held by an individual who at the time of death is not a citizen or resident of the United States will not be subject to U.S. federal estate tax as a result of such individual's death, provided that, at the time of such individual's death, payments of interest with respect to such Taxable Bond would not have been effectively connected with the conduct by such individual of a trade or business within the United States.

Information Reporting and Backup Withholding. Subject to the discussion below under the heading "FATCA," under current U.S. Treasury Regulations, payments of principal and interest on any Taxable Bonds to a holder that is not a United States person will not be subject to any backup withholding tax requirements if the beneficial owner of the Taxable Bond or a financial institution holding the Taxable Bond on behalf of the beneficial owner in the ordinary course of its trade or business provides an appropriate certification to the payor and the payor does not have actual knowledge that the certification is false. If a beneficial owner provides the certification, the certification must give the name and address of such owner, state that such owner is not a United States person, or, in the case of an individual, that such owner is neither a citizen nor a resident of the United States, and the owner must sign the certificate under penalties of perjury. The current backup withholding tax rate is 24%.

Foreign Account Tax Compliance Act ("FATCA")—U.S. Holders and Non-U.S. Holders

Sections 1471 through 1474 of the Code, impose a 30% withholding tax on certain types of payments made to foreign financial institutions, unless the foreign financial institution enters into an agreement with the U.S. Treasury to, among other things, undertake to identify accounts held by certain U.S. persons or U.S.-owned entities, annually report certain information about such accounts, and withhold 30% on payments to account holders whose actions prevent it from complying with these and other reporting requirements, or unless the foreign financial institution is otherwise exempt from those requirements. In addition, FATCA imposes a 30% withholding tax on the same types of payments to a non-financial foreign entity unless the entity certifies that it does not have any substantial U.S. owners or the entity furnishes identifying information regarding each substantial U.S. owner. Under current guidance, failure to comply with the additional certification, information reporting and other specified requirements imposed under FATCA could result in the 30% withholding tax being imposed on payments of interest on the Bonds. In general, withholding under FATCA currently applies to payments of U.S. source interest (including OID) and, under current guidance, will apply to certain "passthru" payments no earlier than the date that is two years after publication of final U.S. Treasury Regulations defining the term "foreign passthru payments." Prospective investors should consult their own tax advisors regarding FATCA and its effect on them.

The foregoing summary is included herein for general information only and does not discuss all aspects of U.S. federal taxation that may be relevant to a particular holder of Taxable Bonds in light of the holder's particular circumstances and income tax situation. Prospective investors are urged to consult their own tax advisors as to any tax consequences to them from the purchase, ownership and disposition of Taxable Bonds, including the application and effect of state, local, non-U.S., and other tax laws.

APPROVAL OF LEGAL PROCEEDINGS

The validity of the Series 2021 Bonds and certain other legal matters are subject to the approving opinion of Orrick, Herrington & Sutcliffe LLP, Bond Counsel to the BWS. A complete copy of the proposed form of the Bond Counsel opinion is contained in Appendix D hereto. Bond Counsel undertakes no responsibility for the accuracy, completeness or fairness of this Official Statement. Certain legal matters will be passed upon for the Underwriters by their counsel, McCorriston Miller Mukai MacKinnon LLP, Honolulu, Hawaii.

CONTINUING DISCLOSURE

To assist the Underwriters in complying with Rule 15c2-12 promulgated by the Securities and Exchange Commission ("Rule 15c2-12"), the BWS will undertake in a Continuing Disclosure Certificate, the form of which is set forth in Appendix C (the "Continuing Disclosure Certificate"), to provide to the Municipal Securities Rulemaking Board on an annual basis certain financial and operating data concerning the BWS, financial statements, notice of certain events and certain other notices, all as described in the Continuing Disclosure Certificate. The undertaking is an obligation of the BWS that is enforceable as described in the Continuing Disclosure Certificate. Beneficial Owners of the Bonds are third party beneficiaries of the Continuing Disclosure Certificate. The execution of the Continuing Disclosure Certificate is a condition precedent to the obligation of the Underwriters to purchase the Series 2021 Bonds.

The BWS has policies and procedures in place to enhance compliance with its continuing disclosure undertakings including the one referenced in the preceding paragraph. The BWS also has retained a dissemination agent to assist in the preparation and filing of annual reports and notices of listed events under the Continuing Disclosure Certificate and previous continuing disclosure undertakings. The BWS regularly updates its financial and operating data, which may involve disclosing additional data, displaying data in a different format or eliminating data that are no longer material.

A failure by the BWS to comply with the Continuing Disclosure Certificate will not constitute an event of default of the Series 2021 Bonds, although any Bondholder or any Beneficial Owner may bring action to compel the BWS to comply with its obligations under the Continuing Disclosure Certificate. Any such failure must be reported in accordance with Rule15c2-12 and must be considered by any broker, dealer, or municipal securities dealer before recommending the purchase or sale of the Series 2021 Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the Series 2021 Bonds and their market price.

MISCELLANEOUS

Additional information may be obtained, upon request, from the Manager.

All quotations from, and summaries and explanations of, the State Constitution and laws referred to herein do not purport to be complete, and reference is made to the State Constitution and laws for full and complete statements of their provisions. Any statements made in this Official Statement involving matters of opinion or estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is made that any of the estimates will be realized. Neither this Official Statement nor any statement which may have been made orally or in writing is to be construed as a contract with the holders of any of the Series 2021 Bonds.

BOARD OF WATER SUPPLY OF THE CITY AND COUNTY OF HONOLULU

/s/ Ernest Y.W. Lau
Ernest Y.W. Lau, Manager and Chief Engineer

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APPENDIX A

Economic and Demographic Factors

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ECONOMIC AND DEMOGRAPHIC FACTORS

Introduction

The City and County of Honolulu, which includes the entire island of Oahu and a number of small outlying islands, is a major metropolitan city with a resident population of 974,563 (approximately 69% of the state's population) as of July 1, 2019. Honolulu's underlying economy is supported by several diversified areas, which include tourism, the federal government and military operations, State and local governments, manufacturing, construction, real estate, education, research and science, trade and services, communications, finance, and transportation. A material deterioration in domestic or global economic conditions, including as a result of the coronavirus outbreak, have had a negative effect on the local economy.

Oahu is situated between 21 degrees and 22 degrees north latitude, just below the Tropic of Cancer. The climate has an average mean winter temperature of 70.2 degrees and an average mean summer temperature of 78.6 degrees. Average rainfall varies widely from one area of Oahu to another. Rainfall is comparatively light in the leeward coastal area where the larger part of the population is located. Waikiki, located on the leeward side of Oahu, has a dry climate with annual precipitation averaging about 27 inches; precipitation in the upper reaches of the Koolau mountains averages about 400 inches a year and provides an adequate supply of water for irrigation use and retention in large subterranean reservoirs for household and industrial uses.

Oahu is one of the oldest of the Hawaiian Islands. It has no active volcanos, and the last volcanic eruptions, which were minor, are believed to have occurred more than 70,000 years ago. The last major volcanic eruption on Oahu was Koʻolau which is believed to have ended approximately 1.8 million years ago.

The following material pertaining to economic factors in the City and County has been excerpted from the Hawaii State Department of Business, Economic Development and Tourism ("DBEDT") Fourth Quarter 2020 Quarterly Statistical Economic Report ("QSER") or from other materials prepared by DBEDT, some of which may be found at http://dbedt.hawaii.gov/. Certain visitor industry statistics have been excerpted from Hawaii Tourism Authority publications.

The COVID-19 pandemic has materially adversely affected Hawaii's economy, and is expected to affect the significance of certain historical information presented for periods prior to the outbreak of the COVID-19 pandemic in March 2020.

Certain Economic Indicators

Employment. The following table presents certain annual employment statistics for the City and County for 2016 through 2020 and the third quarters of 2019 and 2020. In the third quarter of 2020, the unemployment rate in the City and County was 12.0%, down 5.8% from the second quarter's unemployment rate of 17.8%. While the unemployment rate is still much higher because of the economic impacts of COVID-19, a decrease of 5.8% presents a promising and encouraging downward trend. This trend continued through the end of the year with the unemployment rate in the City and County decreasing to 8.3% on a seasonally adjusted basis in December 2020. In the third quarter of 2020, the City and County lost 69,100 non-agricultural wage and salary jobs compared to the same quarter in 2019. Jobs decreased the most in Food Services and Drinking Places, which lost 22,000 jobs or 45.5%. This was followed by Accommodation which lost 14,400 jobs or 75.0%, Transportation, Warehousing & Utilities which lost 6,800 jobs or 27.8%, Professional & Business Services which lost 5,400 jobs or 9.5%, and Arts, Entertainment & Recreation which lost 3,500 jobs or 41.2% in the quarter. For the private sector, in the third quarter of 2020, only Natural Resources, Mining & Construction, added 700 jobs or 2.6%. The Government sector lost 3,000 jobs or 3.2% in the quarter.

Table I

Employment Statistics

	Annual Average				3rd Quarter		
	2016	2017	2018	2019	2019	2020	% Change Year Ago
Civilian Labor Force	466,150	464,750	458,050	450,550	449,000	427,550	-4.8%
Civilian Employment	453,150	453,900	447,000	438,950	437,100	376,250	-13.9%
Unemployed	13,000	10,850	11,050	11,650	11,900	51,300	331.1%
Unemployment Rate	2.8%	2.3%	2.4%	2.6%	2.6%	12.0%	9.4%

Source: State of Hawaii Department of Business, Economic Development and Tourism.

Personal Income. In recent years, per capita personal income for Honolulu residents has consistently been higher than for the State of Hawaii and the United States as a whole. The following table presents the per capita personal income for Honolulu residents in comparison to the State and the country for the years 2015 through 2019. As indicated, the per capital personal income in the City and County in 2019 was $61,174, representing a 3.1% increase over 2018.

Table II

Per Capita Personal Income

Year	Honolulu	State of Hawaii	United States
2015	$53,208	$49,489	$48,998
2016	$54,860	$51,170	$50,004
2017	$57,352	$53,433	$52,114
2018	$59,324	$55,214	$54,601
2019	$61,174	$57,015	$56,469

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Housing Market. The following table presents the annual average resale prices for single-family homes and condominiums in Honolulu from 2015 through 2019, and the quarterly average resale prices for single-family homes and condominiums in Honolulu during the third quarters of 2019 and 2020.

Table III

Average Resale Prices

	Single Family Homes		Condominiums	
Year	Average Resale Price	% Change	Average Resale Price	% Change
2015	$ 863,969	5.1	$435,810	-5.4
2016	$ 884,427	2.4	$572,223	31.3
2017	$ 945,206	6.9	$619,177	8.2
2018	$1,032,415	9.2	$615,019	-0.7
2019	$ 967,045	-6.3	$545,748	-11.3
2019 Q3	$1,011,915	14.0	$543,197	2.0
2020 Q3	$1,000,029	-0.4	$541,583	-3.0

Source: State of Hawaii Department of Business, Economic Development and Tourism.

State and County Governments

With Honolulu as the State capital, most State government activity is concentrated on the Island of Oahu. In 2019, the State government generated 72,900 jobs, of which more than 75% were located on Oahu. The largest number of State employees work in public education and the State university system, with approximately 83% of these employed on Oahu. In addition, the City and County government employed approximately 12,300 individuals in the third quarter of 2020.

Federal Government and Military

The federal government plays an important role in Hawaii's economy. According to the most recent U.S. Bureau and Economic Analysis ("BEA") data, the total compensation of employees ("COE") of federal government employees in Hawaii was about $9.1 billion in 2019, up 4.2% from the previous year. The total COE of combined military and civilian federal employees in Hawaii accounted for about 18.0% of Hawaii's total COE in 2019. Between 2008 and 2018, the annual average compounded growth rate for COE was 3.5% for federal civilian personnel and 1.3% for military personnel in Hawaii. The military personnel accounted for 55.7% of the total federal COE in 2019. The federal government accounted for about 11.0% of State GDP in Hawaii in 2019, a majority of which is defense related.

The Hawaii-based Indo-Pacific Command is responsible for over 50% of global command activity and is essential to national security. Over 90% of the U.S. military presence in Hawaii is on Oahu.

In total, the defense industry provides over 102,000 jobs with annual household incomes totaling $8.7 billion. Generally, the median earnings for active-duty service members and Department of Defense ("DoD") civilians are higher than that of other full-time employees in Hawaii. Military construction projects total $627 million for fiscal year 2018 and fiscal year 2019.

The U.S. Army recently completed a Supplemental Programmatic Environmental Assessment for its Army 2020 force structure realignment. The assessment evaluates a scenario in which the Army would eliminate 16,606 soldiers and civilians from Schofield Barracks and 3,786 from Fort Shafter, both of which are located on the island of Oahu. In response, the Chamber of Commerce of Hawaii's Military Affairs Council launched a campaign to maintain the number of military members in Hawaii and acquired signatures on a petition to keep troops in Hawaii. The Army held a "listening session" on the impact of reducing forces in Hawaii in January 2015. The DoD is considering relocating 2,700 Marines from Okinawa to Hawaii between 2027 and 2031.

The Pearl Harbor Naval Shipyard is the largest industrial/repair complex and employer in Hawaii, with a workforce of nearly 5,200 civilians and contributes more than $925 million into Hawaii's economy annually.

Hawaii continues to host RIMPAC (Rim of the Pacific Exercise) held during even-numbered years, to enhance interoperability between Pacific Rim Armed Forces. In 2018, 25 nations, more than 51 surface ships and submarines, 200 aircraft, and 25,000 personnel participated in RIMPAC. In 2020, due to the coronavirus pandemic, RIMPAC was a sea-only exercise which was developed to ensure the safety of military forces participating, and Hawaii's population, by minimizing shore-based contingents, while striking a balance between combating future adversaries and the COVID-19 threat.

Future levels of federal funding (including defense funding) in Hawaii are subject to potential spending cutbacks and deferrals that may be implemented to reduce the federal budget deficit. The federal budget sequestration has not had a material adverse effect on the City and County or the State.

Finance

As the financial center of the State of Hawaii, Honolulu is served by a full range of financial institutions, including banks, savings and loan associations, and financial services companies. Honolulu currently has 13 institutions in the market, comprised of Hawaii-chartered banks, a Hawaii-chartered financial services company, federally chartered savings banks, a national bank, and interstate branch banks with combined deposits totaling $41.04 billion as of the third quarter of 2020, as reported by the Federal Deposit Insurance Corporation.

Transportation

All parts of the City and County are connected by a comprehensive network of roads, highways, and freeways, and all of the populated areas of the island are served by a bus transit system (TheBus) with ridership of approximately 66 million annually. According to the 2020 Public Transportation Fact Book published by the American Public Transportation Association, the City and County hosts the 25th largest transit agency in the nation and the 13th largest bus agency in an urbanized area.

The City and County is constructing a new 20-mile fixed guideway mass transit system to provide rail service along the island's east-west corridor between Kapolei and downtown Honolulu (Ala Moana Center). Over 60% of the City and County's population currently lives within the area served by this corridor, and this area is projected to continue to grow faster than the rest of Oahu. See "DEBT STRUCTURE – Honolulu Rail Transit Project" in this Official Statement for additional information regarding this rail transit project.

Honolulu is the hub of air and sea transportation for the entire Pacific. The Daniel K. Inouye International Airport ("HNL") is located approximately five miles by highway from the center of downtown Honolulu. The Federal Aviation Administration reported that HNL was the 29th largest U.S. Airport as of 2019 based on the number of enplaned passengers.

Honolulu Harbor is the hub of the Statewide Commercial Harbors System. It serves as a major distribution point of overseas cargo to the neighbor islands and is the primary consolidation center for the export of overseas cargo. The U.S. Department of Transportation, Bureau of Transportation Statistics, Port Performance Freight Statistics Program, Annual Report to Congress 2019, ranks Honolulu Harbor among the top 25 ports in the country in 2018 by tonnage, container, or dry bulk, handling 1,732 total vessel calls, 15.1 million short tons of foreign and domestic cargo, and 1.27 million twenty-foot equivalent units of container cargo. The State Department of Transportation, Harbor Division manages, maintains and operates the State's Harbors Systems to provide for the efficient movement of cargo and passengers. The U.S. military moves most of its cargo through the State's Harbors System.

Construction

Construction was one of the major contributors to job growth in Hawaii over the past few years. The following table shows the estimated value of construction authorizations for private buildings for the City and County and for the State as a whole for the last five years and the third quarters of 2019 and 2020.

Table IV

Estimated Value of Building Permits
(Dollars in Thousands)

Year	State	Change from Prior Year	City & County of Honolulu	Change from Prior Period
2015	3,963,607	19.6%	2,436,954	17.6%
2016	3,240,649	-18.2%	2,141,467	-12.1%
2017	3,127,828	-3.5%	2,007,815	-6.2%
2018	3,268,292	4.5%	1,985,648	-1.1%
2019	3,221,446	-1.4%	2,063,293	3.9%
2019 Q3	798,767	-1.3%	457,271	-12.9%
2020 Q3	843,222	5.6%	577,771	26.4%

Source: State of Hawaii Department of Business, Economic Development and Tourism (compiled from data collected by county building departments).

Significant development projects which were recently completed, are currently under construction, or are in the later planning stages on the island of Oahu include:

- The Airports Division's modernization program, which commenced in 2013, is ongoing. The program includes significant capital improvements such as expanding Daniel K. Inouye International Airport's Inter-Island terminal and main terminal, constructing consolidated car rental facilities at Daniel K. Inouye International Airport and Kahului, Maui, and installing energy saving equipment in airports statewide. Additionally, in February 2018 plans were announced for the construction of a new approximately 800,000 square foot Diamond Head concourse at Daniel K. Inouye International Airport which is anticipated to add 12-14 wide body gates in the initial phase and be expandable to up to 21 gates as well as a new Customs and Border Protection facility and improved security and baggage screening facilities for the Transportation Security Administration.

- The University of Hawaii is in the process of constructing a new 72,000 square feet state-of-the-art LEED Silver Life Sciences Building which will house teaching, laboratory and office support spaces for the College of Natural Sciences biology, botany and microbiology departments, along with the Pacific Biosciences Research Center.

- The Howard Hughes Corporation is developing a master-planned community on 60 acres in Kakaako known as Ward Village. The development as approved to date will include 4,000 high-rise residences, including the Ke Kilohana, A‘ali‘i, Ko‘ula towers and Victoria Place, and more than one million square feet of retail and commercial space, including Merriman's restaurant and a new multi-story Whole Foods supermarket. To date, over 480 luxury residential units have been completed and over 1,600 are currently under construction.

- Brookfield Properties recently completed a $572 million expansion and renovation of its Ala Moana Shopping Center. The expansion included the addition of a new 167,000-square-foot, three-level Bloomingdale's store, a new 186,000-square-foot, three-level Nordstrom store and an additional 300,000 square feet of in-line mall retail space. Attached to the shopping center are two luxury residential apartment projects built over parking podiums. One Ala Moana, a 23-story tower containing 206 luxury residential units, was completed in late 2014. Park Lane, a nine-story complex containing 215 luxury residential units, was completed in 2017. Adjacent to the shopping center, SamKoo Development has completed construction of 485 additional luxury residential units.

- Downtown Capital recently completed the redevelopment of the former Honolulu Advertiser building and adjacent property into a $400 million, two-tower workforce housing condominium project containing 1,045 units.

- Castle & Cooke Homes Hawaii recently began construction on Koa Ridge, a $2.2 billion housing and commercial development on the central Oahu plateau, which will consist of 3,500 single- and multi-family homes (including 30% affordable homes), a medical center, shopping outlets and recreation areas on 576 acres between Mililani and Waipio.

- D.R. Horton – Schuler Homes recently began developing Ho‘opili in West Oahu, which will consist of 11,750 single- and multi-family homes, commercial and light industrial space, community facilities, three elementary schools, one middle school, a high school, parks and open space, and agricultural areas on 1,289 acres of land.

- Hoakalei Resort – Haseko Development is building a 140-acre residential resort on the southwest shore of Oahu with 887 homes and townhouses completed and more planned. The project also includes a completed signature Ernie Els golf course and a recreational lagoon under construction.

- Ka Makana Ali‘i – DeBartolo Development recently completed the first phase of a 1.4 million square-foot, $500 million shopping center in East Kapolei, including 150 shops and restaurants, two hotels and Macy's as an anchor tenant.

- Avalon Group is currently developing the 123-acre Kapolei Business Park West (West Oahu) with 47 industrial lots and the 54-acre Kapolei Business Park Phase 2. An additional expansion of the 3-acre Kapolei Pacific Center will include general and medical offices—existing tenants include the Social Security Administration.

- In March 2019, American Savings Bank, FSB completed a new 373,000 square foot, 11-story headquarters building in Downtown Honolulu. The building contains five levels of office space and six levels of parking. Its pre-cast design allows for a collaborative and dynamic working environment with open-floor layouts on each office floor.

- Artspace has completed construction of Ola Ka ‘Ilima Artspace lofts, a $53 million, 84-unit condominium project in which low and moderate income artists receive a preference for tenancy.

- Manaolana Partners and Kaijima Kagaku USA Inc. is currently developing Manao‘lana Place, a 36-story, mixed-use tower that will include a Mandarin Oriental hotel and luxury condominiums near the Hawaii Convention Center.

- ProsPac is currently developing Azure Ala Moana, a $750 million, 408-unit residential unit project scheduled for completion in 2021.

- SamKoo Development is currently developing The Central Ala Moana, a 512-unit residential condominium project schedule for completion in 2021.

- Ililani LLC is currently developing the 328-unit Ililani affordable housing project in Kakaako, scheduled for completion in late 2021.

- Oliver McMillan Kuhio, LLC and Brookfield Properties are currently developing the Lilia Waikiki, comprised of a new 402-unit residential tower and renovation of 53 existing units, scheduled for completion in 2021.

- Hawaii City Plaza LP is currently developing Hawaii Ocean Plaza, a 407-unit condo-hotel scheduled for completion in Fall 2021.

- Halawa View Housing Partners LP is currently developing Halawa View Apartments, a 458 affordable unit housing project scheduled for completion in September 2021.

- Kobayashi & MacNaughton are currently developing Pawaa Affordable Housing, a 201-unit project in a 21-story tower scheduled for completion in 2022.

- MJF Development Corp. is currently developing The Block 803 Waimanu, a 153-unit condominium project.

- Avalon Group is currently developing the Sky Ala Moana Towers, a mixed-use project, including 390 condominium units, 300 hotel rooms and retail space.

- Salem Partners is currently developing 1500 Kapiolani, a 500-unit condominium-hotel.

- Kalaimoku-Kuhio Development Corp. is redeveloping King Kalakaua Plaza, a retail building and hotel.

- Kamehameha Schools has commenced the Moiliili Gateway project, a redevelopment of 6.5 acres (213,500 square feet) along University Avenue.

- Cuzco Development is currently developing Keeaumoku Towers, two 42-story towers containing 980 residential condominium units.

- Best Hospitality is currently developing the Park Kalia-Waikiki Condo-Hotel, a 170-unit property.

- Sanko Soflan Holdings is currently developing 130 residential units in Waikiki.

Trade and Services

The economy of both the City and County and the State as a whole is heavily trade and service oriented, largely because of the heavy volume of purchases by visitors to the State. According to the State's Department of Taxation, the State's general excise and use tax base for trade activities exceeded $36.36 billion and for service activities exceeded $16.66 billion in 2019. Of the City and County's 397,000 non-agricultural jobs in the third quarter of 2020, retail and wholesale trade together accounted for 56,100 jobs, and health care and social assistance, professional and business services, natural resources, mining, and construction, and financial activities were other major employment sectors. As of the third quarter of 2020, health care and social assistance accounted for approximately 13.5% of jobs in the City and County, professional and business services accounted for approximately 13% of jobs, retail trade for 11.2%, natural resources, mining, and construction for 7%, and federal, state, and county government for 22.6% of non-agricultural jobs.

Agriculture and Diversified Manufacturing

Agriculture and manufacturing are relatively small sectors in the State's and the City and County's economy. Agricultural sales on Oahu totaled $151 million in 2017, accounting for approximately 27% of the State's agricultural production. About 20% of the land on Oahu is zoned for agriculture, which in 2017 consisted of 927 farms encompassing 71,795 acres. With the decline of the sugar and pineapple industries, agricultural lands are returning to an era of small farms growing diversified agricultural products. For example, Hawaii aquaculture sales totaled $76.4 million in 2017, according to the USDA's National Agricultural Statistics Service.

Manufacturing on Oahu consists principally of producing cement (one plant), refining oil (two refineries), and converting oil into synthetic natural gas (one plant). Other activities include the manufacturing of garments, plastic and concrete pipe, jewelry and gift items, and the processing and packaging of tropical fruits, nuts and other food items. There are more than 1,000 manufacturers statewide. In March 2016, the State's High Technology Development Corporation announced the Manufacturing Assistance Program to provide matching grant funds (up to $100,000) for local manufacturers willing to invest into expanding their production through purchase of new equipment or training or improving the energy efficiency of their operations. The program strives to make Hawaii manufacturers more competitive, reducing imports and increasing exports from the State.

Energy

Hawaii's electricity production and costs are still heavily reliant on oil, but renewable energy has been increasing in all counties. In 2018 approximately 27.6% of Hawaii's electricity was generated from renewable sources, the primary sources being solar, wind, biomass, and geothermal. According to DBEDT's Hawaii State Energy Office, the Island of Oahu has two waste-to-energy facilities, seven solar farms, four biofuel facilities, three wind farms, and one ocean project under development with the capacity to generate at least 311 megawatts of energy. The State administration has set a goal of using 100% reusable energy resources by 2045.

In October 2012, the City and County completed a $300 million expansion of its H-Power waste-to-energy facility, increasing its capacity to over 900,000 tons of municipal solid waste per year. The project included new air pollution control equipment mandated by federal law which became operational in April 2011 and a new boiler that entered commercial operations on April 2013 and currently has the capacity to produce approximately 80 megawatts of energy.

In March 2011, First Wind (now owned by SunEdison) completed Oahu's first large-scale commercial wind farm on the North Shore of the island at Kahuku. At full capacity, the project's twelve turbines produce 30 megawatts of energy, enough power for up to 7,700 homes on Oahu. In 2012, First Wind added another 30 turbines on the North Shore of the island at Kawailoa with the capacity to produce an additional 69 megawatts of energy.

In 2019, Clearway Energy Group completed three grid-scale solar power projects on Oahu. Kawailoa Solar, the 49-megawatt solar farm adjacent to the First Wind facility at Kawailoa, is the largest solar project in the State to date using nearly 500,000 solar panels. Waipio Solar, the 45.9-megawatt solar farm located in Waipio, uses over 160,000 solar panels. Finally, Mililani Solar II, the 14.7-megawatt solar farm located in the Mililani Agricultural Park, uses over 150,000 solar panels. The three projects, which total approximately 110 megawatts, generate renewable energy equivalent to that used by about 18,000 homes on Oahu each year.

Three more renewable energy projects were completed on Oahu in 2020—Aloha Solar Energy Fund II, a 5-megawatt solar project located in Kalaeloa; Mauka FIT 1, a 3.5-megawatt solar project located on the North Shore; and Na Pua Makani Wind Project, a 24-megawatt wind project also located on the North Shore. Additionally, several renewable energy projects are currently in the planning stages on Oahu, with estimated completion dates in 2021, 2022, and 2023. These projects include a 12.5-megawatt solar and battery energy storage system ("BESS") project to be developed by AES West Oahu Solar, LLC in West Oahu, 52- and 60-megawatt solar and BESS projects to be developed by Hanwha Energy USA Holdings Corp (174 Power Global) in Kunia, a 120-megawatt solar and BESS project to be developed by Longroad Development Company, LLC in Kunia, a 39-megawatt solar and BESS project to be developed by Mililani I Solar, LLC (Clearway) in Mililani, a 30-megawatt solar and BESS project to be developed by AES Distributed Energy Inc. in Waiawa, and a 36-megawatt solar and BESS project to be developed by Waiawa Solar Power LLC (Clearway) in Waiawa.

Education, Research and Science

The University of Hawaii was established in 1907 and currently consists of a research university at Manoa, baccalaureate institutions at Hilo and West Oahu, and a system of seven community colleges on the islands of Kauai, Oahu, Maui, and Hawaii. The State's only law school is located at Manoa and its only medical school (with a new cancer research center) is located at Kakaako in downtown Honolulu. In the fall of 2020, 49,594 students were enrolled in the University of Hawaii System, 18,025 of them on the Manoa campus.

In addition to the University of Hawaii System, there are three private universities and one private college on Oahu. Federal government research agencies in Honolulu include the U.S. Bureau of Commercial Fisheries and the Environmental Science Services Administration. Among private research organizations on Oahu are the Oceanic Institute and the Bishop Museum. The three high technology centers located on Oahu are the Mililani Technology Park, the Kaimuki Technology Enterprise, and the Manoa Innovation Center.

Visitor Industry

The visitor industry encompasses an array of businesses, including hotels, restaurants, airlines, travel agencies, taxis, tour-bus operators, gift shops, and other service and recreational industries.

The number of visitor arrivals decreased significantly in 2020 due to the coronavirus outbreak. Prior to the outbreak, both domestic visitor arrivals and international visitor arrivals increased in 2019.

The total number of visitor arrivals by air in 2019 was 10,243,165, an increase of 4.9% over the 9,761,448 visitor arrivals by air in 2018. In 2019, total visitor arrivals on domestic flights were 6,871,839, an increase of 7.8% over the 6,377,414 total visitor arrivals on domestic flights in 2018. Arrivals on international flights were 3,371,326, a slight decrease of 0.4% over the 3,384,034 total visitor arrivals on international flights in 2018.

In terms of major market areas, arrivals from the U.S. West were 4,595,319, an increase of 9.3% compared to 2018 and arrivals from the U.S. East were 2,276,520, an increase of 4.7% compared to 2018. Arrivals from Japan were 1,576,205, an increase of 5.8% compared to 2018.

In 2019, 6,154,248 people visited Oahu, an increase of 5% over the 5,862,358 people who visited Oahu in 2018. In 2019, 3,149,962 were domestic visitors, an increase from 2,843,389 domestic visitors in 2018. In 2019, 3,004,286 were international visitors, an increase from 3,018,969 international visitors in 2018.

In 2019, the length of stay per visitor declined by 2.6%. Due to the shorter length of stay, the average total daily visitor census increased less than the growth of visitor arrivals. The total average daily visitor census in 2019 was 245,733 up 2.2% compared to 2018. The domestic average daily census was 182,288, an increase of 4.4% compared to 2018, while the international average daily census was 63,445, a decrease of 3.5% compared to 2018.

Visitor expenditures (by air and cruise ship) totaled $17.716 billion in 2019, an increase of 1.2% compared to 2018.

Total airline capacity, as measured by the number of available seats flown to Hawaii, was 13,619,349 an increase of 2.9% over 2018. Domestic seats were 9,813,531 an increase of 5.7% over 2018 and international seats were 3,805,818, a decrease of 3.7% compared to 2018.

In 2019, the statewide hotel occupancy rate averaged 80.7%, 0.9% higher than in 2018. Oahu's hotel occupancy rate in 2019 averaged 84.0%, 0.1% higher than in 2018.

Table V

Selected State of Hawaii and Oahu Visitor Statistics

	Year Ended December 31				
	2015	**2016**	**2017**	**2018**	**2019**
Arrivals by Air – State	8,563,018	8,821,802	9,277,613	9,761,448	10,243,163
Domestic	5,782,140	5,968,779	6,239,748	6,377,414	6,871,839
International	2,780,878	2,853,023	3,037,865	3,384,034	3,371,326
Arrivals by Air – Oahu	5,339,912	5,447,229	5,683,344	5,862,358	6,154,248
Average Daily Visitor Census – State	213,934	217,675	229,063	240,341	245,733
Domestic	156,026	157,953	164,273	174,611	182,228
International	57,908	59,723	64,791	65,731	63,445
Visitor Expenditures – State (1)	$14,939	$15,754	$16,622	$17,509	$17,716
Hotel Occupancy Rate – State	78.7%	79.0%	80.2%	79.8%	80.7%
Hotel Occupancy Rate – Oahu	85.1%	83.9%	83.5%	83.9%	84.0%

(1) *In millions of dollars. By persons arriving by air and staying overnight or longer (excludes supplemental business expenditures).*

Sources: State of Hawaii Department of Business, Economic Development & Tourism and Hospitality Advisors, LLC.

Honolulu's profile as a visitor destination is enhanced by its role as host of numerous professional and trade conferences and conventions, as well as major sports events.

Conferences and conventions held in Honolulu annually attract thousands of visiting participants statewide, nationally and internationally. The primary site for these events is the Hawaii Convention Center, which is located near Waikiki hotel accommodations and visitor attractions.

The City and County continues to attract major investment to support the visitor industry, including hotels, restaurants, and recreation facilities. Significant development projects related to the visitor industry which are currently under construction or in the later planning stages in or around Waikiki include: (i) a $500 million renovation of 1,100 rooms in the Sheraton Waikiki Hotel, to be completed in phases, (ii) a $90.7 million redevelopment of the Outrigger Reef on the Beach Resort that will add a 200-room hotel tower and increased meeting space, open recreation, and dining areas, (iii) construction of a 32-story tower consisting of 191 timeshare apartment units at the former King's Village site, next to the Hale Waikiki Apartments and Prince Edwards

Apartments, to be completed by 2022, and (iv) the demolition of all existing buildings of the Sheraton Princess Kaiulani, with construction of a new 33-story, 1,009 room tower to begin in 2022. The following development projects have recently been completed: (i) the $100 million renovation of the Hale Koa Hotel, (ii) the $250 million 246-unit second tower of the Ritz Carlton Waikiki and (iii) a conversion by Halekulani Corp of 297 rooms in the Waikiki Parc Hotel into 126 suites.

Significant development projects related to the visitor industry in other parts of Oahu include: (i) the new $60 million 183-room extended-stay Residence Inn by Marriott Hotel in Kapolei, which opened in October 2019 and (ii) a $52 million renovation of Turtle Bay Resort on Oahu's North Shore adding 750 additional units.

APPENDIX B

Audited Financial Statements

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Board of Water Supply
City and County of Honolulu

FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION
WITH INDEPENDENT AUDITOR'S REPORT

Fiscal Years Ended June 30, 2020 and 2019

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

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Board of Water Supply
City and County of Honolulu
INTRODUCTION
Fiscal Year Ended June 30, 2020

The Board of Water Supply of the City and County of Honolulu (BWS) is pleased to present its Annual Financial Report for fiscal year 2020. This introduction provides a brief overview of the mission, organization, and operations of the BWS. The following management's discussion and analysis is intended to provide the reader with an easily understandable analysis of the BWS's financial performance and all aspects of its financial position. Financial statements presenting the financial position, results of operations, and cash flows of the BWS in conformity with accounting principles generally accepted in the United States of America, accompanied by the independent auditor's report, follows the management's discussion and analysis.

HISTORY OF THE BOARD OF WATER SUPPLY

The BWS was created in 1929 by the Territorial Legislature in response to public outcry for a truly effective water management system that was above politics. The 1929 Legislature passed Act 96 to create and define the powers and duties of the Honolulu Board of Water Supply. Although it remained as a department of the City and County of Honolulu (City), the BWS was designed to be a semi-autonomous and self-supporting agency with the authority to charge for water usage to support its capital improvement and operating expenses and set long-term plans for Oahu's water future.

POWERS, DUTIES, AND FUNCTIONS

The BWS manages Oahu's municipal water resources and distribution system, providing residents with a safe, dependable, and affordable drinking water supply.

The BWS is the largest municipal water utility in the state of Hawaii. In fiscal year 2020, the BWS delivered potable and non-potable water to approximately one million customers on Oahu. The BWS carefully and proactively manages and invests in its intricate system, consisting of 94 active potable water sources, 172 reservoirs, and over 2,100 miles of pipeline.

The BWS is a financially self-sufficient, semi-autonomous agency of the City and County of Honolulu. Its operations and projects are financed with revenues generated by water transmission and distribution fees. It receives no tax money from the City. The BWS also pursues federal and state grants to help subsidize BWS projects.

The BWS is governed by a Board of Directors (Board), consisting of seven members. Five members are appointed by the Mayor and are confirmed by the Honolulu City Council. The remaining two serve in their capacities as the Director of the State Department of Transportation, and the Director and Chief Engineer of the City's Department of Facility Maintenance. The Board appoints the BWS Manager and Chief Engineer to administer the BWS.

The BWS consists of the following 10 divisions: Capital Projects Division, Customer Care Division, Field Operations Division, Finance Division, Information Technology Division, Land Division, Office of the Manager and Chief Engineer, Water Quality Division, Water Resources Division, and Water System Operations Division. There are also 3 staff offices in the Office of the Manager and Chief Engineer: Executive Support Office, Human Resources Office and the Communications Office.

Board of Water Supply
City and County of Honolulu
INTRODUCTION
Fiscal Year Ended June 30, 2020

MISSION

The BWS mission is to provide a safe, dependable, and affordable water supply now and into the future, focusing in three strategic areas: resource, operational, and financial sustainability.

- **Resource Sustainability (Safe)**. Protect, conserve and manage Oahu's water supplies and watersheds now and into the future through adaptive and integrated strategies.

- **Operational Sustainability (Dependable)**. Build an effective organization that continuously works to improve dependable service.

- **Financial Sustainability (Affordable)**. Implement sound fiscal strategies to provide safe, dependable and affordable water service.

ACCOMPLISHMENTS

BWS employees work diligently to provide safe, dependable, and affordable water service to customers by concentrating their efforts to achieve the BWS's strategic goals:

Resource Sustainability (Safe)

- Conducted 42,259 chemical tests, 35,094 microbiological tests, and collected 21,656 samples from BWS sources, distribution systems and treatment facilities to ensure all water served is safe to drink; tests performed during Fiscal Year 2020 include regulatory compliance testing, groundwater quality testing, and response to customer inquiries about water quality; BWS continues to monitor the Red Hill Fuel Storage Facilities and provide input to the Administrative Order of Consent as subject matter experts.

- In June 2020, BWS completed its annual production and delivery of the Consumer Confidence Report (CCR), also known as the Water Quality Report, to all BWS customers. The report provides information on the quality of the water delivered from the BWS system and was mailed to all customers on record and is also available at www.boardofwatersupply.com. The BWS also placed ads in Honolulu newspapers, including various ethnic language publications, to inform community members of the distribution.

- Issued $295,449 in rebates and achieved an estimated freshwater savings of more than 28 million gallons per year through the BWS water conservation rebate program for efficient clothes washing machines, rain barrels, and weather-based irrigation controllers.

- BWS continues to work on loi kalo restoration projects on BWS lands in Makaha and Manoa; these agricultural farms have watershed protection and cultural components; a community nonprofit group is evaluated and selected through an RFP process; and this effort builds community support of the BWS mission for the protection and management of Oahu's freshwater resources.

- The BWS sponsored its 42nd annual Water Conservation Week Poster Contest and the 12th annual Water Conservation Week Poetry Contest, receiving more than 1020 posters and 608 poems from 56 Oahu schools, focused on the theme "Creating a Sustainable Water Future". All winning entries will be featured in the 2021 Water Conservation Calendar scheduled for distribution in December 2020.

Operational Sustainability (Dependable)

- May 2020 marked the fifth year of the Stakeholder Advisory Group (SAG) - a group comprised of nearly 30 local residents, civic organization leaders, and business and environmental professionals, covering all City Council districts - whose purpose is to provide important feedback on the BWS Water Master Plan, financial plan, proposed rate study and other important initiatives such as water conservation, recycled water and watershed management; and the SAG effort demonstrates the BWS commitment to increase responsiveness and transparency of public engagement and communications.

- Responded to 349 main breaks, or about 17 breaks per 100 miles of pipeline, and conducted leak detection surveys for 297 miles of pipeline, which resulted in the Leak Detection Team finding and repairing 62 leaks before major property damages or system interruptions occurred.

- BWS staff helped protect Oahu's water resources and prevent damage to BWS infrastructure by handling 12,335 One Call locate requests and providing in-field support for 662 water line leaks and breaks. They proactively investigated 23,963 meters to ensure accurate and timely billing and assisted 4,537 customers with concerns about bills reflecting high water consumption. BWS' Call Center personnel assisted over 122,000 customers by phone, online, in person, fax and mail.

Financial Sustainability (Affordable)

- As of June 30, 2020 awarded $87 million in construction contracts and $17 million in professional service contracts for projects to maintain and improve water system facilities, including:

    - Well and booster stations, reservoirs and corporation yards, and for the systematic replacement of aging and corroded water mains and fire protection improvements;

    - Scheduled construction work for the replacement of 7 miles of pipelines in the Haleiwa, Kahaluu, Kamehameha Heights, Makakilo, Pauoa, Waikele, Waimanalo, and Waipio areas;

    - Initiated design work for future construction of 15 miles of water main replacements in Ala Moana, Ewa Beach, Hauula, Hawaii Kai, Kaneohe, Kapolei, Kuliouou, Manoa, Moanalua, Waialae Iki, and Waipahu;

  - Awarded design and construction contracts for renovations and improvements of the following BWS facilities: Aiea Wells, Halawa 418 Reservoir, Haleiwa Wells, Hoaeae Wells, Honouliuli Well II, Iolekaa Wells, Kaahumanu Wells, Kaluanui Wells, Kapolei 215 Reservoir No. 1, Koko Head 170 Reservoir, Kuliouou Well, Kunia Wells II, Maakua Well, Makaha Wells, Manoa Wells II, Mauna Olu 530 Reservoir, Mililani 994 Booster Station, Mililani Wells I, Mililani Wells II, Mililani Wells IV, Moanalua and Quarry Tunnels, Newtown Wells, Pearl City 285 Reservoir No. 1, Punaluu Wells III, Wahiawa Wells I, Waialae West Well, Waiau Wells, Waipahu Wells I, and Waipahu Wells III;

  - Replaced 39,265 automated meter reading transponder units as part of a $5 million initiative to change out 80,000 units in order to improve automated mobile meter reads and improve billing process efficiency;

- Payments via automatic bill pay have increased in FY 20 and account for 32.9% of all payments. Payments via lockbox continue to be a popular method of payment as well at 31.6% of the customers using this service. Credit card payments account for 19.7%; online banking payments 8.5%, walk-in payments 3.4%; payments made at satellite city hall locations 1.5%, and mail 2.4%.

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INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Board of Water Supply
City and County of Honolulu

Report on the Financial Statements

We have audited the accompanying financial statements of the Board of Water Supply (the "BWS"), a component unit of the City and County of Honolulu (the "City"), as of and for the fiscal years ended June 30, 2020 and 2019, and the related notes to the financial statements, which collectively comprise the BWS's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the BWS as of June 30, 2020 and 2019, and the changes in its financial position and its cash flows for the fiscal years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis on pages 10 through 16 and the schedules of proportionate share of the net pension liability, contributions (pension), changes in the net OPEB liability and related ratios, and contributions (OPEB) on pages 60 to 67 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that comprise the BWS's basic financial statements. The introduction and schedules of bonds payable and net revenue requirement are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedules of bonds payable and net revenue requirement are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedules of bonds payable and net revenue requirement are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introduction has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 6, 2020 on our consideration of the BWS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the BWS's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the BWS's internal control over financial reporting and compliance.

N + K CPAs, INC.

Honolulu, Hawaii
November 6, 2020

This section presents management's discussion and analysis of the BWS's financial condition and activities for the fiscal year ended June 30, 2020. This information should be read in conjunction with the BWS's basic financial statements.

Financial Highlights

The BWS implemented the second of five rate increases on July 2019 to meet cost of delivering water to customers and to support the continuation of the capital improvements needed to meet the mission of the Board of Water Supply. In fiscal year 2020, water rates increased by approximately 2%, which equates to $1.98 of the monthly water charges for an average single-family residential customer effective July 1, 2019.

The BWS maintains a relatively strong financial performance with a manageable capital program. Meanwhile, management continues to carefully evaluate the BWS's finances to ensure optimum performance. In addition to meeting all debt covenants, outstanding debt and cash reserves were kept at levels appropriate for maintaining favorable bond ratings. Key financial highlights are listed below:

- Net position increased $56.9 million in fiscal year 2020 compared to the 46.2 million increase in fiscal year 2019.
- Total assets were $1.8 billion in fiscal year 2020 and $1.7 billion in fiscal year 2019, which exceeded liabilities by $1.2 billion and $1.1 billion at June 30, 2020 and 2019, respectively.
- The BWS's unrestricted current assets at June 30, 2020 were 5.2 times its related current liabilities compared to 5.5 times at June 30, 2019.
- The BWS's debt to equity ratio was 30.5% and 25.5% at June 30, 2020 and 2019, respectively, indicating the continuance of capacity to issue additional debt.

Overview of the Financial Statements

The BWS is a semi-autonomous agency of the City. The financial statements are presented using the economic resources measurement focus and the accrual basis of accounting, whereby revenues and expenses are recognized in the period earned or incurred.

Management's discussion and analysis ("MD&A") represents management's analysis and comments on the BWS's financial condition and performance. Summary financial data, key financial and operational indicators used in the BWS's annual report, budget, bond resolutions, and other management tools were used for this analysis.

The basic financial statements include the statement of net position, statement of revenues, expenses and changes in net position, statement of cash flows, and notes to the financial statements. The statement of net position presents the resources and obligations of the BWS as of the end of the reporting period. The statement of revenues, expenses and changes in net position presents the changes in net position for the fiscal year then ended, and the resultant ending net position balance. The statement of cash flows present changes in cash and cash equivalents (short-term investments with original maturities of three months or less from the date of acquisition), resulting from operating, investing, capital and related financing activities, and non-capital financing activities.

Results of Operations

CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
(Amounts in thousands)

				2020 - 2019		2019 - 2018	
	2020	2019	2018	Increase (decrease)	% Change	Increase (decrease)	% Change
Operating revenues	$ 231,107	$ 228,662	$ 232,378	$ 2,445	1.1%	$ (3,716)	-1.6%
Operating expenses							
Administrative and general	71,191	72,031	70,494	(840)	-1.2%	1,537	2.2%
Depreciation	45,796	47,266	47,337	(1,470)	-3.1%	(71)	-0.1%
Power and pumping	35,044	35,139	32,065	(95)	-0.3%	3,074	9.6%
Other operating expenses	60,688	49,563	47,850	11,125	22.4%	1,713	3.6%
Total operating expenses	212,719	203,999	197,746	8,720	4.3%	6,253	3.2%
Operating income	18,388	24,663	34,632	(6,275)	-25.4%	(9,969)	-28.8%
Nonoperating revenues (expenses)							
Interest income	7,994	7,549	6,097	445	5.9%	1,452	23.8%
Interest expense	(9,261)	(9,661)	(9,837)	400	-4.1%	176	-1.8%
Others	11,895	10,710	(6,169)	1,185	11.1%	16,879	-273.6%
Total nonoperating revenues	10,628	8,598	(9,909)	2,030	23.6%	18,507	-186.8%
Contributions in aid of construction	27,887	12,976	21,509	14,911	114.9%	(8,533)	-39.7%
Change in net position	$ 56,903	$ 46,237	$ 46,232	$ 10,666	23.1%	$ 5	0.0%

Operating revenues for the fiscal year ended June 30, 2020 totaled $231.1 million, an increase of $2.4 million or 1.1% from the fiscal year ended June 30, 2019. This was mainly due to the increase in water consumption rates for the single family and multi-family residential customer class. Meter charges went from a flat rate to a monthly charge based on the meter size. Revenues also increased due to the implementation of a monthly standby charge for automatic fire sprinklers which is based on the size of the meter. There was a slight decrease in revenue in April from the non-residential class, possibly due to the COVID-19 shutdown, but flat lined for the remainder of FY20.

Operating revenues for the fiscal year ended June 30, 2019 totaled $228.7 million, a decrease of $3.7 million or 1.6% from the fiscal year ended June 30, 2018. This was mainly due to a decrease in agriculture and single family residential water consumption.

Total operating expenses increased by $8.7 million in fiscal year 2020. Factors contributing to this change are explained below:

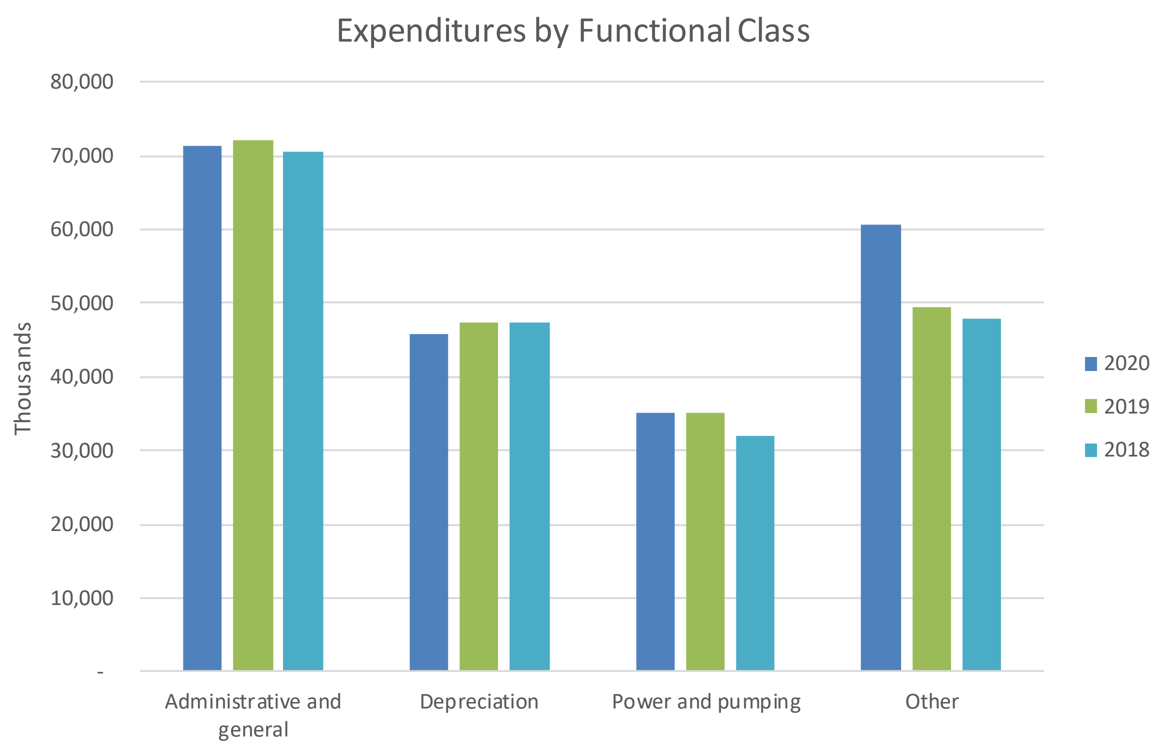
- Power and pumping remained relatively consistent in FY 20 at $35.0 million compared to FY 19 at $35.1 million. Administrative and general also remained relatively consistent in FY20 at $71.2 million compared to last year's $72.0 million.
- Other operating expenses increased by $11.1 million during fiscal year 2020 mainly due to the increase in transmission and distribution, and maintenance costs.

Total operating expenses increased by $6.2 million in fiscal year 2019. Factors contributing to this change are explained below:

- Power and pumping expenses increased by $3.1 million in fiscal year 2019 mainly due to increases in electricity costs.
- Other operating expenses increased by $1.7 million during fiscal year 2019 mainly due to the increase in transmission and distribution costs.

For the fiscal year ended June 30, 2020, net nonoperating revenue increased by $2.0 million. This was the result of an increase in interest income of $0.4 million, an increase in net realized and unrealized gain on investments of $1.4 million, and a decrease in interest expense of $0.4 million.

For the fiscal year ended June 30, 2019, net nonoperating revenue increased by $18.5 million. This was the result of an increase in interest income of $1.4 million and an increase in net realized and unrealized gain on investments of $17.1 million.



Contributions in aid of construction result from Water System Facilities Charges (WSFC) that are levied against all new developments and residential properties requiring water from the BWS's systems, except those developments that have paid for and installed a complete water system, including sources, transmission, and daily storage facilities. In addition, contributions of capital assets from governmental agencies, developers and customers are recorded as contributions in aid of construction at their cost. The BWS realized contributions in aid of construction of $27.9 million in fiscal year 2020 compared to $13.0 million in fiscal year 2019. The increase was primarily due to increases in WSFC revenue of $5.1 million, increases in contributions by private developers of $4.4 million, and SRF debt principal forgiveness of $2.9 million. During the fiscal year ended June 30, 2020 the major developments were Kapolei 215' Reservoir No. 2, Kapolei Business Park West Phase 1, and Honolulu Rail Transit Utility Relocation.

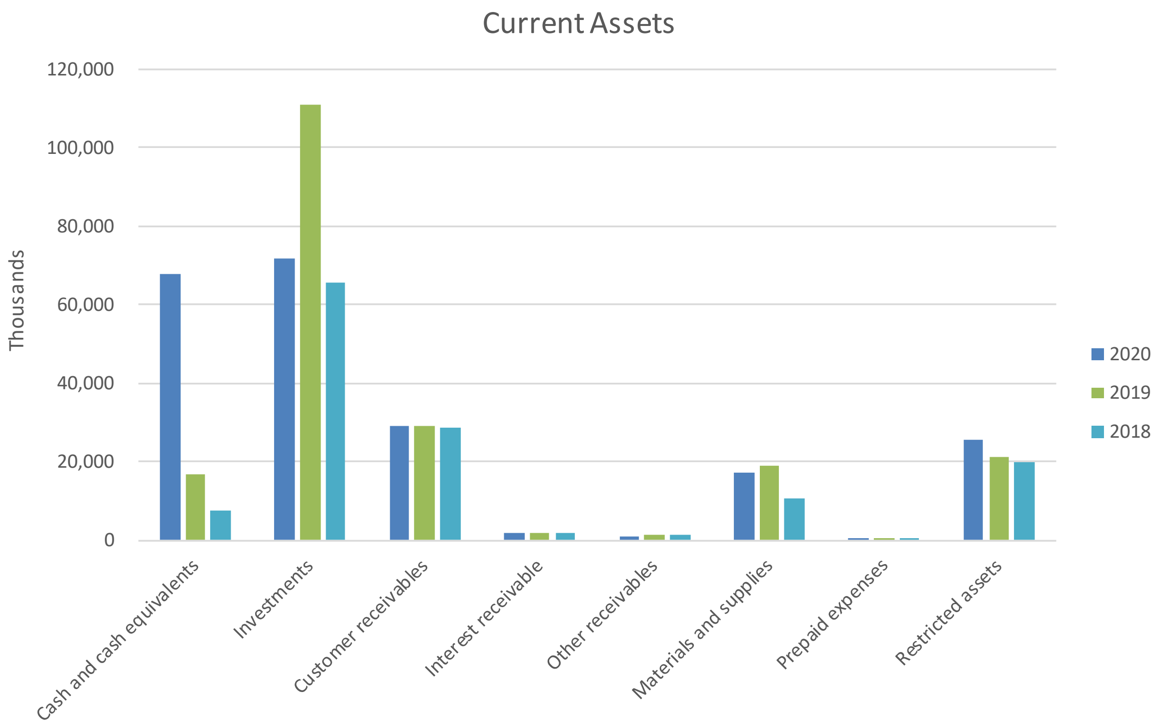
The BWS realized contributions in aid of construction of $13.0 million in fiscal year 2019 compared to $21.5 million in fiscal year 2018. The decrease was primarily due to decreases in contributions by private developers of $3.8 million and WSFC revenue of $3.3 million. During the fiscal year ended June 30, 2019 the major developments were Kalaeloa Boulevard Improvements and Hoopili Phase 3, Parcels 5 and 6.

Financial Condition

CONDENSED STATEMENTS OF NET POSITION
(Amounts in thousands)

				2020 - 2019		2019 - 2018	
	2020	2019	2018	Increase (decrease)	% Change	Increase (decrease)	% Change
Current assets	$ 214,591	$ 200,951	$ 135,696	$ 13,640	6.8%	$ 65,255	48.1%
Noncurrent assets							
Capital assets, net	1,247,700	1,188,906	1,150,029	58,794	4.9%	38,877	3.4%
Investments	306,912	283,878	320,355	23,034	8.1%	(36,477)	-11.4%
Restricted and other assets	75,769	24,351	22,408	51,418	211.2%	1,943	8.7%
Total assets	1,844,972	1,698,086	1,628,488	146,886	8.7%	69,598	4.3%
Deferred outflows of resources	48,195	53,064	57,873	(4,869)	-9.2%	(4,809)	-8.3%
Total assets and deferred outflows of resources	$ 1,893,167	$ 1,751,150	$ 1,686,361	$ 142,017	8.1%	$ 64,789	3.8%
Current liabilities	$ 62,511	$ 54,045	$ 44,731	$ 8,466	15.7%	$ 9,314	20.8%
Noncurrent liabilities							
Bonds payable, noncurrent	267,636	213,780	224,342	53,856	25.2%	(10,562)	-4.7%
Notes payable, noncurrent	97,966	78,163	64,255	19,803	25.3%	13,908	21.6%
Net pension liability	114,808	120,348	113,350	(5,540)	-4.6%	6,998	6.2%
Net OPEB liability	73,815	73,128	74,722	687	0.9%	(1,594)	-2.1%
Other liabilities	14,265	11,766	11,993	2,499	21.2%	(227)	-1.9%
Total liabilities	631,001	551,230	533,393	79,771	14.5%	17,837	3.3%
Deferred inflows of resources	11,750	6,408	5,693	5,342	83.4%	715	12.6%
Net position							
Net investment in capital assets	929,869	885,600	861,923	44,269	5.0%	23,677	2.7%
Restricted for capital activity and debt service	29,005	38,677	33,114	(9,672)	-25.0%	5,563	16.8%
Unrestricted	291,542	269,235	252,238	22,307	8.3%	16,997	6.7%
Total net position	1,250,416	1,193,512	1,147,275	56,904	4.8%	46,237	4.0%
Total liabilities, deferred inflows of resources and net position	$ 1,893,167	$ 1,751,150	$ 1,686,361	$ 142,017	8.1%	$ 64,789	3.8%

The BWS's current assets were 3.4, 3.7, and 3.0 times its related current liabilities as of June 30, 2020, 2019, and 2018, respectively. The ratio decrease at June 30, 2020 was due to an increase in cash, cash equivalents, and investments that were offset by an increase in accounts and contracts payable. The ratio increase at June 30, 2019 was due to an increase in cash, cash equivalents, and investment.



Restricted and other assets increased by $51.4 million in fiscal year 2020. The increase is primarily due to the receipt of Series 2020A net bond proceeds of $65.3 million during fiscal year 2020. Restricted and other assets increased by $1.9 million in fiscal year 2019. The increase is primarily due to an increase in cash and cash equivalents.

Bonds payable increased by $54.9 million as of June 30, 2020. The increase is also attributed to the issuance of Series 2020A Bonds that resulted in the receipt of net bond proceeds of $65.3 million during fiscal year 2020. Bonds payable decreased by $10.3 million as of June 30, 2019. The decrease represents scheduled debt service payments and the amortization of bond premiums during fiscal year 2019.

Notes payable increased by $21.4 million as of June 30, 2020. The increase is due to the receipt of loan proceeds for new projects utilizing financing from the state revolving fund loan program totaling $28.6 million. Notes payable increased by $14.9 million as of June 30, 2019. The increase is primarily due to the receipt of loan proceeds for projects utilizing financing from the state revolving fund loan program totaling $18.0 million.

The net pension liability decreased by $5.5 million as of June 30, 2020 which was mainly due to a .09% decrease in the BWS’s proportion of the net pension liability. The net pension liability increased by $7.0 million as of June 30, 2019 which was mainly due to an increase in the BWS's proportionate share of the collective net pension liability and unfavorable differences between expected and actual experience with regard to economic or demographic factors.

The net OPEB liability increased by $0.6 million as of June 30, 2020, which was mainly due to differences in investment earnings and unfavorable change in assumptions. The net OPEB liability decreased by $1.6 million as of June 30, 2019, which was mainly due to favorable differences between projected and actual earnings on OPEB plan investments and employer contributions exceeding the minimum required contribution in fiscal year 2018.

Capital Assets and Long-Term Debt

During fiscal years 2020 and 2019, the BWS capitalized $56.8 million and $50.9 million, respectively, to its utility plant in service. Major assets added in fiscal year 2020 were Energy Savings Performance Contract, $8.1 million; Kapolei 215’ Reservoir No. 2, $7.5 million; Kapahulu Water System Improvements, Part I, $4.7 million; Kamehame Utility Tunnel 36” Main Rehabilitation, $4.3 million; Kunia Wells II: Remove and Replace GAC Tank Pad Piping, $3.8 million; and Wilhelmina Rise Water System Improvements, Part V, $3.7 million.

During fiscal years 2019 and 2018, the BWS capitalized $50.9 million and $37.3 million, respectively, to its utility plant in service. Major assets added in fiscal year 2019 were Wilhelmina Rise Water System Improvements, Part IV, $6.5 million; Energy Savings Performance Contract, $5.4 million; Kalihi Water System Improvements, Part III, $4.9 million; Liliha Water System Improvements, $2.8 million; and Makakilo 920' and Waipahu 228' No. 2 Reservoir Facility Repairs $2.7 million.

The BWS issues long-term bonds to finance part of its capital improvement program. The BWS has maintained a low debt to equity ratio at 30.5%, 25.5%, and 26.2% for the fiscal years 2020, 2019, and 2018, respectively.

All outstanding bonds have been assigned underlying ratings of AAA from S&P Global and AA+ from Fitch Ratings.

Rate Covenant

The BWS is required under its bond indenture, among other things, to fix, charge and collect such rates and other charges in each fiscal year to meet the net revenue requirement for such fiscal year. The net revenue requirement is the greater of 1) the sum of the aggregate debt service and all deposits required by bond resolution to be made, or 2) 1.20 times the aggregate debt service. The BWS met the net revenue requirements for the fiscal years ended June 30, 2020 and 2019.

Novel Coronavirus (COVID-19)

The unprecedented outbreak of COVID-19 has caused economic and operational uncertainties for government and the private sectors. As the immediate and full impacts of COVID-19 are unknown at this time, the BWS has taken a conservative approach in budgeting both revenues and expenses for fiscal year 2021. In March and April 2020, there was a drop in water production. However, as of August 2020, production remains within its normal range. There are 2 hotels among the BWS's 10 largest users. Consumption and revenue for those hotels from March 2020 through August 2020 is down 50%. Overall, the stay-at-home/work-at-home order resulted in a redistribution of water demand from offices and businesses to their homes. For July and August of FY 21, BWS has seen a 9% decrease in revenues in the non-residential customer class and an increase of 9% in revenue from the residential customer class. The number of delinquent accounts have not drastically changed. In August 2020, the delinquency rate was at 10.81% compared to the average delinquency rate for 2019 of 11.22%.

To assist with the costs incurred by COVID-19, BWS received CARES funding of approximately $902K in FY20 and will be requesting for additional fund in FY21.

BWS has adequate working capital reserves to cover operating costs for a sustained period. In addition, because the BWS's CIP is funded 50% with cash, management can defer some capital projects and reallocate those funds to cover current operating costs.

Request for Information

This financial report is designed to provide a general overview of the BWS's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Board of Water Supply, City and County of Honolulu, 630 S. Beretania Street, Honolulu, Hawaii 96843.

Board of Water Supply
City and County of Honolulu
STATEMENTS OF NET POSITION
June 30, 2020 and 2019

	2020	2019
ASSETS		
Current assets		
Cash and cash equivalents	$ 67,877,735	$ 16,736,721
Investments	71,832,987	111,033,472
Interest receivable	1,866,206	1,982,363
Customer receivables		
Billed, less allowance for uncollectible accounts of $3,794,392 in 2020 and $3,371,847 in 2019	16,925,540	17,354,558
Unbilled	12,082,404	11,654,265
Other receivables, less allowances for uncollectible accounts of $510,868 in 2020 and 2019	1,014,802	1,397,457
Materials and supplies	17,024,618	19,099,033
Prepaid expenses	378,034	456,446
Restricted assets		
Cash and cash equivalents	25,589,110	21,236,291
Total current assets	214,591,436	200,950,606
Noncurrent assets		
Capital assets		
Infrastructure	1,586,973,234	1,556,510,343
Building and improvements	189,954,834	186,259,899
Equipment and machinery	347,463,706	328,433,517
	2,124,391,774	2,071,203,759
Less accumulated depreciation	(1,118,403,479)	(1,073,891,290)
	1,005,988,295	997,312,469
Land	32,373,064	32,373,064
Construction work in progress	209,338,479	159,220,947
Net capital assets	1,247,699,838	1,188,906,480
Investments	306,911,972	283,877,536
Restricted assets		
Cash and cash equivalents	64,893,617	3,201,881
Investments	10,874,633	21,149,006
Other assets	612	659
Total noncurrent assets	1,630,380,672	1,497,135,562
Total assets	1,844,972,108	1,698,086,168
DEFERRED OUTFLOWS OF RESOURCES		
Deferred loss on refunding of debt and other	14,780,122	15,572,789
Deferred outflows of resources related to pensions	21,818,025	27,773,118
Deferred outflows of resources related to OPEB	11,596,553	9,718,371
Total deferred outflows of resources	48,194,700	53,064,278
Total assets and deferred outflows of resources	$ 1,893,166,808	$ 1,751,150,446

See accompanying notes to financial statements.

Board of Water Supply
City and County of Honolulu
STATEMENTS OF NET POSITION (Continued)
June 30, 2020 and 2019

	2020	2019
LIABILITIES		
Current liabilities		
Payable from current assets		
Accounts payable	$ 16,042,971	$ 14,385,208
Contracts payable, including retainages	13,079,867	11,416,826
Accrued vacation, current portion	2,850,143	2,941,584
Accrued workers' compensation, current portion	1,271,067	1,068,132
Other	3,677,477	2,997,372
Total payable from current assets	36,921,525	32,809,122
Payable from restricted assets		
Contracts payable, including retainages	5,138,173	3,585,739
Accrued interest payable	4,423,920	4,706,312
Bonds payable, current portion	9,910,000	8,820,000
Notes payable, current portion	5,754,780	4,124,240
Refundable advances	362,237	--
Total payable from restricted assets	25,589,110	21,236,291
Total current liabilities	62,510,635	54,045,413
Noncurrent liabilities		
Bonds payable, noncurrent portion	267,636,345	213,780,455
Notes payable, noncurrent portion	97,965,810	78,163,163
Net pension liability	114,807,821	120,348,341
Net OPEB liability	73,815,255	73,127,683
Accrued vacation, noncurrent portion	4,486,874	3,832,552
Accrued workers' compensation	3,530,561	2,780,710
Customer advances	2,348,616	2,414,284
Other	3,898,713	2,737,613
Total noncurrent liabilities	568,489,995	497,184,801
Total liabilities	631,000,630	551,230,214
DEFERRED INFLOWS OF RESOURCES		
Deferred inflows of resources related to pensions	10,283,163	3,450,266
Deferred inflows of resources related to OPEB	1,467,196	2,957,650
Total deferred inflows of resources	11,750,359	6,407,916
NET POSITION		
Net investment in capital assets	929,869,437	885,599,654
Restricted for capital activity and debt service	29,004,758	38,677,184
Unrestricted	291,541,624	269,235,478
Total net position	1,250,415,819	1,193,512,316
Total liabilities, deferred inflows of resources and net position	$ 1,893,166,808	$ 1,751,150,446

See accompanying notes to financial statements.

Board of Water Supply
City and County of Honolulu
STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION
Fiscal Years Ended June 30, 2020 and 2019

	2020	2019
OPERATING REVENUES		
Water sales	$ 228,467,575	$ 226,347,969
Other, principally contract and service fees	2,639,953	2,313,872
Total operating revenues	231,107,528	228,661,841
OPERATING EXPENSES		
Administrative and general	71,190,600	72,030,601
Depreciation	45,796,106	47,266,015
Power and pumping	35,044,263	35,139,272
Transmission and distribution	33,022,657	25,232,703
Maintenance	14,839,903	11,430,094
Water reclamation	4,986,298	5,313,092
Customers' accounting and collection	4,154,640	4,287,336
Central administrative services expense fees	3,300,000	3,300,000
Source of supply	384,146	--
Total operating expenses	212,718,613	203,999,113
Operating income	18,388,915	24,662,728
NONOPERATING REVENUES (EXPENSES)		
Interest income	7,994,046	7,549,495
Interest expense, net of amortization of bond premiums of $1,845,668 in 2020 and $1,741,887 in 2019	(9,260,845)	(9,661,066)
Bond issuance costs	(682,715)	--
Loss from disposal of capital assets	(675,481)	(540,882)
Net increase in the fair value of investments	12,327,374	10,866,747
Federal grant revenue	658,355	--
Other	267,177	383,673
Total nonoperating revenues	10,627,911	8,597,967
CONTRIBUTIONS IN AID OF CONSTRUCTION	27,886,677	12,976,364
Change in net position	56,903,503	46,237,059
NET POSITION		
Beginning of year	1,193,512,316	1,147,275,257
End of year	$ 1,250,415,819	$ 1,193,512,316

See accompanying notes to financial statements.

Board of Water Supply
City and County of Honolulu
STATEMENTS OF CASH FLOWS
Fiscal Years Ended June 30, 2020 and 2019

	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers	$ 232,215,173	$ 227,366,672
Payments to suppliers for goods and services	(92,987,403)	(94,721,939)
Payments to employees for services	(60,448,018)	(58,325,919)
Net cash provided by operating activities	78,779,752	74,318,814
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Acquisition and construction of capital assets	(89,728,278)	(73,725,603)
Customer payments for capital projects	10,329,332	6,350,292
Federal grants received	1,020,592	--
Net proceeds from bond issuance	65,293,753	--
Principal paid on bonds	(8,820,000)	(8,550,000)
Interest paid on bonds	(8,902,128)	(9,175,023)
Advanced refunding of previously issued debt	(1,083,073)	--
Proceeds from notes payable	28,543,912	18,048,072
Interest paid on notes payable	(957,567)	(789,555)
Principal paid on notes payable	(4,168,725)	(3,195,391)
Net cash used in capital and related financing activities	(8,472,182)	(71,037,208)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of investments	(135,927,883)	(145,871,012)
Proceeds from maturity of investments	174,695,679	150,050,772
Interest on investments	8,110,203	7,513,375
Net cash provided by investing activities	46,877,999	11,693,135
Net increase in cash and cash equivalents	117,185,569	14,974,741
CASH AND CASH EQUIVALENTS		
Beginning of year	41,174,893	26,200,152
End of year	$ 158,360,462	$ 41,174,893
Reconciliation of cash and cash equivalents to the statement of net position		
Unrestricted	$ 67,877,735	$ 16,736,721
Restricted	90,482,727	24,438,172
	$ 158,360,462	$ 41,174,893

See accompanying notes to financial statements.

Board of Water Supply
City and County of Honolulu
STATEMENTS OF CASH FLOWS (Continued)
Fiscal Years Ended June 30, 2020 and 2019

	2020	2019
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	$ 18,388,915	$ 24,662,728
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	47,505,377	48,781,234
Provision for doubtful accounts	1,018,275	990,929
Change in assets, deferred outflows of resources, liabilities, and deferred inflows of resources:		
Customer receivables	(1,017,396)	(1,477,386)
Other receivables	649,832	412,096
Materials and supplies	2,074,415	(8,579,922)
Prepaid expenses and other	78,412	15,392
Deferred outflows of resources related to pensions	5,955,093	4,158,721
Deferred outflows of resources related to OPEB	(1,878,182)	(863,033)
Accounts and contracts payable	2,176,977	1,845,196
Accrued vacation	562,881	(242,144)
Accrued workers' compensation	952,786	299,656
Other liabilities	1,822,872	(1,802,901)
Net pension liability	(5,540,520)	6,998,047
Net OPEB liability	687,572	(1,594,240)
Deferred inflows of resources related to pensions	6,832,897	(925,353)
Deferred inflows of resources related to OPEB	(1,490,454)	1,639,794
Net cash provided by operating activities	$ 78,779,752	$ 74,318,814
SUPPLEMENTAL DISCLOSURE OF NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES		
Changes in fair value of investments	$ 10,709,380	$ 11,662,776
Contributions of capital assets from government agencies, developers and customers that are recorded as contributions in aid of construction	$ 14,549,677	$ 7,434,353
Capital asset additions included in contracts and accounts payable at year end	$ 18,891,700	$ 16,195,439
Bond proceeds deposited directly with escrow agent for refunding of previously issued debt	$ 47,231,940	$ --
Bond issuance costs deducted from bond proceeds	$ 682,715	$ --
Amortization of other costs	$ 47	$ 47
Amortization of bond premium, net	$ 1,845,668	$ 1,741,887
Amortization of deferred loss on refunding	$ 1,529,163	$ 1,513,205
Forgiveness of principal due on notes payable	$ 2,942,000	$ --

See accompanying notes to financial statements.

NOTE A - OPERATIONS

The Revised Charter of the City and County of Honolulu provides for the operation of the Board of Water Supply (the "BWS") as a semi-autonomous body of the City and County of Honolulu government (the "City"). The BWS has full and complete authority to manage, control and operate the City's water system and related properties.

Article VII of the Revised Charter of the City and County of Honolulu states that the BWS's seven-member Board of Directors has the authority to establish and adjust water rates and charges so that the revenues derived shall be sufficient to make the BWS self-supporting. The Board of Directors is required to follow certain procedures that include holding public hearings before implementing changes in the water rate schedules.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(1) ***Financial Statement Presentation*** - The BWS is a component unit of the City (the "primary government"). The accompanying financial statements present only the financial position and activities of the BWS and do not purport to, and do not present the financial position of the City, the changes in its financial position, or its cash flows.

(2) ***Measurement Focus and Basis of Accounting*** - The accompanying financial statements are presented using the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.

(3) ***Use of Estimates*** - The preparation of the financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities, deferred inflows of resources and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include the carrying amount of capital assets, valuation allowances for receivables, accrued workers' compensation, and pensions and postretirement benefits. Actual results could differ from those estimates.

(4) ***Cash and Cash Equivalents*** - The BWS considers all cash on hand, demand deposits, and short-term investments (including restricted assets) with original maturities of three months or less from the date of acquisition to be cash and cash equivalents.

(5) ***Investments*** - Investments are measured at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The cost of securities sold is generally determined by the weighted average method.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

(6) ***Receivables*** - Receivables are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the BWS's best estimate of the amount of probable credit losses in the BWS's existing receivables. The BWS determines the allowance based on past collection experience and the length of time individual receivables are past due. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

(7) ***Materials and Supplies*** - Materials and supplies are stated at weighted average cost (which approximates the first-in, first-out method). The cost of materials and supplies are recorded as expenses when consumed rather than when purchased.

(8) ***Restricted Assets*** - Restricted assets are comprised of cash and cash equivalents and investments maintained in accordance with bond resolutions and other agreements for the purpose of funding certain debt service payments, construction, improvements, and renewal and replacements of the water system. When both restricted and unrestricted assets are available for use, it is the BWS's policy to use restricted assets first, then unrestricted assets as they are needed. Restricted assets comprise the following:

- The debt service account accumulates transfers from the operating account throughout the fiscal year to make principal and interest payments on the outstanding water system revenue bonds and other notes payable.

- The renewal and replacement account and the reserve release fund provides funding for improvements, reconstruction, emergency or extraordinary repairs, and renewals or replacements of the water system.

- The improvement account holds the proceeds of the series bond issuance pursuant to the series resolution or series certificates. These proceeds are only applied to costs specified in the applicable series resolution or series certificates.

- The extramural account holds reimbursements received from any governmental agency or private entity, pursuant to negotiated agreements, contracts and/or grants.

(9) ***Capital Assets*** - Capital assets include those assets in excess of $5,000 for buildings, infrastructure, and equipment and machinery with a useful life of more than one year. Capital assets are stated at cost and include contributions by governmental agencies, private subdividers and customers at their cost or estimated cost of new construction.

Major replacements, renewals and betterments are capitalized. The BWS also capitalizes certain indirect costs to construction work based upon actual construction direct labor. Maintenance, repairs and replacements that do not improve or extend the lives of the assets are charged to expense.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Assets are depreciated over the individual assets' estimated useful lives using the straight-line method. Depreciation on both purchased and contributed assets is charged against operations.

The estimated useful lives of capital assets are as follows:

Source of supply plant	20 to 100 years
Pumping plant	20 to 50 years
Water treatment plant	20 to 30 years
Transmission and distribution plant	13-1/3 to 50 years
General plant	5 to 50 years

Gains or losses resulting from the sale, retirement or disposal of capital assets in service are credited or charged to nonoperating revenues (expenses).

(10) ***Bond Issue Prepaid Insurance Costs, Original Issue Discount or Premium and Deferred Loss on Refunding of Debt*** - Bond issue costs are expensed when incurred, except for prepaid insurance, which are amortized over the life of the respective issue on a straight-line basis. Bond issue prepaid insurance costs are presented as other assets in the statements of net position.

Original issue discounts or premiums are amortized using the straight-line method over the terms of the respective issues. Original issue discounts or premiums are offset against or added to bonds payable in the statements of net position.

Deferred loss on refunding of debt is amortized using the straight-line method over the remaining life of the refunded debt or the life of the new debt, whichever is shorter. The deferred loss on refunding of debt is presented as deferred outflows of resources in the statements of net position.

(11) ***Accrued Vacation and Compensatory Pay*** - Vacation is earned at the rate of one and three-quarters working days for each month of service. Vacation days may be accumulated to a maximum of ninety days as of the end of the calendar year and are convertible to pay upon termination. The BWS accrues a liability for compensated absences and additional amounts for certain salary-related payments including payroll taxes and fringe benefits.

As of June 30, 2020 and 2019, accumulated sick leave aggregated approximately $19,401,000 and $18,852,000, respectively. Sick leave accumulates at the rate of one and three-quarters working days for each month of service without limit, but can be taken only in the event of illness and is not convertible to pay upon termination of employment. However, an employee who retires or leaves government service in good standing with 60 or more unused sick days is entitled to additional service credit in the State of Hawaii's Employees' Retirement System.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

(12) ***Net Position*** - Net position represents the difference between assets and deferred outflows of resources less liabilities and deferred inflows of resources. Net position is classified in the following three components: net investment in capital assets, restricted for capital activity and debt service, and unrestricted. Net investment in capital assets consists of capital assets, net of accumulated depreciation and reduced by outstanding debt that is attributable to the acquisition, construction or improvement of those assets. Debt related to unspent proceeds or other restricted cash and investments at year-end is not included in the calculation of net investment in capital assets. Restricted for capital activity and debt service consists of net position for which constraints are placed thereon by external parties, such as lenders, grantors, contributors, laws, regulations or enabling legislation. Unrestricted consists of the remaining balance not included in the above categories.

(13) ***Operating Revenues and Expenses*** - The BWS distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services in connection with the BWS's principal ongoing water operations. The principal operating revenues are derived from charges for water usage, while operating expenses include cost of services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

(14) ***Revenue Recognition*** - Charges for water sales are based on usage. The BWS's policy is to bill customers on a cyclical monthly basis. The accrual for unbilled water revenues and related receivables reflected in the accompanying financial statements is based on estimated usage from the latest meter reading date to the end of the fiscal year.

(15) ***Contributions in Aid of Construction*** - Contributions in aid of construction represent cash or capital assets received by the BWS to aid in the construction of infrastructure assets. It also includes the forgiveness of principal due on state revolving fund loans that were used to finance the costs of infrastructure needed to maintain the water system. Contributions in aid of construction are recognized when they are accepted by the BWS and when all applicable eligibility requirements have been met.

(16) ***Water System Facilities Charge*** - A water system facilities charge is levied against all new developments and residential properties requiring water from the BWS's systems, except those developments that have paid for and installed a complete water system, including source, transmission and daily storage facilities. The amounts collected are initially recorded as customer advances and are recognized as contributions in aid of construction when water service is made available to the customer. The use of these funds is designated for the construction of water facilities.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

(17) ***Pensions*** - For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Employees' Retirement System of the State of Hawaii (the "ERS") and additions to/deductions from the ERS's fiduciary net position have been determined using the accrual basis of accounting, which is the same basis as they are reported by the ERS. For this purpose, employer and member contributions are recognized in the period in which the contributions are legally due and benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

(18) ***Postemployment Benefits Other Than Pensions ("OPEB")*** - For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the Hawaii Employer-Union Health Benefits Trust Fund ("EUTF") and additions to/deductions from EUTF's fiduciary net position have been determined on the same basis as they are reported by EUTF. For this purpose, EUTF recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value, except for investments in commingled and money market funds, which are reported at net asset value (NAV). The NAV is based on the fair value of the underlying assets held by the respective fund less its liabilities.

(19) ***Deferred Compensation Plan*** - All full-time employees are eligible to participate in the City and County of Honolulu's Public Employees' Deferred Compensation Plan (the "Plan"), adopted pursuant to Internal Revenue Code Section 457. The Plan permits eligible employees to defer a portion of their salary until future years. The deferred compensation amounts are not available to employees until termination, retirement, death or unforeseeable emergency.

A trust fund was established to protect plan assets from claims of general creditors and from diversion to any uses other than paying benefits to participants and beneficiaries. Accordingly, the BWS has excluded the Plan's assets and liabilities from the financial statements because the BWS and the City do not have significant administrative involvement in the Plan or perform the investment function for the Plan.

(20) ***Risk Management*** - The BWS is exposed to various risks of loss from: (1) torts, (2) theft of, damage to, and destruction of assets, (3) employee injuries and illnesses, (4) natural disasters, and (5) employee health, dental, and accident benefits. Commercial insurance coverage is purchased for claims arising from such matters.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The ranges of insurance limits and deductibles are as follows:

Policy	Limits (Millions)	Deductibles
Property	$ 60	$ 50,000
Public entity liability	$ 15	$ 750,000
Excess workers' compensation	$ 25	$ 600,000
Employment practices	$ 5	$ 75,000
Storage tank liability	$ 2	$ 10,000
Pollution legal liability	$ 5	$ 250,000
Crime	$ 5	$ 25,000
Cyber liability	$ 3	$ 50,000

There have been no significant reductions in insurance coverage's from the prior fiscal year.

(21) ***Reclassification*** - The previously issued financial statements of the BWS as of June 30, 2019 have been reclassified to correct the components of net position presented in the statements of net position. The reclassification decreased the net investment in capital assets component by $29,139,679 and increased the restricted for capital activity and debt service and unrestricted components by $16,529,979 and $12,609,700, respectively. The reclassification had no effect on total net position as of June 30, 2019 or the change in net position for the fiscal year ended June 30, 2019.

(22) ***New Accounting Pronouncements*** - The Government Accounting Standards Board (the "GASB") issued Statement No. 84, Fiduciary Activities. The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Management has determined that this Statement does not have a material impact on the BWS's financial statements.

The GASB issued Statement No. 87, *Leases*. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. The requirements of this Statement are effective for reporting periods beginning after June 15, 2021. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The GASB issued Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*. The primary objective of this Statement is to improve financial reporting by addressing issues related to public-private and public-public partnership arrangements (PPPs). As used in this Statement, a PPP is an arrangement in which a government (the transferor) contracts with an operator (a governmental or nongovernmental entity) to provide public services by conveying control of the right to operate or use a nonfinancial asset, such as infrastructure or other capital asset (the underlying PPP asset), for a period of time in an exchange or exchange-like transaction. This Statement also provides guidance for accounting and financial reporting for availability payment arrangements (APAs). As defined in this Statement, an APA is an arrangement in which a government compensates an operator for services that may include designing, constructing, financing, maintaining, or operating an underlying nonfinancial asset for a period of time in an exchange or exchange-like transaction. The requirements of this Statement are effective for reporting periods beginning after June 15, 2022. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

The GASB issued Statement No. 96, *Subscription-Based Information Technology Arrangements.* This Statement provides guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITA) for government end users. This Statement (1) defines a SBITA; (2) establishes that a SBITA results in a right-to-use subscription asset—an intangible asset—and a corresponding subscription liability; (3) provides the capitalization criteria for outlays other than subscription payments, including implementation costs of a SBITA; and (4) requires note disclosures regarding a SBITA. The requirements of this Statement are effective for reporting periods beginning after June 15, 2022. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

NOTE C - CASH AND INVESTMENTS

Cash deposited with the City is maintained by the Department of Budget and Fiscal Services of the City. The City maintains a cash and investment pool that is used by all of the City's Funds and the BWS. The Hawaii Revised Statutes ("HRS") provide for the City's Director of Finance to deposit the cash with any national or state bank or federally insured financial institution authorized to do business in the State of Hawaii, provided that all deposits are fully insured or collateralized. The City's demand deposits are fully insured or collateralized with securities held by the City or its agents in the City's name.

The HRS authorizes the BWS to invest, with certain restrictions, in obligations of the State of Hawaii or the United States of America, in federally insured savings accounts, time certificates of deposit, and bank repurchase agreements with federally insured financial institutions authorized to do business in the State of Hawaii. The BWS's portfolio is managed by various investment managers. These investments consist of U.S. government and U.S. government agencies securities.

NOTE C - CASH AND INVESTMENTS (Continued)

Interest Rate Risk - Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Generally, the longer the term of an investment, the greater the sensitivity of its fair value to changes in market interest rates. As a means of limiting its exposure to fair value losses, the BWS invests operating funds primarily in shorter-term securities, money market mutual funds, or similar investment pools.

Custodial Credit Risk - The custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. Excluding cash deposited with the City, all cash, money market mutual funds and investment securities as of June 30, 2020 and 2019 were held in trust by two financial institutions in the State of Hawaii.

All investment securities are registered in the name of the BWS and are not exposed to custodial credit risk. Money market mutual funds are not considered investment securities for purposes of custodial credit risk classification and are not exposed to custodial credit risk. Cash held in trust with these financial institutions are uncollateralized, however, amounts in excess of depository insurance are covered by commercial insurance obtained by each financial institution designed to insure against losses resulting from errors and omissions or fraud.

Credit Risk and Concentration of Credit Risk - Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation to the holder of the investment. Concentration of credit risk is the risk of a loss attributed to the magnitude of a government's investment in a single issuer. As of June 30, 2020 and 2019, all investment securities and money market mutual funds were rated Aaa and Aaa-mf, respectively, by Moody's Investors Services. The BWS's concentration of credit risk related to investments in debt securities has been mitigated by limiting such investments to only debt obligations of the U.S. government and U.S. government agencies.

The historical cost and estimated fair value of investments at June 30, 2020 and 2019 consisted of the following:

	2020		2019	
	Cost	Fair Value	Cost	Fair Value
U. S. Treasury obligations	$ 307,193,842	$ 319,258,382	$ 334,445,076	$ 337,750,640
U. S. government agencies	67,727,392	70,361,210	77,625,959	78,309,374
	$ 374,921,234	$ 389,619,592	$ 412,071,035	$ 416,060,014

NOTE C - CASH AND INVESTMENTS (Continued)

As of June 30, 2020 and 2019, the credit exposure as a percentage of total investments were as follows:

	2020		2019	
	Percent of Total	Fair Value	Percent of Total	Fair Value
U. S. Treasury obligations	82%	$ 319,258,382	81%	$ 337,750,640
U. S. government agencies				
Federal National Mortgage Association	7%	26,020,686	9%	35,996,530
Federal Home Loan Mortgage Corporation	1%	3,683,028	2%	6,974,347
Federal Home Loan Bank	8%	33,346,320	8%	35,338,497
Federal Farm Credit Bank	2%	7,311,176	0%	--
	100%	$ 389,619,592	100%	$ 416,060,014

The fair value of investments by contractual maturity at June 30, 2020 and 2019 are shown below:

	Investment Maturities (In Years) at June 30, 2020		
	Fair Value	Less Than 1	1 - 5
U. S. Treasury obligations	$ 319,258,382	$ 56,637,691	$ 262,620,691
U. S. government agencies	70,361,210	17,205,051	53,156,159
	$ 389,619,592	$ 73,842,742	$ 315,776,850

	Investment Maturities (In Years) at June 30, 2019		
	Fair Value	Less Than 1	1 - 5
U. S. Treasury obligations	$ 337,750,640	$ 98,880,356	$ 238,870,284
U. S. government agencies	78,309,374	23,131,037	55,178,337
	$ 416,060,014	$ 122,011,393	$ 294,048,621

NOTE D - RESTRICTED ASSETS

At June 30, 2020 and 2019, the BWS's restricted assets were comprised of cash, cash equivalents and investments and were held for the following purposes:

	2020	2019
Construction, renewals and replacements	$ 71,036,203	$ 5,130,874
Debt service	30,321,157	40,456,304
	$ 101,357,360	$ 45,587,178

NOTE E - FAIR VALUE MEASUREMENTS

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described as follows:

Level 1 - Inputs to the valuation methodology are quoted prices (unadjusted) in active markets for identical assets or liabilities that a government has the ability to access at the measurement date.

Level 2 - Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include:

- Quoted prices for similar assets or liabilities in active markets,
- Quoted prices for identical or similar assets or liabilities in markets that are not active,
- Inputs other than quoted prices that are observable for the asset or liability,
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 - Inputs that are unobservable for an asset or liability.

NOTE E - FAIR VALUE MEASUREMENTS (Continued)

Following is a description of the valuation techniques used by the BWS to measure fair value:

U.S. Treasury obligations: Valued using quoted prices in active markets for identical assets.

U.S. government agencies obligations: Valued using quoted prices for identical or similar assets in markets that are not active.

The following table sets forth by level, within the fair value hierarchy, assets measured at fair value on a recurring basis as of June 30, 2020 and 2019:

	Assets at Fair Value at June 30, 2020			
	Total	Level 1	Level 2	Level 3
U. S. Treasury obligations	$ 319,258,382	$ 319,258,382	$ --	$ --
U. S. government agencies	70,361,210	--	70,361,210	--
	$ 389,619,592	$ 319,258,382	$ 70,361,210	$ --

	Assets at Fair Value at June 30, 2019			
	Total	Level 1	Level 2	Level 3
U. S. Treasury obligations	$ 337,750,640	$ 337,750,640	$ --	$ --
U. S. government agencies	78,309,374	--	78,309,374	--
	$ 416,060,014	$ 337,750,640	$ 78,309,374	$ --

NOTE F - CAPITAL ASSETS

Capital assets activity during the fiscal years ended June 30, 2020 and 2019, were as follows:

	Balance July 1, 2019	Additions	Transfers	Retirements	Balance June 30, 2020
Depreciable assets					
Infrastructure	$ 1,556,510,343	$ 14,745,795	$ 17,370,010	$ (1,652,914)	$ 1,586,973,234
Building and improvements	186,259,899	--	3,794,520	(99,585)	189,954,834
Equipment and machinery	328,433,517	4,703,282	16,243,633	(1,916,726)	347,463,706
Total depreciable assets	2,071,203,759	19,449,077	37,408,163	(3,669,225)	2,124,391,774
Less accumulated depreciation	(1,073,891,290)	(47,505,377)	--	2,993,188	(1,118,403,479)
Total depreciable assets - net	997,312,469	(28,056,300)	37,408,163	(676,037)	1,005,988,295
Land	32,373,064	--	--	--	32,373,064
Construction work in progress	159,220,947	99,930,235	(49,812,703)	--	209,338,479
Net capital assets	$ 1,188,906,480	$ 71,873,935	$ (12,404,540)	$ (676,037)	$ 1,247,699,838

NOTE F - CAPITAL ASSETS (Continued)

	Balance July 1, 2018	Additions	Transfers	Retirements	Balance June 30, 2019
Depreciable assets					
Infrastructure	$ 1,527,922,394	$ 7,492,403	$ 22,554,570	$ (1,459,024)	$ 1,556,510,343
Building and improvements	176,188,768	--	10,463,776	(392,645)	186,259,899
Equipment and machinery	320,775,882	3,975,782	6,453,500	(2,771,647)	328,433,517
Total depreciable assets	2,024,887,044	11,468,185	39,471,846	(4,623,316)	2,071,203,759
Less accumulated depreciation	(1,029,116,807)	(48,781,234)	--	4,006,751	(1,073,891,290)
Total depreciable assets - net	995,770,237	(37,313,049)	39,471,846	(616,565)	997,312,469
Land	32,373,064	--	--	--	32,373,064
Construction work in progress	121,885,982	85,196,667	(47,861,702)	--	159,220,947
Net capital assets	$ 1,150,029,283	$ 47,883,618	$ (8,389,856)	$ (616,565)	$ 1,188,906,480

Depreciation charges allocated to various functions for the fiscal years ended June 30, 2020 and 2019 totaled $1,709,271 and $1,515,219, respectively.

NOTE G - BONDS PAYABLE

At June 30, 2020 and 2019, bonds payable consisted of the following:

	2020	2019
Water System Revenue Bonds, Series 2012A, annual principal due ranging from $2,000,000 to $8,535,000 through July 1, 2024, with interest ranging from 2.00% to 5.00%.	$ 27,115,000	$ 74,870,000
Water System Revenue Bonds, Series 2014A, annual principal due commencing from July 1, 2023, ranging from $410,000 to $9,205,000 through July 1, 2036, with interest ranging from 3.00% to 5.00%.	101,655,000	101,655,000
Water System Revenue Bonds, Series 2014B, annual principal due ranging from $1,540,000 to $4,790,000 through July 1, 2031, with interest ranging from 2.39% to 3.86%.	25,085,000	29,765,000
Water System Revenue Bonds, Series 2020A, annual principal due ranging from $1,035,000 to $3,165,000 through July 1, 2049, with interest ranging from 2.50% to 5.00%.	59,105,000	--
Balance brought forward	$ 212,960,000	$ 206,290,000

NOTE G - BONDS PAYABLE (Continued)

	2020	2019
Balance carried forward	$ 212,960,000	$ 206,290,000
Water System Revenue Bonds, Series 2020B, annual principal due ranging from $580,000 to $5,370,000 through July 1, 2033, with interest ranging from 1.41% to 2.38%.	47,530,000	--
	260,490,000	206,290,000
Add: unamortized premium	17,056,345	16,310,455
	277,546,345	222,600,455
Less: current portion	9,910,000	8,820,000
Noncurrent portion	$ 267,636,345	$ 213,780,455

The BWS had pledged future water revenues, net of specified operating and maintenance expenses, for the security and payment of the water system revenue bonds outstanding. Proceeds from the bonds were used to finance the construction of various components of the water system or to refund the principal amounts of previously issued water system revenue bonds. As of June 30, 2020 and 2019, the total principal and interest remaining to be paid on the bonds totaled $359,722,000 and $290,112,000, respectively. Principal and interest paid for the current year and water revenues, net of specified operating and maintenance expenses, were $17,722,128 and $17,725,023, respectively.

The BWS' outstanding revenue bonds contain a provision that in the event of a default the holders of not less than 25% of the bonds may declare the principal and interest due immediately. An event of default includes, but is not limited to, the following situations: failure to pay the principal and interest due, failure to punctually perform any of the covenants, agreements or conditions of the resolution, and bankruptcy. The BWS has covenanted and agreed to maintain the water system in good repair, to fix rates and charges sufficient to meet the Net Revenue Requirement, not to dispose of the properties comprising the water system, to maintain and keep proper books, and other actions consistent with conducting the business of the water system in an efficient and economical manner.

In March 2020 the BWS issued $47,530,000 in Water System Revenue Bonds, Series 2020B, to advance refund $43,615,000 of outstanding Series 2012A bonds with interest ranging from 4.5% to 5.0%. The net proceeds of $47,231,940 (after payment of $298,060 in bond issuance costs) plus an additional $1,079,884 of Series 2012A debt service reserve fund monies were deposited in an irrevocable trust with an escrow agent to provide for all future debt service payments on the Series 2012A bonds. As a result, $43,615,000 in Series 2012A bonds are considered to be defeased and the liability for those bonds has been removed from the statements of net position as of June 30, 2020.

NOTE G - BONDS PAYABLE (Continued)

The advance refunding resulted in a difference between the reacquisition price and the net carrying amount of the old debt of $718,163. This difference, reported in the accompanying financial statements as deferred outflows of resources, is being charged to operations through fiscal year 2031. The BWS completed the advance refunding to reduce its total debt service payments over the next 14 years by $7,535,785 and to obtain an economic gain (difference between the present values of the old and new debt service payments) of $5,259,514.

Water system revenue bonds are subject to redemption on and after specific dates prior to maturity at the option of the BWS. The redemption amount equals the outstanding principal amount plus accrued interest without premium on the date of redemption.

Debt service requirements on bonds payable at June 30, 2020 are as follows:

Fiscal Year Ending June 30,	Principal	Interest	Total
2021	$ 9,910,000	$ 8,964,000	$ 18,874,000
2022	11,065,000	9,331,000	20,396,000
2023	11,750,000	8,831,000	20,581,000
2024	12,520,000	8,277,000	20,797,000
2025	13,090,000	7,693,000	20,783,000
2026 - 2030	73,645,000	30,218,000	103,863,000
2031 - 2035	71,870,000	15,676,000	87,546,000
2036 - 2040	28,880,000	5,876,000	34,756,000
2041 - 2045	15,650,000	3,626,000	19,276,000
2046 - 2050	12,110,000	740,000	12,850,000
Total	$ 260,490,000	$ 99,232,000	$ 359,722,000

NOTE H - NOTES PAYABLE

At June 30, 2020 and 2019, notes payable from direct borrowings consisted of the following:

	2020	2019
Notes payable to Department of Health (DOH):		
Note payable in semi-annual installments of approximately $150,500, including interest and loan fees at 1.50% per annum, due May 2034.	$ 3,525,273	$ 3,767,710
Balance brought forward	$ 3,525,273	$ 3,767,710

NOTE H - NOTES PAYABLE (Continued)

	2020	2019
Balance carried forward	$ 3,525,273	$ 3,767,710
Note payable in semi-annual installments of approximately $149,600, including interest and loan fees at 1.50% per annum, due May 2034.	3,501,824	3,742,675
Note payable in semi-annual installments of approximately $142,900, including interest and loan fees at 1.50% per annum, due November 2034.	3,558,475	3,794,503
Non-interest bearing note payable in semi-annual installments of approximately $207,300, including loan fees at 1.00% per annum, due November 2034.	5,161,473	5,517,437
Non-interest bearing note payable in semi-annual installments of approximately $785,300, including loan fees at 1.00% per annum, due April 2034.	18,954,499	20,308,392
Non-interest bearing note payable in semi-annual installments of approximately $244,000, including loan fees at 1.00% per annum, due December 2037.	8,220,611	8,465,913
Non-interest bearing note payable in semi-annual installments of approximately $381,400, including loan fees at 1.00% per annum, due February 2039.	26,721,419	23,157,941
Note payable in semi-annual installments of approximately $148,300, including interest and loan fees at 1.50% per annum, due October 2036.	4,318,459	4,547,788
Balance brought forward	$ 73,962,033	$ 73,302,359

NOTE H - NOTES PAYABLE (Continued)

	2020	2019
Balance carried forward	$ 73,962,033	$ 73,302,359
Note payable in semi-annual installments of approximately $231,800, including interest and loan fees at 1.25% per annum, due October 2038.	7,631,670	8,000,000
Note payable in semi-annual installments of approximately $459,600, including interest and loan fees at 1.75% per annum, due October 2039. In fiscal year 2020, principal of $1,221,400 was forgiven by the DOH.	13,778,600	--
Note payable in semi-annual installments of approximately $114,100, including interest and loan fees at 0.25% per annum, due December 2040. In fiscal year 2020, principal of $1,230,600 was forgiven by the DOH.	4,156,814	--
Note payable in semi-annual installments of approximately $155,000, including interest and loan fees at 2.15% per annum, due September 2041. In fiscal year 2020, principal of $490,000 was forgiven by the DOH.	3,345,746	--
Notes payable to other lenders:		
Note payable in monthly installments of approximately $15,700, including interest at 5.0%, due September 2025.	845,727	985,044
	103,720,590	82,287,403
Less current maturities	5,754,780	4,124,240
	$ 97,965,810	$ 78,163,163

The notes payable to the Department of Health are state revolving fund loans and are collateralized by net revenue of the BWS. The BWS' outstanding state revolving fund loans contain a provision that in the event of default the outstanding amounts become due immediately with the consent of the majority of the holders of the BWS' revenue bonds. An event of default includes, but is not limited to, the following situations: failure to pay the principal and interest due, failure to punctually perform any of the covenants, agreements or conditions of the resolution, and bankruptcy. The BWS has covenanted and agreed to maintain the water system in good repair, to fix rates and charges sufficient to meet the Net Revenue Requirement, not to dispose of the properties comprising the water system, to maintain and keep proper books, and other actions consistent with conducting the business of the water system in an efficient and economical manner.

NOTE H - NOTES PAYABLE (Continued)

Debt service requirements on notes payable from direct borrowings at June 30, 2020 are as follows:

Fiscal Year Ending June 30,	Principal	Interest	Loan Fee	Total
2021	$ 5,755,000	$ 266,000	$ 1,005,000	$ 7,026,000
2022	5,885,000	265,000	948,000	7,098,000
2023	5,938,000	245,000	891,000	7,074,000
2024	5,992,000	225,000	834,000	7,051,000
2025	6,047,000	203,000	776,000	7,026,000
2026-2030	30,096,000	764,000	2,997,000	33,857,000
2031-2035	29,129,000	413,000	1,484,000	31,026,000
2036-2040	14,879,000	107,000	325,000	15,311,000
	$ 103,721,000	$ 2,488,000	$ 9,260,000	$ 115,469,000

NOTE I - LONG-TERM LIABILITIES

Changes in long-term liabilities for the fiscal years ended June 30, 2020 and 2019 are as follows:

	Balance July 1, 2019	Additions	Reductions	Balance June 30, 2020	Current Portion
Bonds payable	$ 206,290,000	$ 106,635,000	$ (52,435,000)	$ 260,490,000	$ 9,910,000
Add: unamortized premium	16,310,455	6,573,408	(5,827,518)	17,056,345	--
Total bonds payable	222,600,455	113,208,408	(58,262,518)	277,546,345	9,910,000
Notes payable	82,287,403	28,543,912	(7,110,725)	103,720,590	5,754,780
Accrued vacation	6,774,136	3,413,024	(2,850,143)	7,337,017	2,850,143
Accrued workers' compensation	3,848,842	1,835,004	(882,218)	4,801,628	1,271,067
Customer advances	2,414,284	10,660,105	(10,725,773)	2,348,616	--
Other	2,737,613	2,565,403	(1,404,303)	3,898,713	--
	$ 320,662,733	$ 160,225,856	$ (81,235,680)	$ 399,652,909	$ 19,785,990

NOTE I - LONG-TERM LIABILITIES (Continued)

	Balance July 1, 2018	Additions	Reductions	Balance June 30, 2019	Current Portion
Bonds payable	$ 214,840,000	$ --	$ (8,550,000)	$ 206,290,000	$ 8,820,000
Add: unamortized premium	18,052,342	--	(1,741,887)	16,310,455	--
Total bonds payable	232,892,342	--	(10,291,887)	222,600,455	8,820,000
Notes payable	67,434,722	18,048,072	(3,195,391)	82,287,403	4,124,240
Accrued vacation	7,016,280	2,699,440	(2,941,584)	6,774,136	2,941,584
Accrued workers' compensation	3,549,186	1,381,107	(1,081,451)	3,848,842	1,068,132
Customer advances	1,606,003	6,441,377	(5,633,096)	2,414,284	--
Other	3,704,937	1,404,304	(2,371,628)	2,737,613	--
	$ 316,203,470	$ 29,974,300	$ (25,515,037)	$ 320,662,733	$ 16,953,956

NOTE J - NET POSITION

The BWS's net position consisted of the following as of June 30, 2020 and 2019:

	2020	2019
Net investment in capital assets		
Capital assets, net	$ 1,247,699,838	$ 1,188,906,480
Deferred loss on refunding of debt	14,761,789	15,572,789
Less: water system revenue bonds payable	(277,546,345)	(222,600,455)
Less: notes payable	(103,720,590)	(82,287,403)
Less: contracts and accounts payable attributable to capital assets	(18,891,700)	(16,195,439)
Unspent debt proceeds	67,566,445	2,203,682
	929,869,437	885,599,654
Restricted for capital activity and debt service		
Restricted cash and cash equivalents	90,482,727	24,438,172
Restricted investments	10,874,633	21,149,006
Less: unspent debt proceeds	(67,566,445)	(2,203,682)
Less: accrued interest payable	(4,423,920)	(4,706,312)
Less: refundable advances	(362,237)	--
	29,004,758	38,677,184
Unrestricted	291,541,624	269,235,478
	$ 1,250,415,819	$ 1,193,512,316

NOTE K - LEASES

The BWS leases space for its deep seawater cooling project on Oahu under an operating lease that extends through September 2025. The lease is subject to early cancellation contingent on mutual agreement between the BWS and the lessor. Rent expense under this lease totaled $159,000 for each of the fiscal years ended June 30, 2020 and 2019.

The BWS also leases certain properties to other users, primarily utility and telecommunications companies, under multi-year license agreements. The terms of these agreements range from 5 to 30 years through December 2031. The agreements are generally based on fixed annual amounts, with provisions for increases.

The future minimum rental payments and revenue from these operating leases at June 30, 2020 were as follows:

Fiscal Year Ending June 30,	Future Minimum Rental Payments	Future Minimum Rental Revenue
2021	$ (159,000)	$ 123,000
2022	(159,000)	113,000
2023	(159,000)	104,000
2024	(159,000)	100,000
2025	(159,000)	100,000
2026-2030	(33,000)	500,000
2031-2035	--	150,000
	$ (828,000)	$ 1,190,000

NOTE L - RELATED PARTY TRANSACTIONS

The BWS has an agreement with the Department of Environmental Services, City and County of Honolulu to provide certain services relating to the billing and collection of sewer service charges. For the fiscal years ended June 30, 2020 and 2019 fees related to these services totaled $2,656,182 and $2,559,109, respectively.

The BWS has an agreement with the City to pay a central administrative services expense (“CASE”) fee for treasury, personnel, purchasing and other services that the City provides to the BWS on an on-going basis. The BWS’s Charter allows for CASE fees to the extent that it represents a reasonable charge for services necessary for the BWS to perform its duties. CASE fees totaled $3,300,000 for the fiscal years ended June 30, 2020 and 2019.

NOTE L - RELATED PARTY TRANSACTIONS (Continued)

As of June 30, 2020 and 2019, amounts due from the City for water charges totaled $1,876,582 and $2,059,213, respectively, and are included in customer receivables in the statements of net position.

The BWS has entered into several agreements with the City for joint capital projects. The BWS received $1,500,000 in advances from the City during each of the fiscal years ended June 30, 2020 and 2019. Unexpended advanced funds totaled $2,513,309 and $1,013,309 as of June 30, 2020 and 2019, respectively, and are included in other liabilities in the statements of net position.

In fiscal year 2020, the BWS received $902,356 in Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") funds from the City. These funds must be used for necessary expenditures incurred due to the public health emergency with respect to the Coronavirus Disease 2019. The BWS expended $540,119 as of June 30, 2020; unspent amounts as of June 30, 2020 totaling $362,237 are presented as refundable advances in the statements of net position.

NOTE M - EMPLOYEE BENEFIT PLANS

Pension Plan

Plan description. The ERS is a cost-sharing, multiple-employer public employee retirement system established as a defined benefit pension plan to administer a pension benefits program for all eligible employees of the state and counties of Hawaii. Benefit terms, eligibility, and contribution requirements are established by Chapter 88 of the Hawaii Revised Statutes and can be amended through legislation.

The ERS provides retirement, disability and death benefits that are covered by the provisions of the noncontributory, contributory and hybrid retirement membership classes. The three classes provide a monthly retirement allowance equal to the benefit multiplier (generally 1.25% or 2%) multiplied by the average final compensation multiplied by years of credited service. Average final compensation is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation for employees hired January 1, 1971 or later and the average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation for employees hired prior to January 1, 1971.

For members hired before July 1, 2012, the original retirement allowance is increased by 2.5% each July 1 following the calendar year of retirement. This cumulative benefit is not compounded and increases each year by 2.5% of the original retirement allowance without a ceiling (2.5% of the original retirement allowance the first year, 5.0% the second year, 7.5% the third year, etc.). For members hired after June 30, 2012, the post-retirement annuity increase was decreased to 1.5% per year.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Noncontributory Class

- *Retirement Benefits* - General employees' retirement benefits are determined as 1.25% of average final compensation multiplied by the years of credited service. Employees with 10 years of credited service are eligible to retire at age 62. Employees with 30 years of credited service are eligible to retire at age 55.

- *Disability Benefits* - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35% of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 12.5% of average final compensation.

- *Death Benefits* - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a monthly benefit of 30% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. Additional benefits are payable to surviving dependent children up to age 18. If there is no spouse/reciprocal beneficiary or dependent children, no benefit is payable.

  Ten years of credited service is required for ordinary death benefits. For ordinary death benefits, the surviving spouse/reciprocal beneficiary (until remarriage/re-entry into a new reciprocal beneficiary relationship) and dependent children (up to age 18) receive a benefit equal to a percentage of member's accrued maximum allowance unreduced for age or, if the member was eligible for retirement at the time of death, the surviving spouse/reciprocal beneficiary receives 100% joint and survivor lifetime pension.

Contributory Class for Employees Hired Prior to July 1, 2012

- *Retirement Benefits* - General employees' retirement benefits are determined as 2% of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 55.

- *Disability Benefits* - Members are eligible for service-related disability benefits regardless of length of service and receive a one-time payment of the member's contributions and accrued interest plus a lifetime pension of 50% of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined as 1.75% of average final compensation multiplied by the years of credited service but are payable immediately, without an actuarial reduction, and at a minimum of 30% of average final compensation.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

- *Death Benefits* - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the death benefit is payable to the designated beneficiary.

  Ordinary death benefits are available to employees who were active at time of death with at least one year of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least 10 years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Contributory Class for Employees Hired After June 30, 2012

- *Retirement Benefits* - General employees' retirement benefits are determined as 1.75% of average final compensation multiplied by the years of credited service. General employees with 10 years of credited service are eligible to retire at age 60.

- *Disability and Death Benefits* - Disability and benefits for contributory class members hired after June 30, 2012 are generally the same as those for contributory class members hired June 30, 2012 and prior.

Hybrid Class for Employees Hired Prior to July 1, 2012

- *Retirement Benefits* - General employees' retirement benefits are determined as 2% of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 62. General employees with 30 years of credited service are eligible to retire at age 55.

- *Disability Benefits* - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35% of their average final compensation plus refund of their contributions and accrued interest. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 25% of average final compensation.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

- *Death Benefits* - For service-connected deaths, the designated surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the death benefit is payable to the designated beneficiary.

  Ordinary death benefits are available to employees who were active at time of death with at least five years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage multiplied by 150%, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least 10 years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Hybrid Class for Employees Hired After June 30, 2012

- *Retirement Benefits* - General employees' retirement benefits are determined as 1.75% of average final compensation multiplied by the years of credited service. General employees with 10 years of credited service are eligible to retire at age 65. Employees with 30 years of credited service are eligible to retire at age 60.

- *Disability and Death Benefits* - Provisions for disability and death benefits generally remain the same except for ordinary death benefits. Ordinary death benefits are available to employees who were active at time of death with at least 10 years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Contributions. The employer contribution rate is a fixed percentage of compensation. The employer contribution rate for general employees was 22% and 19% for the fiscal years ended June 30, 2020 and 2019, respectively. For the fiscal years ended June 30, 2020 and 2019, contributions to the pension plan from the BWS totaled $9,411,347 and $7,387,857, respectively.

The employer is required to make all contributions for noncontributory members. For contributory class employees hired prior to July 1, 2012, general employees are required to contribute 7.8% of their salary. For contributing class employees hired after June 30, 2012, general employees are required to contribute 9.8% of their salary. Hybrid class members hired prior to July 1, 2012 are required to contribute 6.0% of their salary. Hybrid class members hired after June 30, 2012 are required to contribute 8.0% of their salary.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2020 and 2019, the BWS reported a liability of $114,807,821 and $120,348,341, respectively, for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2019 and 2018, respectively, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of those dates. The BWS's proportion of the net pension liability was based on the actual employer contributions to the pension plan relative to the contributions of all participating employers. At June 30, 2019 and 2018, the BWS's proportion was 0.81% and 0.90%, respectively, which was a change of -0.09% and 0.02% from its proportion measured as of June 30, 2018 and 2017, respectively.

For the fiscal years ended June 30, 2020 and 2019, the BWS recognized pension expense of $16,642,432 and $17,626,234, respectively. At June 30, 2020 and 2019, the BWS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	June 30, 2020	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 2,008,709	$ 229,779
Changes of assumptions	7,816,545	--
Net difference between projected and actual earnings on pension plan investments	--	315,151
Changes in proportion and differences between employer contributions and proportionate share of contributions	2,581,424	9,738,233
Employer contributions subsequent to the measurement date	9,411,347	--
	$ 21,818,025	$ 10,283,163

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

	June 30, 2019	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 2,170,789	$ 754,112
Changes of assumptions	12,975,494	--
Net difference between projected and actual earnings on pension plan investments	--	621,753
Changes in proportion and differences between employer contributions and proportionate share of contributions	5,238,978	2,074,401
Employer contributions subsequent to the measurement date	7,387,857	--
	$ 27,773,118	$ 3,450,266

At June 30, 2020, the BWS reported $9,411,347 of deferred outflows of resources related to pensions resulting from BWS contributions subsequent to the measurement date, which will be recognized as a reduction of the net pension liability in the fiscal year ended June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources at June 30, 2020 will be recognized in pension expense as follows:

Fiscal Year Ended June 30:	Net Deferred Outflows (Inflows)
2021	$ 3,742,588
2022	610,554
2023	(684,203)
2024	(1,024,724)
2025	(520,700)
	$ 2,123,515

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Actuarial assumptions. The total pension liability in the June 30, 2019 and 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

	2019	2018
Inflation	2.50%	2.50%
Investment rate of return, including inflation	7.00%	7.00%
Salary increases, including inflation		
Police and fire employees	5.00% to 7.00%	5.00% to 7.00%
General employees	3.50% to 6.50%	3.50% to 6.50%
Teachers	3.75% to 5.75%	3.75% to 5.75%

Mortality rates used in the actuarial valuation as of June 30, 2019 and 2018 were based on the following:

Active members - Multiples of the RP 2014 mortality table for active employees based on the occupation of the member.

Healthy retirees - 2019: The 2019 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2019 and with multipliers based on plan and group experience. 2018: The 2016 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2016 and with multipliers based on plan and group experience.

Disabled retirees - 2019: Base table for healthy retirees' occupation, set forward five years, generational projection using the BB projection table from the year 2019. Minimum mortality rate of 3.5% for males and 2.5% for females. 2018: Base table for healthy retirees' occupation, set forward five years, generational projection using the BB projection table from the year 2016. Minimum mortality rate of 3.5% for males and 2.5% for females.

The actuarial assumptions used in the actuarial valuation as of June 30, 2019 was based on the results of an experience study as of June 30, 2018, with most of the assumptions based on the period from July 1, 2013 through June 30, 2018. The actuarial assumptions used in the actuarial valuation as of June 30, 2018 was based on the results of an actuarial experience study for the five-year period ended June 30, 2015.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

The long-term expected rate of return on pension plan investments, based on ERS' investment consultant, was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of geometric real rates of return for each major asset class as of June 30, 2019 and 2018 are summarized in the following tables:

	June 30, 2019		
Strategic Allocation (Risk-Based Classes)	Target Allocation	Long-Term Expected Rate of Return	Long-Term Expected Real Rate of Return *
Broad growth	63.00%	7.65%	5.40%
Principal protection	7.00%	3.00%	0.75%
Real return	10.00%	4.55%	2.30%
Crisis risk offset	20.00%	5.15%	2.90%
	100.00%		

* Uses an expected inflation of 2.25%

	June 30, 2018		
Strategic Allocation (Risk-Based Classes)	Target Allocation	Long-Term Expected Rate of Return	Long-Term Expected Real Rate of Return *
Broad growth	63.00%	7.10%	4.85%
Principal protection	7.00%	2.50%	0.25%
Real return	10.00%	4.10%	1.85%
Crisis risk offset	20.00%	4.60%	2.35%
	100.00%		

* Uses an expected inflation of 2.25%

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Discount rate. The discount rate used to measure the total pension liability at June 30, 2020 and 2019 was 7.00%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that contributions from employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the BWS's proportionate share of the net pension liability to changes in the discount rate. The following presents the BWS's proportionate share of the net pension liability calculated as of the fiscal years ended June 30, 2020 and 2019 using the discount rate of 7.00%, as well as what the BWS's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

	June 30, 2020		
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Proportionate share of the net pension liability	$ 148,949,493	$ 114,807,821	$ 90,226,450

	June 30, 2019		
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Proportionate share of the net pension liability	$ 156,493,555	$ 120,348,341	$ 90,552,169

Pension plan fiduciary net position. Detailed information about the pension plan's fiduciary net position is available in the separately issued ERS financial report. ERS's complete financial statements are available at ers.ehawaii.gov.

Payable to the Pension Plan

At June 30, 2020 and 2019, the amounts payable to the ERS totaled $1,454,111 and $714,455, respectively, which consists of statutorily required employer contributions for the months of June 2020 and 2019, respectively, and excess pension costs required by the HRS for fiscal years 2020 and 2019, respectively.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Postemployment Benefits Other Than Pensions (OPEB)

General Information about the OPEB Plan

Plan description. Chapter 87A of the Hawaii Revised Statutes ("HRS") established the EUTF, an agent multiple-employer defined benefit plan, which provides a single delivery system of health and other benefits for state and county workers, retirees and their eligible dependents. The EUTF issues a stand-alone financial report that is available to the public on its website at https://eutf.hawaii.gov.

Benefits provided. Chapter 87A of the HRS grants the authority to establish and amend the benefit terms to the board of trustees of the EUTF. The EUTF currently provides medical, prescription drug, dental, vision, chiropractic, supplemental medical and prescription drug, and group life insurance benefits for retirees and their dependents. The following table provides a summary of the number of employees covered by the benefits terms as of July 1, 2019 and 2018:

	2020	2019
Inactive employees or beneficiaries currently receiving benefits	582	592
Inactive employees entitled but not yet receiving benefits	54	52
Active employees	579	568
	1,215	1,212

Contributions. The BWS's contribution levels are established by Chapter 87A of the HRS. For the fiscal years ended June 30, 2020 and 2019, the BWS was required to contribute a minimum amount equal to 100% of the annual required contribution ("ARC"), as determined by an actuary retained by the board of trustees of the EUTF. The ARC represents a level of funding that is sufficient to cover, 1) the normal cost, which is the cost of the other postemployment benefits attributable to the current year of service; and 2) an amortization payment, which is a catch-up payment for past service costs to fund the unfunded actuarial accrued liability over the next thirty years. For the fiscal years ended June 30, 2020 and 2019, contributions to the OPEB plan from the BWS totaled $8,165,000 and $7,945,000, respectively, which resulted in an average contribution rate of approximately 20.7% and 20.0%, respectively, of covered-employee payroll.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

For employees hired before July 1, 1996, the BWS pays the entire base monthly contribution for employees retiring with 10 or more years of credited service, and 50% of the base monthly contribution for employees retiring with fewer than 10 years of credited service. A retiree can elect a family plan to cover dependents. The BWS's contribution is based on the plan selected by the retiree (single, two-party, or family plans).

For employees hired after June 30, 1996, but before July 1, 2001, and who retire with fewer than 10 years of service, the BWS makes no contributions. For those retiring with at least 10 years of service but fewer than 15 years of service, the BWS pays 50% of the base monthly contribution. For employees retiring with at least 15 years of service but fewer than 25 years of service, the BWS pays 75% of the base monthly contribution. For employees retiring with at least 25 years of service, the BWS pays 100% of the base monthly contribution. The BWS's contribution is based on the plan selected by the retiree (single, two-party, or family plans).

For employees hired on or after July 1, 2001, and who retire with less than 10 years of service, the BWS makes no contributions. For those retiring with at least 10 years but fewer than 15 years of service, the BWS pays 50% of the base monthly contribution. For those retiring with at least 15 years but fewer than 25 years of service, the BWS pays 75% of the base monthly contribution. For those employees retiring with at least 25 years of service, the BWS pays 100% of the base monthly contribution. Only single plan coverage is provided for retirees in this category. The BWS's contribution is based on the single plan base monthly contribution. Retirees can elect family coverage but must pay the difference.

Net OPEB Liability

The BWS's net OPEB liability as of June 30, 2020 and 2019 was measured as of July 1, 2019 and 2018, respectively, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of those dates.

Actuarial assumptions. The total OPEB liability in the July 1, 2019 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50%
Salary increases	3.50% to 7.00%, including inflation
Investment rate of return	7.00%
Healthcare cost trend rates	
PPO	Initial rate of 8.00%, declining to a rate of 4.86% after 12 years
HMO	Initial rate of 8.00%, declining to a rate of 4.86% after 12 years

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Part B & base monthly contribution	Initial rate of 5.00%, declining to a rate of 4.70% after 11 years
Dental	Initial rate of 5.00% for first two years, followed by 4.00%
Vision	Initial rates of 0.00% for first two years, followed by 2.50%
Life insurance	0.00%

The total OPEB liability in the July 1, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50%
Salary increases	3.50% to 7.00%, including inflation
Investment rate of return	7.00%
Healthcare cost trend rates	
PPO	Initial rates of 10.00%, declining to a rate of 4.86% after 13 years
HMO	Initial rate of 10.00%, declining to a rate of 4.86% after 13 years
Part B & base monthly contribution	Initial rates of 4.00% and 5.00%, declining to a rate of 4.70% after 12 years
Dental	Initial rate of 5.00% for first three years, followed by 4.00%
Vision	Initial rates of 0.00% for first three years, followed by 2.50%
Life insurance	0.00%

Mortality rates used in the actuarial valuation as of July 1, 2019 and 2018 were based on the following:

Active members - Multiples of the RP 2014 mortality table for active employees based on the occupation of the member.

Healthy retirees - 2019: The 2019 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2019 and with multipliers based on plan and group experience. 2018: The 2016 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2016 and with multipliers based on plan and group experience.

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Disabled retirees - 2019: Base table for healthy retirees' occupation, set forward five years, generational projection using the BB projection table from the year 2019. Minimum mortality rate of 3.5% for males and 2.5% for females. 2018: Base table for healthy retirees' occupation, set forward five years, generational projection using the BB projection table from the year 2016. Minimum mortality rate of 3.5% for males and 2.5% for females.

The actuarial assumptions used in the actuarial valuation as of June 30, 2019 was based on the results of an experience study as of June 30, 2018, with most of the assumptions based on the period from July 1, 2013 through June 30, 2018. The actuarial assumptions used in the actuarial valuation as of June 30, 2018 was based on the results of an actuarial experience study for the five-year period ended June 30, 2015.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class as of July 1, 2019 and 2018 are summarized in the following table:

	2020		2019	
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Target Allocation	Long-Term Expected Real Rate of Return
Non-U.S. equity	17.00%	6.90%	17.00%	6.50%
U.S. equity	15.00%	5.35%	15.00%	5.05%
Private equity	10.00%	8.80%	10.00%	8.65%
Core real estate	10.00%	3.90%	10.00%	4.10%
Trend following	9.00%	3.25%	9.00%	3.00%
U.S. microcap	7.00%	7.30%	7.00%	7.00%
Global options	7.00%	4.75%	7.00%	4.50%
Private credit	6.00%	5.60%	6.00%	5.25%
Long treasuries	6.00%	2.00%	6.00%	1.90%
Alternate risk premia	5.00%	2.75%	5.00%	2.45%
TIPS	5.00%	1.20%	5.00%	0.75%
Core bonds	3.00%	1.50%	3.00%	1.30%
	100.00%		100.00%	

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Discount rate. The discount rate used to measure the total OPEB liability at June 30, 2020 and 2019 was 7.00%. The projection of cash flows used to determine the discount rate assumed that BWS contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments for current active and inactive employees. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Changes in the Net OPEB Liability

The following schedules present the changes in the net OPEB liability for the fiscal years ending June 30, 2020 and 2019:

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balance at June 30, 2019	$ 153,014,513	$ 79,886,830	$ 73,127,683
Changes for the fiscal year:			
Service cost	2,598,017	--	2,598,017
Interest on the total OPEB liability	10,592,452	--	10,592,452
Difference between expected and actual experience	(28,736)	--	(28,736)
Changes of assumptions	1,247,028	--	1,247,028
Contributions - employer	--	7,945,000	(7,945,000)
Net investment income	--	3,430,974	(3,430,974)
Benefit payments	(5,985,550)	(5,985,550)	--
Administrative expense	--	(25,068)	25,068
Other	--	2,370,283	(2,370,283)
Net changes	8,423,211	7,735,639	687,572
Balance at June 30, 2020	$ 161,437,724	$ 87,622,469	$ 73,815,255

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balance at June 30, 2018	$ 146,389,649	$ 71,667,726	$ 74,721,923
Changes for the fiscal year:			
Service cost	2,480,098	--	2,480,098
Interest on the total OPEB liability	10,129,142	--	10,129,142
Difference between expected and actual experience	(2,312,485)	--	(2,312,485)
Changes of assumptions	2,183,447	--	2,183,447
Contributions - employer	--	8,855,338	(8,855,338)
Net investment income	--	5,235,037	(5,235,037)
Benefit payments	(5,855,338)	(5,855,338)	--
Administrative expense	--	(15,933)	15,933
Other	--	--	--
Net changes	6,624,864	8,219,104	(1,594,240)
Balance at June 30, 2019	$ 153,014,513	$ 79,886,830	$ 73,127,683

Sensitivity of the net OPEB Liability to changes in the discount rate. The following presents the net OPEB liability of the BWS, as well as what the BWS's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current discount rate:

	June 30, 2020		
	1% Decrease (6.00%)	Discount Rate (7.00%)	1% Increase (8.00%)
Net OPEB Liability	$ 98,004,905	$ 73,815,255	$ 54,701,539

	June 30, 2019		
	1% Decrease (6.00%)	Discount Rate (7.00%)	1% Increase (8.00%)
Net OPEB Liability	$ 96,267,884	$ 73,127,683	$ 54,940,141

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Sensitivity of the net OPEB Liability to changes in the healthcare cost trend rates. The following presents the net OPEB liability of the BWS, as well as what the BWS's net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower or 1-percentage point higher than the current healthcare cost trend rates:

	June 30, 2020		
	1% Decrease	Current Healthcare Cost Trend Rates	1% Increase
Net OPEB Liability	$ 54,216,408	$ 73,815,255	$ 98,973,632

	June 30, 2019		
	1% Decrease	Current Healthcare Cost Trend Rates	1% Increase
Net OPEB Liability	$ 54,329,692	$ 73,127,683	$ 97,393,040

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the fiscal years ended June 30, 2020 and 2019, the BWS recognized OPEB expense of $5,483,936 and $7,127,521, respectively. At June 30, 2020 and 2019, the BWS reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	June 30, 2020	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ --	$ 1,467,196
Changes of assumptions	2,375,747	--
Net difference between projected and actual earnings on pension plan investments	1,055,806	--
Employer contributions subsequent to the measurement date	8,165,000	--
	$ 11,596,553	$ 1,467,196

NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

	June 30, 2019	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ --	$ 1,878,175
Changes of assumptions	1,773,371	--
Net difference between projected and actual earnings on pension plan investments	--	1,079,475
Employer contributions subsequent to the measurement date	7,945,000	--
	$ 9,718,371	$ 2,957,650

At June 30, 2020 the BWS reported $8,165,000 as deferred outflows of resources related to OPEB resulting from BWS contributions subsequent to the measurement date, which will be recognized as a reduction of the net OPEB liability in the fiscal year ended June 30, 2021. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at June 30, 2020 will be recognized in OPEB expense as follows:

Fiscal Year Ended June 30:	Net Deferred Outflows
2021	$ 298,463
2022	298,463
2023	627,928
2024	667,066
2025	72,437
	$ 1,964,357

NOTE N - COMMITMENTS AND CONTINGENCIES

Contract Commitments

Commitments, primarily for capital improvements, approximated $334,970,996 and $260,328,698 as of June 30, 2020 and 2019, respectively. Such amounts are to be funded by operating revenues, contributed capital, cash and investments on hand.

NOTE N - COMMITMENTS AND CONTINGENCIES (Continued)

Workers' Compensation Self-Insurance Liability

The BWS is self-insured for workers' compensation and disability claims up to $600,000 and in excess of $25,000,000. The BWS has obtained excess insurance coverage for claims that are not self-insured. The BWS provides reserves for claims not covered by insurance that in the opinion of management will result in probable judgment against the BWS.

The liability for losses and loss adjustment expenses is comprised of case reserves and incurred but not reported loss reserves ("IBNR"). Case or outstanding loss reserves represent estimates of ultimate costs to settle reported claims.

Determination of a reserve account for workers' compensation is a significant estimate. It is reasonably possible that one or more future events could result in a material change in the estimated claims loss in the near term.

Safe Drinking Water

The BWS is subject to the requirements of the Safe Drinking Water Act (the "Act"), which is administered by the State Department of Health on behalf of the U.S. Environmental Protection Agency. Management believes that the BWS is in full compliance with the requirements of the Act and is not aware of any matters under the Act that may materially affect the BWS's customer service area.

Other Legal Matters

The BWS is party to various legal proceedings arising in the normal course of business. The outcome of individual matters is not predictable. However, management believes that the ultimate resolution of all such matters, after considering insurance coverage, will not have material adverse effect on the BWS's financial position, results of operations, or liquidity.

NOTE O - COVID-19

On March 11, 2020 the World Health Organization declared the outbreak of novel coronavirus disease (COVID-19) as a pandemic, which has led to an economic downturn on a global scale that has created significant uncertainty, volatility, and disruption across economies and financial markets. The pandemic has also resulted in federal, state, and local governments and private entities mandating various restrictions, including travel and business restrictions, temporary closures of nonessential businesses, and wide-sweeping quarantines and stay-at-home orders. While the disruption caused by COVID-19 is expected to be temporary, there is uncertainty around the duration and severity of this pandemic. The related financial impact on the BWS's financial statements cannot be reasonably determined at this time.

REQUIRED SUPPLEMENTARY INFORMATION

Board of Water Supply
City and County of Honolulu
SCHEDULE OF PROPORTIONATE SHARE
OF THE NET PENSION LIABILITY
Last Ten Fiscal Years *

Measurement Period Ended	Proportion of the Net Pension Liability	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a %age of Covered Payroll	Plan Fiduciary Net Position as a %age of the Total Pension Liability
June 30, 2019	0.81%	$ 114,807,821	$ 38,390,927	299%	54.87%
June 30, 2018	0.90%	$ 120,348,341	$ 36,816,067	327%	55.48%
June 30, 2017	0.88%	$ 113,350,294	$ 35,912,898	316%	54.80%
June 30, 2016	0.87%	$ 116,342,916	$ 34,536,085	337%	51.28%
June 30, 2015	0.93%	$ 81,526,553	$ 33,412,761	244%	62.42%
June 30, 2014	0.91%	$ 73,141,824	$ 32,202,276	227%	63.92%
June 30, 2013	0.78%	$ 69,992,291	$ 29,761,149	235%	57.96%

* This schedule is intended to present information for ten years, as of the measurement date of the collective net pension liability for each respective fiscal year. Additional years will be built prospectively as information becomes available.

See accompanying notes to required supplementary information.

Board of Water Supply
City and County of Honolulu
SCHEDULE OF CONTRIBUTIONS (PENSION)
Last Ten Fiscal Years

Fiscal Year Ended	Statutorily Required Contribution	Contributions in Relation to Statutorily Required Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a %age of Covered Payroll
June 30, 2020	$ 9,411,347	$ 9,411,347	$ --	$ 39,537,387	23.8%
June 30, 2019	$ 7,387,857	$ 7,387,857	$ --	$ 38,390,927	19.2%
June 30, 2018	$ 7,561,614	$ 7,561,614	$ --	$ 36,816,067	20.5%
June 30, 2017	$ 6,885,401	$ 6,885,401	$ --	$ 35,912,898	19.2%
June 30, 2016	$ 6,647,884	$ 6,647,884	$ --	$ 34,536,085	19.2%
June 30, 2015	$ 6,686,641	$ 6,686,641	$ --	$ 33,412,761	20.0%
June 30, 2014	$ 5,931,238	$ 5,931,238	$ --	$ 32,202,276	18.4%
June 30, 2013	$ 4,604,149	$ 4,604,149	$ --	$ 29,761,149	15.5%
June 30, 2012	$ 4,404,845	$ 4,404,845	$ --	$ 29,353,916	15.0%
June 30, 2011	$ 4,497,292	$ 4,497,292	$ --	$ 29,981,949	15.0%

See accompanying notes to required supplementary information.

NOTE A - CHANGES OF ASSUMPTIONS

There were no changes of assumptions or other inputs that significantly affected the measurement of the total pension liability since the measurement period ended June 30, 2016.

Amounts reported in the schedule of the proportionate share of the net pension liability as of the measurement period ended June 30, 2016 (fiscal year ended June 30, 2017) were significantly impacted by the following changes of actuarial assumptions:

- The investment return assumption decreased from 7.65% to 7.00%
- Mortality assumptions were modified to assume longer life expectancies as well as to reflect continuous mortality improvement

Prior to the measurement period ended June 30, 2016 (fiscal year ended June 30, 2017), there were no other factors, including the use of different assumptions that significantly affect trends reported in these schedules.

Board of Water Supply
City and County of Honolulu
SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY
AND RELATED RATIOS
Last Ten Fiscal Years *

	2020	2019	2018
Total OPEB liability			
Service cost	$ 2,598,017	$ 2,480,098	$ 2,404,087
Interest on the total OPEB liability	10,592,452	10,129,142	9,685,512
Difference between expected and actual experience	(28,736)	(2,312,485)	--
Changes of assumptions	1,247,028	2,183,447	--
Benefit payments	(5,985,550)	(5,855,338)	(5,724,727)
Net change in total OPEB liability	8,423,211	6,624,864	6,364,872
Total OPEB liability - Beginning	153,014,513	146,389,649	140,024,777
Total OPEB liability - Ending	$ 161,437,724	$ 153,014,513	$ 146,389,649
Plan fiduciary net position			
Contributions - employer	$ 7,945,000	$ 8,855,338	$ 11,724,727
Net investment income	3,430,974	5,235,037	6,029,726
Benefit payments	(5,985,550)	(5,855,338)	(5,724,727)
Administrative expense	(25,068)	(15,933)	(13,794)
Other	2,370,283	--	78,200
Net change in plan fiduciary net position	7,735,639	8,219,104	12,094,132
Plan fiduciary net position - Beginning	79,886,830	71,667,726	59,573,594
Plan fiduciary net position - Ending	$ 87,622,469	$ 79,886,830	$ 71,667,726
Net OPEB liability	$ 73,815,255	$ 73,127,683	$ 74,721,923
Plan fiduciary net position as a percentage of the total OPEB liability	54.28%	52.21%	48.96%
Covered-employee payroll	$ 39,801,114	$ 38,023,983	$ 36,968,407
Net OPEB Liability as a Percentage of Covered-employee payroll	185.46%	192.32%	202.12%

* This schedule is intended to present information for ten years for each respective fiscal year. Additional years will be built prospectively as information becomes available.

See accompanying notes to required supplementary information.

Board of Water Supply
City and County of Honolulu
SCHEDULE OF CONTRIBUTIONS (OPEB)
Last Ten Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered-Employee Payroll	Contributions as a %age of Covered-Employee Payroll
June 30, 2020	$ 8,165,000	$ 8,165,000	$ --	$ 39,537,387	20.7%
June 30, 2019	$ 7,945,000	$ 7,945,000	$ --	$ 39,801,114	20.0%
June 30, 2018	$ 8,467,000	$ 8,855,338	$ (388,338)	$ 38,023,983	23.3%
June 30, 2017	$ 8,181,000	$ 11,724,727	$ (3,543,727)	$ 36,968,407	31.7%
June 30, 2016	$ 8,826,000	$ 11,728,539	$ (2,902,539)	$ 35,467,175	33.1%
June 30, 2015	$ 8,528,000	$ 10,750,399	$ (2,222,399)	$ 34,329,374	31.3%
June 30, 2014	$ 8,977,000	$ 11,982,667	$ (3,005,667)	$ 32,993,059	36.3%
June 30, 2013	$ 8,674,000	$ 12,732,550	$ (4,058,550)	$ 30,236,942	42.1%
June 30, 2012	$ 10,750,000	$ 10,718,550	$ 31,450	$ 30,013,958	35.7%
June 30, 2011	$ 10,387,000	$ 12,339,213	$ (1,952,213)	$ 30,605,429	40.3%

See accompanying notes to required supplementary information.

Board of Water Supply
City and County of Honolulu
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
REQUIRED BY GASB STATEMENT NO. 75
Fiscal Years Ended June 30, 2020 and 2019

NOTE A - SIGNIFICANT METHODS AND ASSUMPTIONS

The actuarially determined annual required contributions ("ARC") for the fiscal year ending June 30, 2020 was developed in the July 1, 2018 valuation. The following summarizes the significant methods and assumptions used to determine the actuarially determined contribution for the fiscal year ended June 30, 2020:

Actuarial valuation date	July 1, 2018
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, closed
Equivalent single amortization period	17.9 as of June 30, 2020
Asset valuation method	Smoothed
Inflation rate	2.50%
Investment rate of return	7.00%
Payroll growth	3.50%
Salary increases	3.50% to 7.00% including inflation
Demographic assumptions	Based on the experience study covering the five year period ending June 30, 2015 as conducted for the Hawaii Employees' Retirement System (ERS)
Mortality	System-specific mortality tables utilizing scale BB to project generational mortality improvement
Participation rates	98% healthcare participation assumption for retirees that receive 100% of the Base Monthly Contribution. Healthcare participation rates of 25%, 65%, and 90% for retirees that receive 0%, 50%, or 75% of the base monthly contribution, respectively. 100% for life insurance and 98% for Medicare Part B
Healthcare cost trend rates	
PPO	Initial rate of 10%, declining to a rate of 4.86% after 13 years
HMO	Initial rate of 10%, declining to a rate of 4.86% after 13 years
Part B	Initial rates of 4% and 5%; declining to a rate of 4.7% after 12 years
Dental	5% for the first 3 years; then 4% for all future years
Vision	0% for the first 3 years; then 2.5% for all future years
Life Insurance	0%

NOTE A - SIGNIFICANT METHODS AND ASSUMPTIONS (Continued)

The actuarially determined ARC for the fiscal year ending June 30, 2019 was developed in the July 1, 2017 valuation. The following summarizes the significant methods and assumptions used to determine the actuarially determined contribution for the fiscal year ended June 30, 2019:

Actuarial valuation date	July 1, 2017
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, closed
Equivalent single amortization period	18.9 as of June 30, 2019
Asset valuation method	Market
Inflation rate	2.50%
Investment rate of return	7.00%
Payroll growth	3.50%
Salary increases	3.50% to 7.00% including inflation
Demographic assumptions	Based on the experience study covering the five year period ending June 30, 2015 as conducted for the Hawaii Employees' Retirement System (ERS)
Mortality	System-specific mortality tables utilizing scale BB to project generational mortality improvement
Participation rates	98% healthcare participation assumption for retirees that receive 100% of the Base Monthly Contribution. Healthcare participation rates of 25%, 65%, and 90% for retirees that receive 0%, 50%, or 75% of the base monthly contribution, respectively. 100% for life insurance and 98% for Medicare Part B
Healthcare cost trend rates	
PPO	Initial rate of 6.6%, 6.6%, and 9%, declining to a rate of 4.86% after 14 years
HMO	Initial rate of 9%, declining to a rate of 4.86% after 14 years
Part B	Initial rate of 2% and 5%; declining to a rate of 4.7% after 14 years
Dental	3.5%
Vision	2.5%
Life Insurance	0%

NOTE A - SIGNIFICANT METHODS AND ASSUMPTIONS (Continued)

The actuarial valuation as of July 1, 2009, which was used to develop the ARC for fiscal year 2011 and 2012, included a reduction to the discount rate used from the prior valuation. The discount rate changed from a blended discount rate of 7% - 8% to 7%. This resulted in an overall increase to the actuarially determined OPEB liability and the ARC.

There were no other factors that significantly affected trends in the amounts reported in the schedule of changes in the net OPEB liability and related ratios or the schedule of contributions (OPEB).

SUPPLEMENTARY INFORMATION

Board of Water Supply
City and County of Honolulu
SCHEDULE OF BONDS PAYABLE
June 30, 2020

	Interest Rate	Bond Dated	Maturing Serially From	Call Dates (1)	Outstanding June 30, 2020
Water System Revenue Bonds					
Series 2012A					
Insured Serial Bonds	5.000%	3/29/2012	7/1/2020	(2)	$ 2,320,000
Insured Serial Bonds	2.000%	3/29/2012	7/1/2020	(2)	2,000,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2021	(2)	6,865,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2022	(2)	8,535,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2023	7/1/2022	3,605,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2024	7/1/2022	3,790,000
					27,115,000
Water System Revenue Bonds					
Series 2014A (Non-AMT)					
Tax-Exempt Serial Bonds					
Insured Serial Bonds	5.000%	12/9/2014	7/1/2023	(2)	5,585,000
Insured Serial Bonds	3.000%	12/9/2014	7/1/2024	(2)	410,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2024	(2)	5,455,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2025	7/1/2024	6,165,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2026	7/1/2024	6,480,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2027	7/1/2024	6,810,000
Insured Serial Bonds	3.000%	12/9/2014	7/1/2028	(2)	930,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2028	7/1/2024	6,215,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2029	7/1/2024	7,505,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2030	7/1/2024	7,930,000
Insured Serial Bonds	3.250%	12/9/2014	7/1/2031	(2)	4,470,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2031	7/1/2024	3,825,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2032	7/1/2024	6,575,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2033	7/1/2024	6,840,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2034	7/1/2024	8,500,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2035	7/1/2024	8,755,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2036	7/1/2024	9,205,000
					101,655,000
Water System Revenue Bonds					
Series 2014B (AMT)					
Taxable Serial Bonds					
Insured Serial Bonds	2.389%	12/9/2014	7/1/2020	(2)	4,790,000
Insured Serial Bonds	2.619%	12/9/2014	7/1/2021	(2)	2,585,000
Insured Serial Bonds	2.755%	12/9/2014	7/1/2022	(2)	1,540,000
Insured Serial Bonds	2.915%	12/9/2014	7/1/2023	(2)	1,585,000
Insured Serial Bonds	3.135%	12/9/2014	7/1/2024	(2)	1,625,000
Insured Serial Bonds	3.285%	12/9/2014	7/1/2025	(2)	1,670,000
Insured Serial Bonds	3.385%	12/9/2014	7/1/2026	(2)	1,730,000
Insured Serial Bonds	3.485%	12/9/2014	7/1/2027	(2)	1,785,000
Insured Serial Bonds	3.585%	12/9/2014	7/1/2028	(2)	1,845,000
Insured Serial Bonds	3.685%	12/9/2014	7/1/2029	(2)	1,910,000
Insured Serial Bonds	3.760%	12/9/2014	7/1/2030	(2)	1,975,000
Insured Serial Bonds	3.860%	12/9/2014	7/1/2031	(2)	2,045,000
					$ 25,085,000

(1) Call dates indicated are optional.

(2) Noncallable.

Board of Water Supply
City and County of Honolulu
SCHEDULE OF BONDS PAYABLE (Continued)
June 30, 2020

	Interest Rate	Bond Dated	Maturing Serially From	Call Dates (1)	Outstanding June 30, 2020
Water System Revenue Bonds					
Series 2020A (Tax Exempt)					
Insured Serial Bonds	5.000%	3/25/2020	7/1/2021	(2)	$ 1,035,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2022	(2)	1,085,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2023	(2)	1,145,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2024	(2)	1,200,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2025	(2)	1,265,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2026	(2)	1,330,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2027	(2)	1,395,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2028	(2)	1,470,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2029	(2)	1,545,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2030	(2)	1,620,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2031	7/1/2030	1,705,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2032	7/1/2030	1,790,000
Insured Serial Bonds	5.000%	3/25/2020	7/1/2033	7/1/2030	1,885,000
Insured Serial Bonds	2.500%	3/25/2020	7/1/2034	(2)	1,955,000
Insured Serial Bonds	4.000%	3/25/2020	7/1/2035	7/1/2030	2,020,000
Insured Serial Bonds	4.000%	3/25/2020	7/1/2036	7/1/2030	2,105,000
Insured Serial Bonds	4.000%	3/25/2020	7/1/2037	7/1/2030	2,190,000
Insured Serial Bonds	2.625%	3/25/2020	7/1/2038	(2)	2,265,000
Insured Serial Bonds	4.000%	3/25/2020	7/1/2039	7/1/2030	2,340,000
Insured Serial Bonds	2.750%	3/25/2020	7/1/2040	(2)	2,420,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2041	7/1/2030	2,490,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2042	7/1/2030	2,565,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2043	7/1/2030	2,645,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2044	7/1/2030	2,725,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2045	7/1/2030	2,805,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2046	7/1/2030	2,895,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2047	7/1/2030	2,980,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2048	7/1/2030	3,070,000
Insured Serial Bonds	3.000%	3/25/2020	7/1/2049	7/1/2030	3,165,000
					$ 59,105,000

(1) Call dates indicated are optional.

(2) Noncallable.

Board of Water Supply
City and County of Honolulu
SCHEDULE OF BONDS PAYABLE (Continued)
June 30, 2020

	Interest Rate	Bond Dated	Maturing Serially From	Call Dates (1)	Outstanding June 30, 2020
Water System Revenue Bonds					
Series 2020B					
Taxable Serial Bonds					
	1.408%	3/25/2020	7/1/2020	(2)	$ 800,000
	1.408%	3/25/2020	7/1/2021	(2)	580,000
	1.508%	3/25/2020	7/1/2022	(2)	590,000
	1.661%	3/25/2020	7/1/2023	(2)	600,000
	1.720%	3/25/2020	7/1/2024	(2)	610,000
	1.770%	3/25/2020	7/1/2025	(2)	4,535,000
	1.933%	3/25/2020	7/1/2026	(2)	4,620,000
	1.983%	3/25/2020	7/1/2027	(2)	4,715,000
	2.027%	3/25/2020	7/1/2028	(2)	4,815,000
	2.077%	3/25/2020	7/1/2029	(2)	4,910,000
	2.127%	3/25/2020	7/1/2030	(2)	5,015,000
	2.227%	3/25/2020	7/1/2031	(2)	5,125,000
	2.327%	3/25/2020	7/1/2032	(2)	5,245,000
	2.377%	3/25/2020	7/1/2033	(2)	5,370,000
					47,530,000
					$ 260,490,000

(1) Call dates indicated are optional.
(2) Noncallable.

Board of Water Supply
City and County of Honolulu
SCHEDULE OF NET REVENUE REQUIREMENT
Fiscal Years Ended June 30, 2020 and 2019

		2020		2019
REVENUES				
Water sales	$	228,467,575	$	226,347,969
Interest		7,994,046		7,549,495
Other		3,565,485		2,697,545
Total revenues		240,027,106		236,595,009
DEDUCTIONS				
Operating expenses		212,718,613		203,999,113
Less: depreciation expense		(45,796,106)		(47,266,015)
Less: allocated depreciation charges		(1,709,271)		(1,515,219)
Total deductions		165,213,236		155,217,879
Net revenues	$	74,813,870	$	81,377,130
NET REVENUE REQUIREMENT				
Greater of:				
1) Aggregate debt service	$	18,464,913	$	17,875,798
Required deposits		--		--
	$	18,464,913	$	17,875,798
2) Aggregate debt service	$	18,464,913	$	17,875,798
Minimum required debt service ratio	x	1.20	x	1.20
Net revenue requirement	$	22,157,896	$	21,450,958
Net revenue to aggregate debt service ratio		4.05		4.55

APPENDIX C

Form of Continuing Disclosure Certificate

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FORM OF CONTINUING DISCLOSURE CERTIFICATE

This Continuing Disclosure Certificate (the "Disclosure Certificate") is executed and delivered by the Board of Water Supply ("BWS") of the City and County of Honolulu, Hawaii (the "City and County"), acting on behalf of the BWS in connection with the issuance of $93,535,000 Water System Revenue Bonds, Series 2021A and Series 2021B (together, the "Bonds"). The Bonds are being issued pursuant to Hawaii Revised Statutes, Chapter 49, and the Revised Charter of the City and County of Honolulu, as amended (collectively, the "Act"), and the proceedings of the BWS, including Water System Revenue Bond Resolution adopted by the BWS on April 26, 2001 (the "Bond Resolution") and the Series Resolution adopted by the BWS on February 22, 2021 (the "2021 Series Resolution"). The Bond Resolution, as previously supplemented and amended, as supplemented and amended by the 2021 Series Resolution, and as it may be further supplemented and amended, is referred to herein as the "Resolution." The BWS hereby covenants and agrees as follows:

Section 1. ***Purpose of the Disclosure Certificate.*** This Disclosure Certificate is being executed and delivered by the BWS for the benefit of the holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with Securities and Exchange Commission Rule 15c2-12(b)(5) (the "Rule").

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

"Annual Report" means any Annual Report provided by the BWS pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

"Beneficial Owner" means any person which (a) has or shares the power, directly or indirectly, to vote or consent with respect to, to make investment decisions concerning the ownership of, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries), or (b) is treated as the owner of any Bonds for federal income tax purposes.

"Dissemination Agent" means BLX Group LLC, or any successor Dissemination Agent designated in writing by the BWS and which has filed with the BWS a written acceptance of such designation. As provided in Section 7 hereof, the BWS shall serve as Dissemination Agent during any period in which another Dissemination Agent has not been designated by the BWS.

"Financial Obligation" means, for purposes of the Listed Events set out in Section 5(a)(x) and Section 5(b)(viii), a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term "Financial Obligation" shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

"Holder" means the person in whose name any Bond shall be registered.

"Listed Events" means any of the events listed in Section 5(a) or (b) of this Disclosure Certificate.

"MSRB" means the Municipal Securities Rulemaking Board or any other entity designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access (EMMA) website of the MSRB, currently located at *http://emma.msrb.org*.

"Official Statement" shall mean the Official Statement, dated March 9, 2021, prepared and distributed in connection with the initial sale of the Bonds.

"Participating Underwriters" means any of the original underwriters of the Bonds required to comply with the Rule in connection with the offering of the Bonds.

"Rule" means Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

Section 3. ***Provision of Annual Reports.***

(a) The BWS shall, or shall cause the Dissemination Agent to, not later than 270 days after the end of each fiscal year of the BWS (presently June 30), commencing with the report for the fiscal year ending June 30, 2021, provide to the MSRB an Annual Report that is consistent with the requirements of Section 4 of this Disclosure Certificate. The Annual Report must be submitted in electronic format, accompanied by such identifying information as is prescribed by the MSRB, and may cross-reference other information as provided in Section 4 of this Disclosure Certificate; provided that the audited financial statements of the BWS may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date. If the BWS's fiscal year changes, the BWS, upon becoming aware of such change, shall give notice of such change in the same manner as for a Listed Event under Section 5(c). The Annual Report shall be submitted on a standard form in use by industry participants or other appropriate form and shall identify the Bonds by name and CUSIP number.

(b) In a timely manner prior to the date set forth in subsection (a) above, the BWS shall provide the Annual Report to the Dissemination Agent (if other than the BWS). If the BWS is unable to provide to the MSRB an Annual Report by the date required in subsection (a), the BWS shall send a notice to the MSRB in substantially the form attached as Exhibit A. The audited financial statements of the BWS may be submitted separately from the balance of the Annual Report and later than the date required above for the filing of the Annual Report if they are not available by that date.

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

Section 4. ***Content of Annual Reports.***

(a) The Annual Report shall contain or incorporate by reference the following information:

(i) Audited financial statements of the BWS for the prior fiscal year, prepared in accordance with generally accepted accounting principles as promulgated to apply to governmental entities from time to time by the Governmental Accounting Standards Board. If the BWS's audited financial statements are not available by the time the Annual Report is required to be provided to the MSRB pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the Official Statement relating to the Bonds, and the audited financial statements shall be provided to the MSRB in the same manner as the Annual Report when they become available; and

(ii) The financial information and operating data with respect to the BWS for each fiscal year of the BWS of the type included in the Official Statement under the headings "FINANCIAL INFORMATION," and "PENDING LITIGATION." The BWS regularly updates such financial and operating data and may disclose additional data, display data in a different format, or eliminate data that are no longer material.

(b) Information contained in an Annual Report for any fiscal year containing any modified operating data or financial information for such fiscal year shall explain, in narrative form, the reasons for such modification and the effect of such modification on the Annual Report being provided for such fiscal year. If a change in accounting principles is included in any such modification, such Annual Report shall present a comparison between the financial statements or information prepared on the basis of modified accounting principles and those prepared on the basis of former accounting principles.

Any or all of the items above may be included by specific reference to other documents, including official statements of debt issues of the BWS or related public entities, which have been made available to the public on the MSRB's website. The BWS shall clearly identify each such other document so included by reference.

Section 5. ***Reporting of Significant Events.***

(a) Pursuant to the provisions of this Section 5, the BWS shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Bonds, not later than ten New York securities market business days after the occurrence of the event:

i. Principal and interest payment delinquencies;

ii. Unscheduled draws on debt service reserves reflecting financial difficulties;

iii. Unscheduled draws on credit enhancements reflecting financial difficulties;

iv. Substitution of credit or liquidity providers, or their failure to perform;

v. Issuance by the Internal Revenue Service of proposed or final determination of taxability or of a Notice of Proposed Issue (IRS Form 5701 TEB);

vi. Tender offers;

vii. Defeasances;

viii. Rating changes;

ix. Bankruptcy, insolvency, receivership or similar event of the obligated person; or

x. Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the BWS, any of which reflect financial difficulties.

For the purposes of the event identified in subparagraph (ix) above, the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

(b) The BWS shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Bonds, if material, not later than ten New York securities market business days after the occurrence of the event:

i. Unless described in paragraph 5(a)(v), adverse tax opinions or other material notices or determinations by the Internal Revenue Service with respect to the tax status of the Bonds or other material events affecting the tax status of the Bonds;

ii. Modifications to rights of Bondholders;

iii. Optional, unscheduled or contingent Bond calls;

iv. Release, substitution, or sale of property securing repayment of the Bonds;

v. Non-payment related defaults;

vi. The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms;

vii. Appointment of a successor or additional trustee or the change of name of a trustee; or

viii. Incurrence of a Financial Obligation of the BWS, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the BWS, any of which affect security holders.

(c) The BWS shall give, or cause to be given, in a timely manner, notice of a failure to provide the annual financial information on or before the date specified in Section 4, as provided in Section 4.

(d) Whenever the BWS obtains knowledge of the occurrence of a Listed Event described in Section 5(b), the BWS shall determine if such event would be material under applicable federal securities laws.

(e) If the BWS learns of the occurrence of a Listed Event described in Section 5(a), or determines that knowledge of a Listed Event described in Section 5(b) would be material under applicable federal securities laws, the BWS shall within ten business days of occurrence file, or cause the Dissemination Agent to file, a notice of such occurrence with the MSRB in electronic format, accompanied by such identifying information as is prescribed by the MSRB. Notwithstanding the foregoing, notice of the Listed Event described in subsections (a)(vii) or (b)(iii) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected Bonds pursuant to the Resolution.

(f) The BWS intends to comply with the Listed Events described in Section 5(a)(x) and Section 5(b)(viii), and the definition of "Financial Obligation" in Section 2, with reference to the Rule, any other applicable federal securities laws and the guidance provided by the Securities and Exchange Commission in Release No. 34-83885 dated August 20, 2018 (the "2018 Release"), and any further amendments or written guidance provided by the Commission or its staff with respect the amendments to the Rule effected by the 2018 Release.

Section 6. ***Termination of Reporting Obligation.*** The BWS's obligations under this Disclosure Certificate shall terminate upon the legal defeasance, prior redemption or payment of amounts fully sufficient to pay and discharge the Bonds, or upon delivery to the BWS or the Dissemination Agent (if other than the BWS) of an opinion of nationally recognized bond counsel to the effect that continuing disclosure is no longer required. If such termination occurs prior to the final maturity of the Bonds, the BWS shall give notice of such termination in the same manner as for a Listed Event under Section 5(c).

Section 7. ***Dissemination Agent.*** From time to time, the BWS may appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. If at any time there is not any other designated Dissemination Agent, the BWS shall be the Dissemination Agent. The initial Dissemination Agent shall be the BWS. The sole remedy of any party against the Dissemination Agent shall be nonmonetary and specific performance. The Dissemination Agent shall not be responsible for the form or content of any Annual Report, notice of Listed Event, or other document furnished to the Dissemination Agent by the BWS. The Dissemination Agent shall receive reasonable compensation for its services provided hereunder. The Dissemination Agent may resign at any time by providing at least 60 days' notice to the BWS.

Section 8. ***Amendment Waiver.*** Notwithstanding any other provision of this Disclosure Certificate, the BWS may amend this Disclosure Certificate, and any provision of this Disclosure Certificate may be waived, provided that all of the following conditions are satisfied:

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

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

(c) The amendment or waiver either (i) is approved by the Holders of the Bonds in the same manner as provided in the Certificate for amendments to the Certificate with the consent of Holders, or (ii) does not, in the opinion of the BWS, materially impair the interests of the Holders or Beneficial Owners of the Bonds.

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

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

Section 10. ***Default.*** In the event of a failure of the BWS to comply with any provision of this Disclosure Certificate, any Holder or Beneficial Owner of the Bonds may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the BWS or the Dissemination Agent (if other than the BWS), as the case may be, to comply with its obligations under this Disclosure Certificate. A default under this Disclosure Certificate shall not be deemed an Event of Default under the Certificate, and the sole remedy under this Disclosure Certificate in the event of any failure of the BWS or the Dissemination Agent to comply with this Disclosure Certificate shall be an action to compel performance.

Section 11. ***Duties, Immunities and Liabilities of Dissemination Agent.*** The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Agreement, and the BWS agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's gross negligence or willful misconduct. The obligations of the BWS under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

Section 12. ***Beneficiaries.*** This Disclosure Certificate shall inure solely to the benefit of the BWS, the Dissemination Agent, the Participating Underwriters and holders and beneficial owners from time to time of the Bonds, and shall create no rights in any other person or entity.

Section 13. ***Governing Law***. This Disclosure Certificate shall be construed and interpreted in accordance with the laws of the State of Hawaii, and any suits and actions arising out of this Disclosure Certificate shall be instituted in a court of competent jurisdiction in the State of Hawaii; provided, however, that to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Agreement shall be construed in accordance with such federal securities laws and official interpretations thereof.

Date: March 25, 2021

____
Ernest Y.W. Lau, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu

The above and foregoing certificate is hereby approved as to form and legality this 25th day of March, 2021:

____
Paul S. Aoki
Acting Corporation Counsel
City and County of Honolulu

EXHIBIT A

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

Name of Issuer:	Board of Water Supply, City and County of Honolulu, Hawaii
Name of Bond Issue:	Water System Revenue Bonds, Series 2021A and Series 2021B
Date of Issuance:	March 25, 2021

NOTICE IS HEREBY GIVEN that the Board of Water Supply of the City and County of Honolulu, Hawaii ("BWS") has not provided an Annual Report with respect to the above-named Bonds as required by Section 3 of the Continuing Disclosure Certificate, dated March 25, 2021, executed by the BWS for the benefit of the holders and beneficial owners of the above-referenced Bonds. The BWS anticipates that the Annual Report will be filed by _________________.

Dated: ___________________________

BOARD OF WATER SUPPLY, CITY AND
COUNTY OF HONOLULU, HAWAII

By: _______________________________________
Authorized Signatory

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APPENDIX D

Proposed Form of Opinion of Bond Counsel

PROPOSED FORM OF OPINION OF BOND COUNSEL

[Date of Delivery]

Board of Water Supply of the
City and County of Honolulu
Honolulu, Hawaii

Re: Board of Water Supply of the City and County of Honolulu
Water System Revenue Bonds, Series 2021A and Series 2021B (Taxable)
(Final Opinion)

Ladies and Gentlemen:

We have acted as bond counsel to the Board of Water Supply (the "Board") of the City and County of Honolulu (the "City and County") in connection with the issuance of $50,020,000 aggregate principal amount of its Water System Revenue Bonds, Series 2021A (the "Series 2021A Bonds") and $43,515,000 aggregate principal amount of its Water System Revenue Bonds, Series 2021B (Taxable) (the "Series 2021B Bonds" and, together with the Series 2021A Bonds, the "Bonds"), pursuant to proceedings of the Board, including a Bond Resolution, adopted April 26, 2001 and a Series Resolution, adopted on February 22, 2021 (collectively, the "Resolution"), and a Series Certificate of an authorized officer of the Board dated March 9, 2021 (the "Certificate"). Capitalized terms not otherwise defined herein shall have the meanings assigned to them in the Certificate.

In such connection, we have reviewed the Resolution, the Certificate, the Tax Certificate of the Board, dated the date hereof (the "Tax Certificate"), an opinion of Corporation Counsel of the City and County, certificates of the Board and others, and such other documents, opinions and matters to the extent we deemed necessary to render the opinions set forth herein.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. Such opinions may be affected by actions taken or omitted or events occurring after original delivery of the Bonds on the date hereof. We have not undertaken to determine, or to inform any person, whether any such actions are taken or omitted or events do occur or any other matters come to our attention after original delivery of the Bonds on the date hereof. Accordingly, this letter speaks only as of its date and is not intended to, and may not, be relied upon or otherwise used in connection with any such actions, events or matters. We disclaim any obligation to update this letter. We have assumed the genuineness of all documents and signatures provided to us and the due and legal execution and delivery thereof by, and validity against, any parties other than the Board. We have assumed, without undertaking to verify, the accuracy of the factual matters represented, warranted or certified in the documents, and of the legal conclusions contained in the opinions, referred to in the second paragraph hereof. Furthermore, we have assumed compliance with all covenants and agreements contained in the Resolution, the Certificate and the Tax Certificate, including (without limitation) covenants and agreements compliance with which is necessary to assure that future actions, omissions or events will not cause interest on the Series 2021A Bonds to be included in gross income for federal income tax purposes. We call attention to the fact that the rights and obligations under the Bonds, the Resolution, the Certificate and the Tax Certificate and their enforceability may be subject to bankruptcy, insolvency, receivership, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases, and to the limitations on legal remedies against counties in the State of Hawaii. We express no opinion with respect to any indemnification, contribution, liquidated damages, penalty (including any remedy deemed to constitute or having the effect of a penalty), right of set-off, arbitration, choice of law, choice of forum, choice of venue, non-exclusivity of remedies, waiver or severability provisions contained in the foregoing documents, nor do we express any opinion with respect to the state or quality of title to or interest in any of the assets described in or as subject to the pledge of the Resolution or the accuracy or sufficiency of the description contained therein of, or the remedies available to enforce liens on, any such assets. Our services did not include financial or other non-legal advice. Finally, we undertake no responsibility for the accuracy, completeness or fairness of the Official Statement or other offering material relating to the Bonds and express no opinion with respect thereto.

Based on and subject to the foregoing, and in reliance thereon, as of the date hereof, we are of the following opinions:

1. The Bonds constitute the valid and binding special obligations of the Board.

2. The Bonds are payable from and are secured by the net revenues and other funds pledged to the payment thereof pursuant to the Resolution.

3. The Resolution has been duly adopted and constitutes the valid and binding obligation of the Board, and the Certificate has been duly executed and delivered by an authorized officer of the Board and constitutes the valid and binding obligation of the Board.

4. Interest on the Series 2021A Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986. Interest on the Series 2021A Bonds is not a specific preference item for purposes of the federal alternative minimum tax. We observe that interest on the Series 2021B Bonds is not excludable from gross income for federal income tax purposes. The Bonds and the income therefrom are exempt from all taxation by the State of Hawaii or any county or other political subdivision thereof, except inheritance, transfer, estate and certain franchise taxes. We express no opinion regarding other tax consequences related to the ownership or disposition of, or the amount, accrual or receipt of interest on, the Bonds.

Faithfully yours,

ORRICK, HERRINGTON & SUTCLIFFE LLP

APPENDIX E

Summary of Certain Provisions of the Resolution

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SUMMARY OF CERTAIN PROVISIONS OF THE RESOLUTION

The Resolution contains terms and conditions relating to the issuance of Bonds, including various covenants and security provisions, certain of which are summarized below. This summary does not purport to be comprehensive or definitive, and is subject to all of the provisions of the Resolution, to which reference is hereby made. Copies of the Resolution are available from the BWS. This summary uses various terms defined in the Resolution. Summaries of certain of these definitions are set forth below.

Certain Definitions

"Accreted Value" means, with respect to any Capital Appreciation Bond, (i) as of any Valuation Date, the amount set forth for such date in the Series Resolution authorizing such Bond or in a Series Certificate relating to such Bond and (ii) as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date, calculated based on the assumption that Accreted Value accrues during any semi-annual period in equal daily amounts on the basis of a year of twelve 30-day months, and (2) the difference between the Accreted Values for such Valuation Dates.

"Accrued Debt Service" means as of any date of computation and with respect to the Bonds of any Series, an amount equal to the sum of: (i) interest on such Bonds accrued and unpaid and to accrue to the end of the then current calendar month, and (ii) principal, Sinking Fund Installment and redemption premium which are due and unpaid for such Series of Bonds and that portion of the principal, unsatisfied balance of any Sinking Fund Installment (as determined in accordance with the Resolution) and redemption premium for such Series of Bonds next due which would have accrued to the end of such calendar month if deemed to accrete monthly from a date one year prior to its due date.

"Additional Bonds Requirement" means the financial test required to be satisfied as set forth in the Board's certificate or the Consulting Engineer's certificate required by the Resolution to be delivered prior to issuing a Series of Bonds.

"Aggregate Debt Service" means, for any period and as of any date of computation, the sum of the amounts of Debt Service for such period with respect to all Series of Bonds.

"Appreciated Value" means, with respect to any Deferred Income Bond (i) as of any Valuation Date, the amount set forth for such date in the Series Resolution authorizing such Bond or a Series Certificate relating to such Bond and (ii) as of any date other than a Valuation Date, the sum of (a) the Appreciated Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date, calculated based on the assumption that Appreciated Value accrues during any semi-annual period in equal daily amounts on the basis of a year of twelve 30-day months, and (2) the difference between the Appreciated Values for such Valuation Dates, and (iii) as of any date of computation on and after the Interest Commencement Date, the Appreciated Value on the Interest Commencement Date.

"Assumed Long-Term Fixed Rate" means, with respect to any Variable Rate Bonds, (i) a numerical rate of interest that such Bonds would have borne if issued as Fixed Rate Bonds with the same maturity and taking into account Sinking Fund Installments and (ii) if the Board has in connection with such Variable Rate Bonds entered into an Interest Rate Exchange Agreement which provides that the Board is to pay to another person an amount determined based upon a fixed rate of interest on a notional amount and which requires the Counterparty to pay to the Board an amount equal to the amount by which interest on the notional amount stated therein at the rate borne by such Variable Rate Bonds exceeds the interest payable on such notional amount at a rate stated therein, the fixed rate or other rate of interest set forth in or determined in accordance

with such agreement. With respect to the Bonds described in clause (i) of the preceding sentence, an Authorized Officer of the Board shall certify or cause the Remarketing Agent for Such Series of Variable Rate Bonds or other qualified person to certify such Assumed Long-Term Fixed Rate on the issue date of such Bonds, taking into account such market factors as such Authorized Officer of the Board or such Remarketing Agent or such qualified person shall deem necessary or appropriate.

"Authorized Officer" means the Manager, the Chief Financial Officer or other officer designated by resolution of the Board.

"Bond Anticipation Notes" means obligations issued in anticipation of the subsequent issuance of Bonds, as provided in the Resolution.

"Bond Counsel" means an attorney or a firm of attorneys, selected by the City and County or the Board, of nationally recognized standing in the field of law relating to obligations of states and political subdivisions.

"Bondholder" or *"Holder of a Bond"* or *"Holder"* means the registered owner of any Bond which at the time shall be registered other than to bearer, or such holders' duly authorized attorney in fact, representative or assigns.

"Capital Appreciation Bond" means any Bond as to which interest is compounded as provided in the Resolution and is payable only at the maturity or prior redemption thereof.

"Chief Financial Officer" means the officer or deputy officer of the Board charged with the responsibility for managing and supervising the financial and fiscal matters of the Board.

"Code" means the Internal Revenue Code of 1986, any successor statutes thereto and any applicable regulations issued thereunder.

"Consulting Engineer" means any engineer or engineering firm or corporation retained from time to time by or on behalf of the Board pursuant to the Resolution to perform the acts and carry out the duties provided for such Consulting Engineer in the Resolution.

"Costs" means all costs of any Improvement and shall include, but shall not be limited to, all costs and estimated costs of the issuance of the Bonds, all architectural, engineering, inspection, financial and legal expenses, the cost of causing the payment of the principal or interest or both of the Bonds to be insured or guaranteed, the initial cost of any Support Facility or Interest Rate Exchange Agreement obtained or permitted by the Act, and interest which it is estimated will accrue during the construction of any Improvement and for six (6) months thereafter.

"Counterparty" means any person with which the Board has entered into an Interest Rate Exchange Agreement.

"Debt Service" means, as of any particular date of computation, with respect to any Bonds and with respect to any period, the aggregate of the amounts to be paid or set aside in such period for the payment (or retirement) of the principal and Redemption Price (if any) of, and interest (to the extent not capitalized) on, such Bonds: provided, however, that the term "Debt Service" shall not include interest on Bonds to the extent it is to be paid from amounts credited to a Series Capitalized Interest Account, from amounts credited to the Payment Account or from any other source provided for such payment.

"Deferred Income Bond" means any Bond as to which interest accruing thereon prior to the Interest Commencement Date of such Bond is compounded on each Valuation Date for such Deferred Income Bond, and as to which interest accruing after the Interest Commencement Date is payable on the interest payment

dates established in the Series Resolution or Series Certificate providing for the issuance of such Deferred Income Bonds.

"Depositary" means any bank, national banking association or trust company selected and appointed by an Authorized Officer in accordance with the Resolution as a depositary of moneys and Investment Securities held under the provisions of the Resolution.

"Director of Budget and Fiscal Services" means the Director of Budget and Fiscal Services of the City and County appointed pursuant to and having the powers as set forth in the City Charter.

"Exempt Obligation" means an obligation of any state or territory of the United States of America, any political subdivision of any state or territory of the United States of America, or any agency, authority, public benefit corporation or instrumentality of such state, territory or political subdivision, the interest on which is excludable from gross income under Section 103 of the Code, and which, at the time an investment therein is made or such obligation is deposited in any fund or account under the Resolution, is rated in one of the two highest Rating Categories by any two of Fitch, Moody's and S&P.

"Fiscal Year" means the twelve month period established by the Board or provided by law from time to time as its fiscal year, and which, as of the date of adoption of the Resolution, is the 12-month period commencing on July 1 of any year and ending on June 30 of the following year.

"*Fitch*" means Fitch Inc., its successors and their assigns and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, "Fitch" shall be deemed to refer to any other nationally recognized rating agency, if any, designated by the Board.

"Fixed Rate Bonds" means any Bonds issued bearing interest at a fixed rate per annum from their dated date or such other date to their maturity date.

"Improvements" means the acquisition, purchase, construction, reconstruction, improvement, betterment or extension of the Water System

"Interest Commencement Date" means, with respect to any particular Deferred Income Bond, the date prior to the maturity date thereof specified in the Series Resolution or a Series Certificate providing for the issuance of such Bond, after which interest accruing on such Bond shall be payable on the interest payment dates established in such Series Resolution or Series Certificate.

"Interest Rate Exchange Agreement" means an agreement entered into by the Board relating to Bonds of one or more Series which provides that during the term of such agreement the Board is to pay to the Counterparty an amount based on the interest accruing at a fixed or variable rate per annum on a notional amount and that the Counterparty is to pay to the Board either (i) an amount based on the interest accruing on such notional amount at a fixed, capped or variable rate per annum, in each case computed according to a formula set forth in such agreement, or that one shall pay to the other any net amount due under such agreement, or (ii) an amount based on the amount by which the rate at which such Bonds bear interest exceeds a rate stated in such agreement.

"Investment Agreement" means an agreement for the investment of moneys with a Qualified Financial Institution.

"Investment Securities" means any of the following, if and to the extent that the same are legal for the investment of funds of the Board:

(i) Government Obligations;

(ii) Investment Agreements;

(iii) Direct obligations and fully guaranteed certificates of beneficial interest of the Export-Import Bank of the United States; consolidated debt obligations and letter of credit-backed issues of the Federal Home Loan Banks; participation certificates and senior debt obligations of the Federal Home Loan Mortgage Corporation ("FHLMCs"); debentures of the Federal Housing Administration; mortgage-backed securities (except stripped mortgage securities which are valued greater than par on the portion of unpaid principal) and senior debt obligations of the Federal National Mortgage Association ("FNMAs"); participation certificates of the General Services Administration; guaranteed mortgage-backed securities and guaranteed participation certificates of the Government National Mortgage Association ("GNMA's"); guaranteed participation certificates and guaranteed pool certificates of the Small Business Administration; debt obligations and letter of credit-backed issues of the Student Loan Marketing Association; local authority bonds of the U.S. Department of Housing & Urban Development; guaranteed Title XI financings of the U.S. Maritime Administration; guaranteed transit bonds of the Washington Metropolitan Area Transit Authority; Resolution Funding Corporation securities.

(iv) direct obligations of any state or territory of the United States of America or any subdivision or agency thereof whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, in one of the two highest Rating Categories by any two of Fitch, Moody's and S&P, or any obligation fully and unconditionally guaranteed by any state, subdivision or agency whose unsecured, uninsured and unguaranteed general obligation debt is rated, at the time of purchase, in one of the two highest Rating Categories by any two of Fitch, Moody's and S&P;

(v) commercial paper (having original maturities of not more than 270 days) rated, at the time of purchase, any two of the following: "F-1" by Fitch, "P-1" by Moody's and "A-1" by S&P;

(vi) Federal funds, unsecured certificates of deposit, time deposits or bankers acceptances (in each case having maturities of not more than 365 days) of any domestic bank including a branch office of a foreign bank which branch office is located in the United States, provided legal opinions are received to the effect that full and timely payment of such deposit or similar obligation is enforceable against the principal office or any branch of such bank, which is rated, at the time of purchase, any two of the following: "F-1" by Fitch, "P-1" by Moody's and "A-1" by S&P;

(vii) deposits of any bank or savings and loan association which has combined capital, surplus and undivided profits of not less than $3 million, provided such deposits are continuously and fully insured by the Bank Insurance Fund or the Savings Association Insurance Fund of the Federal Deposit Insurance Corporation ("FDIC");

(viii) investments in money-market funds rated in the highest Rating Category of any two of Fitch, Moody's and S&P;

(ix) repurchase agreements collateralized by Government Obligations, GNMAs, FNMAs or FHLMCs with any registered broker/dealer subject to the Securities Investors' Protection Corporation jurisdiction or any commercial bank insured by the FDIC, if such broker/dealer or bank has an uninsured, unsecured and unguaranteed obligation rated in one of the two highest Rating Categories by any two of Fitch, Moody's and S&P, provided:

(a) a master repurchase agreement or specific written repurchase agreement governs the transaction; and

(b) the securities are held free and clear of any lien by the Depositary or an independent third party acting solely as agent ("Agent") for the Depositary, and such third party is (i) a Federal Reserve Bank, or (ii) a bank which is a member of the Federal Deposit Insurance Corporation and which has combined capital, surplus and undivided profits of not less than $50 million, and the Depositary shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Depositary; and

(c) a perfected first security interest under the Uniform Commercial Code, or book entry procedures prescribed at 31 C.F.R. 306.1 *et seq*. or 31 C.F.R. 350.0 *et seq*. in such securities is created for the benefit of the Depositary; and

(d) the repurchase agreement has a term of 3 years or less, and the Depositary or the Agent will value the collateral securities no less frequently than weekly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within two business days of such valuation; and

(e) the fair market value of the securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 100%.

(x) investments in any mutual fund whose portfolio is limited to Government Obligations and the investments described in clause (ii) of this definition of Investment Securities; and

(xi) student loan resource securities including student loan auction rate securities, student loan asset-backed notes, student loan program revenue notes and bonds, and securities issued pursuant to Rule 144A of the Securities Act of 1933, including any private placement issues, issued with either bond insurance or over collateralization guaranteed by the United States Department of Education, provided all insurers are rated in the highest Rating Category by Fitch, Moody's or S&P.

"LIBOR" means the offered rate for deposits in U.S. dollars for a one-month period which appears on the Telerate Page 3750 at approximately 11:00 a.m., London time, on such date, or if such date is not a date on which dealings in U.S. dollars are transacted in the London interbank market, then on the next preceding day on which such dealings were transacted in such market.

"Moody's" means Moody's Investors Service, Inc., its successors and their assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, "Moody's" shall be deemed to refer to any other nationally recognized rating agency, if any, designated by the Board.

"Net Revenue Requirement" means with respect to any Fiscal Year or any other period, an amount equal to the greater of: (i) the sum of (a) the Aggregate Debt Service in such Fiscal Year or such period and (b) the Required Deposits for such Fiscal Year or such period; or (ii) 1.20 times the maximum Aggregate Debt Service in such Fiscal Year or such period plus 1.00 times the aggregate Support Facility Reimbursement Obligations outstanding as of the end of Fiscal Year or such period.

"Net Revenues" means, with respect to any period, the Revenues during such period less amounts required to pay Operation and Maintenance Expenses.

"Operating Fund" means the Board of Water Supply Operating Fund previously established in the City and County Treasury, as described in the Resolution.

"Operation and Maintenance Expenses" means the costs and expenses of operating and maintaining the Water System, including, without limiting the generality of the foregoing, (i) all expenses includable in the operation and maintenance expense accounts of the Board relating to the Water System according to generally

accepted accounting principles, exclusive of depreciation and amortization of property values or losses, (ii) to the extent not included in the preceding clause (i) or paid from Bond proceeds or otherwise, the Board's share of the costs and expenses of operating and maintaining any plants and properties jointly owned with others, and (iii) any Rebate Amounts.

"Opinion Of Counsel" means with respect to the Board a written opinion of counsel selected by the City and County or the Board, which, with respect to federal income tax law and securities law relating to obligations issued by state and local governmental units, is Bond Counsel. Any Opinion of Counsel may be based (insofar as it relates to factual matters or information which is in the possession of the Board) upon a Written Certificate of the Board unless such counsel knows, or in the exercise of reasonable care should have known, that such Written Certificate is erroneous.

"Outstanding" or *"outstanding"* when used with reference to Bonds means, as of any date, Bonds theretofore or thereupon issued or authorized pursuant to the Resolution, except: (a) any Bonds canceled by a Paying Agent or paid at or prior to such date; (b) Bonds in lieu of or in substitution for which other Bonds shall have been delivered pursuant to the Resolution; (c) Bonds deemed to be no longer outstanding as provided in the Resolution; and (d) Option Bonds tendered or deemed tendered in accordance with the provisions of the Series Resolution or Series Certificate providing for the issuance of such Bonds which have been purchased by or on behalf of the Board and in lieu of or substitution for which another Bond shall have been authenticated and delivered pursuant to the Resolution, provided that interest thereon shall have been paid through such tender or purchase date thereof and the purchase price thereof shall have been paid or amounts are available for such payment as provided therein and in such Series Resolution or Series Certificate.

"Parity Support Facility Reimbursement Obligation" means the obligation of the Board described in the Resolution to directly reimburse the Support Facility Provider of any Support Facility for amounts paid by such Support Facility Provider under such Support Facility or a Counterparty under an Interest Rate Exchange Agreement for amounts paid thereunder, on a parity with the obligation of the Board to pay the Bonds, whether or not such obligation to reimburse is evidenced by a promissory note or other similar instrument.

"Paying Agent" means, as to Bonds of any particular Series, the Director of Budget and Fiscal Services or the bank or trust company designated for the payment of the principal and Redemption Price (if any) of, and interest on, the Bonds of such Series in the Series Resolution or Series Certificate providing for the issuance of such Series.

"*Rating Agency*" means any nationally recognized credit rating agency which has rated all or any Series of Bonds at the request of the Director of Budget and Fiscal Services, and may include Fitch, Moody's and S&P.

"*Rating Category*" means a rating, such as AA or A, without regard to qualification of such rating by symbols such as "+" or "-" or numerical notation.

"*Rebate Amount*" means any amount required by Section 148(f) of the Code to be paid to the United States Treasury Department in respect of Tax-exempt Bonds.

"Record Date" means, with respect to any Series of Bonds, (i) with respect to the payment of interest, the 15th day (whether or not a Business Day) of the month preceding an interest payment date; (ii) with respect to notice of redemption, the 45th day (whether or not a Business Day) preceding the date of redemption; or (iii) such other day as may be provided in the Series Resolution or Series Certificate providing for the issuance of such Series.

"Refunded Municipal Obligations" means Exempt Obligations which are rated in the highest Rating Category by any two of Fitch, Moody's and S&P and provision for the payment of the principal of and interest on which shall have been made by an irrevocable deposit with a trustee or escrow agent of Governmental

Obligations, which are held by a bank or trust company organized and existing under the laws of the United States of America or any state, the District of Columbia or possession thereof in the capacity as custodian, the maturing principal of and interest on which Government Obligations shall be sufficient to pay, when due, the principal of and interest on such Exempt Obligations.

"Reimbursable Obligations" means reimbursable general obligation bonds issued and delivered or to be hereafter issued and delivered by the City and County to finance certain costs related to the Water System, the debt service on which the Board is required by State law to reimburse the City and County's General Fund.

"Reimbursable Obligation Requirement" means with respect to any period of time, the amount required to be credited to the Reimbursable Obligation Fund pursuant to the ordinances and resolutions of the City Council providing for the issuance and delivery of Reimbursable Obligations.

"Required Deposits" means, for any period, the amounts, if any, required (i) to be paid into the Common Reserve Account, each Series Reserve Account, the Subordinate Obligation Fund and the Reimbursable Obligation Fund; and (ii) to pay Support Facility Reimbursement Obligations.

"Resolution" means the First Bond Resolution adopted by the Board on April 26, 2001, as from time to time amended or supplemented by one or more Supplemental Resolutions.

"Revenue Bond Index" means the 30-year Revenue Bond Index of *The Bond Buyer*, a publication in New York, New York, or any successor publication maintaining such Index or in the event *The Bond Buyer* or any successor publication does not maintain such Index, an equivalent index with the same or similar components as the Revenue Bond Index.

"Revenues" means the moneys collected, including any moneys collected from the City and County or any department thereof, except the Board, derived by the Board from the rates, rentals, fees and charges prescribed for the use and services of, and the facilities and commodities furnished by, the Water System, including, without limiting the generality of the foregoing, (i) all income, receipts, profits, and other moneys derived from the sale of water and from the furnishing or supplying of the services, facilities and commodities through the Water System; (ii) all income from investments of moneys held under the Resolution including investment income on the Improvement Fund but not including any earnings on the Rebate Account, the Subordinate Obligation Fund and the Reimbursable Obligation Fund; (iii) all payments made by Counterparties pursuant to Interest Rate Exchange Agreements; and (iv) moneys and Investment Securities transferred from the Rate Stabilization Account to the Operating Fund within 90 days following the end of a Fiscal Year. "Revenues" shall not include, (i) deposits subject to refund until such deposits have become the property of the Board; (ii) contributions in-aid-of construction and assessment, impact and other similar fees imposed and collected by the Board which are targeted to pay the Costs of specific Improvements; (iii) income, fees, charges, receipts, profits or other moneys derived by the Board from its ownership or operation of any separate utility system; or (iv) any gifts, grants, donations or other moneys received by the Board from any state or federal agency or other person if such gifts, grants, donations or other moneys are the subject of any limitation or reservation: (a) imposed by the donor or grantor; (b) imposed by law or administrative regulation to which the donor or grantor is subject, limiting the application of such funds; (v) amounts retained in the Operating Fund for working capital and operating reserves pursuant to the Resolution; or (vi) moneys and Investment Securities transferred from the Operating Fund to the Rate Stabilization Account within 90 days following the end of a Fiscal Year.

"S&P" means Standard & Poor's, a division of The McGraw-Hill Companies, its successors and their assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, S&P shall be deemed to refer to any other nationally recognized rating agency designated by the Board.

"Serial Bonds" means Bonds which mature serially and which are not Term Bonds.

"Series," "Series of Bonds" or *"Bonds of a Series"* means all Bonds designated as being of the same series issued and delivered on original issuance in a simultaneous transaction, and any Bonds thereafter delivered in lieu thereof or in substitution therefor pursuant to the Resolution.

"Series Certificate" means a certificate of an Authorized Officer of the Board fixing the terms, conditions and other details of Bonds in accordance with the delegation of power to do so under the Resolution or under a Series Resolution.

"Series Resolution" means a resolution of the Board authorizing the issuance of a Series of Bonds adopted by the Board pursuant to the Resolution.

"Sinking Fund Installment" means an amount so designated which is established pursuant to the Resolution. The portion of any such Sinking Fund Installment remaining after the deduction of any such amounts credited pursuant to the Resolution toward the same (or the original amount of any such Sinking Fund Installment if no such amounts shall have been credited toward the same) shall constitute the unsatisfied balance of such Sinking Fund Installment for the purpose of calculation of Sinking Fund Installments due on a future date.

"Subordinate Obligations" means any bonds, notes or other evidences of indebtedness of the Board payable from Net Revenues, other than the Bonds and Reimbursable Obligations, issued in accordance with and complying with the provisions of the Resolution.

"Subordinate Obligation Requirement" means with respect to any period of time, the amount required to be deposited in the Subordinate Obligation Fund pursuant to the resolution, indenture or other instruments of the Board adopted by or entered into by the Board in accordance with the Resolution and providing for all payments with respect to Subordinate Obligations.

"Supplemental Resolution" means any resolution adopted by the Board and becoming effective pursuant to and in compliance with the provisions of the Resolution, which amends or supplements the provisions of the Resolution, any Series Resolution or any other Supplemental Resolution.

"Support Facility" means an irrevocable letter of credit, surety bond, loan agreement, standby purchase agreement or other agreement, facility or insurance or guaranty arrangement issued or extended by any Support Facility Provider, pursuant to which the Board is entitled to obtain moneys to pay the principal or Redemption Price of Bonds due in accordance with their terms or tendered for purchase or redemption, plus accrued interest thereon to the date of payment, purchase or redemption thereof in accordance with the Resolution and with the Series Resolution authorizing such Bonds or a Series Certificate relating to such Bonds, whether or not the Board is in default under the Resolution.

"Support Facility Provider" means a bank, a trust company, a national banking association, an organization subject to registration with the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956 or any successor provisions of law, a federal branch pursuant to the International Banking Act of 1978 or any successor provisions of law, a savings bank, a savings and loan association, an insurance company or association chartered or organized under the laws of any state of the United States of America, the Government National Mortgage Association or any successor thereto, the Federal National Mortgage Association or any successor thereto, or any other federal agency or instrumentality approved by the Board or a Counterparty.

"Support Facility Reimbursement Obligation" means the obligation of the Board to reimburse a Support Facility Provider for amounts paid under its Support Facility or a Counterparty for amounts paid under an Interest Rate Exchange Agreement, whether or not such obligation to reimburse is evidenced by a promissory note or other similar instrument.

"Term Bonds" means Bonds the retirement or the redemption of which shall be provided for from moneys credited to the Payment Account pursuant to the Resolution.

"Variable Rate Bonds" means any Bonds issued bearing interest at a rate per annum subject to adjustment from time to time based on the terms thereof, based upon an index, or otherwise calculated in a manner which precludes the actual rate for the entire term of such Bonds from being ascertainable in advance (*i.e.*, a "variable rate"); provided, however, that a Bond the interest rate on which shall have been fixed for the remainder of the term thereof shall constitute a Fixed Rate Bond and no longer a Variable Rate Bond; provided, further, however, that in the case where a Bond bears a variable rate and is dated and has the same maturity as a Bond bearing a rate that is a constant rate minus the rate borne by the first bond (*i.e.*, an "inverse variable rate"), both Bonds shall constitute Fixed Rate Bonds and no longer Variable Rate Bonds.

"Water System" means all plants and properties, both real and personal and tangible and intangible, now or hereafter existing, of the Board, used for or pertaining to the supplying, purification, filtration, transmission and distribution of water or incidental or necessary to the preservation of the Board's wells and water supply and the integrity thereof. Without limiting the generality of the foregoing, said term shall include: (1) the existing plants and properties comprising the Water System of the Board, as of the date of adoption of the Resolution; and (2) all Improvements hereafter constructed or otherwise acquired, including, without limitation, water properties acquired by annexations or water properties acquired through the Board's participation in any regional water system, purchase of water or water rights, conservation or reclamation projects and appliances.

Pledge Made in the Resolution

The Bonds are limited special obligations of the Board payable solely from and secured by the funds pledged therefor by the Board pursuant to the Resolution. The Board has pledged as security for the payment of the principal and Redemption Price (if any) of, and interest on, the Bonds in accordance with their terms and the provisions of the Resolution, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution: (i) the proceeds of sale of the Bonds pending application thereof in accordance with the provisions of the Resolution or of a Series Resolution or a Series Certificate; (ii) the Net Revenues; (iii) all Funds and Accounts held under the Resolution other than the Rebate Account, the Subordinate Obligation Fund and the Reimbursable Obligation Fund; (iv) with respect to any Series of Bonds not entitled to the benefit of a Series Reserve Account, such Series Reserve Account; and (v) with respect to any Series of Bonds not entitled to the benefit of the Common Reserve Account, the Common Reserve Account, including the investments, if any, in such pledged Funds and Accounts; and the Bondholders shall have a lien on, and a security interest in, such proceeds, Net Revenues and Funds and Accounts for such purpose and subject to such provisions of the Resolution. Such lien and security interest for the payment of Bonds are prior and superior to any lien and security interest for the payment of Subordinate Obligations and Reimbursable Obligations.

The Resolution provides that each of the obligations, duties, limitations and restraints imposed upon the Board by the Resolution shall be deemed to be a covenant between the Board and every holder of the Bonds, and the Resolution and every provision and covenant thereof shall be deemed to be and shall constitute a continuing contract and agreement between the Board and the holders from time to time of the Bonds issued thereunder, to secure the full and final payment of the principal and Redemption Price of and interest on all Bonds which may from time to time be issued, executed, and delivered under the Resolution. The covenants and agreements set forth in the Resolution to be performed by the Board shall be for the equal and proportionate benefit, security and protection of all holders of the Bonds without preference, priority or distinction as to payment or security or otherwise of any of the Bonds over any of the others for any reason or cause whatsoever except as expressly provided in the Resolution, in a Series Resolution, a Series Certificate or a Supplemental Resolution or in the Bonds.

Additional Bonds and Refunding Bonds

Basic Test. One or more Series of Bonds may be issued on a parity with other Bonds at any time and from time to time for any lawful use or purpose relating to the Water System, including, without limitation, payment of all or a portion of the Costs of Improvements, but only upon compliance as to each such Series with the provisions set forth in the Resolution, including, among other things, delivery to the Director of Budget and Fiscal Services of certain documents or moneys or securities, including:

(1) A certificate satisfying the "Additional Bonds Requirement," defined as either (A) a Written Certificate of the Board based: (i) on audited figures or (ii) to the extent audited figures are not available, on figures taken by an independent certified public accountant from the Board's books and records, showing that the Net Revenues, after making certain adjustments as described below, for: (a) the most recent Fiscal Year, or (b) any consecutive 12-month period out of 24 months immediately preceding the month in which such Bonds are issued were not less than 1.20 times the maximum Aggregate Debt Service on the Outstanding Bonds and the Series of Bonds then proposed to be issued in any Fiscal Year, plus 1.00 times the aggregate Support Facility Reimbursement Obligations outstanding as of the date of the Written Certificate; or (B) a Written Certificate of the Board or certificate of the Consulting Engineer that the Net Revenues to be derived in each of the five (5) Fiscal Years following the earlier of: (i) the end of the period during which interest is capitalized or, if no interest is to be capitalized, the Fiscal Year in which the proposed Series of Bonds are issued, and (ii) the date on which substantially all Improvements to be financed with the proceeds of the proposed Series of Bonds are expected to commence operations, or, if the proceeds of such Series of Bonds will not be used to fund the Costs of Improvements, the Fiscal Year in which the proposed Series of Bonds are issued, are estimated to be not less than 1.20 times the maximum Aggregate Debt Service on all Bonds then Outstanding and on the proposed Series of Bonds in any such Fiscal Year, plus 1.00 times the aggregate Support Facility Reimbursement Obligations outstanding as of the date of such Written Certificate of the Board or certificate of the Consulting Engineer, as the case may be.

(2) A Written Certificate of the Board stating the amount required to be in the Common Reserve Account after issuance of the Bonds then to be issued, and that after deposit in the Common Reserve Account of the amount, if any, to be deposited therein in connection with the issuance of such Bonds, the amounts on deposit in the Common Reserve Account will not be less than the Common Reserve Account Requirement.

(3) A Written Certificate of the Board stating the amount required to be in the Series Reserve Account, if any, created to provide additional security for the Bonds then to be issued following issuance of such Bonds, and that after deposit in such Series Reserve Account of the amount to be deposited therein in connection with the issuance of such Bonds, the amounts on deposit in such Series Reserve Account will not be less than the Series Reserve Account Requirement for such Series Reserve Account.

Certain Adjustments. The Resolution permits and requires certain adjustments to be made in determining whether the Basic Test described above for the issuance of Bonds other than Refunding Bonds are met.

(1) In determining Debt Service on Variable Rate Bonds then Outstanding and Variable Rate Bonds then proposed to be issued for purposes of the *Basic Test* described above, the interest rate is to be calculated as: (i) if any Variable Rate Bonds are then Outstanding and have been Outstanding for at least 24 months, the highest average interest rate borne by such Variable Rate Bonds over the preceding 12-month period, or (ii) if no such Variable Rate Bonds are then Outstanding, (a) for the proposed Variable Rate Bonds that are Tax-exempt Bonds, the average interest rate of the Revenue Bond Index over the preceding 12-month period at the time of calculation, and (b) for the proposed

Variable Rate Bonds that are not Tax-exempt Bonds, the average interest rate of LIBOR over the preceding 12-month period at the time of calculation.

(2) Bond Anticipation Notes then Outstanding are to be treated as Bonds. In determining Debt Service on such Bond Anticipation Notes, such Bond Anticipation Notes are assumed to mature in 30 years resulting in level annual debt service and bear interest equal to the Revenue Bond Index at the time of calculation.

(3) Subordinate Obligations and Reimbursable Obligations originally issued as Bond Anticipation Notes with a maturity of five (5) years or less are assumed to mature in 30 years resulting in level annual debt service and bear interest equal to the Revenue Bond Index at the time of calculation.

(4) In preparing any certificate required by the *Basic Test* described above, the Authorized Officer or Consulting Engineer, as applicable, may make adjustments to the Net Revenues as follows:

a. If any changes have been made in the schedule of rates and charges imposed by the Board on sales of water and services furnished by the Water System which are in effect at the time of adoption of the Series Resolution providing for the issuance of the Bonds then being issued and were placed into effect subsequent to the start of the Fiscal Year or the 12-month period selected pursuant to clause (1) under the *Basic Test* described above, the Authorized Officer may, if such changes result in increases in such rates and charges, and shall, if such changes result in reductions in such rates and charges, adjust the Net Revenues for such period to reflect any change in such Net Revenues which would have occurred if the schedule of rates and charges in effect at the time of the adoption of the Series Resolution authorizing the issuance of such Bonds had been in effect during the portion of such period in which such schedule was not in effect.

b. If customers are being served by the Board at the time of adoption of the Series Resolution authorizing the issuance of the Bonds then being issued and who were added to the Water System subsequent to the start of the Fiscal Year or the 12-month period selected pursuant to clause (1) under the *Basic Test* described above, the Authorized Officer may adjust the Net Revenues for such period to reflect any change in such Net Revenues which would have occurred if the additional customers had been served during the portion of the period in which such customers were not served.

c. If residential, commercial, industrial or institutional customers which are in existence are not then served by the Water System at the time of adoption of the Series Resolution authorizing the issuance of the Bonds then being issued, but are then expected to be served following completion of the Improvements during the five (5) Fiscal Years covered by such certificate, the Costs of which are financed from the proceeds of such Bonds, the Authorized Officer or Consulting Engineer, as applicable, shall estimate the effect which such new customers would have had on the Net Revenues for the period selected pursuant to clause (1) under the *Basic Test* described above, if such new customers had been served during the entire period and shall adjust the Net Revenues for such period to give effect to such new customers. Any such estimate shall be based upon the operating experience and records of the Board with respect to the Water System and upon any available financial and quarterly statistics deemed pertinent by the Authorized Officer or Consulting Engineer, as applicable.

d. If any long-term, guaranteed contracts with customers of the Water System are in effect at the time of adoption of the Series Resolution authorizing the issuance of the Bonds then being issued and which were entered into subsequent to the start of the Fiscal Year or

12-month period selected pursuant to clause (1) under the *Basic Test* described above, the Authorized Officer may adjust the Net Revenues for such period to reflect any change in such Net Revenues which would have occurred if such contracts had been in effect for the entire period.

e. In providing the certificate required pursuant to clause (1) under the *Basic Test* described above, the Authorized Officer or Consulting Engineer, as applicable, shall deem the Operation and Maintenance Expenses for the Water System for the first Fiscal Year of the 5-year period to be equal to such Operation and Maintenance Expenses for the Fiscal Year immediately preceding the Fiscal Year in which the proposed Series of Bonds is to be delivered, and thereafter the Authorized Officer or Consulting Engineer, as applicable, shall adjust, if deemed necessary, for any increased Operation and Maintenance Expenses which are estimated to occur during any subsequent Fiscal Year during the 5-year period and are, in the judgment of the Authorized Officer or Consulting Engineer, as applicable, essential to maintaining and operating the Water System.

f. In rendering its certificate, the Authorized Officer or Consulting Engineer, as applicable, may rely upon estimates from other sources which such Authorized Officer or Consulting Engineer considers reliable, making such adjustments and provisions for contingencies based on similar projects and other considerations as deemed appropriate by the such Authorized Officer or Consulting Engineer.

The Board may issue a Series of Refunding Bonds at any time for the purpose of refunding (including by purchase) all or any portion of Bonds Outstanding, including amounts to pay principal, redemption premium and interest to the date of maturity or redemption (or purchase) and the expense of issuing the Refunding Bonds and of effecting such refunding if the conditions set forth in the Resolution are complied with, including all of the conditions of the *Basic Test* described above, except that the Additional Bonds Requirement need not be satisfied if the maximum annual Debt Service in any Fiscal Year on the Refunding Bonds proposed to be issued does not exceed maximum annual Debt Service in any Fiscal Year on the refunded Bonds by more than 10%. All adjustments described above in *Certain Adjustments* are applicable to the issuance of Refunding Bonds.

The Board may also issue a Series of Refunding Bonds at any time for the purpose of refunding (including by purchase) all or any portion of outstanding Subordinate Obligations or Reimbursable Obligations, including amounts to pay principal, redemption premium and interest to the date of maturity or redemption (or purchase) and the expense of issuing the Refunding Bonds and of effecting such refunding if the conditions set forth in the Resolution are complied with, including all of the conditions of the *Basic Test* described above.

Bond Anticipation Notes

Bond Anticipation Notes may be issued if the Board has by a Series Resolution duly authorized the issuance of Bonds under the Resolution. No Bond Anticipation Notes may be issued unless the Board has caused to be filed with the Director of Budget and Fiscal Services on or prior to the date of issuance of such Bond Anticipation Notes, a certificate of the Board to the effect that, based on market conditions expected to be prevailing at the time of issuance of the Series of Bonds in anticipation of which such Bond Anticipation Notes are issued and on other reasonable assumptions set forth in such certificate, the provisions of the Resolution for the issuance of Bonds other than Refunding Bonds are expected to be complied with at the time of issuance of such Series of Bonds. The maximum maturity of such Bond Anticipation Notes, including the renewals thereof, must not exceed five (5) years from the date of the original Bond Anticipation Note. The principal of such Bond Anticipation Notes may be paid from the proceeds of such notes (or any renewal thereof) or from the proceeds of the Bonds in anticipation of which such notes were issued. The interest on such notes may be secured by a lien on and pledge of, and be paid from, the Net Revenues on a parity with the lien on and pledge of the Net Revenues created in the Resolution for the payment and security of the Bonds. The principal of such Bond Anticipation Notes shall be secured by a lien on and pledge of the proceeds of the Bonds in anticipation of which such notes were issued and any such pledge will have priority over any other pledge of such proceeds created by the Resolution. Bond Anticipation Notes are treated as Bonds for all purposes of the Resolution, including the Additional Bonds tests, and are payable from the Debt Service Fund except to the extent that the principal of any such Bond Anticipation Note is paid from the proceeds of other Bond Anticipation Notes or from proceeds of Bonds.

Subordinate Obligations

The Board may issue Subordinate Obligations which are payable out of, and which may be secured by a pledge of, such amounts in the Subordinate Obligation Fund as may from time to time be available for the purpose of payment. The Board may, by resolution, provide for various priorities in the liens and pledges securing Subordinate Obligations, and nothing in the Resolution shall be construed so as to require that the payment of, or pledges securing, Subordinate Obligations be on a parity *inter se.*

The Board may also issue Subordinate Obligations: (i) to refund any Subordinate Obligations issued as provided in the Resolution; (ii) to refund Outstanding Bonds; or (iii) to refund any Reimbursable Obligations. Such Subordinate Obligations issued for refunding purposes may be payable out of, and may be secured by a pledge of, such amounts in the Subordinate Obligation Fund or General Fund as may from time to time be available therefor.

The Resolution requires that the resolution, indenture or other instrument securing or evidencing each issue of Subordinate Obligations must contain provisions (which shall be binding on all holders of such Subordinate Obligations) not more favorable to the holders of such Subordinate Obligations than those provided in the Resolution to holders of Bonds with respect to payment, claim on Revenues and other matters.

Reimbursable Obligations

The obligation for the payment of Reimbursable Obligations shall be: (i) after and inferior to the lien and security interest for the payment of Bonds and those Subordinate Obligations which are payable from the Subordinate Obligation Fund; and (ii) prior and superior to the lien and security interest for the payment of those Subordinate Obligations which are payable from the General Fund. Reimbursable Obligations are payable from the Reimbursable Obligation Fund.

Support Facilities and Interest Rate Exchange Agreements

In connection with the issuance of any Series of Bonds and to the extent permitted by law, the Board may obtain or cause to be obtained from one or more Support Facility Providers or one or more Support Facilities providing for payment of all or a portion of the purchase price or principal, premium, if any, or interest due or to become due on specified Bonds of such Series, or providing for the purchase of such Bonds or a portion thereof by the Support Facility Provider, or providing, in whole or in part, for the funding of the Common Reserve Account or a Series Reserve Account pursuant to the Resolution. In connection with the issuance of any Series of Bonds or to improve the management of its assets and liabilities, to the extent permitted by law, the Board may enter into with one or more Counterparties one or more Interest Rate Exchange Agreements; provided that no such Interest Rate Exchange Agreement shall adversely affect the exclusion from gross income for federal income tax purposes of interest on the Tax-exempt Bonds of any Series.

In connection therewith, the Board may enter into agreements with the Support Facility Provider or Counterparties to provide for, among other things: (i) the payment of fees and expenses to such Support Facility Provider or Counterparties; (ii) the terms and conditions of such Support Facility or Interest Rate Exchange Agreement and the Series of Bonds affected thereby; and (iii) the security, if any, to be provided to such Support Facility Provider or Counterparties. The Board may secure the Support Facility or Interest Rate Exchange Agreement by an agreement providing for the purchase of the Bonds secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as specified in the applicable Series Resolution or Series Certificate. Debt Service with respect to any Bonds so secured shall be calculated for purposes of the definition of Common Reserve Account Requirement by using the Assumed Long-Term Fixed Rate.

The Board may also agree in any agreement with such Support Facility Provider or the Counterparty under an Interest Rate Exchange Agreement to reimburse directly such Support Facility Provider or Counterparty for any amounts paid under the terms of such Support Facility or Interest Rate Exchange Agreement, together with interest thereon (the "Support Facility Reimbursement Obligation"); provided, however, that no Support Facility Reimbursement Obligation shall be created, for purposes of the Resolution, until amounts are paid under such Support Facility or Interest Rate Exchange Agreement, as the case may be. Any such Support Facility Reimbursement Obligation may be secured by a lien on and pledge of the Net Revenues on a parity with the lien on and pledge of the Net Revenues created by the Resolution with respect to the Bonds (a "Parity Support Facility Reimbursement Obligation"). Any such Parity Support Facility Reimbursement Obligation is to be deemed to be a part of the Series of Bonds relating to the Support Facility which gave rise to such Parity Support Facility Reimbursement Obligation.

Any Support Facility deposited in the Common Reserve Account or the long-term debt of the issuer of any Support Facility deposited in the Common Reserve Account must, in each case, be rated in one of the two highest Rating Categories of any of the Rating Agencies at the time of initial deposit thereof. If a disbursement is made pursuant to a Support Facility deposited in the Common Reserve Account, the Board must (i) reinstate the full amount of such Support Facility, and (ii) if necessary, deposit Net Revenues in the Common Reserve Account in the amount of the disbursement made under such Support Facility, in either case such that the amount in the Common Reserve Account shall equal the Common Reserve Account Requirement within a period of time not longer than would be required to restore the Common Reserve Account by application of moneys in the Operating Fund.

The Board shall obtain and maintain in effect one or more Support Facilities for Option Bonds. The Board shall obtain a replacement Support Facility to replace any Support Facility for Option Bonds that is expiring, not renewed or terminated. Procedures for such replacement, maintenance and notices to Bondholders, rating agencies or other persons shall be provided in the Series Resolution or Series Certificate providing for the issuance of such Bonds.

Funds and Accounts

The Operating Fund has heretofore been created and is held by the Board in the Treasury of the City and County. In addition, the following funds and accounts are established by the Resolution, also to be held by the Board in the Treasury of the City and County:

Rebate Account and Rate Stabilization Account, in the Operating Fund;
Debt Service Fund, which contains the Payment Account, the Common Reserve Account and any Series Reserve Account;
Subordinate Obligation Fund;
Reimbursable Obligation Fund;
Renewal and Replacement Fund;
General Fund; and
Improvement Fund and any Series Improvement Account and any Series Capitalized Interest Account.

Operating Fund

Revenues are to be collected by the Board and are to be deposited into the Operating Fund. From the amounts deposited in the Operating Fund, the Board will pay the current Operation and Maintenance Expenses of the Board, including any transfer to the Rebate Account of such amount as is necessary to pay the Rebate Amount or to set aside a reserve for such payment, and shall make the transfers to other Funds and Accounts as prescribed in the Resolution. In addition, there shall be deposited in the Operating Fund all other amounts required by the City Charter and the Resolution to be so deposited.

In each month, the Board shall, after paying the Operating and Maintenance Expenses for such month and setting aside an amount sufficient to pay the Operating and Maintenance Expenses expected to be incurred for the balance of such month, retain, apply or transfer on the 5th day before the end of each month, unless otherwise provided in the Resolution, a sufficient amount of moneys in the Operating Fund in the following order of priority:

First, to the Payment Account, if and to the extent required so that the balance in the Payment Account shall equal the Accrued Debt Service for all Bonds Outstanding on said date and the interest accrued on all Bond Anticipation Notes Outstanding on said date;

Second, (a) to the Common Reserve Account, if and to the extent required either (i) an amount so that the balance in the Common Reserve Account shall equal the Common Reserve Account Requirement on said date, or (ii) an amount such that if the same amount were deposited in each month, the amount of any deficiency in the Common Reserve Account will be eliminated at the end of the 6th month following the first credit; and (b) to each Series Reserve Account, if and to the extent required either (i) an amount such that the balance in each Series Reserve Account will equal the Series Reserve Account Requirement for each Series Reserve Account on said date, or (ii) an amount such that if the same amount were deposited in each month the amount of any deficiency in each Separate Series Common Reserve Account will be eliminated at the end of the 6th month following the first credit; provided, however, that such transfers will be pro rata, based on the proportion of the Common Reserve Account Requirement and each Series Reserve Account Requirement to the sum of the Common Reserve Account Requirement and all Series Reserve Account Requirements;

Third, in the Operating Fund, a reasonable and necessary amount for working capital and operating reserves;

Fourth, to the Subordinate Obligation Fund, an amount equal to all Subordinate Obligation Requirements, if any, theretofore accrued and unpaid and not met from any other source and to accrue and become payable during the succeeding calendar month and not met from any other source;

Fifth, to the Reimbursable Obligation Fund an amount equal to all Reimbursable Obligation Requirements, if any, payable on such day and not met from any other source;

Sixth, to the Renewal and Replacement Fund, an amount equal to 1/12th of the amount provided in the Annual Budget of the Board to be credited to such Fund during such Fiscal Year, provided that if any such monthly allocation to the Renewal and Replacement Fund shall be less than the required amount, the amount of the next succeeding monthly payment shall be increased by the amount of such deficiency;

Seventh, to the Rate Stabilization Account, such amount as will be provided in the Annual Budget to be transferred to the Rate Stabilization Account in such month or so much thereof as will be available; provided, however, that if any such monthly allocation to the Rate Stabilization Account will be less than the required amount, the next succeeding transfer will be increased by the amount of such deficiency;

Eighth, to pay Costs of Improvements; and

Ninth, to the General Fund, such amount as shall be set forth in a Written Certificate of the Board.

Upon determining the Rebate Amount with respect to each Series of Tax-exempt Bonds, the Board is required to transfer from any of the Funds and Accounts pledged or held under the Resolution, other than the Debt Service Fund, the Subordinate Obligation Fund and the Reimbursable Obligation Fund, and credit to the Rebate Account, all or a portion of the Rebate Amount with respect to such Series of Bonds, and pay each such Rebate Amount out of the Rebate Account to the Department of the Treasury of the United States of America.

Moneys and Investment Securities credited to the Rate Stabilization Account are to be transferred to the Operating Fund at the times and in the amounts be provided in the Annual Budget for the purposes of stabilizing the rates and charges of the Water System.

The Resolution permits the Board, if provided in a Series Resolution, to pay directly out of the Operating Fund reimbursements to providers of Support Facilities which have been drawn upon in the same priority and order as payments from the Operating Fund to the Payment Account, Common Reserve Account, any applicable Series Reserve Account or other Funds and Accounts as if such payments were part of such Funds and Accounts.

Purposes of the Various Funds

Debt Service Fund - Payment Account. The Board will pay out of the Payment Account to each Paying Agent: (i) on or before each interest payment date for any of the Bonds or Bond Anticipation Notes the amount required for the interest payable on such date; (ii) on or before each principal payment date, an amount equal to the principal, if any, due on such date by reason of maturity or by reason of the payment of any Sinking Fund Installment; and (iii) on or before any redemption date for the Bonds, the amount required for the payment of the Redemption Price and interest on the Bonds then to be redeemed. Such amounts will be applied by each Paying Agent on and after the due dates thereof. The Board will also pay out of the Payment Account the accrued interest included in the purchase price of Bonds purchased for retirement.

Amounts accumulated in the Payment Account by reason of the payment of any Sinking Fund Installment may, on or prior to the 60th day preceding the due date of such Sinking Fund Installment, be applied by the Board to: (i) the purchase of Bonds of the maturity for which such Sinking Fund Installment was established, or (ii) the redemption of such Bonds at the applicable sinking fund Redemption Price, if then redeemable by their terms. All such purchases of Bonds will: (i) be made at prices not exceeding the applicable sinking fund Redemption Price of such Bonds plus accreted interest; (ii) be made as arranged by the Board in such manner and from such sellers or brokers at such prices as the Board shall determine; and (iii) be made to insure that delivery of the Bonds so purchased shall not occur later than the 60th day next preceding the redemption date to which the Sinking Fund Installment is to be applied. The applicable sinking fund Redemption Price of any Bonds (or principal amount of maturing Bonds) so purchased or redeemed will be deemed to constitute part of the Payment Account until such Sinking Fund Installment date, for the purpose of calculating the amount of such Account. As soon as practicable after the 60th day preceding the due date of any such Sinking Fund Installment, the Board will proceed to call for redemption on such due date Bonds of the maturity for which such Sinking Fund Installment was established (except in the case of Bonds maturing on a Sinking Fund Installment date) in such amount as is necessary to complete the retirement of the unsatisfied balance of such Sinking Fund Installment after making allowance for any Bonds purchased or redeemed pursuant to the Resolution which the Board has applied as a credit against such Sinking Fund Installment. The Board will pay out of the Payment Account to the appropriate Paying Agents, on or before the redemption date, the amount required for the redemption of the Bonds so called for redemption, and such amount will be applied by such Paying Agents to such redemption.

The amount, if any, credited to the Payment Account from a Series Capitalized Interest Account will be applied to the payment of interest on the Bonds as the same becomes due and payable as provided in the Resolution.

Upon any purchase or redemption pursuant to the Resolution of Bonds of any Series and maturity for which Sinking Fund Installments have been established: (i) if the principal amount of the Bonds so purchased is less than or equal to the next succeeding Sinking Fund Installment for such Series there will be credited to the next such Sinking Fund Installment an amount equal to the principal amount of the Bonds of such Series so purchased; and (ii) if the principal amount of the Bonds so purchased is greater than the next succeeding Sinking Fund Installment, there will be credited toward each such Sinking Fund Installment thereafter to become due an amount bearing the same ratio to such Sinking Fund Installment as the total principal amount of such Bonds so purchased or redeemed bears to the total principal amount of all such Sinking Fund Installments to be so credited or, at the option of the Board, an amount equal to the next succeeding Sinking Fund Installment. The portion of any such Sinking Fund Installment remaining after the deduction of any such amounts credited toward the same (or the original amount of any such Sinking Fund Installment if no such amounts shall have been credited toward the same) will constitute the unsatisfied balance of such Sinking Fund Installment for the purpose of calculation of Sinking Fund Installments due on a future date.

Debt Service Fund - Common Reserve Account. If on the day preceding any principal or interest payment date the amount in the Payment Account is less than Accrued Debt Service for all Bonds then Outstanding which are entitled to the benefit of the Common Reserve Account, the Board will pay out of the Common Reserve Account to each Paying Agent for such Bonds the amount necessary to satisfy the deficiency for payment to the holders of such Bonds. Amounts so applied will be derived first, from cash or Investments Securities on credit to the Common Reserve Account and second, from draws or demands on Support Facilities held in the Common Reserve Account upon the terms and conditions set forth in any such Support Facility.

Whenever the amounts on deposit in the Common Reserve Account exceed the Common Reserve Account Requirement, the Board will withdraw the amount of such excess and deposit such excess to the credit of the Payment Account or the Operating Fund, as the Board shall determine.

Whenever the amount (exclusive of Support Facilities) in the Common Reserve Account, together with the amount in the Payment Account attributable to Bonds entitled to the benefit of the Common Reserve Account, is sufficient to pay in full the principal or Redemption price, if any, of interest on all such Outstanding Bonds in accordance with their terms, the funds on credit to the Common Reserve Account will be transferred to the Payment Account. Prior to such transfer, all Investment Securities held in the Common Reserve Account will be liquidated by the Board to the extent necessary to provide for timely payment of the principal or Redemption Price, if any, of and interest on such Bonds.

When a Series of Bonds entitled to the benefit of the Common Reserve Account are refunded in whole or in part or are otherwise paid, moneys may be withdrawn from the Common Reserve Account for such Series to pay or provide for the payment of such Bonds or refunded Bonds, as the case may be; provided that immediately after such withdrawal or transfer there must be on credit to the Common Reserve Account an amount equal to the Reserve Account Requirement for the Bonds then Outstanding which are entitled to the benefit of the Common Reserve Account, after taking into account such refunding or payment.

The Common Reserve Account Requirement is to be calculated or recalculated: (i) at the time of issuance of a Series of Bonds (or Bond Anticipation Notes); (ii) at the time a Series of Bonds is retired in its entirety; (iii) at such other time as in the Opinion of Counsel is required to maintain the exclusion of interest on the Bonds from gross income for federal income taxation purposes.

Subordinate Obligation Fund. The Board will at all times maintain in the Subordinate Obligation Fund an amount equal to the Subordinate Obligation Requirement. Moneys on credit to the Subordinate

Obligation Fund will be applied by the Board solely in accordance with the provisions of, and subject to the priorities and limitations and restrictions provided in the resolution, indenture or other instrument of the Board securing or evidencing such Subordinate Obligations. Any moneys credited to the Subordinate Obligation Fund are immediately free and clear of the lien and pledge created by the Resolution.

Reimbursable Obligation Fund. The Board will at all times maintain in the Reimbursable Obligation Fund an amount equal to the Reimbursable Obligation Requirement. Moneys on deposit in the Reimbursable Obligation Fund will be applied by the Board solely to reimburse the General Fund of the City and County for payment of debt service due on Reimbursable Obligation issued or to be issued by the City and County with respect to the Water System. Any moneys deposited in the Reimbursable Obligation Fund are immediately free and clear of the lien and pledge created by the Resolution.

Renewal and Replacement Fund. Moneys on credit to the Renewal and Replacement Fund may be applied to the Costs of Improvements, or the reconstruction of, the Water System, emergency repairs of the Water System, and major or extraordinary repairs, renewals or replacements of the Water System, in each case to be set forth in the Annual Budget: (i) to restore or prevent physical damage to the Water System or any part thereof; (ii) for the safe and efficient operation of the Water System; or (iii) to prevent loss of Revenues.

If, on the day preceding any interest payment date, the moneys in the Payment Account, after making the transfers from the Common Reserve Account and the General Fund as provided in the Resolution, are insufficient to pay the interest and principal becoming due on the Bonds, the Board will transfer from the Renewal and Replacement Fund for credit to the Debt Service Fund the amount necessary (or all the moneys in such Fund if less than the amount necessary) to satisfy such deficiency.

If, on each January 1 and July 1, (i) the moneys, Investment Securities and the amount of all Support Facilities credited to the Common Reserve Account are less than the Common Reserve Account Requirement, and the transfer referred to in the preceding paragraph has been made, the Board will transfer from the Renewal and Replacement Fund for credit to the Common Reserve Account the amount necessary (or all the moneys in such Fund if less than the amount necessary) to satisfy such deficiency; and (ii) the moneys, Investment Securities and amount of Support Facilities credited to any Series Reserve Account are less than the Series Reserve Account Requirement for such Series Reserve Account, and the transfer referred to in the above paragraph have been made, the Board will transfer from the Renewal and Replacement Fund for credit to such Series Reserve Account the amount necessary (or all the moneys in said Fund if less than the amount necessary) to eliminate such deficiency; provided, however, that such transfers will be pro rata, based on the proportion of the Common Reserve Account Requirement and each Series Reserve Account Requirement to the sum of the Common Reserve Account Requirement and all Series Reserve Account Requirements.

If the moneys on credit to the Subordinate Obligation Fund are less than the Subordinate Obligation Requirement, and the transfers referred to in the preceding two paragraphs have been made, the Board will transfer from the Renewal and Replacement Fund to the Subordinate Obligation Fund the amount necessary (or all the moneys in such Fund if less than the amount necessary) to satisfy such deficiency.

If the moneys on deposit in the Reimbursable Obligation Fund are less than the Reimbursable Obligation Requirement, and the transfers referred to in the preceding three paragraphs have been made, the Board will transfer from the Renewal and Replacement Fund to the Reimbursable Obligation Fund the amount necessary (or all the moneys in such Fund if less than the amount necessary) to satisfy such deficiency.

General Fund. The Board will transfer from the General Fund: (i) to the Payment Account, the Common Reserve Account and each Series Reserve Account the amount necessary (or all the moneys in the General Fund if less than the amount necessary) to satisfy any deficiencies in payments to such Accounts required by the Resolution; (ii) in the event of any transfer of moneys from the Common Reserve Account or any Series Reserve Account to the Payment Account, to the Common Reserve Account or such Series Reserve Account the amount of any resulting deficiency in such Account; (iii) provided that all transfers referred to in clauses (i) and (ii) above have been made, to the Renewal and Replacement Fund the amount, if any, necessary to satisfy the deficiency in such Fund; (iv) such amount as the Board may, in its discretion, determine to set aside in reserve for meeting the deficiencies referred to in clauses (i) through (iii) above; (v) provided that all transfers and reserves therefor referred to in clauses (i) through (iv) above have been made, to the Subordinate Obligation Fund the amount, if any, necessary to satisfy any deficiency in meeting the Subordinate Obligation Requirement; and (vi) provided that all transfers and reserves therefor referred to in clauses (i) through (v) above have been made, to the Reimbursable Obligation Fund, the amount, if any, necessary to satisfy any deficiency in meeting the Reimbursable Obligation Requirement.

Amounts in the General Fund not required to meet a deficiency referred to in the preceding paragraph may be applied to any of the following purposes:

(1) the Costs of Improvements, or the provision of one or more reserves therefor;

(2) for transfer to the Rate Stabilization Account in the Operating Fund such amounts as may be provided in the Annual Budget for the purpose of stabilizing rates and charges.

(3) the purchase at such price or prices as the Board may deem advisable or redemption of any Bonds and expenses of such purchase or redemption or, at any time; or

(4) for any other lawful purpose of the Board.

Improvement Fund. The Series Resolution or Series Certificate providing for the issuance of any Series of Bonds (exclusive of Refunding Bonds) may create and establish one or more separate special series improvement accounts (a “Series Improvement Account”) in the Improvement Fund. In the event any interest on such Bonds is to be capitalized from the proceeds of such Bonds, there will be created in the Improvement Fund a special series account (a “Series Capitalized Interest Account”) with such designation as may be appropriate.

Moneys credited to any Series Capitalized Interest Account will be used for the purpose of paying interest on the Bonds of the related designated Series. On or before the 5th day preceding the end of the month next preceding the maturity of an installment of interest on the Bonds for the payment of which moneys have been credited to a Series Capitalized Interest Account, the Board will transfer from such Series Capitalized Interest Account for credit to the Payment Account an amount which, together with any moneys theretofore held in the Payment Account, will be sufficient to pay such next maturing installment of interest on such Bonds.

Investment of Funds

Moneys in the Payment Account shall, to the fullest extent practicable and reasonable, be invested and reinvested by the Director of Budget and Fiscal Services (at the Written Direction of an Authorized Officer) solely in noncallable Investment Securities which are Government Obligations, FNMAs or FHLMCs (as such terms are defined in the definition of Investment Securities) which mature or are subject to redemption at the option of the holder on or prior to the respective dates when the moneys in Payment Account will be required for the purposes intended.

Moneys in the Common Reserve Account or any Series Reserve Account not required for immediate disbursement for the purpose for which the Common Reserve Account or such Series Reserve Account is created may, to the fullest extent practicable and reasonable, be invested and reinvested solely in, and obligations credited to the Common Reserve Account shall be, investments specified in items (i) to (vi), inclusive, of the definition of Investment Securities and which shall mature not later than five (5) years from the date of investment thereof. The Director of Budget and Fiscal Services shall not be liable for any depreciation in value of any such investments.

Moneys in the Operating Fund and General Fund not required for immediate disbursement for the purpose for which such Funds are created shall, to the fullest extent practicable and reasonable, be invested and reinvested, to the extent allowed by law, solely in, and obligations deposited in such Funds will be, Investment Securities which mature or are subject to redemption at the option of the holder not later than such times as will be necessary to provide moneys when needed to provide payments from such Funds.

Moneys in a Improvement Fund, other than a Series Capitalized Interest Account therein, not required for immediate disbursement for the purposes for which such Fund is created shall, to the fullest extent practicable and reasonable, be invested and reinvested by the Board to the extent allowed by law, solely in, and obligations deposited in such Fund will be, Investment Securities which mature or are subject to redemption at the option of the holder not later than such times as shall be necessary to provide moneys when needed to provide payments from such Fund.

Moneys in a Series Capitalized Interest Account not required for immediate disbursement for the purposes for which such Account is created will, to the fullest extent practicable and reasonable, be invested and reinvested by the Board to the extent allowed by law, solely in, and obligations deposited in such Account shall be, noncallable Investment Securities which are Government Obligations, FNMAs or FHLMCs (as such terms are defined in the definition of Investment Securities) which mature or are subject to redemption at the option of the holder not later than such times as shall be necessary to provide moneys when needed to provide payments from such Account.

To the extent permitted in the Resolution, all income received from the investment or reinvestment of moneys in the Funds and Accounts will be deposited in the respective Funds and Account from which such investments are made and applied as a credit against the next succeeding deposit or credit required to be made pursuant to the Resolution; provided, however, that, except as to the Subordinate Obligation Account and the Reimbursable Obligation Account, all or a portion of the income received from the investment or reinvestment of moneys in any such Fund and Account may be deposited in the Operating Fund or the Improvement Fund, including any Series Capitalized Interest Account therein; and provided, further, however, that all income received from the investment or reinvestment of moneys in any Series Capitalized Interest Account will be credited to the Payment Account.

Valuation of Investment Securities

In computing the amount in any Fund or Account, Investment Securities therein are to be valued at cost or accreted market value, whichever is lower, exclusive of accrued interest. The Board shall determine the value of Investment Securities held in any Fund or Account as frequently as it deems necessary, but not less often than annually.

Depositaries

All moneys deposited under the provisions of the Resolution with the Board or any Depositary or Paying Agent must be held in trust and applied only in accordance with the provisions of the Resolution, and each of the Funds and Accounts established by the Resolution shall be a trust fund.

Each Depositary and Paying Agent, other than the Director of Budget and Fiscal Services, must be a bank or trust company organized under the laws of any state of the United States of America or a national banking association, in each case having capital stock, surplus and undivided earnings of $5,000,000 or more and willing and able to accept such office on reasonable and customary terms and authorized by law to act in accordance with the provisions of the Resolution.

Concerning Paying Agents and Depositaries

Paying Agents and Depositaries May Buy, Hold, Sell or Deal in Bonds. Each Paying Agent and each Depositary, and its respective directors, officers, employees or agents, may in good faith buy, sell, own, hold and deal in any of the Bonds or coupons, if any, issued under the provisions of the Resolution and may join any action which any holder of a Bond may be entitled to take, with like effect as if such depositary were not a Paying Agent or Depositary under the Resolution.

Reimbursement of Paying Agents and Depositaries. Each Paying Agent and Depositary is entitled to reasonable fees and to reimbursement by the Board for all expenses and charges reasonably incurred by it in the performance of its duties under the Resolution.

Covenants

The Board has covenanted and agreed in the Resolution with the holders of all Bonds issued pursuant to the Resolution as follows:

Maintenance of the Water System; Keeping the System in Good Repair. The Board will: (i) maintain, preserve and keep, or cause to be maintained, preserved and kept, the properties of the Water System and all additions and betterments thereto and extensions thereof, and every part and parcel thereof in good repair, working order and condition, (ii) from time to time make, or cause to be made, all necessary and proper repairs, renewals, replacements, additions, extensions and betterments thereto, so that at all times the business carried on in connection therewith will be properly and advantageously be conducted, and (iii) comply, or cause to be complied with the terms and conditions of any permit or license for the Water System or any part thereof issued by any federal or State governmental agency or body and with any federal or State law or regulation applicable to the construction, operation, maintenance and repair of the Water System or requiring a license, permit or approval therefor.

Rates and Charges. The Board will fix, charge and collect such rates and other charges as will be required in order that in each Fiscal Year the Net Revenues will be not less than the Net Revenue Requirement for such Fiscal Year (*"Rate Covenant"*). The failure in any Fiscal Year to comply with the Rate Covenant does not constitute an Event of Default if the Board complies with requirements described in the next paragraph.

Prior to the end of each Fiscal Year the Manager will complete a review of the financial condition of the Board for the purpose of estimating whether the Net Revenues for such Fiscal Year and for the next succeeding Fiscal Year will be sufficient to comply with the *Rate Covenant* described in the preceding paragraph and will by a Written Certificate make a determination with respect thereto. Such review will take into consideration the completion of any uncompleted Improvement and the issuance of future Series of Bonds if necessary to finance the completion of such Improvements. Such Written Certificate setting forth a reasonably detailed statement of the actual and estimated Revenues, Operation and Maintenance Expenses, Aggregate Debt Service, and any other estimates or assumptions upon which such determination was based, must be filed with the Board on or before July 1 in each year. If the Manager determines that the Revenues may not be so sufficient, the Manager or the Board shall forthwith make a study for the purpose of determining a schedule of fees, rates and charges which, in the opinion of the Manager or the Board, will cause sufficient Revenues to be collected in the following Fiscal Year to comply with the *Rate Covenant* described in the preceding paragraph and will cause additional Revenues to be collected in such following and later Fiscal Years sufficient to eliminate the amount of any deficiency at the earliest practicable time, or the Manager or the Board may elect to cause the Consulting Engineer to make such a study and render such opinion. The Board will as promptly as practicable but no later than the 120 days following such determination by the Manager or the Board, or receipt of the Consulting Engineer's recommendation, adopt and place in effect such schedule of fees, rates and charges as so determined or recommended.

Sale, Lease or Other Disposition of Properties of the Water System. The Board will not sell, mortgage, lease or otherwise dispose of the properties of the Water System except as described below.

(1) The Board may sell, lease, or otherwise dispose of the properties comprising the Water System if simultaneously with such disposition thereof provision is made for the payment of all Bonds then outstanding and such Bonds are no longer deemed Outstanding under the Resolution.

(2) The Board may from time to time, on such terms and conditions as may be prescribed by the Board, sell, lease or otherwise dispose of any part of the properties comprising the Water System determined by the Board to have a value as of the date of such disposition not exceeding 5% of the net book assets of the Water System as of the last day of the preceding Fiscal Year, as shown in the most recent audited financial statements of the Board. The Board may sell, lease or otherwise dispose of any part of the properties comprising the Water System having a value in excess of such percentage if the Consulting Engineer certifies to the Board in writing that the terms and conditions of the proposed sale, lease or other disposition of any such properties are fair and reasonable, and that the estimated Revenues to be derived from the remaining properties of the Water System, after taking into consideration the use by the Board of the proceeds of such proposed disposition of such properties, will be sufficient to enable the Board to comply with all covenants and conditions of the Resolution. Proceeds of any sale, lease or other disposition of any portion of the properties of the Water System pursuant to this paragraph will be paid into the Payment Account and applied to the purchase of redemption of Bonds or into the Operating Fund and applied by the Board for the purpose of financing Improvements to the Water System or other lawful purposes of the Board, as the Board may determine.

(3) The Board may sell, lease, or otherwise dispose of surplus lands, crops, timber, buildings and any other portion of the works, plant and facilities of the Water System and real and personal property comprising a part thereof, which, in the opinion of the Board, have become unserviceable, inadequate, obsolete, worn out, or unfit to be used in the operation of the Water System, or no longer necessary, material to, or useful in such operation. Proceeds of any such sale, lease or other disposition of any portion of the properties of the Water System pursuant to this paragraph will be paid into the Operating Fund.

(4) If permitted by the laws of the State, the Board may transfer without consideration the properties comprising the Water System to a public corporation or political subdivision of the State, provided such corporation or subdivision assumes all of the Board's obligations and duties under the Resolution.

(5) In the event that any part of the properties of the Water System are transferred from the Board through the operation of law (including condemnation), any moneys received by the Board as a result thereof must be paid: (i) if such proceeds are not in excess of $250,000, into the Operating Fund, or (ii) if such proceeds are in excess of $250,000: (a) into the Payment Account and applied to the purchase or redemption of Bonds, or (b) into the Renewal and Replacement Fund and applied by the Board for the purpose of financing Improvements to the Water System, as the Board shall determine.

Insurance. Except as provided in the next paragraph, the Board will keep, or cause to be kept, the works, plants and facilities comprising the properties of the Water System and the operations thereof insured to the extent available at reasonable cost with responsible insurers, with policies payable to the Board, against risks of direct physical loss, damage to or destruction of the Water System, or any part thereof, at least to the extent that similar insurance is usually carried by utilities operating like properties against accidents, casualties or negligence, including liability insurance and worker's compensation insurance; provided, however, that any time while any contractor engaged in constructing any part of the Water System is fully responsible therefor, the Board is not required to keep such part of the Water System insured. All policies of insurance must be for the benefit of the holders of the Bonds and the Board as their respective interests may appear. In the event of any loss or damage to the properties of the Water System covered by insurance, the Board will: (1) with respect to each such loss, promptly repair and reconstruct to the extent necessary to the proper conduct of the operations of the Water System the lost or damaged portion thereof and shall apply the proceeds of any insurance policy or policies covering such loss or damage for that purpose to the extent required therefor, unless, in case of loss or damage involving $250,000 or more, the Board will determine that such repair and reconstruction not be undertaken, and (2) if the Board will not use the entire proceeds of such insurance to repair or reconstruct such lost or damaged property, the proceeds of such insurance policy or policies or any portion thereof not used for such repair or reconstruction, as the case may be, will be paid into the Operating Fund.

The Board may elect to self-insure. If the Board elects to self-insure differently from other utilities in the same business, or fails to carry insurance against any of the risks normally insured against by operators of facilities similar to the Water System, it must secure the concurrence of an independent insurance consultant. In making its decision whether to concur in such self-insurance, the independent insurance consultant must: (i) make an estimate of the added financial risks, if any, assumed by the Board as a result of the self-insurance, (ii) consider the availability of commercial insurance, the terms upon which such insurance is available and the costs of such available insurance, and the effect of such terms and costs upon the Board's costs and charges for its services, and (iii) determine whether the added financial risk, if any, being assumed by the Board is prudent in light of the savings to be realized from such self-insurance or in light of the general availability of insurance.

All the insurance required under the Resolution may be maintained as part of a blanket insurance policy by the City and County.

Consulting Engineer. The Board may from time to time retain and appoint, as Consulting Engineer, an independent consulting engineer or engineering firm or corporation having special skill, knowledge and experience in analyzing the operations of water systems, preparing rate analyses, forecasting the loads and revenues of water systems, preparing feasibility reports respecting the financing of water systems and advising on the operation of water facilities, who shall be available to advise the Board, upon request, and to make such investigations and determinations as may be necessary from time to time under the provisions of the Resolution.

Books of Account; Annual Audit. The Board will maintain and keep proper books of account relating to the Water System and in accordance with generally accepted accounting principles. Within 180 days after the end of each Fiscal Year, the Board will cause such books of account to be audited by an independent certified public accountant. The audit may be part of a comprehensive audit of the City and County, provided that the Water System in such audit is treated as an "enterprise fund" and the revenues and expenses of the Water System are stated in a manner which permits identification by category of the sources and uses of the Revenues. A copy of each audit report in conformity with generally accepted accounting principles must be filed promptly with the Board and sent to any Bondholder filing with the Manager a written request for a copy thereof and to each Rating Agency.

To Pay Bonds Punctually. The Board will duly and punctually pay, or cause to be paid, but only from the Revenues and income specified in the Resolution, the principal and Redemption Price (if any) of, and interest on each and every Bond on the dates and at the places, and in the manner provided in the Bonds according to the true intent and meaning thereof, and the Board will faithfully do and perform and at all times fully observe and keep any and all of its covenants, undertakings, stipulations and provisions contained in the Bonds and in the Resolution.

Payment of Taxes and Other Claims. The Board will from time to time duly pay and discharge, or cause to be paid and discharged, all taxes, assessments and other governmental charges, or payments in lieu thereof, lawfully imposed upon the properties of the Water System (or any part thereof) or upon the Net Revenues or income received therefrom when the same become due, as well as all lawful claims for labor, material and supplies, which, if not paid, might become a lien or charge upon said properties or any part thereof, or upon the Revenues derived from the ownership or operation thereof, or which might in any way impair the security of the Bonds, except any such assessments, charges or claims which the Board shall in good faith contest as to validity.

Extension of Payment of Bonds. The Board will not directly or indirectly extend or assent to the extension of the maturity of any of the Bonds or the time of payment of any claims for interest by the purchase of such Bonds or claims for interest or by any other arrangement and in case the maturity of any of the Bonds or the time for payment of any such claims for interest is extended, such Bonds or claims for interest will not be entitled in case of any default under the Resolution to the benefit of the Resolution or to any payment out of any assets of the Board or the funds (except funds held in trust for the payment of particular Bonds or claims for interest pursuant to the Resolution) held by the Paying Agent, except subject to the prior payment of the principal of all Bonds issued and outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Bonds as will not be represented by such extended claims for interest.

Sound Improvements. The Board will not expend any of the income, revenues, receipts, profits and other moneys derived by it from the ownership or operation of the Water System for any Improvements which, in the sole opinion of the Manager, will not properly and advantageously contribute to the conduct of the business of the Water System in an efficient and economical manner unless required to do so to permit the continued operation of the Water System or to preserve or protect the Water System, including the Board's wells and water supply and the integrity thereof.

Tax Covenants. In order to maintain the exclusion from gross income for federal income tax purposes of interest on the Tax-exempt Bonds of any Series, the Board shall comply with the provisions of the Code applicable to such Bonds, including without limitation the provisions of the Code relating to the computation of the yield on investments of the Gross Proceeds of such Bonds, reporting of earnings on the Gross Proceeds of such Bonds, and payment of any Rebate Amount to the United States Treasury Department.

Annual Budget. Not later than May 31 before the beginning of any Fiscal Year the Board will prepare a preliminary budget of Operation and Maintenance Expenses of the Water System and reserves therefor for the ensuing Fiscal Year. Each such preliminary budget and each Annual Budget will include, in addition to provisions for all anticipated Operation and Maintenance Expenses, provision for the payments required to be made to the Renewal and Replacement Fund, provided that such payments shall in the aggregate, at least equal the amount described below. Such preliminary budget and any Annual Budget may set forth such additional material as the Board may determine.

Except as described below, on or before the 15th day of each such Fiscal Year, the Board shall finally adopt the Annual Budget for such year. The Board may at any time adopt an amended Annual Budget for the remainder of the then current Fiscal Year. Copies of the Annual Budget and of any amended Annual Budget shall be promptly filed with the Board, for inspection by Bondholders.

If for any reason the Board does not adopt the Annual Budget before the 15th day of any Fiscal Year, the budget for the preceding Fiscal Year is deemed to be in effect for such Fiscal Year until the Annual Budget for such Fiscal Year is adopted. For any purpose of computation under the provisions of the Resolution, the budget for the preceding year is deemed to have been adopted for any Fiscal Year until the Annual Budget for such year is adopted and a copy thereof filed with the Board.

Every preliminary budget, Annual Budget and amended Annual Budget must: (i) set forth in reasonable detail amounts required for repair, replacement or reconstruction of the Water System and major or extraordinary repairs, renewals or replacements of the Water System, if any, for the period to be covered by such budget, (ii) specify the amounts to be deposited in the Renewal and Replacement Fund, the Subordinate Obligation Fund, the Reimbursable Obligation Fund and the General Fund, the amounts to be maintained in the Operating Fund for working capital and operating reserves and in the Rate Stabilization Account for rate stabilization purposes, if any, for such purposes for such period, (iii) specify the amounts to be transferred from the General Fund to the Rate Stabilization Account and to other Funds and Accounts, and (iv) project the amounts required for such purposes for the next five Fiscal Years in such format as the Manager shall determine. A copy of each such report will be filed and maintained in the records of the Board.

Events of Default

Each of the following events constitutes an Event of Default under the Resolution:

(a) if payment of the principal and Redemption Price (if any) of any Bond is not punctually made when due and payable, whether at the stated maturity thereof or upon proceedings for the redemption thereof (whether by voluntary redemption or a mandatory sinking fund redemption or otherwise);

(b) if payment of the interest on any Bond is not punctually be made when due;

(c) if the provisions of any Series Resolution with respect to mandatory Sinking Fund Installment payments or the redemption of Term Bonds therefrom, as the case may be, are not punctually complied with at the time and in the manner specified in such Series Resolution;

(d) if the Board fails to duly and punctually perform or observe any other of the covenants, agreements or conditions contained in the Resolution or in the Bonds, on the part of the Board to be performed, and such failure continues for 90 days after written notice thereof from the holders of not less than 20% of the Bonds then Outstanding; provided that, if such failure is such that it cannot be corrected within such 90-day period, it will not constitute an Event of Default if corrective action is instituted within such period and diligently pursued until the failure is corrected; or

(e) if the Board: (i) admits in writing its inability to pay its debts generally as they become due; or (ii) files a petition in bankruptcy or seeking a composition of indebtedness under the provisions of any federal or State bankruptcy or similar law; or (iii) makes an assignment for the benefit of its creditors; or (iv) files a petition or any answer seeking relief under the provisions of any federal or State bankruptcy or similar law; or (v) consents to the appointment of a receiver of the whole or any substantial part of the Water System; or (vi) consents to the assumption by any court of competent jurisdiction under the provisions of any other law for the relief or aid of debtors of custody or control of the Board, or of the whole or any substantial part of the Water System.

Notice to Bondholders of Event of Default

Immediately after the occurrence of an Event of Default, or within 30 days after any Paying Agent knows of any Event of Default, the Paying Agent or Paying Agents will give to the Bondholders, all other Paying Agents, and all Support Facility Providers, and each Rating Agency, in the manner provided in the Resolution, notice of all Events of Default known to the Board, unless such Events of Default have been cured before the giving of such notice.

Acceleration of Bonds

If an Event of Default shall happen and shall not have been remedied, then and in every such case the holders of not less than 25% in principal amount of the Bonds then Outstanding, by notice in writing to the Board and the Director of Budget and Fiscal Services, may declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable. The right of the holders of not less than 25% in principal amount of the Bonds then Outstanding to make any such declaration, however, shall be subject to the condition that if, at any time after such declaration, but before the Bonds shall have matured by their terms, all overdue installments of interest upon the Bonds, together with interest on such overdue installments of interest to the extent permitted by law and all other sums then payable by the Board under the Resolution (except the principal of, and interest accrued since the next preceding interest date on, the Bonds due and payable solely by virtue of such declaration) shall either be paid by or for the account of the Board or provision satisfactory to the holders of a majority in principal amount of the Bonds then Outstanding shall be made for such payment, and all defaults under the Bonds or under the Resolution (other than the payment of principal and interest due and payable solely by reason of such declaration) shall be cured or be secured to the satisfaction of the holders of a majority in principal amount of the Bonds then Outstanding or provision deemed by such holders of the Bonds to be adequate shall be made therefor, then and in every such case the holders of a majority in principal amount of the Bonds then Outstanding, by written notice to the Board, may rescind such declaration and annul such default in its entirety, but no such rescission shall extend to or affect any subsequent default or impair or exhaust any resulting right or power.

Inspection of Books and Records; Board to Account as Trustee for Express Trust

The Board has covenanted in the Resolution that if an Event of Default has happened and has not been remedied, the books of record and account of the Board relating to the Water System and all other records relating thereto will at all times be subject to the inspection and use of the holders of 25% in principal amount of Bonds Outstanding and of their respective agents and attorneys or of any committee therefor.

The Board has also covenanted in the Resolution that if an Event of Default has happened and has not been remedied, the Board will continue to account, as a trustee of an express trust, for all Revenues and other Moneys, securities and funds pledged under the Resolution.

Application of Revenues in an Event of Default

During the continuance of an Event of Default as defined in items (a) through (c) of Section 9.01 of the Resolution or of any other Event of Default as defined in such Section 9.01 resulting in an Event of Default as defined in items (a) through (c) of such Section 9.01, the Revenues received by a receiver appointed pursuant to Section 9.06 as the result of the taking of possession of the business and properties of the Water System, are to be applied by the receiver firstly to the payment of all necessary and proper Operation and Maintenance Expenses of the Water System and all other proper disbursements or liabilities made or incurred by the receiver; secondly, to the then due and overdue payments into the Debt Service Fund, including the making up of deficiencies therein; and lastly, for any lawful purpose in connection with the Water System.

In the event that at any time the funds held by the receiver pursuant to the preceding paragraph are insufficient for the payment of the principal and Redemption Price (if any) of, and interest then due on the Bonds, such funds (other than funds held for the payment or redemption of particular Bonds or coupons) and all Revenues of the Board are to be applied as follows:

(1) Unless the principal of all of the Bonds have become due and payable,

First, to the payment of all necessary and proper Operating and Maintenance Expenses and all other proper disbursements or liabilities made or incurred by the receiver;

Second, to the payment to the persons entitled thereto of all installments of interest then due (including any interest on overdue principal) in the order of the maturity of such installments, earliest maturities first, and if the amounts available shall not be sufficient to pay in full any installment or installments of interest maturing on the same date, then to the payment thereof ratably, according to the amount due thereon, to the persons entitled thereto, without any discrimination or preference; and

Third, to the payment to the persons entitled thereto of the principal and premium, if any, due and unpaid upon the Bonds at the time of such payment without preference or priority of any Bond over any other Bonds, ratably, according to the amounts due respectively for principal and redemption premium, without any discrimination or preference.

(2) If the principal of all of the Bonds have become due and payable,

First, to the payment of all necessary and proper Operation and Maintenance Expenses and all other proper disbursements or liabilities made or incurred by the receiver; and

Second, to the payment of the principal and interest then due and unpaid upon the Bonds without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Bond over any other Bond, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or preference.

Whenever moneys are to be applied pursuant to the foregoing paragraphs, such moneys shall be applied by the receiver, at such times, and from time to time, as it in its sole discretion shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future.

If and whenever all overdue installments of interest on all Bonds, together with the reasonable and proper charges, expenses, and liabilities of the holders of the Bonds, their respective agents and attorneys, and all other sums payable by the Board under the Resolution including the principal and Redemption Price (if any) on all Bonds which are then payable, will either be paid in full by or for the account of the Board or provision satisfactory to the receiver will be made for such payment, and all defaults under the Resolution or the Bonds has been made good and secured to the satisfaction of the receiver or provision deemed by the receiver to be adequate therefor, the receiver will pay over to the Board all of its moneys, securities, funds and Revenues then remaining unexpended in the hands of the Bondholders' Committee, described below (except moneys, securities, funds or Revenues deposited or pledged, or required by the terms of the Resolution to be deposited or pledged, with the Director of Budget and Fiscal Services), control of the business and possession of the property of the Board will be restored to the Board, and thereupon the Board will be restored to its former positions and rights under the Resolution, and all Revenues will thereafter be applied as provided in the Resolution as if no default had occurred. No such payment over to the Board or resumption of this application of Revenues, as provided in the Resolution, will extend to or affect any subsequent default under the Resolution or impair any right consequent thereon.

Certain Remedies of Bondholders

If an Event of Default has happened and has not have been remedied, the holder of any Bond Outstanding shall be entitled, for the equal benefit and protection of all holders of Bonds similarly situated, to protect and enforce the rights vested in such holder by the Resolution by such appropriate judicial proceeding as such holder shall deem most effectual to protect and enforce any such right, either by suit in equity or by action of law, whether for the specific performance of any covenant or agreement contained in the Resolution, or in aid of the exercise of any power granted in the Resolution, or to enforce any other legal or equitable right vested in the holders of Bonds by the Resolution or by law; provided, however, that no judicial proceeding shall be brought seeking the appointment of a receiver to take possession of the Water System, or to manage, receive and apply the Revenues unless the holders of not less than a majority in principal amount of the Bonds then Outstanding or a Bondholders' Committee representing the holders of not less than a majority in principal amount of the Bonds then Outstanding shall have joined in or consented to such proceeding.

Bondholders' Committee. If an Event of Default has happened and has not been remedied, the holders of not less than 25% in principal amount of the Bonds then Outstanding may call a meeting of the holders of Bonds for the purpose of electing a Bondholders' Committee. Such meeting shall be called and proceedings thereat shall be conducted as provided for other meetings of Bondholders pursuant to the Resolution. At such meeting the holders of not less than a majority of the principal amount of the Bonds then Outstanding must be present in person or by proxy in order to constitute a quorum for the transaction of business, less than a quorum, however, having power to adjourn from time to time without any notice other than that required by the Resolution. A quorum being present at such meeting, the Bondholders present in person or by proxy may, by the votes cast by the holders of a majority in principal amount of the Bonds so present in person or by proxy, elect one or more persons who may or may not be Bondholders to the Bondholders' Committee which shall act as trustee for all Bondholders. The Bondholders present in person or by proxy at said meeting, or at any adjourned meeting thereof, will prescribe the manner in which the successors of the persons elected to the Bondholders' Committee at such Bondholders' meeting are to be elected or appointed, and may prescribe rules and regulations governing the exercise by the Bondholders' Committee of the power conferred upon it in the Resolution, and may provide for the termination of the existence of the Bondholders' Committee.

Bondholders May Direct Proceedings

The holders of not less than a majority in principal amount of the Bonds at the time outstanding are authorized and empowered: (1) to direct the time, method, and place of conducting any proceeding for any remedy available to the holders of the Bonds; or (2) on behalf of the holders of the Bonds then Outstanding, to consent to the waiver of any Event of Default or its consequences.

Abandonment; Adverse Determination

In case the holders of the Bonds or a Bondholders' Committee has proceeded to enforce any right under the Resolution and such proceedings have been discontinued or abandoned for any reason, or have been determined adversely to the holders of the Bonds or a Bondholders' Committee, then and in every such case the Board and the holders of the Bonds will be restored to their former positions and rights under the Resolution, and all rights, remedies and powers of the holders of the Bonds will continue as if no such proceedings had been taken.

Amending and Supplementing of Resolution

Amending and Supplementing of Resolution Without Consent of Holders of Bonds. (A) The Board, from time to time and at any time and without the consent or concurrence of any holder of any Bond, may adopt a Supplemental Resolution: (i) for the purpose of providing for the issuance of Bonds pursuant to the provisions of the Resolution (which Supplemental Resolution shall be a Series Resolution); (ii) to make any changes, modifications, amendments or deletions to the Resolution which may be required to permit the Resolution to be qualified under the Trust Indenture Act of 1939 of the United States of America; or (iii) if the Board determines that the rights of the holders of the Bonds then Outstanding shall not be materially adversely affected thereby, for any one or more of the following purposes:

1. to make any changes or corrections in the Resolution as to which the Board shall have been advised by counsel that the same are verbal corrections or changes or are required for the purpose of curing or correcting any ambiguity or defective or inconsistent provision or omission or mistake or manifest error contained in the Resolution, or to insert in the Resolution such provisions clarifying matters or questions arising under the Resolution as are necessary or desirable;

2. to add additional covenants and agreements of the Board for the purpose of further securing the payment of the Bonds;

3. to surrender any right, power or privilege reserved to or conferred upon the Board by the terms of the Resolution;

4. to confirm as further assurance any lien, pledge or charge, or the subjection to any lien, pledge, or charge, created or to be created by the provisions of the Resolution;

5. to grant or to confer upon the holders of the Bonds any additional rights, remedies, powers, authority or security that lawfully may be granted to or conferred upon them; and

6. to modify in any other respect any of the provisions of the Resolution.

(B) Except for Series Resolutions authorizing the issuance of Bonds pursuant to the Resolution, the Board shall not adopt any Supplemental Resolution authorized by the foregoing provisions unless in the Opinion of Counsel to the effect that the adoption of such Supplemental Resolution is permitted by the foregoing provisions and the provisions of such Supplemental Resolution do not adversely affect the rights of the holders of the Bonds then Outstanding.

Amendment of Resolution With Consent of Holders of Bonds. With the consent of the holders of not less than a majority of the Bonds then Outstanding, the Board may from time to time and at any time adopt a Supplemental Resolution amending or supplementing the Resolution for the purpose of adding any provisions to, or changing in any manner or eliminating any of the provisions of, the Resolution, or modifying or amending the rights and obligations of the Board under the Resolution, or modifying or amending in any manner the rights of the holders of the Bonds then Outstanding. For purposes of the preceding sentence, the written consent of each Support Facility Provider providing a Support Facility for any Bonds shall constitute consent of the Holders of such Bonds.

Without the specific consent of the holder of each such Bond which would be affected thereby, no Supplemental Resolution amending or supplementing the provisions of the Resolution will:

(1) change the fixed maturity date for the payment of the principal of any Bond or the dates for the payment of interest thereon or the terms of the redemption thereof, or reduce the principal amount of any Bond or the rate of interest thereon or the Redemption Price (including any premium) payable upon the redemption or prepayment thereof;

(2) reduce the aforesaid percentage of Bonds, the holders of which are required to consent to any Supplemental Resolution amending or supplementing the provisions of the Resolution;

(3) give to any Bond or Bonds any preference over any other Bond or Bonds secured by the Resolution;

(4) authorize the creation of any pledge of the Revenues and other moneys pledged under the Resolution, prior, superior or equal to the pledge of and lien and charge thereon created therein for the payment of the Bonds except to the extent provided in the Resolution; or

(5) deprive any holder of the Bonds in any material respect of the security afforded by the Resolution;

provided further, however, that without the specific consents of the holders of not less than a majority in principal amount of the Term Bonds then Outstanding and affected thereby, no Supplemental Resolution amending or supplementing the provisions of the Resolution may: (a) change the amount of any Sinking Fund Installments for the retirement of Term Bonds or the due dates of such installments or the terms for the purchase or redemption thereof from such installments, or (b) reduce the aforesaid percentage of Term Bonds, the holders of which are required to consent to any such Supplemental Resolution. A modification or amendment of the provisions of the Resolution with respect to the Operating Fund or the Payment Account or Common Reserve Account or any Separate Series Reserve Account will not be deemed a change in the terms of payments; provided that no such modification or amendment shall, except upon the consent of the holders of all Bonds then Outstanding affected thereby, reduce the amount or amounts required to be credited to the Payment Account or Common Reserve Account or any Separate Series Reserve Account.

APPENDIX F

Book-Entry System and Global Clearance Procedures

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BOOK-ENTRY SYSTEM AND GLOBAL CLEARANCE PROCEDURES

The information set forth in this Appendix F is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear Bank SA/NV ("Euroclear") or Clearstream Banking, S.A. ("Clearstream," and together with DTC and Euroclear, the "Clearing Systems") currently in effect. The information in this Appendix F concerning the Clearing Systems has been obtained from sources believed to be reliable, but the BWS does not take any responsibility for the accuracy, completeness or adequacy of the information in this Appendix F. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. The BWS will not have any responsibility or liability for any aspect of the records relating to, or payments made on account of beneficial ownership interests in the Series 2021 Bonds held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

So long as Cede & Co. is the registered owner of the Series 2021 Bonds, as nominee for DTC, references herein and in the Paying Agent Agreement to the Bondholders, registered owners or owners (or similar terms) of the Series 2021 Bonds shall mean Cede & Co., as aforesaid, and shall not mean the Beneficial Owners of the Series 2021 Bonds.

DTC Book-Entry System

DTC will act as securities depository for the Series 2021 Bonds. The Series 2021 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each maturity of the Series 2021 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC is rated AA+ by Standard & Poor's. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.

Purchases of Series 2021 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2021 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2021 Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2021 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2021 Bonds, except in the event that use of the book-entry system for the Series 2021 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2021 Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2021 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2021 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2021 Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Series 2021 Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2021 Bonds, such as redemptions defaults, and proposed amendments to the Series 2021 Bond documents. For example, Beneficial Owners of the Series 2021 Bonds may wish to ascertain that the nominee holding the Series 2021 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the Paying Agent and request that copies of notices be provided directly to them.

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

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2021 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the BWS as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Series 2021 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions and dividend payments on the Series 2021 Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Paying Agent, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC or its nominee, the Paying Agent, or the BWS, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions and dividend payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the BWS or the Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2021 Bonds at any time by giving reasonable notice to the BWS or the Paying Agent. Under such circumstances, in the event that a successor depository is not obtained, Series 2021 Bond certificates are required to be printed and delivered.

The BWS may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, Series 2021 Bond certificates will be printed and delivered to DTC.

NEITHER THE BWS NOR THE PAYING AGENT WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO DIRECT PARTICIPANTS, INDIRECT PARTICIPANTS OR THE PERSONS FOR WHICH THEY ACT AS NOMINEES WITH RESPECT TO THE SERIES 2021 BONDS, OR FOR ANY PRINCIPAL OF OR INTEREST PAYMENT THEREON.

The BWS and the Paying Agent may treat DTC (or its nominee) as the sole and exclusive registered owner of the Series 2021 Bonds registered in its name for the purposes of payment of the principal of, or interest on, the

Series 2021 Bonds, giving any notice permitted or required to be given to registered owners under the Paying Agent Agreement, registering the transfer of the Series 2021 Bonds, or other action to be taken by registered owners and for all other purposes whatsoever. The BWS and the Paying Agent shall not have any responsibility or obligation to any Direct or Indirect Participant, any person claiming a beneficial ownership interest in the Series 2021 Bonds under or through DTC or any Direct or Indirect Participant, or any other person which is not shown on the registration books of the BWS (kept by the Paying Agent) as being a registered owner, with respect to the accuracy of any records maintained by DTC or any Direct or Indirect Participant; the payment by DTC or any Direct or Indirect Participant of any amount in respect of the principal of or interest on the Bonds; any notice which is permitted or required to be given to registered owners thereunder or under the conditions to transfers or exchanges adopted by the BWS; or other action taken by DTC as registered owner.

Global Clearance Procedures

Beneficial interests in the Series 2021 Bonds may be held through DTC, Clearstream or Euroclear as operator of the Euroclear System, directly as a participant or indirectly through organizations that are participants in such system.

Euroclear and Clearstream. Euroclear and Clearstream each hold securities for their customers and facilitate the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream also deal with domestic securities markets in several countries through established depositary and custodial relationships. Euroclear and Clearstream have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream customers are worldwide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system, either directly or indirectly.

Clearing and Settlement Procedures. The Series 2021 Bonds sold in offshore transactions will be initially issued to investors through the book-entry facilities of DTC, or Clearstream and Euroclear in Europe if the investors are participants in those systems, or indirectly through organizations that are participants in the systems. For any of such Series 2021 Bonds, the record holder will be DTC's nominee. Clearstream and Euroclear will hold omnibus positions on behalf of their participants through customers' securities accounts in Clearstream's and Euroclear's names on the books of their respective depositories.

The depositories, in turn, will hold positions in customers' securities accounts in the depositories' names on the books of DTC. Because of time zone differences, the securities account of a Clearstream or Euroclear participant as a result of a transaction with a participant, other than a depository holding on behalf of Clearstream or Euroclear, will be credited during the securities settlement processing day, which must be a business day for Clearstream or Euroclear, as the case may be, immediately following the DTC settlement date. These credits or any transactions in the securities settled during the processing will be reported to the relevant Euroclear participant or Clearstream participant on that business day. Cash received in Clearstream or Euroclear as a result of sales of securities by or through a Clearstream participant or Euroclear participant to a DTC Participant, other than the depository for Clearstream or Euroclear, will be received with value on the DTC settlement date but will be available in the relevant Clearstream or Euroclear cash account only as of the business day following settlement in DTC.

Transfer Procedures. Transfers between participants will occur in accordance with DTC rules. Transfers between Clearstream participants or Euroclear participants will occur in accordance with their respective rules and operating procedures. Cross-market transfers between persons holding directly or indirectly through DTC, on the one hand, and directly or indirectly through Clearstream participants or Euroclear participants, on the other, will be effected by DTC in accordance with DTC rules on behalf of the relevant European international clearing system by the relevant depositories; however, cross-market transactions will require delivery of instructions to the relevant

European international clearing system by the counterparty in the system in accordance with its rules and procedures and within its established deadlines in European time.

The relevant European international clearing system will, if the transaction meets its settlement requirements, deliver instructions to its depository to take action to effect final settlement on its behalf by delivering or receiving securities in DTC, and making or receiving payment in accordance with normal procedures for same day funds settlement applicable to DTC. Clearstream participants or Euroclear participants may not deliver instructions directly to the depositories.

The BWS will not impose any fees in respect of holding the Series 2021 Bonds; however, holders of book-entry interests in the Series 2021 Bonds may incur fees normally payable in respect of the maintenance and operation of accounts in DTC, Euroclear and Clearstream.

Initial Settlement. Interests in the Series 2021 Bonds will be in uncertified book-entry form. Purchasers electing to hold book-entry interests in the Series 2021 Bonds through Euroclear and Clearstream accounts will follow the settlement procedures applicable to conventional Eurobonds. Book-entry interests in the Series 2021 Bonds will be credited to Euroclear and Clearstream participants' securities clearance accounts on the business day following the date of delivery of the Series 2021 Bonds against payment (value as on the date of delivery of the Series 2021 Bonds). DTC participants acting on behalf of purchasers electing to hold book-entry interests in the Series 2021 Bonds through DTC will follow the delivery practices applicable to securities eligible for DTC's Same Day Funds Settlement system. DTC participants' securities accounts will be credited with book-entry interests in the Series 2021 Bonds following confirmation of receipt of payment to the BWS on the date of delivery of the Series 2021 Bonds.

Secondary Market Trading. Secondary market trades in the Series 2021 Bonds will be settled by transfer of title to book-entry interests in Euroclear, Clearstream or DTC, as the case may be. Title to such book-entry interests will pass by registration of the transfer within the records of Euroclear, Clearstream or DTC, as the case may be, in accordance with their respective procedures. Book-entry interests in the Series 2021 Bonds may be transferred within Euroclear and within Clearstream and between Euroclear and Clearstream in accordance with procedures established for these purposes by Euroclear and Clearstream. Book-entry interests in the Series 2021 Bonds may be transferred within DTC in accordance with procedures established for this purpose by DTC. Transfer of book-entry interests in the Series 2021 Bonds between Euroclear or Clearstream and DTC may be effected in accordance with procedures established for this purpose by Euroclear, Clearstream and DTC.

Special Timing Considerations. Investors should be aware that investors will only be able to make and receive deliveries, payments and other communications involving the Series 2021 Bonds through Euroclear or Clearstream on days when those systems are open for business. In addition, because of time zone differences, there may be complications with completing transactions involving Clearstream and/or Euroclear on the same business day as in the United States. U.S. investors who wish to transfer their interests in the Series 2021 Bonds, or to receive or make a payment or delivery of the Series 2021 Bonds, on a particular day, may find that the transactions will not be performed until the next business day in Luxembourg if Clearstream is used, or Brussels if Euroclear is used.

Clearing Information. It is expected that the Series 2021 Bonds will be accepted for clearance through the facilities of Euroclear and Clearstream. The CUSIP numbers for the Series 2021 Bonds are set forth on the inside cover of the Official Statement.

General. Neither Euroclear nor Clearstream is under any obligation to perform or continue to perform the procedures referred to above, and such procedures may be discontinued at any time.

NEITHER THE BWS NOR THE UNDERWRITERS WILL HAVE ANY RESPONSIBILITY FOR THE PERFORMANCE BY EUROCLEAR OR CLEARSTREAM OR THEIR RESPECTIVE DIRECT OR INDIRECT PARTICIPANTS OR ACCOUNT HOLDERS OF THEIR RESPECTIVE OBLIGATIONS UNDER THE RULES AND PROCEDURES GOVERNING THEIR OPERATIONS OR THE ARRANGEMENTS REFERRED TO ABOVE.

BOARD OF WATER SUPPLY, CITY AND COUNTY OF HONOLULU • WATER SYSTEM REVENUE BONDS, SERIES 2021A (TAX-EXEMPT) AND SERIES 2021B (TAXABLE)

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