

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com



February 16, 2021

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair
KAPUA SPROAT, Vice Chair
RAY C. SOON
MAX J. SWORD
NA'ALEHU ANTHONY

JADE T. BUTAY, Ex-Officio
ROGER BABCOCK, Jr., Designate Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

NOTICE

The Board of Water Supply, City and County of Honolulu, will hold a Regular Meeting on Monday, February 22, 2021, at 2:00 p.m. in the Boardroom, Public Service Building, 630 South Beretania Street, Honolulu, Hawaii.

Pursuant to the Eighteenth Supplementary Proclamation issued by Governor David Y. Ige on February 12, 2021, related to the COVID-19 emergency, in order to allow public participation in a manner consistent with social distancing practices, the following procedures are in effect for the meeting.

Some Board members may be participating in the meeting by interactive conference technology from remote locations.

TESTIMONY

Testimony can be submitted as follows:

- Written testimony may be emailed to board@hbws.org or faxed to (808) 748-5079. Testimony is due by Monday, February 22, 2021, at noon. Written testimonies should include the submitter's address, email address, and phone number. Written testimony will be posted to the BWS website at boardofwatersupply.com.
- Mail written testimony to Board of Water Supply, 630 S. Beretania St., Honolulu, HI 96843. Testimony is due by Monday, February 22, 2021, at noon.
- On-line testimony will be accepted at boardofwatersupply.com/testimony. Fill out the testimony form. Due by Monday, February 22, 2021, at noon.
- Telephone testimony will be accepted during the meeting at (808) 748-6040. Callers will be placed in a queue and brought up to testify one at a time.
- In-person testimony will not be accepted.

Testimony is limited to two (2) minutes and shall be presented by the registered speaker only.

MATERIALS AVAILABLE FOR INSPECTION

Meeting materials ("board packet" under HRS Section 92-7.5) are accessible at www.boardofwatersupply.com/boardmeetings.

VIEWING THE MEETING

The meeting will be viewable via live streaming on:

(1) the BWS website: www.boardofwatersupply.com/live. Video will appear on screen. You may have to click the arrow on video to start it. You may have to unmute audio as muted audio tends to be the default setting.

SPECIAL REQUESTS AND ACCOMMODATIONS

If you require special assistance, an auxiliary aid or service, and/or an accommodation due to a disability to participate in this meeting (i.e., sign language interpreter; interpreter for language other than English, or wheelchair accessibility), please call 748-5172 or email your request to board@hbws.org at least three business days prior to the meeting date.

The agenda for the February 22, 2021, Regular Meeting of the Board of Water Supply is as follows:

ITEMS REQUIRING BOARD ACTION

1. Approval of the Minutes of the Regular Meeting Held on January 25, 2021
2. Adoption of Resolution No. 920, 2021, Adopting the Long Range Financial Plan Update 2021 of the Honolulu Board of Water Supply
3. Resolution No. 921, 2021, Authorizing Up to \$200,000,000 Principal Amount of Series 2021 Bonds

ITEMS FOR INFORMATION

1. Capital Improvement Program Quarterly Update
2. Financial Statement and Supplementary Information with Independent Auditors' Report, Fiscal Year Ended June 30, 2020, and 2019
3. Financial Update for the Quarter Ended December 31, 2020
4. Recruitment Status
5. Status Update of Groundwater Levels at All Index Stations
6. Water Main Repair Report for January 2021

EXECUTIVE SESSION

1. Approval of the Minutes of the Executive Session Held on October 26, 2020
2. To Consult with the Board's Attorney on Questions and Issues Pertaining to the Board's Powers, Duties, Privileges, Immunities, and Liabilities Pertaining to Matters Concerning the Red Hill Bulk Fuel Storage Facility [HRS § 92-5(a)(4)]
3. To Consider the Evaluation of the Chief Engineer, Where Consideration of Matters Affecting Privacy Will be Involved [HRS § 92-5(a)(2)]

MINUTES

THE REGULAR MEETING OF THE BOARD OF WATER SUPPLY

February 22, 2021

At 1:59 PM on February 22, 2021, in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Andaya called to order the Regular Meeting.

Present: Bryan P. Andaya, Chair
Kapua Sproat, Vice Chair via WebEx
Ray C. Soon, Board Member via WebEx
Max J. Sword, Board Member via WebEx
Na'alehu Anthony, Board Member via WebEx
Jade T. Butay, Board Member, Ex-Officio via WebEx
Roger Babcock, Board Member, Ex-Officio via WebEx

Also Present: Ernest Lau, Manager and Chief Engineer
Ellen Kitamura, Deputy Manager and Chief Engineer via WebEx
Jason Takaki, Program Administrator, Capital Projects Division
Jadine Urasaki, Assistant Program Administrator, Capital Projects Division via WebEx
Jennifer Elflein, Program Administrator, Customer Care Division via Vimeo
Kathleen Elliott-Pahinui, Information Officer, Communications Office via Vimeo
Michael Fuke, Program Administrator, Field Operations Division
Joseph Cooper, Waterworks Controller, Finance Division
Michele Thomas, Executive Assistant I, Human Resources Office via WebEx
Henderson Nuuhiwa, Program Administrator, Information Technology Division via Vimeo
Michael Matsuo, Land Administrator, Land Division via Vimeo
Erwin Kawata, Program Administrator, Water Quality Division via Vimeo
Barry Usagawa, Program Administrator, Water Resources Division
Kevin Ihu, Program Administrator, Water System Operations Division via Vimeo
Kathy Mitchell, Administrative Services Officer via Vimeo

David Ebersold, Vice President, CDM Smith via
WebEx
David Brown, Morgan, Lewis, & Bockius, LLP via
WebEx
Stella Bernardo, Information Specialist II,
Communications Office via WebEx
Blaine Fergerstrom, Information Specialist II,
Communications Office via WebEx
Deanna Thyssen, Manager Secretary via WebEx
Joy Cruz-Achiu, Board Secretary

Others Present: Jeff Lau, Deputy Corporation Counsel
via WebEx
Jessica Wong, Deputy Corporation Counsel
via WebEx Call

REGULAR MEETING

Chair Bryan Andaya requested a roll call for the Regular Meeting. Chair Andaya asked each Board Member to respond verbally when their names were called. Vice Chair Kapua Sproat, aye; Board Member Max Sword, aye; Board Member Na'alehu Anthony, aye; and Board Member Jade Butay. Chair Andaya indicated that Board Members Ray Soon and Roger Babcock may be joining the Board Meeting later.

Chair Andaya requested all attendees calling-in or video conferencing to please mute their microphone when not speaking to the audience. When intending to speak, unmute their microphone and identify themselves before speaking.

Chair Andaya also introduced those present in the Boardroom, Manager Ernest Lau, Board Secretary Joy Cruz-Achui, Information Specialist Steven Norstrom, and Joseph Cooper, Waterworks Controller. Joining from the City and County Corporation Counsel was Deputy Jeff Lau via WebEx and Deputy Jessica Wong via WebEx Call.

Chair Andaya welcomed Board Member Roger Babcock at 2:02 PM when he joined the Regular Board Meeting via WebEx.

Chair Andaya stated that the Board of Water Supply (BWS) is dedicated to providing safe, dependable, and affordable water now and into the future.

Chair Andaya stated under the Seventeenth Supplementary Proclamation issued by Governor David Ige on December 16, 2020, to follow public participation in a matter consistent with social distancing practices. The following procedures are in effect for the meeting. Board Members are participating from remote locations via WebEx.

Chair Andaya shared the various ways to submit testimony: Written testimony may be submitted by email to board@hbws.org, by fax to (808) 748-5079; mailed to Board of Water Supply, 630 S. Beretania St., Honolulu, HI 96843; or online at the boardofwatersupply.com/testimony, which were all due at noon today. If you have not had the chance to send in your testimony by email, fax, or mail, telephone testimony, you may still do so. Telephone testimony is accepted by calling (808)748-6040, where you will be put in the queue and allowed to testify one at a time. Unfortunately, due to the pandemic, in-person testimony is suspended. Pursuant to HRS Section 92-7.5, Board Meeting materials available to view on our website at www.boardofwatersupply.com/boardmeeting.

Chair Andaya also announced the Board Meeting is broadcasted live on the BWS website at www.boardofwatersupply.com/live.

APPROVAL OF MEETING	Approval of the Minutes of the Regular Meeting Held on January 25, 2021.
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MOTION TO APPROVE	Jade Butay and Roger Babcock motioned and seconded, respectively, to approve the Minutes of the Regular Meeting of January 25, 2021.
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Chair Andaya asked if there was any discussion on the minutes from the Board Members. Since there was no discussion, Chair Andaya asked Mr. Norstrom, is there was anyone to testify by telephone. Mr. Norstrom responded there were no telephone testifiers. Chair Andaya asked Board

Secretary Ms. Cruz-Achui, were there any written testimony. Ms. Cruz-Achui responded there was no written testimony.

In lieu of a roll call vote, Chair Andaya requested a voice vote on the motion and requested that Board Members in favor of the motion say "Aye." The Board members present responded with a verbal "Aye." Board Member Sword indicated that he would be abstaining since he was not present at the January Board Meeting. Chair Andaya then inquired if any Board Members would like to vote "Nay" on the motion. There were no "Nay" votes. Chair Andaya announced that the motion passed.

At 2:12 PM, Board Member Ray Soon joined the Regular Board Meeting via WebEx.

THE MINUTES OF THE REGULAR MEETING HELD ON JANUARY 25, 2021, WERE APPROVED AT THE FEBRUARY 22, 2021 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON			ABSENT
MAX J. SWORD			ABSTAINED
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR	X		

"February 22, 2021

**ADOPTION OF
RESOLUTION
NO. 920, 2021,
ADOPTING THE
LONG RANGE
FINANCIAL PLAN
UPDATE 2021 OF
THE HONOLULU
BOARD OF
WATER SUPPLY**

**Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843**

Chair and Members:

**Subject: Adoption of Resolution No. 920, 2021, Adopting the Long
Range Financial Plan Update 2021 of the Honolulu Board of
Water Supply**

One of the strategic objectives of the Board of Water Supply is to "develop and implement short and long term financial plans and policies."

The Long Range Financial Plan Update 2021 proactively reviews the Board of Water Supply's financial position and planned operations, maintenance, and capital expenditures given the impact of the novel coronavirus (COVID-19) global pandemic. This update builds on the Long Range Financial Plan adopted by the Board of Directors in March 2018 by comparing actual to planned performance, evaluating the impacts of COVID-19, and implementing appropriate adjustments.

We respectfully recommend that the Board adopt the Long Range Financial Plan Update of the Honolulu Board of Water Supply, February 2021.

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

Attachment"

DISCUSSION: Chair Andaya stated that this action item was the adoption of the Long Range Financial Plan Update of the BWS. The update was discussed at the January Board Meeting and distributed to the members for review and adoption at the February Board Meeting.

Manager Lau confirmed that the draft plan was distributed to the Board Members about three weeks ago. To date he has not received any questions or comments on the draft plan.

Manager Lau also stated that Mr. Joe Cooper, Waterworks Controller and Mr. Dave Ebersol from CDM-Smith were standing by if there were any questions or comments from the Board.

**MOTION TO
ADOPT** Max Sword and Jade Butay motioned and seconded respectively, the Adoption Resolution No. 920, 2021, The Long Range Financial Plan Update 2021 of the Honolulu Board of Water Supply.

DISCUSSION: Chair Andaya recognized Mr. Joe Cooper

Mr. Cooper stated that the Long Range Financial Plan was first adopted in 2018 with a 30 year time horizon plan. The plan accounted for six (6) major events that could financially impact the BWS. However, the adopted plan did not address the impact from a global pandemic. The updated plan addressed planning for a global pandemic and also included the impacts of the current pandemic on BWS's revenues. The analysis concluded that even with the increase in past due accounts, BWS remained financially stable. The updated plan gives BWS insight and information on evaluating the impact of COVID-19 and other stresses to make informed financial decisions. Mr. Cooper respectfully requested that the Board approve the Long Range Financial Plan Update 2021.

Chair Andaya thanked Mr. Cooper for this report. Chair Andaya then asked Board Secretary Ms. Cruz-Achiu, if there were any written testimony submitted. Ms. Cruz-Achiu responded there was no written testimony. Chair Andaya asked Mr. Norstrom, if there was anyone waiting to testify by telephone. Mr. Norstrom responded there were no telephone testifiers.

Chair Andaya closed public testimony and asked if there were any discussion on Resolution No. 920, 2021, Adopting the Long Range Financial Plan Update 2021 of the Honolulu Board of Water Supply. Being that there was no discussion, Chair Andaya requested that Board Secretary, Ms. Joy Cruz-Achiu conduct the roll call vote.

Ms. Cruz-Achiu conducted a roll call vote: Vice Chair Kapua Sproat, aye; Board Member Ray Soon, aye; Board Member Max Sword, aye; Board Member Na'alehu Anthony, aye; Board Member Jade Butay, aye; Board Member Roger Babcock, aye; and Chair Bryan Andaya, aye.

Ms. Cruz-Achiu announced that the motion passed with seven ayes.

ADOPTION OF RESOLUTION NO. 920, 2021, ADOPTING THE LONG RANGE FINANCIAL PLAN UPDATE 2021 OF THE HONOLULU BOARD OF WATER SUPPLY, ADOPTED FEBRUARY 22, 2021			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD	X		
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR.	X		

BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU

RESOLUTION NO. 920, 2021

**ADOPTING THE LONG RANGE
FINANCIAL PLAN UPDATE 2021 OF THE
HONOLULU BOARD OF WATER SUPPLY**

WHEREAS, the Board of Water Supply, City and County of Honolulu takes to heart and is committed to its vision of “Ka Wai Ola – Water for Life,” which captures the critical need of water as the basis of life; and

WHEREAS, the Board of Water Supply’s mission is to provide safe, dependable, and affordable water to our customers now and into the future; and

WHEREAS, the Long Range Financial Plan adopted by the Board of Directors in March 2018 provided a financial framework to support the Board of Water Supply’s 30-year Water Master Plan and evaluated the impact of six different scenarios; and

WHEREAS, the global pandemic caused by the novel coronavirus (COVID-19) was not among the six scenarios evaluated; and

WHEREAS, the Long Range Financial Plan Update 2021 compares actual financial performance to planned performance and evaluates the impacts of the COVID-19 global pandemic; now, therefore,

BE IT RESOLVED by the Board of Water Supply, City and County of Honolulu,
that the Long Range Financial Plan Update 2021 of the Honolulu Board of Water
Supply, February 2021 be adopted to provide financial guidance for the Department.

ADOPTED:



BRYAN P. ANDAYA
Chair

Honolulu, Hawaii
February 22, 2021

ADOPTION OF RESOLUTION NO. 920, 2021, ADOPTING THE LONG RANGE FINANCIAL PLAN UPDATE 2021 OF THE HONOLULU BOARD OF WATER SUPPLY, ADOPTED FEBRUARY 22, 2021			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD	X		
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR.	X		

DRAFT

**Long Range Financial Plan
Update 2021**

Honolulu Board of Water
Supply

February 2021



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Appendices

Appendix A Delinquency Recovery Model

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Abbreviations and Acronyms

Board	BWS Board of Directors
BWS	Board of Water Supply
City	City and County of Honolulu
COVID-19	Novel coronavirus
DSCR	Debt Service Coverage Ratio
FY	Fiscal Year
M	Million
LRFP	Long Range Financial Plan
mg	Million gallons
mgd	Million gallons per day
SRF	State Revolving Fund
WHO	World Health Organization
WMP	Water Master Plan
WSFC	Water System Facilities Charges

Section 1

Impetus for Update

The Board of Water Supply (BWS) for the City and County of Honolulu (City) provides an average of 145 million gallons per day (mgd) of potable water and 10 mgd of non-potable water to nearly one million people on O‘ahu. The BWS has about 170,000 potable water service customer accounts. The municipal potable water system provides dependable service through a complex system of 2,100 miles of pipe, 386 source and booster pumps, 212 water sources (wells, tunnels, and shafts), and 172 water storage reservoirs. The BWS provides non-potable water for irrigation and industrial uses through a water recycling facility and several separate brackish sources. Groundwater is the only source for the BWS potable water supply, coming from naturally filtered aquifers that can withstand periods of drought. The BWS water system delivers high quality water at quantities to provide for the health and safety of the community and has built-in redundancies and resiliency; but, as is typical with water systems of this size, some of the infrastructure is aging and needs attention. In October of 2016, the Board of Directors (Board) adopted the Water Master Plan, giving the BWS a roadmap to meet future needs, establish priorities, and adopt sustainable financing strategies. In March 2018, the Board adopted the Long Range Financial Plan as the policy document that establishes financing strategies, helping the BWS to effectively implement its Water Master Plan. In August 2018, the Board adopted revisions to its Schedule of Water Rates and Charges for the Furnishing of Water and Water Service for fiscal years (FY) 2019 through 2023 to support the implementation of the Long Range Financial Plan and Water Master Plan.

In addition to identifying the revenue requirement for an initial 10-year period (FY 2019 through FY 2028), the Long Range Financial Plan considered longer-term financial trends for a 30-year planning horizon. As part of this evaluation, the plan evaluated the potential impacts of uncertainties in water demands, water quality, economic factors, regulatory requirements, and climate change by considering six different scenarios, as shown in Table 1-1.

Table 1-1. Scenarios

Scenario	Uncertainties Considered
Aggressive conservation	Water demands
Aggressive growth	Water demands, water quality
Major natural disaster	Water demands, water quality, economic factors
Major source water contamination	Regulatory requirements, water quality
Climate change	Climate change, water demands, water quality, economic factors
Economic cycle	Economic factors

On March 11, 2020, the World Health Organization (WHO) declared the novel coronavirus (COVID-19) outbreak a global pandemic. Recognizing that a global pandemic was not among the six scenarios previously evaluated, the BWS decided to proactively review their financial position and planned operations and maintenance and capital expenditures given the resulting economic impacts. In particular, like other water and wastewater utilities, the BWS was concerned about impacts to water demands, delinquency rates, and unrecoverable revenues and if adjustments to budgeted expenditures would need to be made in case of reduced revenues. The BWS also wanted to update the long range model based on its financial position at the end of FY 2020 and in light of potential impacts from the pandemic.

Section 2

Review Current Status vs Long Range Financial Plan

2.1 Comparison of Actuals vs Plan

The update started with comparing actual operations and maintenance and capital expenditures versus those forecasted in the Long Range Financial Plan that was adopted in 2018. This comparison was used to determine if any course-correction was needed before addressing any pandemic-related issues.

Table 2-1 compares adopted budgets, actual historical operations and maintenance expenditures, and the modeled operations and maintenance expenditures in the Long Range Financial Plan through fiscal year (FY) 2021. As is common among its peer agencies, the BWS typically does not expend its full budgeted amount of operations and maintenance. However, over the period FY 2018 through FY 2020, the BWS increasingly spent larger amounts than projected in the Long Range Financial Plan. These additional expenditures contributed to reductions in the days cash on hand (working capital), which lowered from 257 days in FY 2018 to 111 days in FY 2020. While this FY 2020 value is within the stated financial policies of maintaining 60 to 180 days of working capital, continuing this trend could bring the BWS close to or below the minimum of 60 days working capital as stated in its Board-adopted financial policies.

Table 2-1. Operations and Maintenance Comparison

	FY 2018	FY 2019	FY 2020	FY 2021
Adopted Budget	\$159,820,692	\$164,633,099	\$182,008,638	\$183,634,937 (1)
Actual Expenditures	\$139,706,497	\$147,091,259	\$164,751,000	NA (3)
Long Range Model	\$136,853,600	\$138,374,800	\$142,913,300	\$148,362,000
Difference (2)	\$2,852,897	\$8,716,459	\$21,837,700	

(1) Initially adopted budget as of May 26, 2020.

(2) Actual less Long Range model.

(3) Since FY 2021 is not complete, actual expenditures are not available.

Figure 2-1 shows the adopted annual budgets, actual expenditures, the 10-year budget developed as part of the Long Range Financial Planning process, and the modeled operations and maintenance expense from FY 2013 through FY 2027. From FY 2013 through FY 2017, actual operations and maintenance expenditures averaged 78 percent of adopted budgets. Prior to considering updates to its water rates, in 2018, the BWS implemented procedures to tighten this gap through a more rigorous budgeting process. This was reflected in the Long Range model, which presumed 85 percent of budget would be spent. Actual expenditures in FY 2018 and FY 2019 were 88 percent of budget. In the short-term, the modeled gap may have been reasonable, but over the long-term it appears to be too big and suggests the need for a revised baseline. Additionally, by FY 2020 and FY 2021, adopted budgets started deviating from the initial 10-year budget considered in the Long Range Financial Plan. The drivers for the FY 2020 operations and maintenance budget increases occurred in each major category except salary-related. Almost \$9 million was due to materials, supplies and expenses for items such as replacing

the reverse osmosis line for the recycled water system, an advanced treatment study, and the risk resiliency assessment required by the federal America's Water Infrastructure Act of 2018. Fixed charges related to the employee retirement system and electricity added \$4 million to the budget. Therefore, a new baseline for operations and maintenance costs was developed reflecting 1) the tighter gap between budget and actual and 2) that the BWS downward revised its adopted FY 2021 operating budget to be closer to the original 10-year budget.

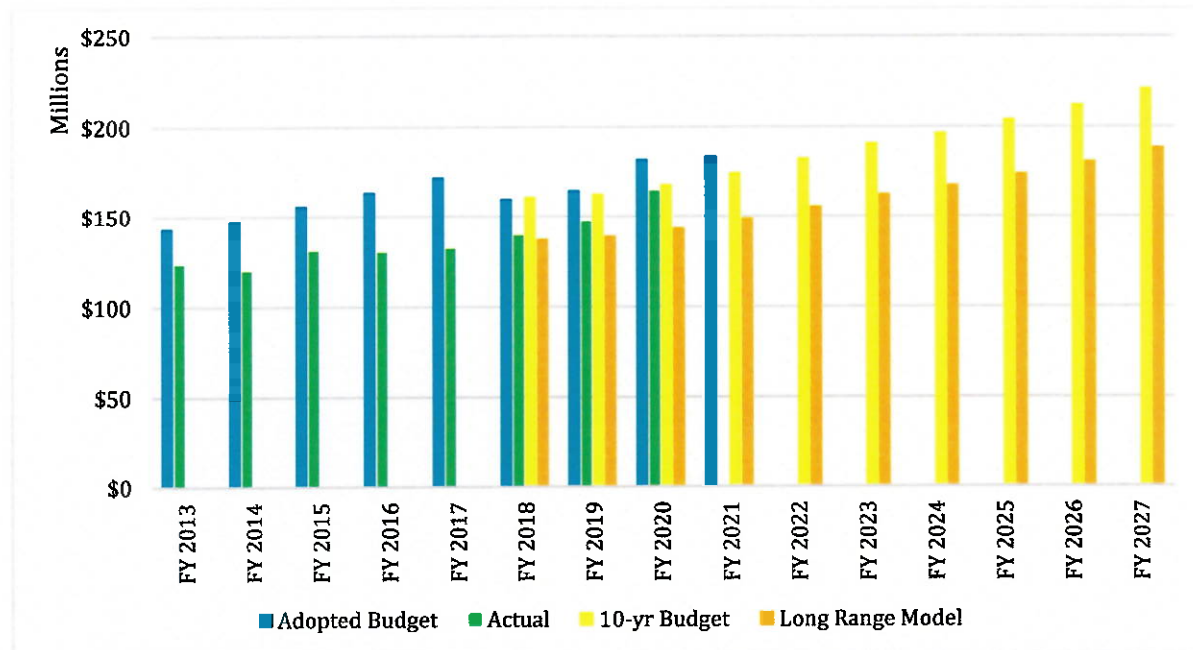


Figure 2-1. Annual Operations and Maintenance Expense Comparison, near-term

The other key expenditure category is capital improvements. Table 2-2 compares the adopted capital improvement budgets, the actual amounts encumbered, and the modeled encumbrances for FY 2018 through FY 2021. In two of the three years of historical data shown, the Long Range model was more conservative than actual, forecasting an additional \$15.8 million in encumbrances than was realized over the period. Modeling is typically conservative in this manner to reduce the risk of revenues not being sufficient to cover revenue requirements. Additionally, this amount is overshadowed by the potential overage in FY 2021. The FY 2021 budget includes \$21.3 million for the Kalawahine 180 Reservoir project.

Table 2-2. Capital Improvement Comparison – Historical and Budget Year

	FY 2018	FY 2019	FY 2020	FY 2021
Adopted Capital Budget	\$144,340,200	\$138,461,000	\$166,305,000	\$200,937,500 (1)
Encumbered Capital	\$121,674,415	\$108,604,775	\$135,772,180	NA
Long Range Model	\$118,358,800	\$119,965,600	\$143,553,500	\$129,731,700
Difference (2)	\$3,315,615	-\$11,360,825	-\$7,781,320	NA

(1) Capital budget as of July 2020.

(2) Encumbered less Long Range model.

Based on this initial review, the BWS revised the 6-Year capital improvement plan in October, which is shown in Table 2-3. Over the timeframe shown, the full capital planning is within \$5 million of the Water Master Plan. However, when compared to the amounts presumed to be encumbered based on the historical encumbrance rate of 82 percent (calculated over FY 2006 – FY 2016), the capital projection is \$95.5 million more than projected in the Long Range model. Note that the plan value for FY 2021 is lower than in the approved Budget Amendment No. 1 from September 28, 2020 of \$201.6 million.

Table 2-3. Capital Improvement Comparison –6-Year Forecast (10/1/2020)

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
6-Year (10/1/2020), 2020\$(1)	\$197,738,000	\$154,691,000	\$188,648,000	\$202,367,000	\$176,460,000	\$221,567,000
6-Year (10/1/2020), inflated	\$203,670,140	\$164,111,682	\$206,140,763	\$227,765,841	\$204,565,503	\$264,562,585
WMP, inflated	\$158,209,400	\$211,947,400	\$190,247,100	\$230,290,100	\$250,094,600	\$234,764,800
6-Year less WMP	\$45,460,740	-\$47,835,718	\$15,893,663	-\$2,524,259	-\$45,529,097	\$29,797,785
Long Range Model	\$129,731,700	\$173,796,900	\$156,002,600	\$188,837,900	\$205,077,600	\$192,507,100
Difference (2)	\$68,006,300	-\$19,105,900	\$32,645,400	\$13,529,100	-\$28,617,600	\$29,059,900

(1) 6-Year capital budget October 1, 2020

(2) Capital projection less Long Range model

Based on these comparisons, a further revision and re-baselining of capital expenditures was also deemed appropriate.

Table 2-4 compares the dollar amount of capital projects that were anticipated to be funded with cash in the Long Range Financial Plan to the actual amount of cash spent on capital projects in FY 2018 – FY 2020. The model had forecast more use of cash than actually occurred because the BWS took advantage of favorable interest terms to use bonds to finance part of the capital program and the encumbered CIP over these three years was lower than forecast in the model (Table 2-2).

Table 2-4. Capital Improvement Historical Cash Comparison

	FY 2018	FY 2019	FY 2020
Actual Capital Cash Expenditures	\$44,672,987	\$70,795,088	\$86,060,702
Long Range Model	\$106,126,000	\$105,731,100	\$138,553,500
Difference (1)	-\$61,453,013	-\$34,936,012	-\$52,492,798

(1) Actual less Long Range model.

A check of billed water volume and rate-based revenue between the Long Range model and historical was also performed. That comparison is presented in Table 2-5 and Table 2-6, respectively. Forecasted water volumes are within 2 percent of actual billed volumes. Forecasted revenues are within 3 percent. Both of these percentages represent normal variability, especially given that changes in the BWS's water sales are strongly influenced by changes in weather. The lower revenue, without a corresponding reduction in expenses, also contributed to lowering the days cash on hand.

Table 2-5. Comparison of Forecast and Actual Billed Water, mg

	FY 2018	FY 2019	FY 2020
Actual	130.1	130.2	126.7
Actual Adjusted	128.3	128.0	124.4
Long Range Model	130.5	130.0	129.5
Difference (1)	-0.4	0.2	-2.8

(1) Actual less Long Range model.

Table 2-6. Comparison of Forecast and Actual Rate-Based Revenue, \$M

	FY 2018	FY 2019	FY 2020
Actual (1)	\$229.5	\$226.3	\$228.5
Long Range Model	\$232.7	\$231.9	\$235.7
Difference (2)	-\$3.2	-\$5.6	-\$7.2

(1) Financial Statements and Supplementary Information with Independent Auditor's Report Fiscal Years Ended June 30, 2019 and 2018. Financial Statements and Supplementary Information with Independent Auditor's Report Fiscal Years Ended June 30, 2020 and 2019.

(2) Actual less Long Range model.

2.2 Revised Baseline

The major revisions to the baseline were to the operations and maintenance assumptions and to the capital improvement assumptions. The discussion starts with operations and maintenance as it represents a larger portion of the BWS' annual cash expenditures and has less flexibility in shifting costs. In contrast, the capital improvement program can adjust financing strategies and defer some projects to help stay within budget and meet financial policies, if needed.

2.2.1 Operations & Maintenance

Two major assumptions had to be re-evaluated regarding the operations and maintenance expenditures: 1) dollar amounts for the current fiscal year plus 6 years and 2) whether to use budgeted values scaled to estimated expenditures based on historical actual vs budget expenditures or to directly forecast actual expenditures. Based on discussions with the BWS staff, the model continues to use budgeted values, which were updated on October 23, 2020. However, the percent of budget expended was increased to 92 percent based on the near-term expenditure rate of 88 percent. This higher rate applies a more conservative forecast for operations and maintenance expenses and recognizes that the latest revised budget represents even further reductions from what the BWS initially planned. Annual percentage increases for FY 2022 – FY 2027 range from 1.2 percent to 2.7 percent. After FY 2027, the modeled expenditures escalate at 3.5 percent per year, consistent with the long-term annual average escalation used in the Long Range Financial Plan. Table 2-7 shows a BWS operations and maintenance forecast as of October 23, 2020 and the revised baseline for modeled expenditures based on 92 percent of budget.

Table 2-7. Operations and Maintenance Forecast through FY 2027, \$M

Fiscal Year	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Personnel Services	\$51.1	\$52.8	\$53.4	\$53.9	\$54.4	\$55.5	\$56.6
Materials & Supplies	\$72.1	\$72.8	\$73.5	\$74.3	\$75.8	\$78.0	\$80.8
Equipment	\$6.6	\$6.6	\$6.7	\$6.8	\$6.9	\$7.1	\$7.4
Fixed Costs	\$53.9	\$54.4	\$55.3	\$56.2	\$57.2	\$58.4	\$59.6
Total	\$183.6	\$186.7	\$188.9	\$191.2	\$194.3	\$199.1	\$204.4
Annual Increase		1.7%	1.2%	1.2%	1.6%	2.4%	2.7%
Revised Baseline	\$168.9	\$171.8	\$173.8	\$175.9	\$178.8	\$183.1	\$188.1

2.2.2 Capital Improvement 6-Year Plan

The BWS has considered revisions to its 6-Year capital improvement budget, as provided on November 25, 2020. Table 2-8 shows this version and the inflated values used in the modeling of budgeted capital. The inflation assumption of 3 percent per year remains unchanged from the Long Range Financial Plan.

Table 2-8. Revised 6-Year Capital Budget, 11/25/2020

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
6-Year Capital, 2020\$ (1)	\$197,738,000	\$167,841,000	\$168,194,000	\$193,002,000	\$189,000,000	\$195,126,000
6-Year Capital, Inflated	\$203,670,100	\$178,062,500	\$183,790,100	\$217,225,500	\$219,102,800	\$232,990,600

(1) November 25, 2020

In reviewing historical encumbrances against the capital budgets and against the capital budgets without adjustments for construction cost index and contract adjustment account, it was observed that the total encumbered amount over the period is close to the budget without adjustments. Additionally, the encumbrance rate versus the budget including adjustments has increased from the average 82 percent used in the Long Range Financial Plan, which looked at data from FY 2006 to FY 2016. The more recent data indicate that a higher encumbrance rate may be warranted in the near-term modeling.

Table 2-9. Historical Encumbrances

Fiscal Year	Budgeted	Budgeted w/o Adjustments	Encumbered	% Encumbered vs Budget	% Encumbered vs Budget w/o Adjustments
2014	\$87,578,800	\$74,312,000	\$82,683,020	94.4%	111.3%
2015	\$75,511,300	\$68,100,500	\$69,307,781	91.8%	101.8%
2016	\$118,667,500	\$104,680,000	\$112,888,438	95.1%	107.8%
2017	\$80,790,500	\$67,435,000	\$75,670,740	93.7%	112.2%
2018	\$144,340,200	\$112,768,000	\$121,674,415	84.3%	107.9%
2019	\$138,461,000	\$119,855,000	\$108,604,775	78.4%	90.6%
2020	\$166,305,000	\$143,950,000	\$135,772,180	81.6%	94.3%
Total	\$811,654,300	\$691,100,500	\$706,601,349	87.1%	102.2%

(1) November 25, 2020

FY 2027 through FY 2047 uses the projected capital from the original Long Range Financial Plan modeling. FY 2048 – FY 2050 is based on an average of the three prior years.

2.2.3 Revised Baseline Cashflow Forecast

Based on the revisions to the baseline operations and maintenance and capital improvement budgets described in Sections 2.2.1 and 2.2.2, respectively, a revised baseline cashflow was developed. In addition to the revised operations and maintenance and 6-Year capital budgets, the revised baseline keeps the revenue adjustments the same as the Long Range Financial Plan through FY 2031, maintains the debt service coverage ratio above 1.6, and maintains the days of working capital above 60. This is done by adjusting the amount of 6-Year capital budget to be encumbered and adjusting the mix of debt and cash used each year to see how much capital the BWS can afford to encumber each year. Debt options for financing the capital budget include revenue bonds and State Revolving Fund low cost loans.

Figure 2-2 compares the operations and maintenance expense from the original Long Range Financial Plan with the revised expense used in this update. Between FY 2021-FY 2031, expenses in the revised baseline are forecast to be \$63.5 million higher, reflecting the narrowing of the gap between budget and actual expenditures. In the long-term, the two forecasts converge, reflecting an anticipated long-term trend of aligning the budgeting process with the Long Range Financial Plan.

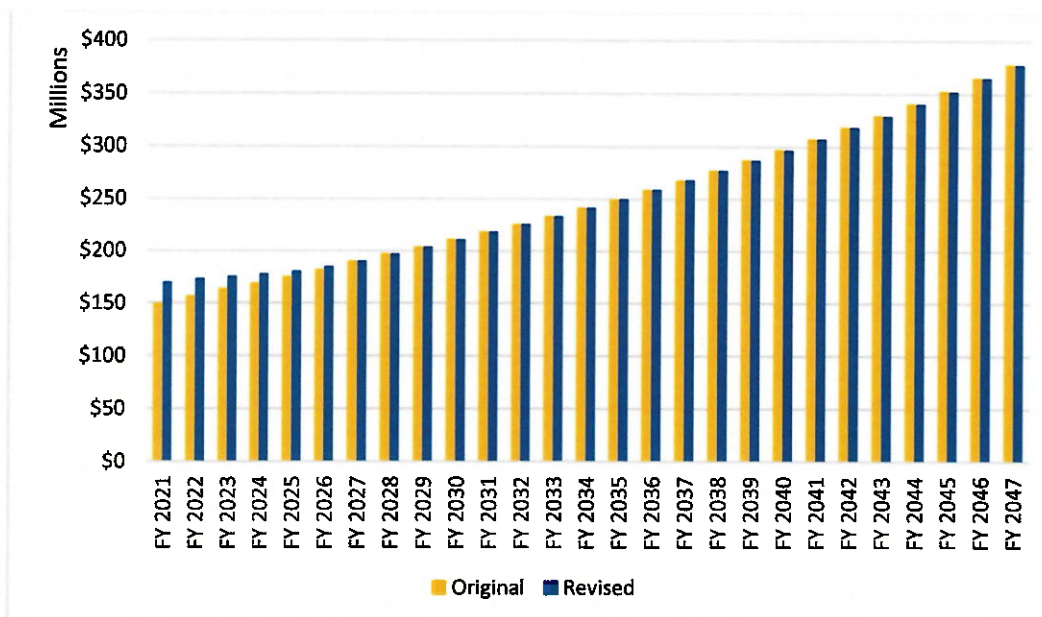


Figure 2-2. Annual Operations and Maintenance Expense Comparison, Coincident Years

Figure 2-3 compares the forecasted capital to be funded from the original plan with the revised baseline. To keep the revenue adjustments the same through FY 2031, the amount of capital encumbered is projected to be slightly lower between FY 2026 and FY 2031. From FY 2032 through FY 2047, the capital encumbered remains the same.

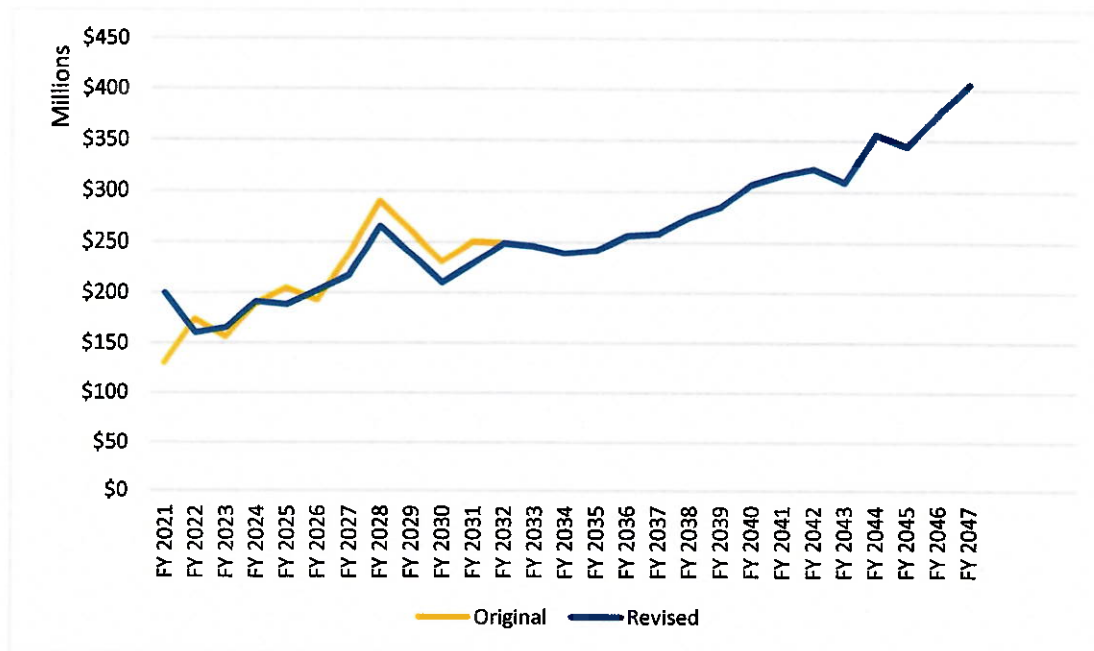


Figure 2-3. Capital Encumbered Projection Comparison, Coincident Years

Table 2-10 shows the annual projected capital encumbrances for FY 2021 through FY 2031 for the original Long Range model and the revised baseline. The new forecast anticipates \$46 million (or 2 percent) less capital encumbrances over these coincident years.

Table 2-10. Projected Capital to be Funded, FY 2021 – FY 2031, \$M

Fiscal Year	Original	Revised
2021	\$129,731,700	\$199,902,200
2022	\$173,796,900	\$160,256,300
2023	\$156,002,600	\$165,411,100
2024	\$188,837,900	\$191,158,400
2025	\$205,077,600	\$188,428,400
2026	\$192,507,100	\$202,701,800
2027	\$237,684,900	\$217,394,900
2028	\$289,942,300	\$265,191,400
2029	\$260,792,800	\$238,530,200
2030	\$230,121,700	\$210,477,200
2031	\$250,179,100	\$228,822,400
Total	\$2,314,674,600	\$2,268,274,300

The BWS has several mechanisms for funding the capital program including cash, bonds, State Revolving Fund loans, and water system facilities charges (WSFC) funds. Table 2-11 shows the projected sources and uses of funds for capital projects through FY 2031. WSFC funds are conservatively based on historical annual average funds received as new charges have not yet been adopted. If new charges are adopted and the pace of development stays similar to historical, then additional funds would be available to fund deferred growth projects.

Table 2-11. Projected Capital Sources and Uses of Funds, \$M

Item	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Carryover of Prior Year	\$16	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sources											
Cash	\$52.4	\$54.2	\$56.1	\$48.7	\$46.1	\$60.3	\$43.2	\$73.1	\$46.4	\$63.1	\$84.4
Bond Issue	\$65.0	\$65.0	\$70.0	\$115.4	\$125.0	\$125.0	\$155.0	\$175.0	\$175.0	\$130.0	\$125.0
State Revolving Loan	\$12.0	\$9.0	\$19.0	\$19.6	\$10.0	\$10.0	\$12.0	\$10.0	\$10.0	\$10.0	\$12.0
WSFC Funds	\$54.9	\$32.4	\$20.6	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0	\$8.0
Total Sources	\$184.2	\$160.6	\$165.8	\$191.7	\$189.1	\$203.3	\$218.2	\$266.1	\$239.4	\$211.1	\$229.4
Uses											
Capital Encumbered	\$199.9	\$160.3	\$165.4	\$191.2	\$188.4	\$202.7	\$217.4	\$265.2	\$238.5	\$210.5	\$228.8
Bond Cost of Issuance	\$0.3	\$0.3	\$0.4	\$0.6	\$0.6	\$0.6	\$0.8	\$0.9	\$0.9	\$0.7	\$0.6
Total Uses	\$200.2	\$160.6	\$165.8	\$191.7	\$189.1	\$203.3	\$218.2	\$266.1	\$239.4	\$211.1	\$229.4
Unused Funds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

An estimated \$1,325 million in bonds and \$134 million in State Revolving Fund loans are projected to be issued during the next 11 fiscal years. While the initial period shown above relies more on bonds, over the 30-year period cash and WSFC funds are projected to fund 52 percent of capital needs consistent with the long-term goal of funding the capital program with not more than a 50:50 ratio of bonds to cash. Figure 2-4 graphically displays the sources and uses of funds including any annual carryover.

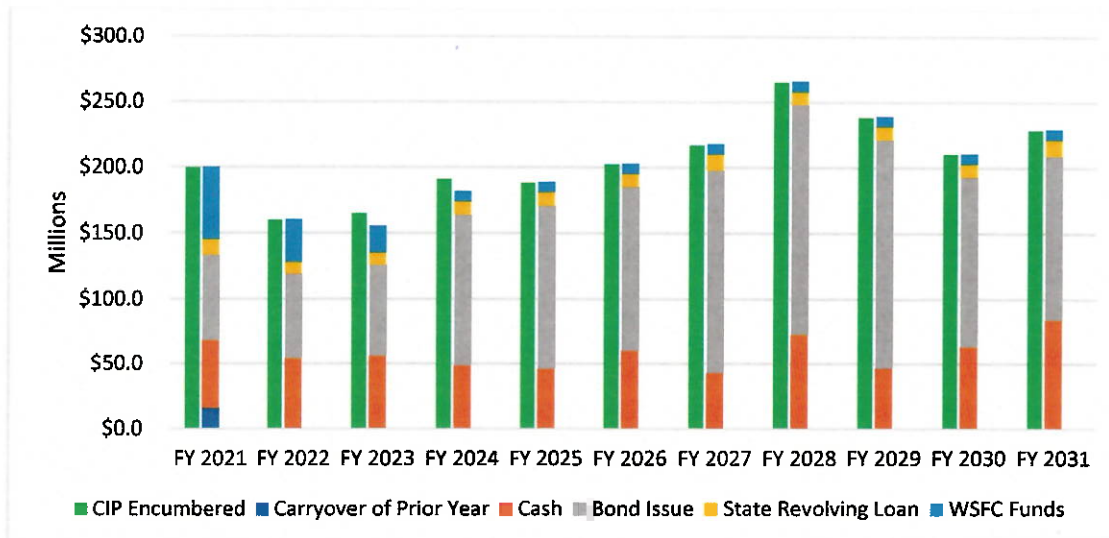
**Figure 2-4. Capital Encumbered and Sources of Funding**

Figure 2-5 shows the operating fund balance for the revised baseline as well as the annual projected revenue and expenditures. The operating fund balance is projected to stay within the equivalent of 60 to 180 days of cash, which complies with the Board's financial policy.

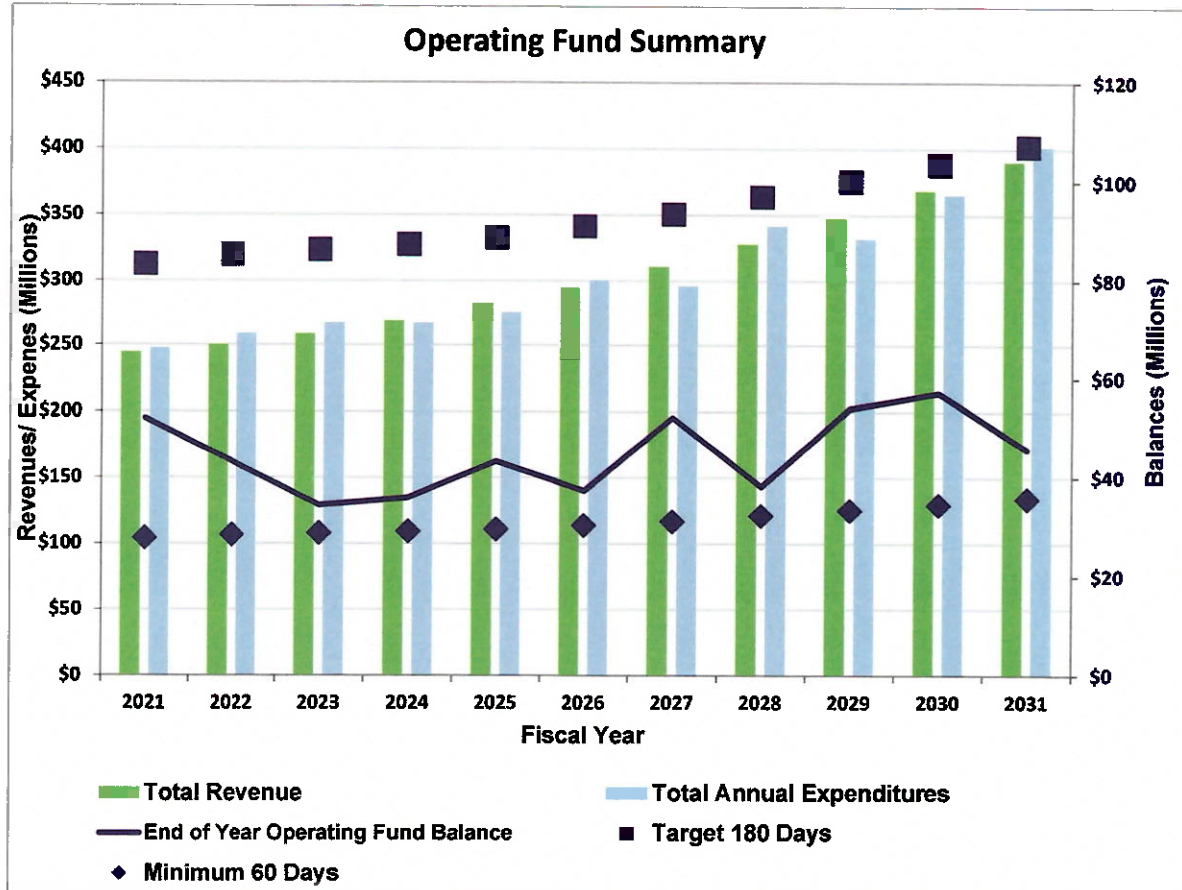


Figure 2-5. Revised Baseline Operating Fund Balance

Table 2-12 presents the detailed cashflow for FY 2021 through FY 2031. The revenue adjustments in FY 2021-FY 2023 show as zero because the modeling already uses the Board-approved rates (August 2018) for estimating rate-based revenue in those fiscal years. The FY 2023 approved rate is used to project the "Billed Wtr User Charges Under Approved Rates" for FY 2024 through FY 2031. While this revision shows a possible path forward for future rate adjustments, a 5-year rate study should be conducted that focuses on the near-term as well as costs of service and affordability.

Table 2-12. Revised Cashflow, FY 2021-FY 2031, \$M

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031
Billed Wtr User Charges Under Approved Rates [1]											
Single-family	\$99	\$104	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$111	\$111
Multi-unit	\$46	\$46	\$46	\$46	\$46	\$46	\$46	\$47	\$47	\$47	\$47
Non-Residential	\$82	\$83	\$85	\$85	\$85	\$85	\$85	\$85	\$85	\$85	\$85
Agricultural	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
Non-Potable	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
R-1 Golf	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
R-1 Other	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3	\$3
RO (Subject to Published Rates)	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
Private Fire Service	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Total Water Billed Charges	\$236	\$243	\$252	\$251	\$251	\$252	\$252	\$252	\$252	\$253	\$253
User Charge Revenue Adjustment First Year											
Year	Adjustment	Effective Months									
2021	0.0%	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2022	0.0%	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2023	0.0%	0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2024	4.5%	12		\$11	\$11	\$11	\$11	\$11	\$11	\$11	\$11
2025	5.0%	12			\$13	\$13	\$13	\$13	\$13	\$13	\$13
2026	5.0%	12				\$14	\$14	\$14	\$14	\$14	\$14
2027	5.5%	12					\$16	\$16	\$16	\$16	\$16
2028	5.5%	12						\$17	\$17	\$17	\$17
2029	6.0%	12							\$19	\$19	\$19
2030	6.0%	12								\$21	\$21
2031	6.0%	12									\$22
Water User Charge Revenue Adjustment	\$0	\$0	\$0	\$11	\$24	\$38	\$54	\$71	\$91	\$111	\$133
Total Billed Water User Charge Revenue	\$236	\$243	\$252	\$262	\$276	\$290	\$306	\$323	\$343	\$364	\$386
Contractual Water Revenue	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Miscellaneous Income [2]	\$6	\$6	\$6	\$6	\$6	\$4	\$4	\$4	\$4	\$4	\$4
Uncollected Revenues	(\$0)	(\$0)	(\$1)	(\$1)	(\$1)	(\$1)	(\$1)	(\$1)	(\$1)	(\$1)	(\$1)
Interest Income	\$2	\$1	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$1
Total Revenue	\$244	\$250	\$259	\$269	\$282	\$295	\$311	\$328	\$348	\$369	\$391
Annual Expenditures											
Operation and Maintenance Expense	\$169	\$173	\$175	\$177	\$180	\$184	\$190	\$197	\$203	\$210	\$217
Debt Service											
Existing Debt - Bonds	\$19	\$20	\$21	\$21	\$21	\$21	\$21	\$21	\$21	\$21	\$21
Existing Debt - SRF & JABSOM	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6
SRF Fees - Existing Loans	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$0	\$0
Proposed Debt - Bonds	\$0	\$4	\$7	\$11	\$17	\$24	\$31	\$39	\$49	\$58	\$65
Proposed Debt - SRF	\$0	\$1	\$1	\$2	\$3	\$4	\$4	\$5	\$5	\$6	\$6
SRF Fees - Proposed Loans	\$0	\$0	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Subtotal Debt Service	\$26	\$32	\$36	\$42	\$49	\$56	\$63	\$73	\$83	\$93	\$100
Transfers to:											
Cash Funded Capital	\$52	\$54	\$56	\$49	\$46	\$60	\$43	\$73	\$46	\$63	\$84
Total Annual Expenditures	\$247	\$259	\$267	\$267	\$275	\$301	\$296	\$342	\$332	\$366	\$402
Beginning of Year Balance	\$55	\$52	\$43	\$34	\$36	\$43	\$37	\$52	\$38	\$54	\$57
Annual Increase (Decrease)	(\$3)	(\$9)	(\$9)	\$1	\$7	(\$6)	\$15	(\$14)	\$16	\$3	(\$11)
End of Year Operating Fund Balance	\$52	\$43	\$34	\$36	\$43	\$37	\$52	\$38	\$54	\$57	\$46
Target 180 Days of O&M [3]	\$83	\$85	\$86	\$87	\$89	\$91	\$94	\$97	\$100	\$104	\$107
Minimum 60 Days of O&M [3]	\$28	\$28	\$29	\$29	\$30	\$30	\$31	\$32	\$33	\$35	\$36
Estimated Days of Working Capital	112	91	72	74	88	74	100	71	97	99	77
DSCR - Bonds	4.00	3.24	3.03	2.90	2.70	2.47	2.36	2.20	2.08	2.01	2.01
DSCR - Aggregate	2.88	2.42	2.30	2.21	2.09	1.97	1.91	1.82	1.75	1.72	1.73

[1] Calculated using the approved water rates.

[2] Includes system facilities charges, fire protection installations, billing services for ENV and other misc income.

[3] 180 Days of O&M within 10 years of FY2018, minimum of 60 days.

Section 3

Trends and Sensitivity Analysis Update

Since the degree of uncertainty grows with time over the duration of the study period, a trend analysis, rather than detailed modeling, was performed in the Long Range Financial Plan. The trend analysis looks at possible financial changes from the revised baseline based on identified scenarios.

3.1 Update of Scenarios based on Revised Baseline

Figure 3-1 shows the revised baseline revenue requirements over the near and long terms and compares the revenues under approved (or existing) rates between the Long Range Financial Plan (identified on graphs as LRFP) and the revised baseline. Years 1 – 11 are shown as solid lines and Years 12 – 30 are the trend analysis and are shown as dashed lines. The long-term revenue requirements trend upward is due to an increased capital program, an increase in staffing to support that program, and escalation. However, due to the adjustments discussed in the prior section, revenue requirements are expected to be lower under the revised baseline due to tighter operations and maintenance budgets and lower initial capital program. Over the forecast period, the revised baseline revenues under existing rates are expectedly higher than those projected in the Long Range Financial Plan because they reflect the subsequently adopted rates that are effective through FY 2023.

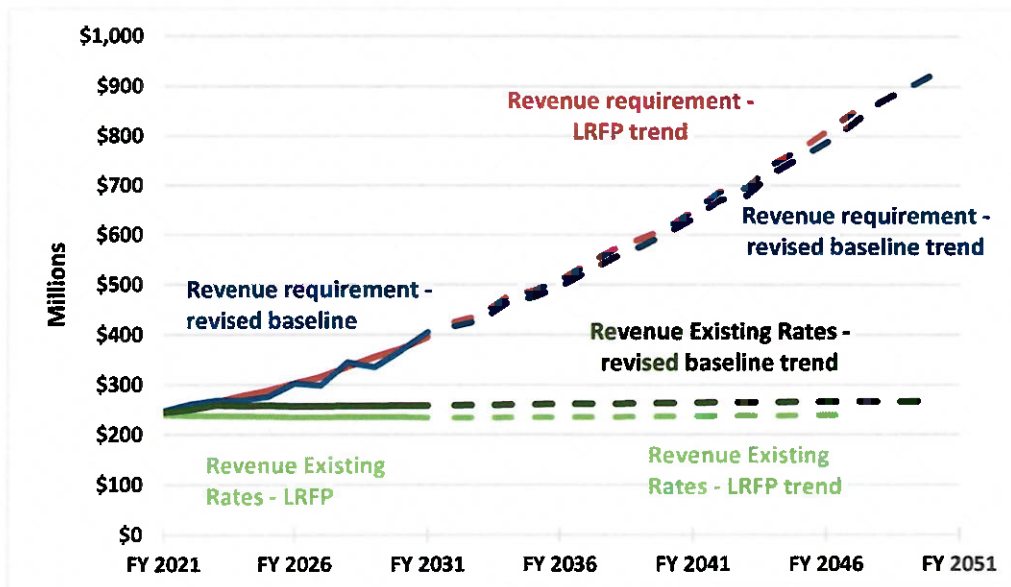


Figure 3-1. Long-Term Revenue and Revenue Requirements Trends Under Approved Rates

Figure 3-2 presents the projected additional revenue needs (beyond FY 2023) expressed as a percent of rate-based revenue. The revised baseline shows a trend that stays a little higher than the Long Range Financial Plan in the middle years and then drops lower in the later years. The

two lines overlap each other in Years 1 – 11 as the revenue adjustments deliberately remain the same between the two.

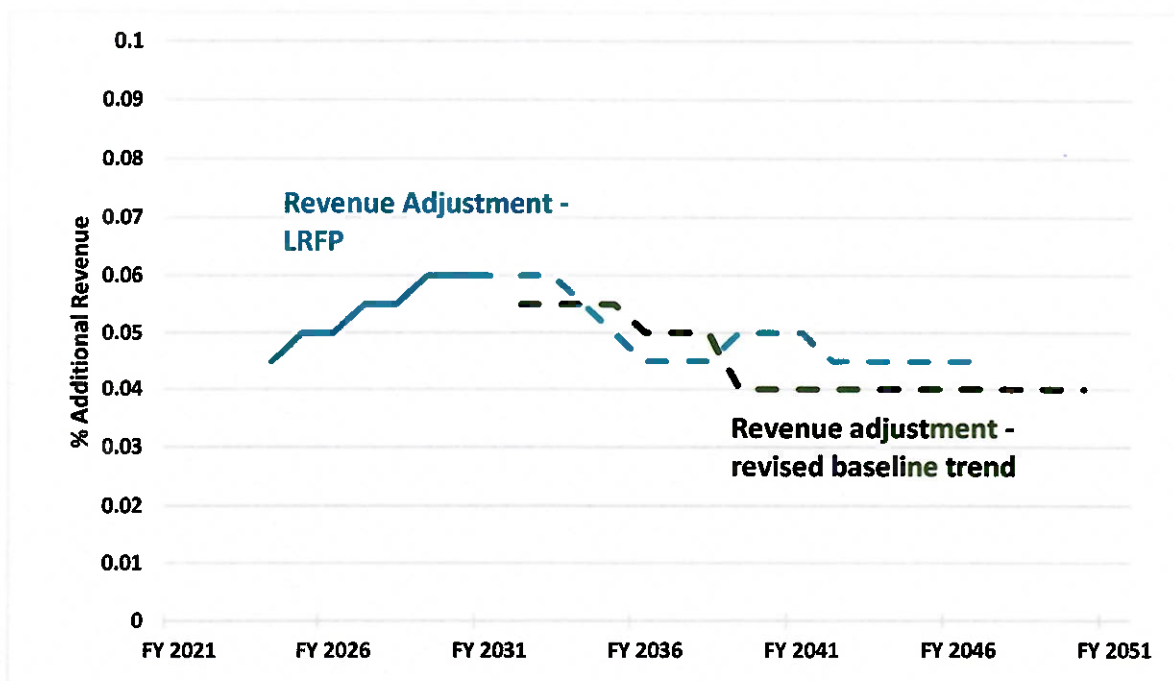


Figure 3-2. Additional Revenue Needs Trend as a Percent of Existing Rate-Based Revenue

Three scenarios evaluated in the Long Range Financial Plan model have been updated based on the revised baseline: aggressive conservation, aggressive growth, and climate change. The remaining three scenarios, major natural disaster, major source water contamination, and economic cycle, were evaluated as events as opposed to long-term trends. Accordingly, those analyses do not warrant updating at this time.

3.1.1 Aggressive Conservation

The assumption in the Long Range Financial Plan is that demand will decrease ~0.25 percent per year due to conservation. To evaluate the potential impacts of more aggressive conservation, this analysis considers the following scenario:

Aggressive Conservation – Assume that demand decreases 1 percent per year. In this scenario, it is assumed that the percentage of usage within the existing tiers remains the same, or an across the board drop, with no expectation that only high users conserve.

Figure 3-3 shows that the aggressive conservation scenario will have the impact of reducing revenues from water sales. In 30-years' time, this reduction could be about 24 percent. This will then increase the revenue shortfall throughout the 30-year planning horizon, which may be partially or wholly offset by deferral of growth-related projects, depending on timing and location. To be conservative, potential decreases in costs due to lower demand have not been analyzed. For example, aggressive conservation could result in lower power usage that may or may not decrease costs for the BWS due to Hawaiian Electric's Energy Cost Recovery Factor or

energy cost increases, or possibly delay the need for additional growth-related infrastructure. Project deferral is, however, recognized as a mitigation strategy. Since the impact of these on revenue requirements is highly uncertain, a trend analysis on the revenue requirements was not performed for this scenario.

Figure 3-4 shows the anticipated trends in additional revenue needs under this scenario. The impacts of lower demand due to aggressive conservation begin immediately and compound throughout the planning period. Annual increases as a percentage of existing rate-based revenues are generally 1 to 2 percent higher per year than with the revised baseline. However, this should not be interpreted to mean that either customers or the BWS should not actively pursue conservation objectives, particularly given the potential impacts of climate change.

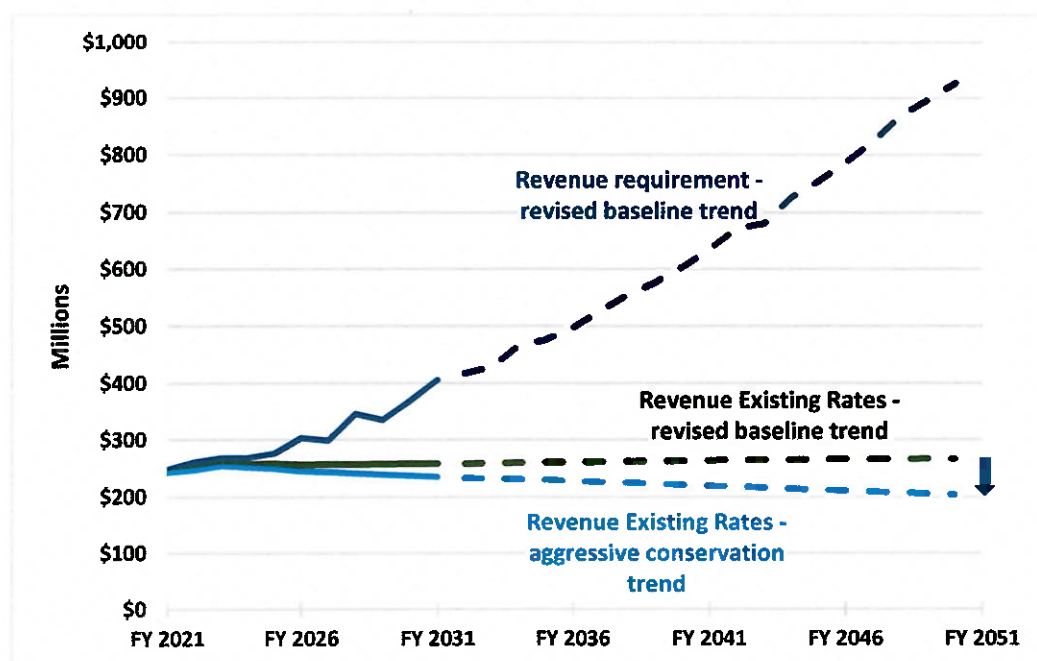


Figure 3-3. Revenue Impact due to Aggressive Conservation

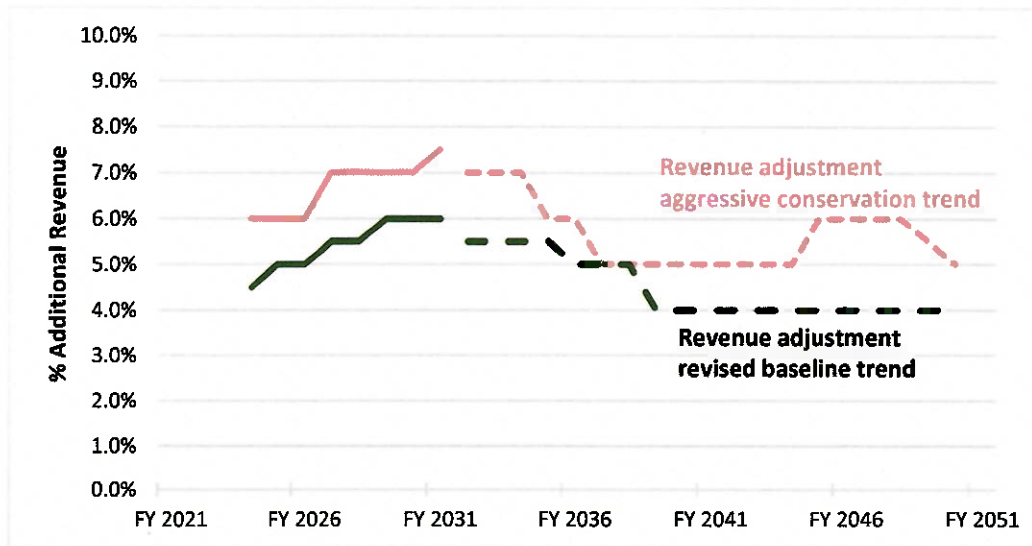


Figure 3-4. Additional Revenue Needs Trend as a Percent of Existing Rate-Based Revenue, Aggressive Conservation

3.1.2 Aggressive Growth

The Long Range Financial Plan evaluated two sub-scenarios: growth per Water Master Plan assumptions and even greater growth.

Water Master Plan High Range Demand Projection Assumptions – Assume 0.6 percent per year growth in usage through FY 2025, then 0.4 percent per year through FY 2040, then 0.5 percent per year through FY 2050. (no change in percent usage within existing tiers)

Aggressive Growth above Water Master Plan Assumptions – Assume 1 percent per year growth in usage (no change in percent usage within existing tiers)

Both sub-scenarios would have increases in O&M costs; however, these costs are anticipated to be offset by additional rate-based revenue generated under existing rates due to the increased demand.

Figure 3-5 and Figure 3-6 show that under the aggressive growth assumptions revenues from water sales will increase. By year 30, that shift is in the 12 – 30 percent range. This increase in water sales revenue will then decrease the revenue shortfall throughout the 30-year planning horizon.

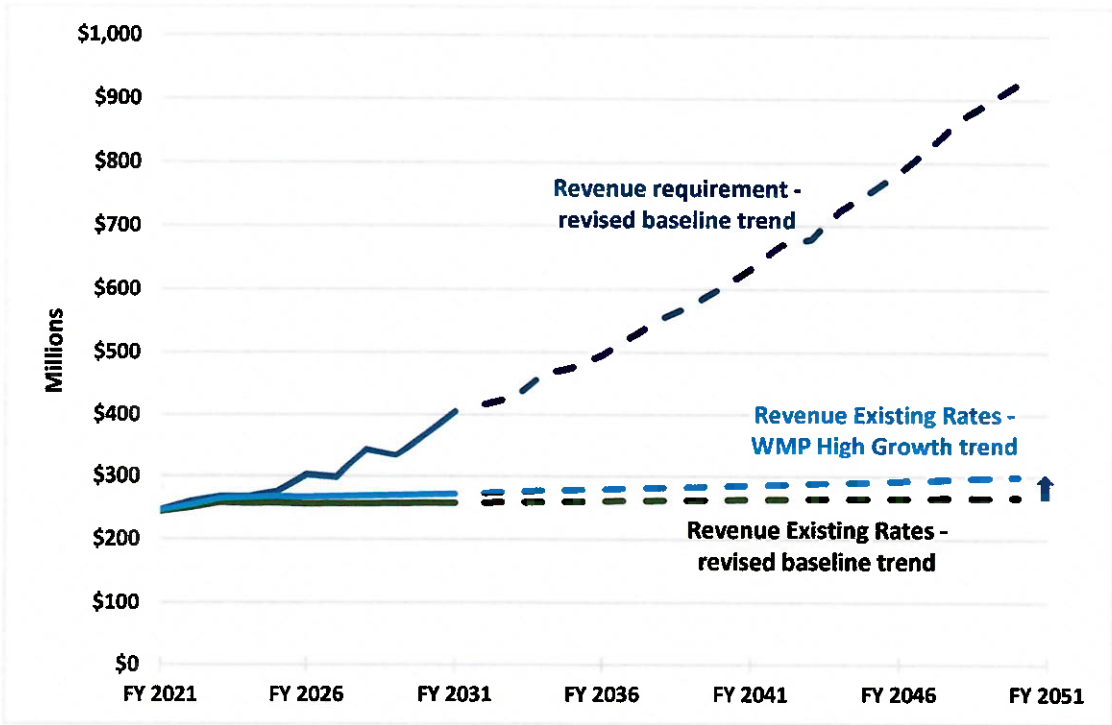


Figure 3-5. Revenue Impact due to Water Master Plan High Range Demand Growth

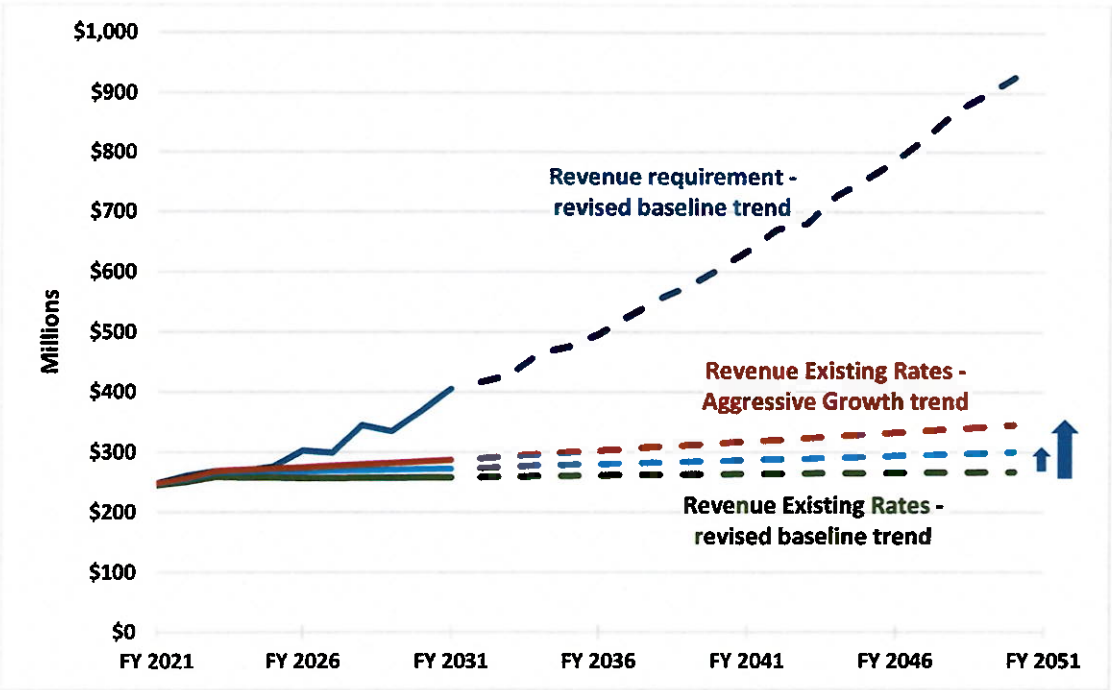


Figure 3-6. Revenue Impact due to Water Master Plan High Demand and Aggressive Growth

Figure 3-7 and Figure 3-8 show the anticipated trends in additional revenue needs under the high demand and aggressive growth scenarios, respectively. Projections show additional revenue needs as generally lower than in the revised baseline. A small upward adjustment is needed just after Year 11 to keep the days working capital above the minimum and then the trend continues to be lower than the baseline. It is assumed that costs for growth-related facilities (e.g., new wells, additional storage) are either a) provided for by developers or b) fully recovered from the Water System Facilities Charge.

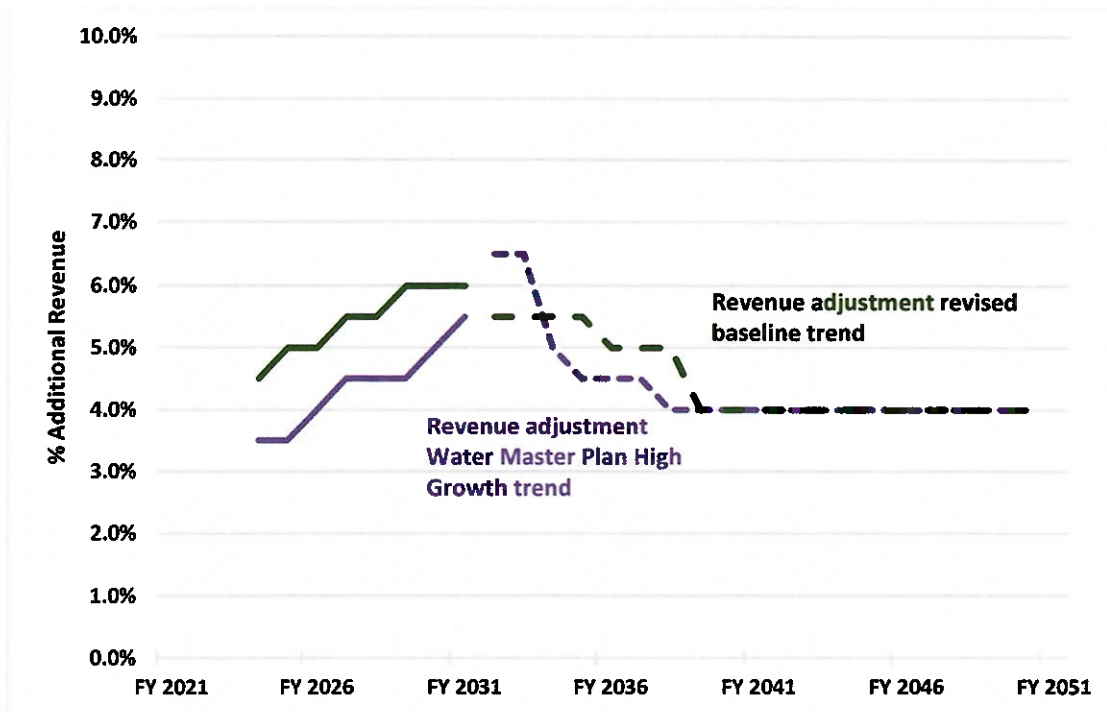


Figure 3-7. Additional Revenue Needs Trend as a Percent of Existing Rate-Based Revenue, Water Master Plan High Demand Case

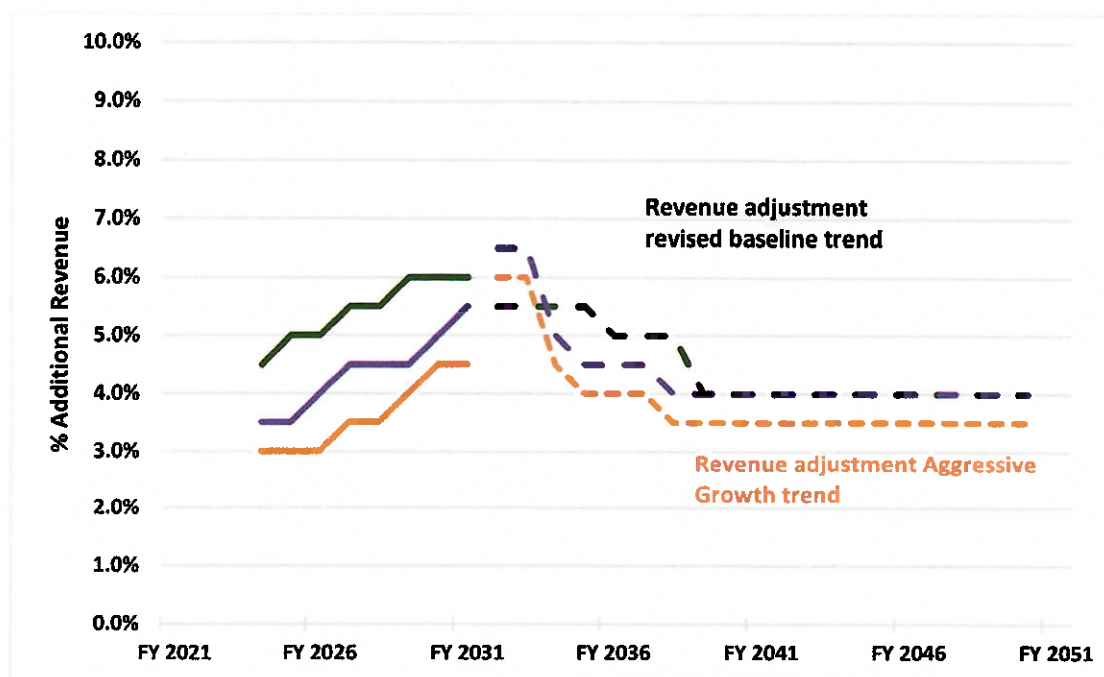


Figure 3-8. Additional Revenue Needs Trend as a Percent of Existing Rate-Based Revenue, Aggressive Growth

3.1.3 Climate Change

The Long Range Financial Plan defined the climate change scenario as follows:

Climate Change – Assume that higher capital replacement is needed due to increased groundwater salinity (resulting in loss of source yields) and that additional sources are needed to replace failing groundwater sources. Assume 25 percent of infrastructure is low enough and close enough to the coast to be impacted and that the impact will halve the useful life.

Assume that demand decreases 1 percent per year. In this scenario, it is assumed that the percentage of usage within the existing tiers remains the same, or an across the board drop, with no expectation that only high users conserve.

The assumptions of aggressive conservation and sea level rise in this scenario are aligned with both the Primary Urban Center Watershed Management Plan (BWS, in progress) and the Water Research Foundation's Impacts of Climate Change on Honolulu Water Supplies and Planning Strategies for Mitigation (Water Research Foundation, 2019). These envision reductions in aquifer sustainable yield during low rainfall conditions and significant sea level rise. By mid-century, nuisance flooding associated with sea level rise will commonly occur and as it worsens, tourism in Waikiki could decrease. At 3 feet and more of sea level rise, much of Waikiki will experience flooding during high tide and much of the beach is expected to disappear. This could be expected to affect tourism as well as potentially increasing outmigration due to limited inland

area and/or economic impacts. Consequently, capital expenditures would be expected to increase to address infrastructure that could be impacted by regular flooding, and water demands could decrease due to reductions in sustainable yield and/or lower tourism and increased net outmigration.

As seen in Figure 3-9, in the near term, no appreciable difference in revenue requirements is seen. However, over the long term, revenue requirements would begin to increase as assets had to be replaced sooner than originally planned, possibly by 6 percent over the revised baseline by the 30th year. Figure 3-9 also shows a potential decrease in revenue due to the associated conservation assumptions in this scenario. By year 30, revenues could be about 23 percent lower than the revised baseline. Figure 3-10 shows the anticipated trends in additional revenue needs under the climate change scenario. Projections show additional revenue needs varying between 5 and 8 percent per year, or 0.5 to 2 percent per year above the revised baseline.

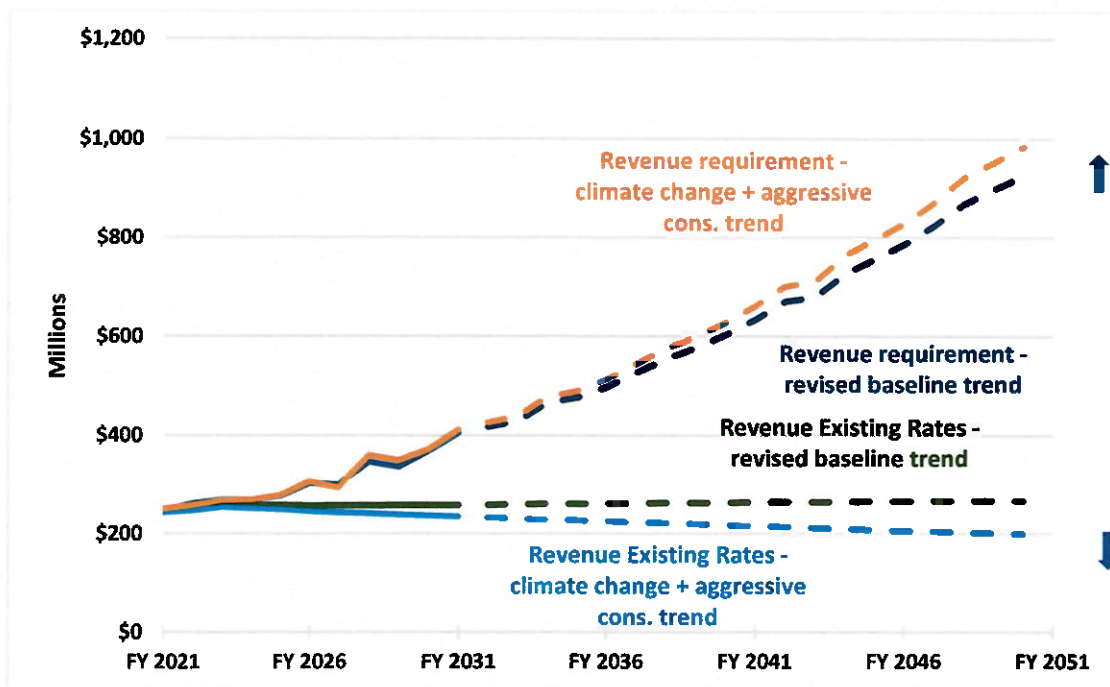


Figure 3-9. Revenue Requirements Impact due to Climate Change and Aggressive Conservation

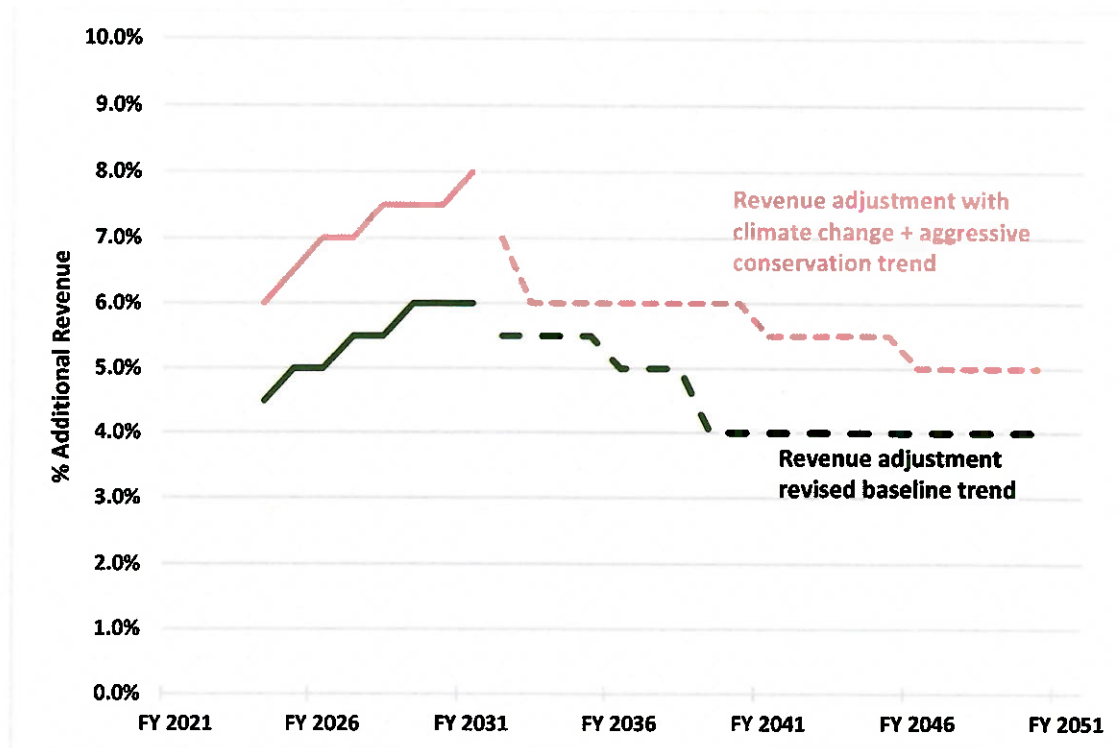


Figure 3-10. Additional Revenue Needs Trend as a Percent of Existing Rate-Based Revenue, Climate Change + Aggressive Conservation

3.2 Pandemic Scenario

The Long Range Financial Plan did not include a pandemic scenario. However, on March 11, 2020, the WHO declared COVID-19 a global pandemic. Discussions within the water industry regarding the potential impacts of the COVID-19 pandemic on a utility's ability to meet its mission have centered around concerns over reduced revenues and increased expenses. Indications are that these impacts vary widely from utility to utility. The pandemic scenario evaluates these impacts resulting from the current COVID-19 pandemic specific to the BWS. The intent is to provide guidance in support of current decision-making, in addition to documenting impacts to help guide future response in the event of another pandemic. Key areas of investigation were water demands and delinquencies.

While the long range modeling and trend analyses evaluate annual impacts, for this pandemic scenario, we have analyzed monthly data as far back as January 2016 to provide context to current conditions and to identify trends. Variables to consider in a pandemic scenario include water sales; delinquencies, duration to repay, and uncollectable debt; stimulus funding; changes in operations and maintenance expenses; and changes to the capital improvement program.

3.2.1 Water Demand and Sales

Figure 3-11 shows the BWS's daily potable water production and 30-day moving average for the island between March 1 and December 31, 2020 against the 5-year monthly average. Throughout

the pandemic, the BWS has continually monitored water production because it serves as an early indicator of revenues, which lag by at least a month due to the meter reading and billing cycle. Immediately following the WHO's March 11 pandemic declaration and the stay-at home orders and tourism restrictions that followed, daily water production dropped precipitously, from about 130 million gallons per day (mgd) to less than 115 mgd.

Due to COVID-19 restrictions and the resulting dramatic impact to Hawaii's tourism-driven economy, by May 2020, the unemployment rate in Hawaii soared to 22.6 percent, the second highest in the nation following Nevada. At the same time, daily water production rose steeply from its March decline and was exceeding the 5-year monthly average due to a drought from April 2020 through December 2020 impacting Windward and East Honolulu, along with unusually high temperatures (90F and higher). With the return of a hot, dry summer, and with the notable exception on July 26 when Hurricane Douglas came within 30 miles of Oahu, water production increased over the five-year monthly average and generally remained there until mid-October.

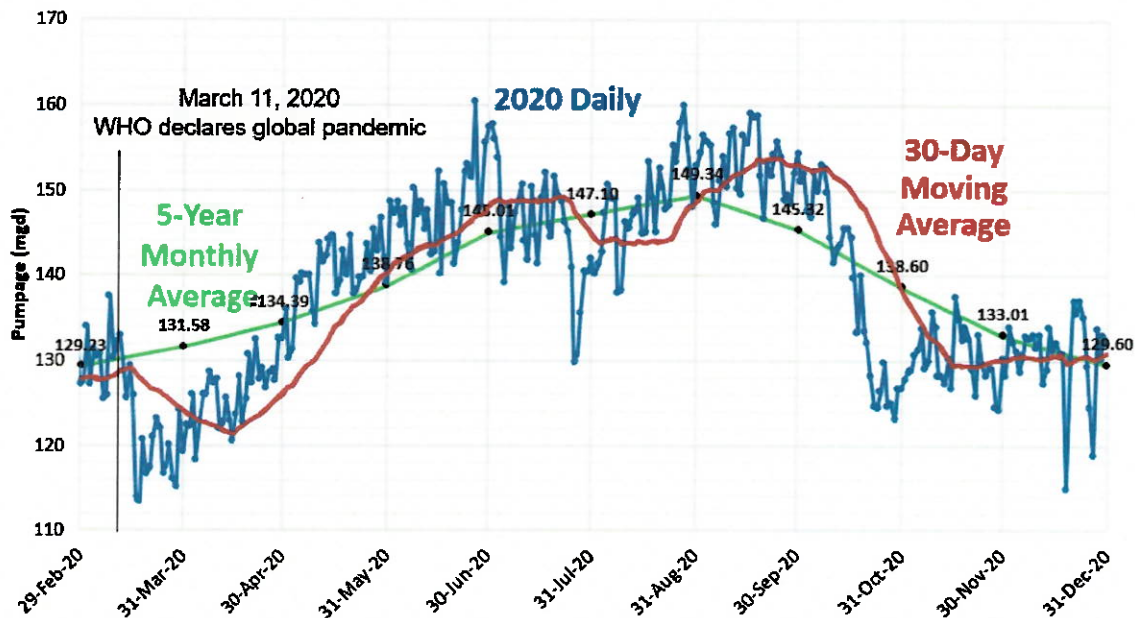


Figure 3-11. Total Island Potable Water Production since March 1, 2020

While the BWS's high water demands throughout the summer may seem surprising when considering the near-total shuttering of tourism and the resulting economic impacts, changes in the BWS's water demands were strongly driven by the drought and high temperatures mentioned above. Figure 3-12 shows the rainfall index for the Honolulu Watershed Area. An index of 100 is normal (average) for any given month and shown with the red line. March was much wetter than normal, with an index of 139, and April was dramatically drier, with an index of only 35. The very dry trend continued throughout the summer and into fall, excepting Hurricane Douglas in July, and is inversely correlated to water demands. In fact, a multivariate statistical analysis completed by the BWS in 2018 documented that weather alone accounts for about half of the variability in the BWS's water demands, more than any other factor.

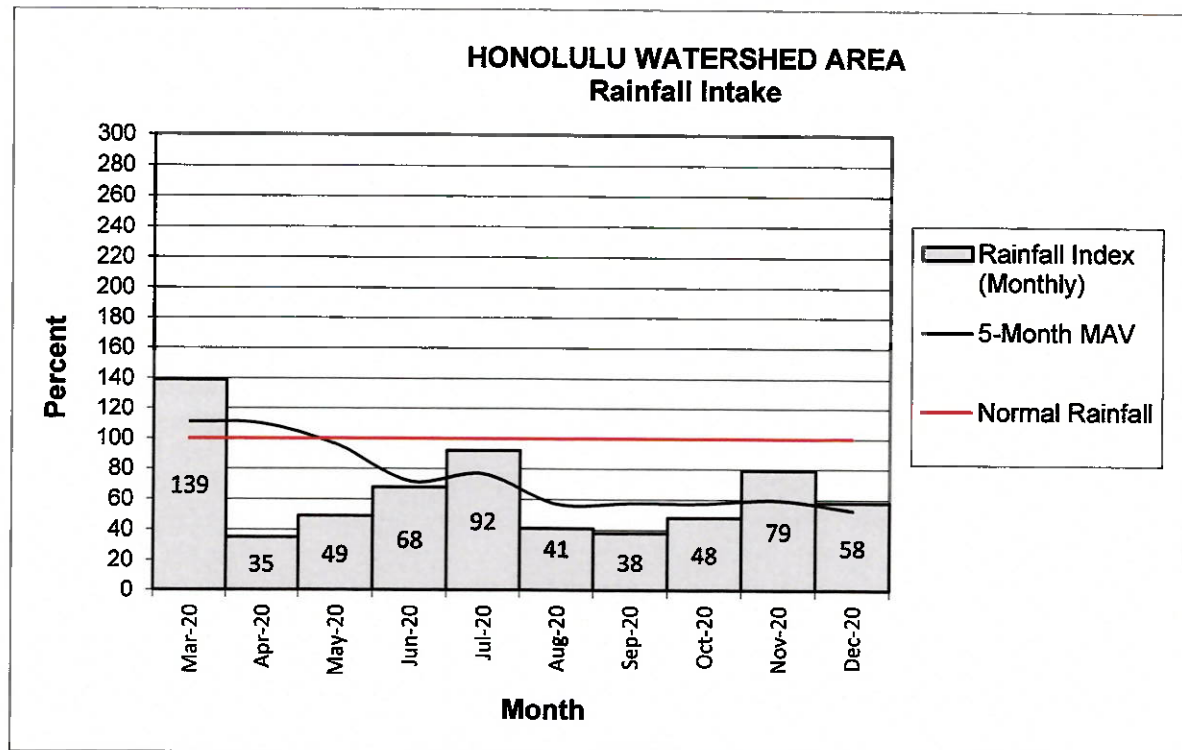


Figure 3-12. Rainfall Index for the Honolulu Watershed Area

The water production data discussed above provide an aggregated view of island-wide water demands. It is observed that, despite the closure of restaurants and hotels associated with the near-total shutdown of tourism, overall water demands appear virtually unimpacted by the pandemic. To better understand this, monthly billing data were analyzed to evaluate changes in water usage across various customer segments: single-family residential, multi-unit residential, and non-residential.

The following figures present the monthly water demand from January 2016 through December 2020 for the three major customer groups: single-family residential, multi-unit residential, and non-residential. Calendar years were chosen for the presentation of these data to better illustrate the seasonal changes in water demands. Because changes in the BWS's water demands are so dependent upon changes in weather, point comparisons such as one month to the previous month or the previous year are of limited value. To illustrate, Figure 3-13 shows monthly single-family residential water demand for the most recent 5-year period.

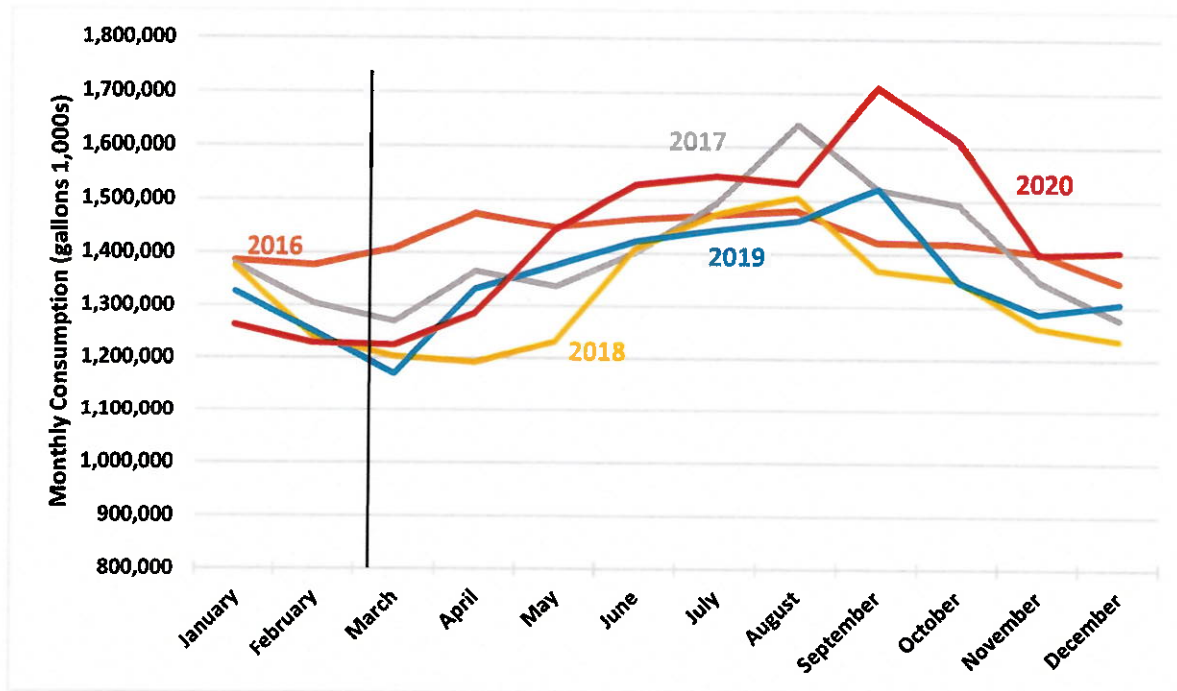


Figure 3-13. Single-Family Residential Monthly Demand

As a result, it was decided to compare 2020 monthly water demands to the 5-year average water demands. The results for single-family residential, multi-unit residential, and non-residential are shown in Figure 3-14, Figure 3-15 and Figure 3-16, respectively. Both residential customer classes (shown in Figure 3-14 and Figure 3-15) reflect increased demand, due in part to the stay at home requests and due in part to warmer weather, which lead to increased discretionary water demand. As seen in the non-residential chart (Figure 3-16), demand decreased sharply between March and May. However, as businesses were allowed to re-open with precautions (e.g., take out service only), the demand rebounded into the low end of the range. These graphs indicate that the pandemic had little overall impact to total water demand; that weather is still the single-most important driver for water demand.

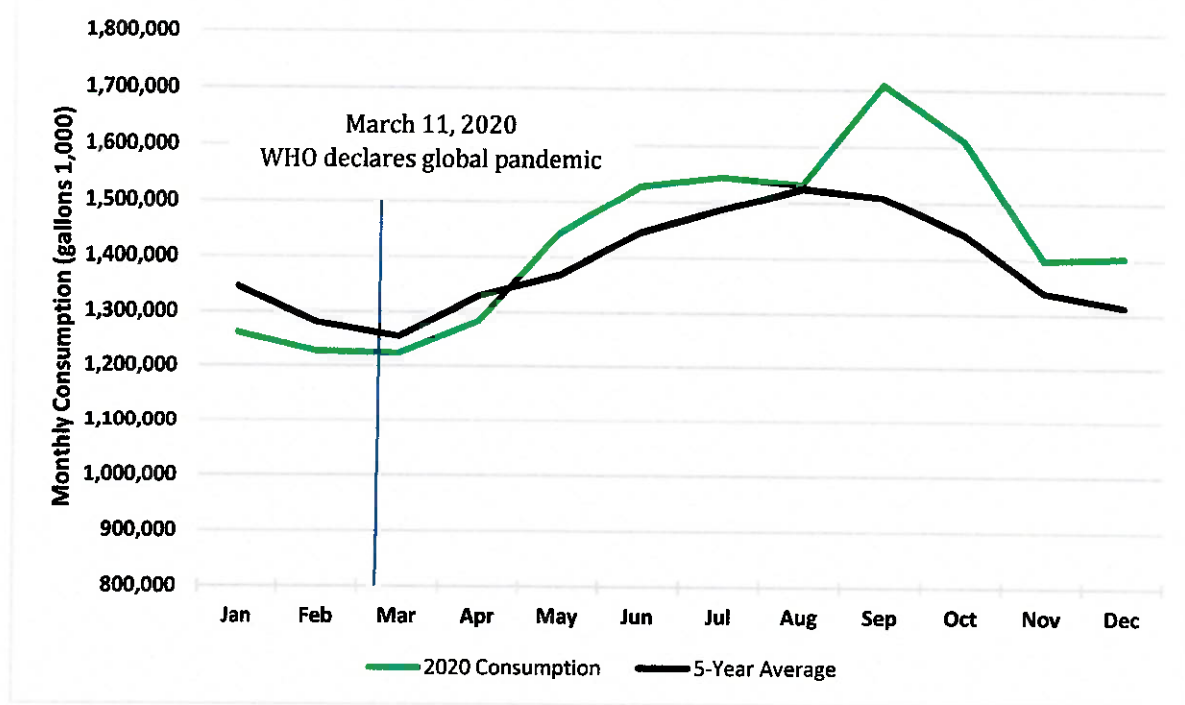


Figure 3-14. Single-Family Residential Monthly Demand vs 5-Year Average

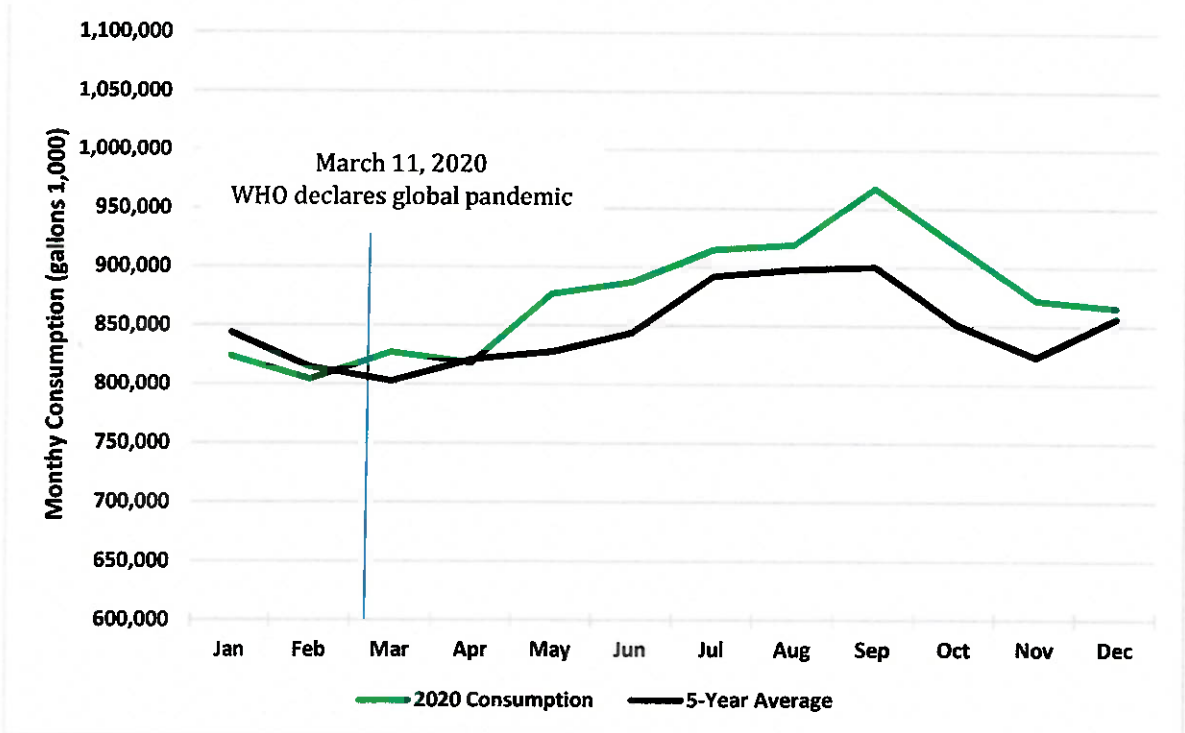


Figure 3-15. Multi-Unit Residential Monthly Demand vs 5-Year Average

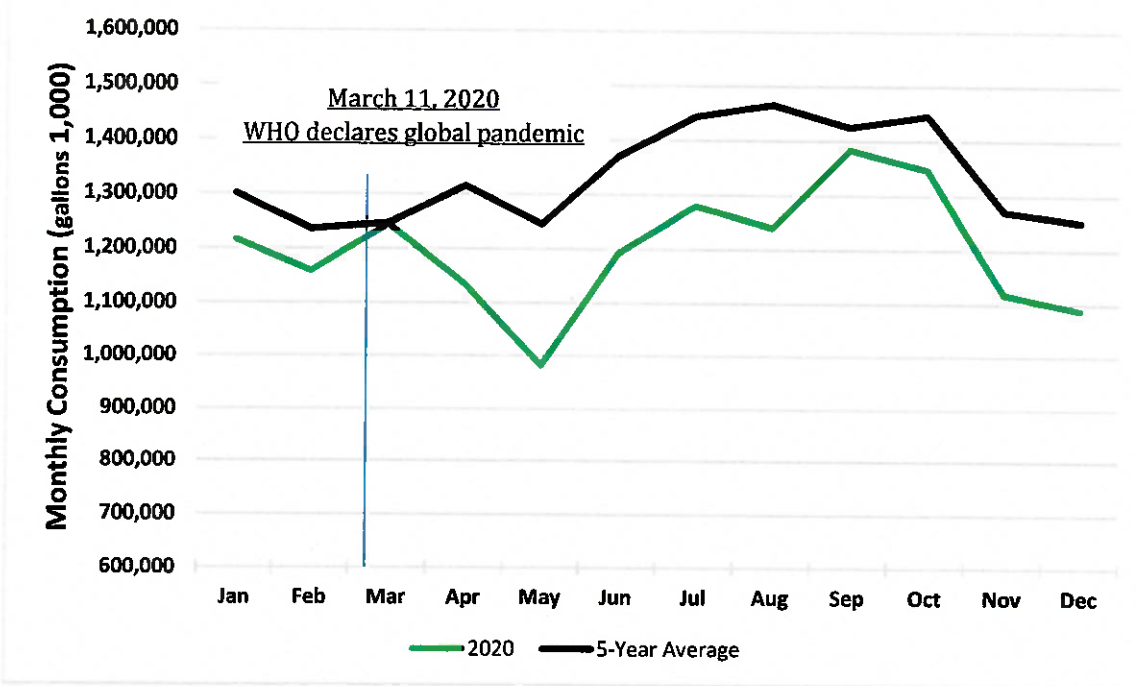


Figure 3-16. Non-Residential Monthly Demand vs 5-Year Average

Figure 3-17 presents a timeline series of water consumption for each of the four customer classes from January 2016 through December 2020. After March 2020, a noticeable dip in non-residential is seen along with a corresponding increase in single-family residential water sales. While non-residential sales have somewhat rebounded since then, single-family residential consumption continues to be higher than previous because people are spending more time at home (working from home or temporarily unemployed due to decreased tourism and restaurant closures/scaling-back). Multi-unit residential water sales have also increased since the global pandemic was declared.

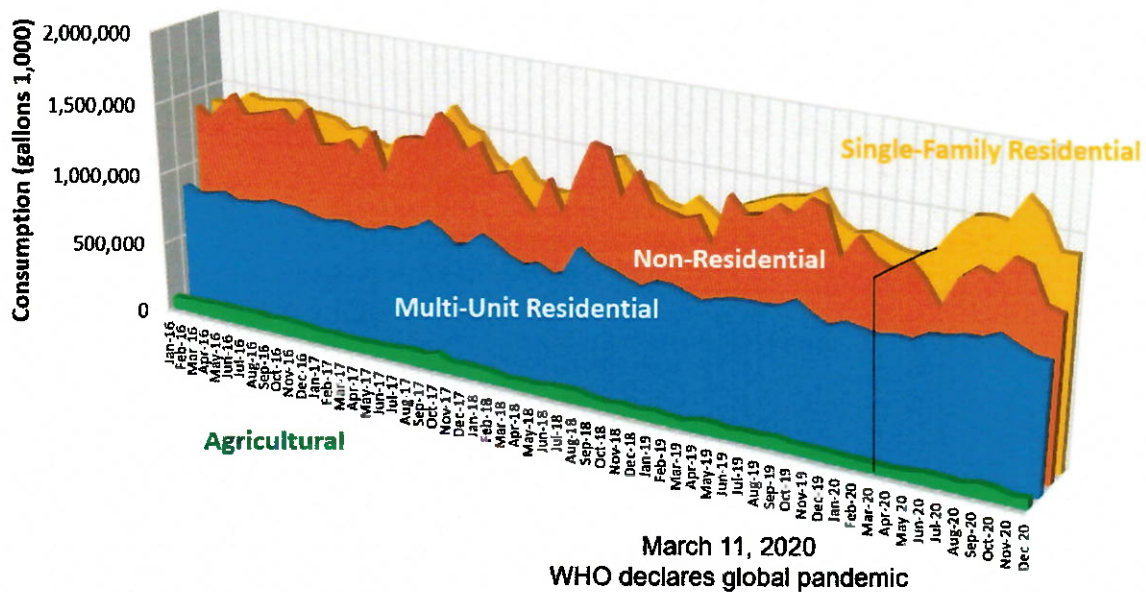


Figure 3-17. Water Sales by Customer Class since January 2016, gallons 1,000s

3.2.2 Delinquencies

While water demand remained high, customers' ability to pay their bills may have been impacted by pandemic-related restrictions. Between 2015 and 2019, the amount of uncollected revenue averaged 0.2 percent of rate-based revenue (or less than \$500,000 per year). Uncollected revenue are those delinquent accounts for which the BWS has determined they will be unable to collect. If more accounts are delinquent, then it's possible that uncollected revenues will also increase. Figure 3-18 shows the percentage of water accounts that are 30 days or more past due since January 2017. While the number of delinquent accounts in April and May 2020 appears a little higher than historical, by June the number of accounts has dropped to the lower end of the range.

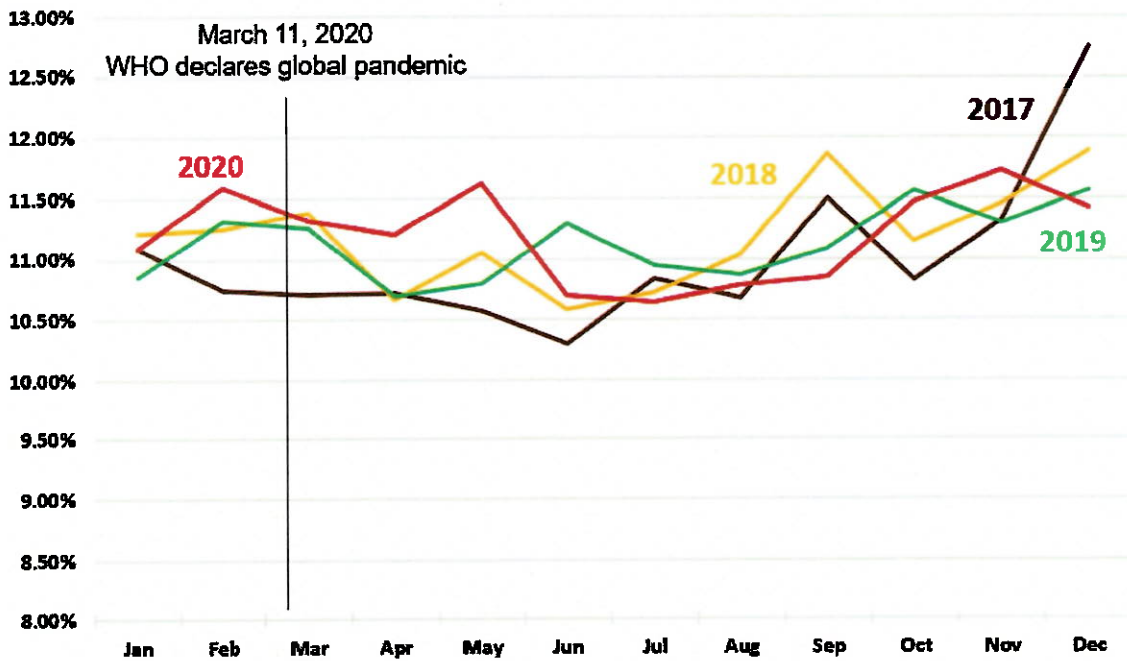


Figure 3-18. Percentage of Water Accounts 30 days Past Due, 2017 to 2020

The focus then turned to the residential and commercial accounts. As shown in Figure 3-19, for the first five months of 2020, the number of residential delinquencies was at the high end of the range. However, in June through September 2020, the number of delinquent accounts dropped to the lower end of the range. The number of delinquent accounts has stayed in the middle range through the rest of 2020. Figure 3-20 shows the dollar amount of delinquencies in residential accounts. The general trend is that the dollar amount of delinquencies increases each year, in part due to rate increases. After March 2020, the amount of delinquent revenue starts to trend higher than historical. Given that the number of delinquent accounts has leveled off, this seems to indicate that the same accounts may be getting further and further behind.

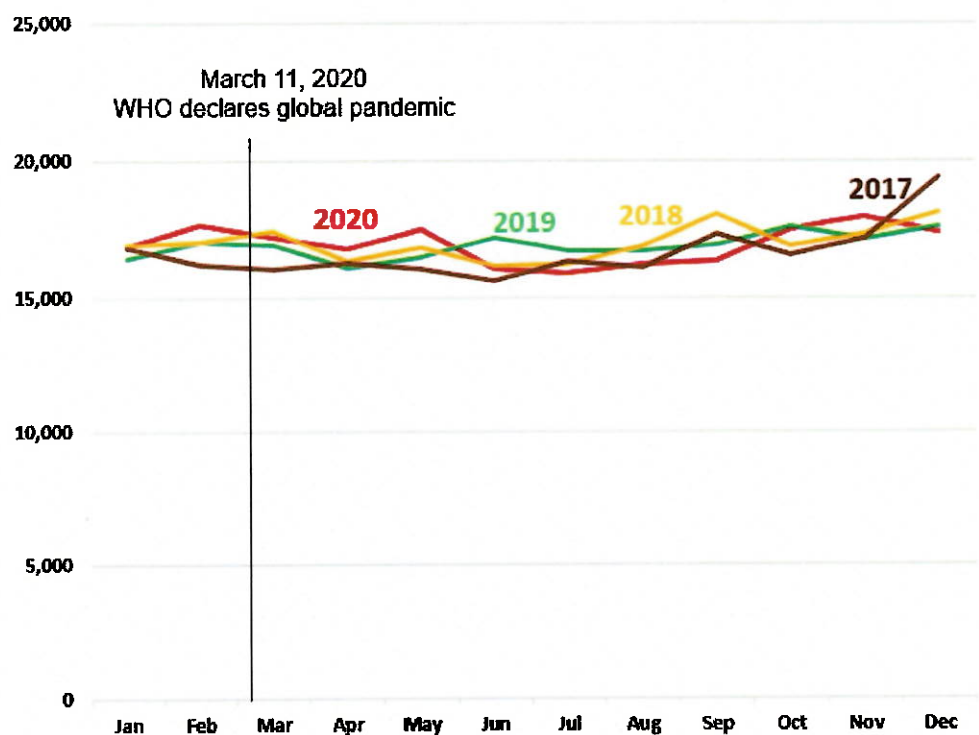


Figure 3-19. Monthly Residential Water Customer Delinquency, 2017 to 2020, Accounts

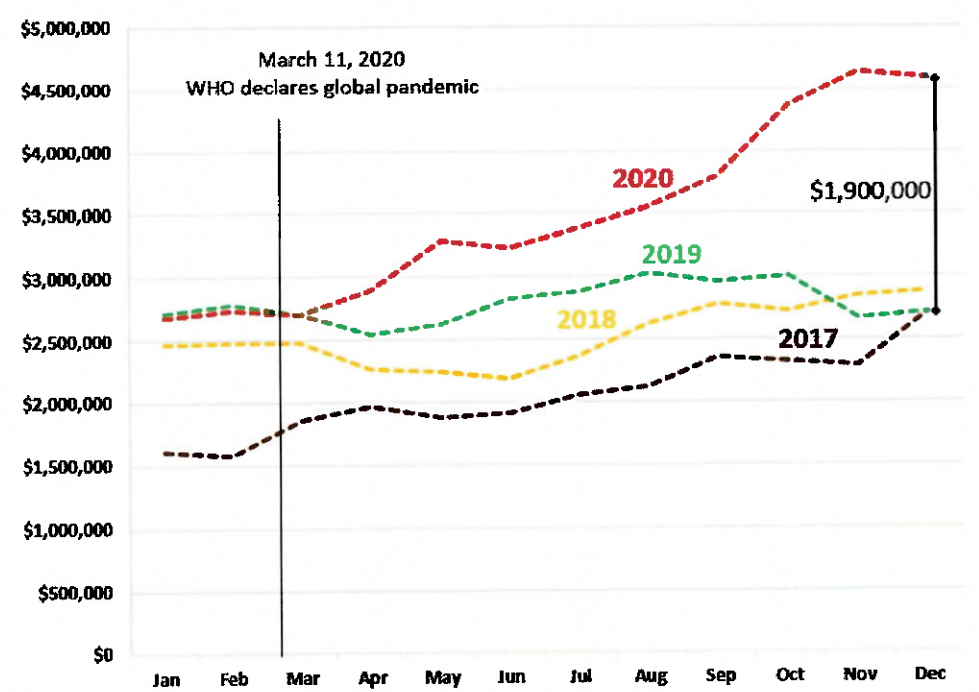


Figure 3-20. Monthly Residential Water Customer Delinquency, 2017 to 2020, \$

Figure 3-21 shows that the number of delinquent commercial accounts spiked shortly after the World Health Organization declared the global pandemic. That number dropped some in June, possibly due to use of stimulus payments to pay past-due amounts, but not all the way back to historical levels. The number of delinquent commercial accounts also appears to have started declining since October 2020. Figure 3-22 shows the dollar amount of delinquencies in commercial accounts. It shows a similar trend to residential except that it appears to be decreasing since September 2020.

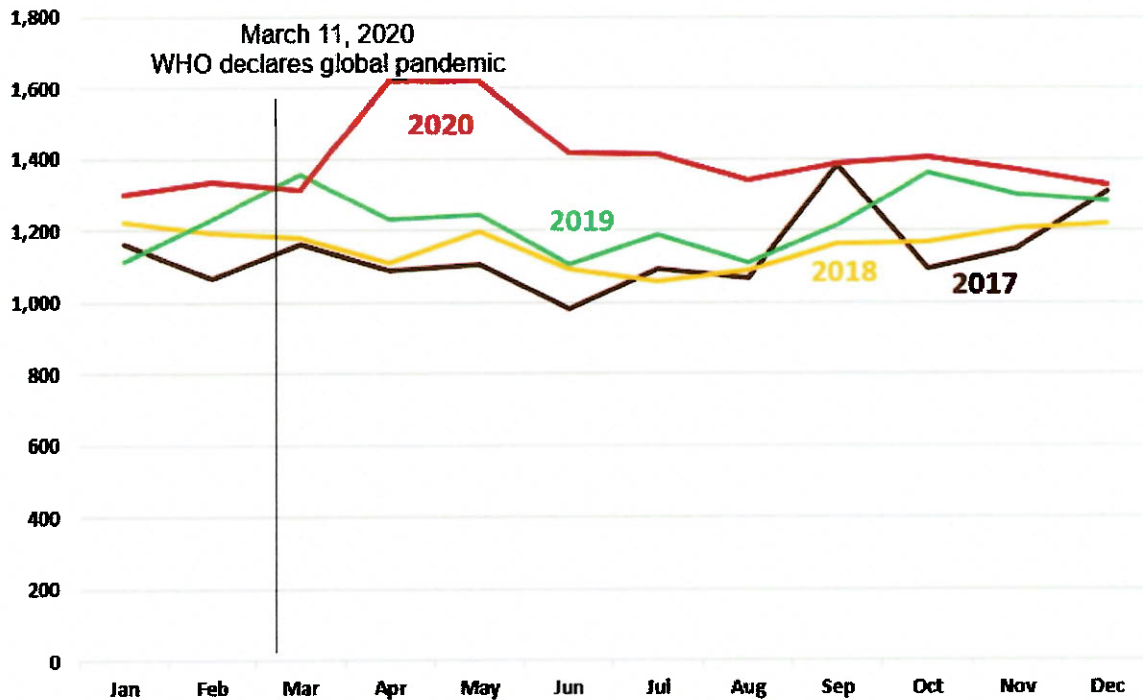


Figure 3-21. Monthly Commercial Water Customer Delinquency, 2017 to 2020, Accounts

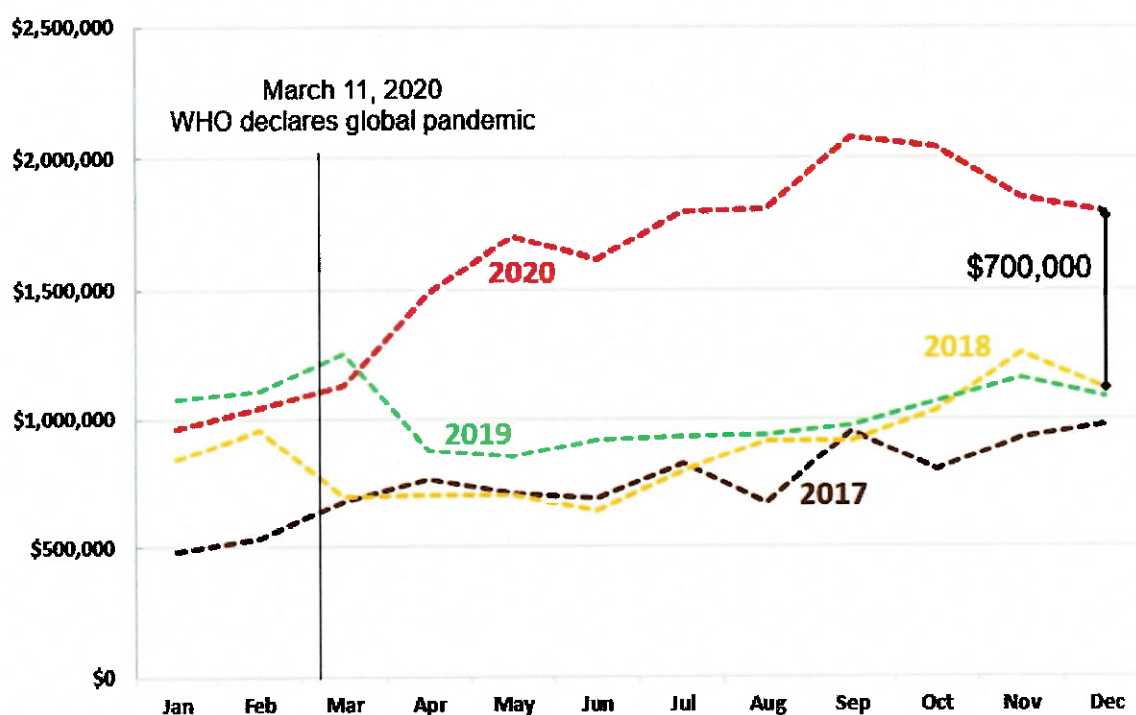


Figure 3-22. Monthly Commercial Water Customer Delinquency, 2017 to 2020, \$

3.2.3 Uncollectable Revenue

A separate spreadsheet model included in Appendix A was built to test the magnitude of month-to-month delinquencies and estimate overall additional uncollectable revenue under three variations of the pandemic scenario tied to “reopening” tourism. These three scenarios were informed by the University of Hawaii Economic Research Organization’s Annual Hawaii Forecast with Global Outlook (December 11, 2020). The forecast uses test-based reopening and access to a vaccine as predominant factors in reopening tourism. We identify rapid testing and effective contact tracing to also be important. The forecast does not use masking, physical distancing, minimizing social gatherings and good hygiene as differentiators in any of its three scenarios.

- A. Optimistic timeframe for test-based reopening, optimistic timeframe for rapid testing and effective contract tracing, no third wave, and independent of a vaccine due to extensive testing and contract tracing.
- B. Moderate timeframe for test-based reopening, no third wave, and vaccine is widely available Summer 2021.
- C. Pessimistic timeframe for test-based reopening, no rapid testing and effective contract tracing, third wave occurs, and vaccine is widely available late 2021.

Calendar year 2019 monthly delinquency amounts were used as the baseline. Monthly percentages are estimated for each of the scenarios representing a larger percentage of baseline delinquency dollars. Under Scenario A, delinquency amounts would return to normal by the end

of calendar year 2021. Under Scenarios B and C, delinquency amounts would return to normal by the end of calendar year 2022.

The BWS's typical uncollectable percent is 0.2 percent of revenues. For the pandemic scenarios, we presumed 5 percent of delinquencies for Scenario A, 10 percent of delinquencies for Scenario B, and 15 percent of delinquencies for Scenario C. Figure 3-23 shows the monthly projected residential delinquent billed revenue for the three scenarios. Uncollected revenue is projected to increase between \$136,000 to \$466,000 over normal levels.

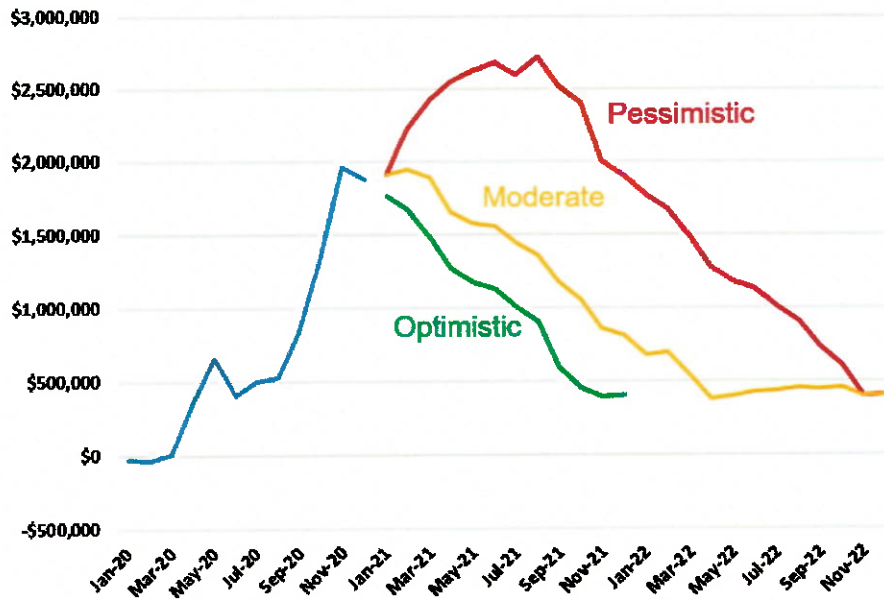


Figure 3-23. Residential Delinquency Scenarios

Figure 3-24 shows the monthly projected commercial delinquent billed revenue for the three scenarios. Uncollected revenue is projected to increase between \$22,000 to \$133,000 over normal levels.

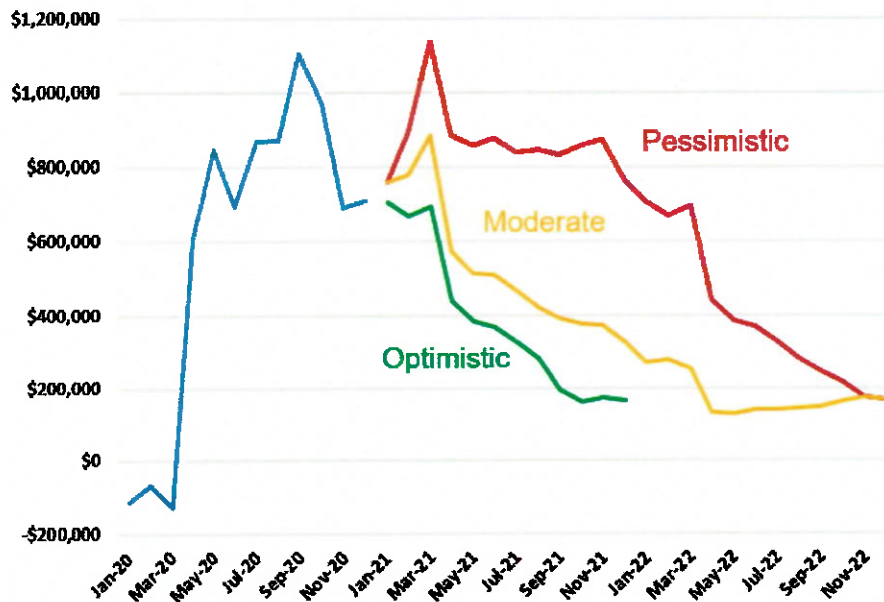


Figure 3-24. Commercial Delinquency Scenarios

The worst of these scenarios, C, was modeled at the annual level. Delinquencies were modeled to be about \$3.8 million in FY 2021 and \$2 million in FY 2022. All but 15 percent of these delinquency amounts were then paid back over FY 2023 through FY 2025. Delinquencies are normally paid back sooner, but to be conservative, we have made this assumption.

As seen in Figure 3-25, the revenue lines between the revised baseline and the pandemic scenario overlay each other. This indicates that these monthly cashflow issues, at the annual level, do not impact the long term trending.

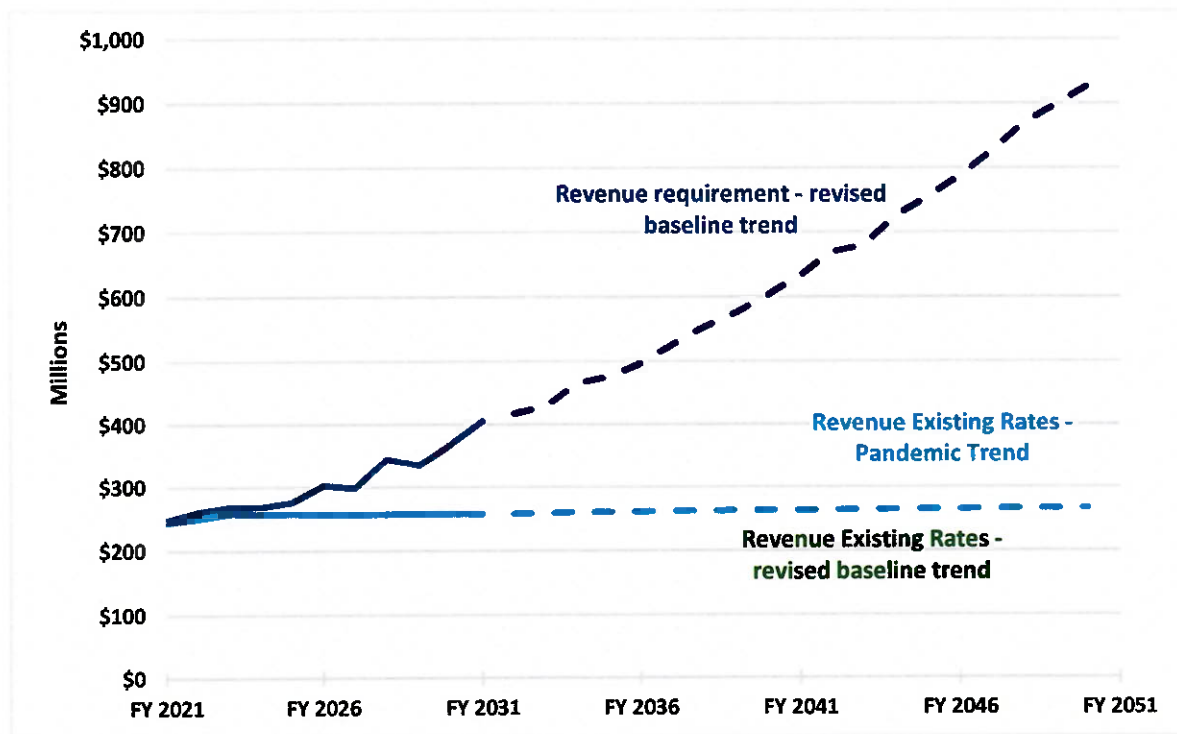


Figure 3-25. Revenue Requirements Impact due to Pandemic

Consistent with Figure 3-25, Figure 3-26 shows that projected revenue adjustments for the pandemic scenario do not change from the revised baseline. Therefore, at an annual level, currently-projected impacts appear to be relatively minor and may be mitigated to some extent in the future by COVID-19 stimulus funds that may be made available. However, it is imperative to recognize that, as of this report date, the COVID-19 global pandemic is not over and the conditions necessary for comprehensive economic recovery have not been met. Moreover, there continues to be high uncertainty in the timing of when these conditions will be met. Additionally, multiple COVID-19 variants that are 70 percent¹ more contagious are circulating globally with scientists working to learn more about how easily they might spread, whether they could cause more severe illness, and whether currently authorized vaccines will protect people against them.

¹UC Davis Health, Public Affairs and Marketing. "New, More Contagious Strains of COVID-19 May Be Spreading Quickly." *UC Davis Health*, 13 Jan. 2021, health.ucdavis.edu/health-news/newsroom/new-more-contagious-strains-of-covid-19-may-be-spreading-quickly/2021/01.

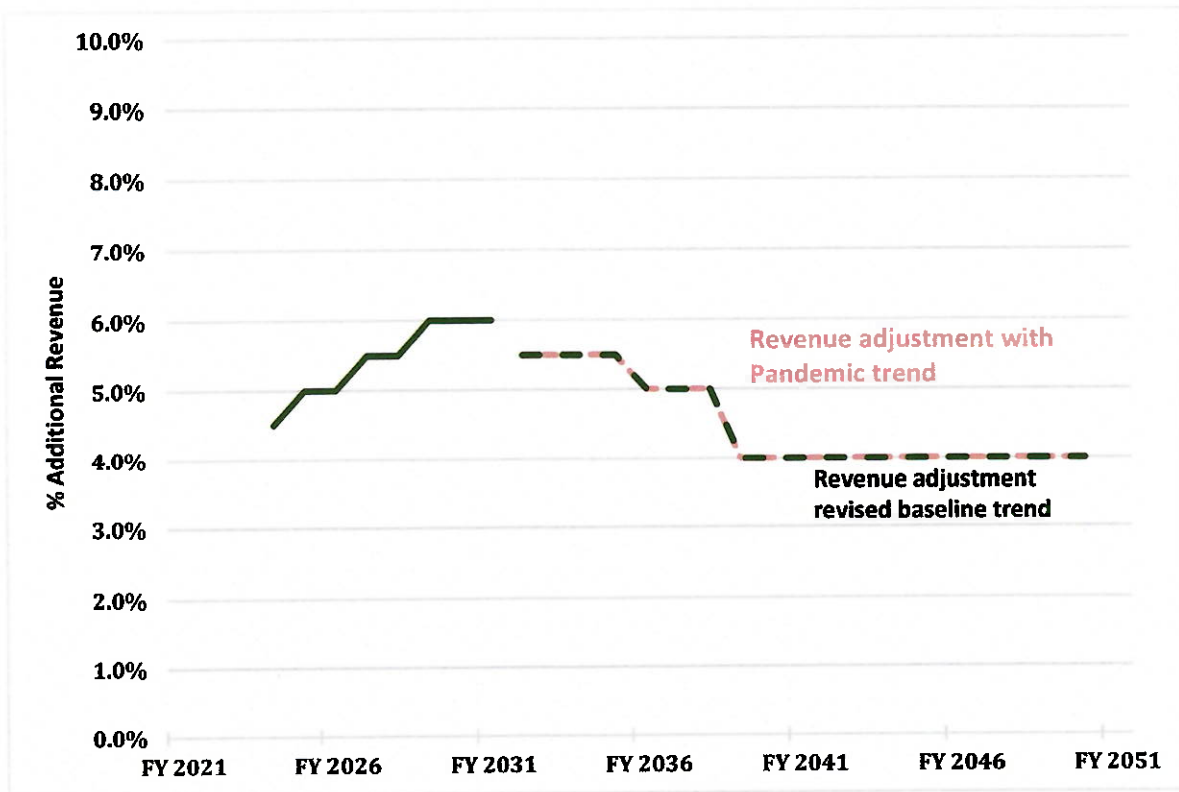


Figure 3-26. Additional Revenue Needs Trend as a Percent of Existing Rate-Based Revenue, Pandemic

3.2.4 Expense Impacts

The BWS has incurred additional expenses due to COVID-19 and is seeking reimbursement with the Coronavirus Aid, Relief, and Economic Security (CARES) Act funds. Expense types include installing touchless faucets, cleaning supplies, personal protective equipment, air filters, thermometers, COVID-19 impact study, and lobby renovations. Additional expenses are estimated to be about \$1.5 million. About \$900,000 of that has been reimbursed with CARES funds and another \$350,000, approximately, has been approved for funding. The remaining is either pending approval or is yet to be submitted for approval. Additional expenses continue to be evaluated for potential CARES fund reimbursement.

3.3 Concurrent Pandemic and Hurricane Scenario

The Long Range Financial Plan qualitatively discussed the impact of a major natural disaster (such as a hurricane or earthquake), which was defined as:

Major Natural Disaster – Assume damage to infrastructure causing capital needs and revenue loss as water service is interrupted or rate collection is reduced. Sampled disaster events caused capital damage ranging from 1.3 to 4.8 percent of net assets and revenue loss of 1.9 to 24 percent over the first year following the event.

From a planning perspective, it is instructive to consider the concurrent events of a major natural disaster and a global pandemic. It must be realized, however, that such consideration is speculative and should not be used or relied upon to guide either the implementation or avoidance of any current or future actions. Rather, decisions regarding specific financial actions should be made in the context of conditions at the time, were such an unfortunate combination of events could actually occur.

In the Long Range Financial Plan, the potential financial impacts to the BWS resulting from a major natural disaster were determined to be much more severe than what has been realized to date as a result of the COVID-19 global pandemic. For example, with the pandemic to date, there has been no apparent change to total water sales nor has there been any physical damage to facilities, and customers are largely able to pay their bills on time.

On September 11, 1992, Hurricane Iniki, the strongest hurricane to hit the Hawaiian Islands in recorded history, struck the island of Kauai. In 2008 US\$, it caused an estimated \$7.4 billion in damage. Coffman and Noy (June 2009)² estimated that it took 7-8 years for Kauai's economy to return to pre-Iniki levels, and that even after 17 years, it had not recovered in terms of population and labor force. Their work documents that Kauai experienced an outmigration of about 10 percent that was still persistent in 2009. In contrast, based upon a review of the County of Kauai, Department of Water Financial Statements as of June 30, 1994 and 1993, water sales for FY 1993 and FY 1994 were \$200,000 (3.4 percent) lower and \$369,000 (6.4 percent) higher, respectively, than the year preceding the hurricane. Therefore, even with a long, slow economic recovery, the water utility appeared to rebound quickly based on a review of water sales. This indicates that the water demands are relatively inelastic.

Given these uncertainties in the potential financial impacts associated with a concurrent global pandemic and natural disaster, appropriate planning actions that should be taken include an assessment of the potential risks and vulnerabilities to the BWS water system and utility personnel that would result from these events and the development of appropriate emergency response plans to be implemented as a result. In 2020, in accordance with the requirements of America's Water Infrastructure Act of 2018 the BWS completed both of these major activities and certified their completion to the United States Environmental Protection Agency.

² Coffman, Makena and Ilan Noy. "A Hurricane's Long-Term Economic Impact: the Case of Hawaii's Iniki." *ResearchGate*, July 2009, https://www.researchgate.net/publication/228613232_A_Hurricane%27s_Long-Term_Economic_Impact_The_Case_of_Hawaii%27s_Iniki. Accessed January 2021.

Section 4

Conclusions

In response to the financial uncertainties posed by the COVID-19 global pandemic, the BWS has taken proactive steps to review both its operations and maintenance budget and capital budget, closely monitor water sales and revenues, analyze water production and rainfall trends, and track delinquencies. Reviews conducted to check financial conditions at the end of FY 2020 compared to the Long Range Financial Plan indicated that budgets needed to be reviewed to facilitate the BWS staying on course and within its financial policies. Accordingly, adjustments were made to the projected expenses, particularly in the near-term (through FY 2031), resulting in a revised baseline. Overall, near-term expenses are projected to be \$17 million more than in the Long Range Financial Plan. However, by imposing some austerity to increases in the operations and maintenance budget through the global pandemic and ensuing economic recovery, adjusting the timing of some capital expenditures, and adjusting the mix of bonds and cash to fund the capital improvement program, the revised baseline provides a roadmap for the BWS to meet its goals within the currently approved rate schedule and near-term revenue adjustments anticipated in the Long Range Financial Plan. Additionally, while estimated revenues were within 3 percent of actual, representing normal variability, the lower amount of revenues also contributed to the erosion of days of working capital. Of note, revenues from the Water System Facilities Charge, which has not been updated since the 1990's, are insufficient to cover the costs of all growth-related projects. Updating this charge is recommended. The charges are currently being reviewed and planned for Board consideration in FY2022.

Through the use of both debt and cash and strategic timing of projects, long-term projected revenue adjustments are expected to be similar to those projected in the Long Range Financial Plan. However, as seen already since the plan was created, actual conditions have resulted in deviations from the plan, requiring adjustments to budgeting processes as well as model assumptions. Accordingly, a rate study should be conducted to evaluate both actual and anticipated near-term conditions for the subsequent rate setting period that begins with FY 2024. This study should also consider updates to costs of service and affordability.

Under the revised baseline, impacts from different scenarios modeled in the Long Range Financial Plan yield similar results. This demonstrates the benefits of the BWS's active management of its financial conditions, which continue to be robust and flexible enough to address near-term realities.

With the shutdown of Hawaii's tourism-dependent economy due to the pandemic, coupled with stay at home orders, the BWS has predictably observed decreases in non-residential water demands. However, those decreases have been offset by increases in residential water usage, with no discernable impact to overall water use. Consequently, the BWS's water sales have been sustained throughout the pandemic. Close examination of delinquencies has shown that the stress on some individual customers is significant. The BWS has worked diligently with these customers to help them establish payment plans; thus, helping to limit the overall amount of delinquencies. The total amount of delinquencies at the end of December 2020 was

approximately \$2.6 million, or about 1.1 percent of the BWS's annual revenue. Consequently, the impact to the BWS's revenues seems limited to managing cashflow at the month-to-month level, with little-to-no impact on annual and long range modeling.

Potential long-term impacts from the pandemic are uncertain, depending on both the speed and vigor of the economic recovery, which is dependent on the virus and the actions taken to respond to it. However, coupled with the potential for a major natural disaster during a pandemic, the uncertainty only increases. Because there are no modern examples of this occurring, the evaluation of this scenario is speculative. One potential manifestation could be a decrease in Oahu's population if the tourism industry does not rebound quickly and robustly from a pandemic event, in combination with the sustained damage to tourism infrastructure that would be anticipated from a concurrent hurricane. If customers migrate to areas less economically impacted, then water consumption could decline commensurately, mimicking the water conservation scenario. Conversely, water demands could rebound relatively quickly, as occurred on Kauai after the extensive damage of Hurricane Iniki even with the sustained 10 percent decrease in population that followed.

In addressing potential future scenarios, the BWS still has access to the full range of mitigation strategies discussed in the Long Range Financial Plan. The trend analysis indicates that with diligent implementation of the Water Master Plan, on-going monitoring using the Water Master Plan scorecard and other available metrics, adherence to the financial policies, and proactive management and mitigation, any single year's revenue adjustment could remain below 10 percent. The possible exception is the scenario of a concurrent pandemic and major natural disaster that was not analyzed quantitatively due to its speculative nature. To avoid double-digit rate increases in this scenario, when customers will be least able to pay, the magnitude of mitigation adjustments could be much more significant than in other scenarios. These mitigations provide valuable tools to the BWS that will help it navigate successfully through the potential uncertainties of such an event.

Despite the relatively minor financial impacts to BWS documented thus far, it is imperative to recognize that, as of this report's date, the COVID-19 global pandemic is not over and the conditions necessary for comprehensive economic recovery have not been met. Moreover, high uncertainty in the timing of when these conditions will be met continues. Additionally, multiple COVID-19 variants are circulating globally with scientists working to learn more about how easily they might spread, whether they could cause more severe illness, and whether currently authorized vaccines will protect people against them.

Appendix A

Delinquency Recovery Model

A spreadsheet model was developed to project month-to-month delinquent amounts for the residential and commercial customer classes and to project the possible increase in uncollectable revenue due to more delinquencies.

Three variations of the pandemic scenario were created based on UHERO scenarios from its quarterly reports that are tied to “reopening” tourism. These three scenarios were informed by the University of Hawaii Economic Research Organization’s Annual Hawaii Forecast with Global Outlook (December 11, 2020). The forecast uses test-based reopening and access to a vaccine as predominant factors in reopening tourism. We identify rapid testing and effective contact tracing to also be important. The forecast does not use masking, physical distancing, minimizing social gatherings and good hygiene as differentiators in any of its three scenarios.

- A. Optimistic timeframe for test-based reopening, optimistic timeframe for rapid testing and effective contract tracing, no third wave, and independent of a vaccine due to extensive testing and contract tracing.
- B. Moderate timeframe for test-based reopening, no third wave, and vaccine is widely available Summer 2021.
- C. Pessimistic timeframe for test-based reopening, no rapid testing and effective contract tracing, third wave occurs, and vaccine is widely available late 2021.

The model uses calendar year 2019 monthly delinquency amounts as the baseline. Monthly delinquencies in 2019 ranged from \$2.5 million to \$3.0 million. Monthly delinquencies in 2020 ranged from \$2.7 million to \$4.6 million. The difference between these two years shows an increasing amount of delinquent revenues, up to 69 percent of the baseline. Analysis of historical delinquencies in 2018 and 2019 showed an approximate 15 percent increase in the dollar amount of annual average delinquencies. This 15 percent increase is considered the “return to normal” level in the model.

Informed by this comparison, the model projects monthly delinquencies for 2021 and 2022 for the three scenarios. Under Scenario A, delinquency amounts would return to normal by the end of calendar year 2021. Under Scenarios B and C, delinquency amounts would return to normal by the end of calendar year 2022.

The model also estimates the amount of delinquent revenue that will be uncollectable. The BWS’s typical uncollectable percent is 0.2 percent of revenues. For the pandemic scenarios, we presumed 5 percent of the maximum monthly delinquent amount for Scenario A, 10 percent for Scenario B, and 15 percent for Scenario C. This uncollectable amount would be in addition to the BWS’s historical uncollectable revenue.

The model works by having the user enter in the forecasted percent of the baseline delinquent amount for the month due to the pandemic scenario. For Scenario A, the additional delinquent amount starts at 65 percent and lowers to the baseline amount of 15 percent by the end of 2021. For Scenario B, the additional delinquent amount starts at 70 percent and steps down to 15 percent by the end of 2022. For Scenario C, the delinquent amount climbs from 70 percent to 100 percent over the first five months of 2021, then begins to decrease to 15 percent by the end of 2022.

The residential and commercial models, respectively, are shown on the following pages.
Additional uncollectable residential revenue is projected to range from \$88,300 to \$408,000.
Additional uncollectable commercial revenue is projected to range from \$35,200 to \$170,000.

Residential Scenarios

						Scenario A		Scenario B		Scenario C	
Year	Month	2019 Baseline	Actuals	Actual - Baseline	%	Forecast %	Forecast \$	Forecast %	Forecast \$	Forecast %	Forecast \$
2020	Jan-20	\$2,717,884	\$2,685,569	-\$32,315	-1%						
	Feb-20	\$2,779,836	\$2,741,430	-\$38,406	-1%						
	Mar-20	\$2,698,650	\$2,706,883	\$8,234	0%						
	Apr-20	\$2,544,860	\$2,898,249	\$353,389	14%						
	May-20	\$2,624,874	\$3,282,881	\$658,006	25%						
	Jun-20	\$2,824,394	\$3,226,074	\$401,680	14%						
	Jul-20	\$2,883,057	\$3,379,100	\$496,043	17%						
	Aug-20	\$3,022,286	\$3,549,276	\$526,990	17%						
	Sep-20	\$2,957,969	\$3,798,822	\$840,853	28%						
	Oct-20	\$3,005,123	\$4,359,696	\$1,354,573	45%						
	Nov-20	\$2,671,364	\$4,629,303	\$1,957,939	73%						
	Dec-20	\$2,709,943	\$4,588,706	\$1,878,763	69%						
2021	Jan-21	\$2,717,884				65%	\$1,766,625	70%	\$1,902,519	70%	\$1,902,519
	Feb-21	\$2,779,836				60%	\$1,667,902	70%	\$1,945,885.36	80%	\$2,223,869
	Mar-21	\$2,698,650				55%	\$1,484,257	70%	\$1,889,054.78	90%	\$2,428,785
	Apr-21	\$2,544,860				50%	\$1,272,430	65%	\$1,654,159.32	100%	\$2,544,860
	May-21	\$2,624,874				45%	\$1,181,194	60%	\$1,574,924.68	100%	\$2,624,874
	Jun-21	\$2,824,394				40%	\$1,129,757	55%	\$1,553,416.55	95%	\$2,683,174
	Jul-21	\$2,883,057				35%	\$1,009,070	50%	\$1,441,528.45	90%	\$2,594,751
	Aug-21	\$3,022,286				30%	\$906,686	45%	\$1,360,028.75	90%	\$2,720,057
	Sep-21	\$2,957,969				20%	\$591,594	40%	\$1,183,187.68	85%	\$2,514,274
	Oct-21	\$3,005,123				15%	\$450,769	35%	\$1,051,793.20	80%	\$2,404,099
	Nov-21	\$2,671,364				15%	\$400,705	32%	\$854,836.51	75%	\$2,003,523
	Dec-21	\$2,709,943				15%	\$406,491	30%	\$812,982.77	70%	\$1,896,960
2022	Jan-22	\$2,717,884	Enter actuals in column D Enter forecast % in columns G, I, and K Enter Uncollectable % in cells G44, I44 and K44					25%	\$679,471.01	65%	\$1,766,625
	Feb-22	\$2,779,836						25%	\$694,959.06	60%	\$1,667,902
	Mar-22	\$2,698,650						20%	\$539,729.94	55%	\$1,484,257
	Apr-22	\$2,544,860						15%	\$381,729.07	50%	\$1,272,430
	May-22	\$2,624,874						15%	\$393,731.17	45%	\$1,181,194
	Jun-22	\$2,824,394						15%	\$423,659.06	40%	\$1,129,757
	Jul-22	\$2,883,057						15%	\$432,458.54	35%	\$1,009,070
	Aug-22	\$3,022,286						15%	\$453,342.92	30%	\$906,686
	Sep-22	\$2,957,969						15%	\$443,695.38	25%	\$739,492
	Oct-22	\$3,005,123						15%	\$450,768.51	20%	\$601,025
	Nov-22	\$2,671,364						15%	\$400,704.62	15%	\$400,705
	Dec-22	\$2,709,943						15%	\$406,491.38	15%	\$406,491
Maximum Delinquency Amount							\$1,766,625		\$1,945,885		\$2,720,057
Uncollectable %						5%		10%		15%	
Uncollectable Amount							\$88,331		\$194,589		\$408,009

Commercial Scenarios

						Scenario A		Scenario B		Scenario C	
Year	Month	2019 Baseline	Actuals	Actual - Baseline	%	Forecast %	Forecast \$	Forecast %	Forecast \$	Forecast %	Forecast \$
2020	Jan-20	\$1,081,867	\$965,841	-\$116,027	-11%						
	Feb-20	\$1,109,851	\$1,041,587	-\$68,263	-6%						
	Mar-20	\$1,258,911	\$1,130,103	-\$128,808	-10%						
	Apr-20	\$880,459	\$1,488,070	\$607,611	69%						
	May-20	\$855,638	\$1,699,130	\$843,492	99%						
	Jun-20	\$920,374	\$1,612,603	\$692,229	75%						
	Jul-20	\$930,561	\$1,795,977	\$865,417	93%						
	Aug-20	\$937,117	\$1,808,170	\$871,053	93%						
	Sep-20	\$973,196	\$2,076,008	\$1,102,812	113%						
	Oct-20	\$1,070,958	\$2,037,669	\$966,711	90%						
	Nov-20	\$1,159,024	\$1,848,766	\$689,742	60%						
	Dec-20	\$1,089,322	\$1,795,913	\$706,591	65%						
2021	Jan-21	\$1,081,867				65%	\$703,214	70%	\$757,307	70%	\$757,307
	Feb-21	\$1,109,851				60%	\$665,910	70%	\$776,895.53	80%	\$887,881
	Mar-21	\$1,258,911				55%	\$692,401	70%	\$881,237.71	90%	\$1,133,020
	Apr-21	\$880,459				50%	\$440,230	65%	\$572,298.41	100%	\$880,459
	May-21	\$855,638				45%	\$385,037	60%	\$513,382.67	100%	\$855,638
	Jun-21	\$920,374				40%	\$368,150	55%	\$506,205.73	95%	\$874,355
	Jul-21	\$930,561				35%	\$325,696	50%	\$465,280.38	90%	\$837,505
	Aug-21	\$937,117				30%	\$281,135	45%	\$421,702.64	90%	\$843,405
	Sep-21	\$973,196				20%	\$194,639	40%	\$389,278.42	85%	\$827,217
	Oct-21	\$1,070,958				15%	\$160,644	35%	\$374,835.29	80%	\$856,766
	Nov-21	\$1,159,024				15%	\$173,854	32%	\$370,887.71	75%	\$869,268
	Dec-21	\$1,089,322				15%	\$163,398	30%	\$326,796.67	70%	\$762,526
2022	Jan-22	\$1,081,867	Enter actuals in column D Enter forecast % in columns G, I, and K Enter Uncollectable % in cells G44, I44 and K44					25%	\$270,466.84	65%	\$703,214
	Feb-22	\$1,109,851						25%	\$277,462.69	60%	\$665,910
	Mar-22	\$1,258,911						20%	\$251,782.20	55%	\$692,401
	Apr-22	\$880,459						15%	\$132,068.86	50%	\$440,230
	May-22	\$855,638						15%	\$128,345.67	45%	\$385,037
	Jun-22	\$920,374						15%	\$138,056.11	40%	\$368,150
	Jul-22	\$930,561						15%	\$139,584.11	35%	\$325,696
	Aug-22	\$937,117						15%	\$140,567.55	30%	\$281,135
	Sep-22	\$973,196						15%	\$145,979.41	25%	\$243,299
	Oct-22	\$1,070,958						15%	\$160,643.69	20%	\$214,192
	Nov-22	\$1,159,024						15%	\$173,853.61	15%	\$173,854
	Dec-22	\$1,089,322						15%	\$163,398.33	15%	\$163,398
Maximum Delinquency Amount							\$703,214		\$881,238		\$1,133,020
Uncollectable %						5%		10%		15%	
Uncollectable Amount							\$35,161		\$88,124		\$169,953

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"February 22, 2021

RESOLUTION
NO. 921, 2021,
AUTHORIZING
UP TO
\$200,000,000
PRINCIPAL
AMOUNT OF
SERIES
2021 BONDS

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Resolution No. 921, 2021, Authorizing Up to \$200,000,000
Principal Amount of Series 2021 Bonds

We recommend the adoption and approval of Resolution No. 921, 2021 which authorizes and approves the issuance by the Board of Water Supply (Board) at one time, of not to exceed \$200,000,000 principal amount of revenue bonds. The purposes for which the Series 2021 Bonds are being issued are: (1) to pay the cost of improvements authorized in the capital budget of the Board; (2) to pay the cost of issuance of the Series 2021 Bonds; and (3) to fund a trust fund to provide for the refunding and redemption of all or a portion of the Board's Water System Revenue Bonds, Series 2012A, Series 2014A, and/or Series 2014B. The bonds shall be on terms and conditions as the Board determined to be necessary and advisable.

Respectfully Submitted,

/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer

Attachment"

DISCUSSION: Chair Andaya stated that Resolution No 921, 2021 is for the authorization of up to \$200 million dollars of principal amount of revenues bonds.

MOTION TO ADOPT Max Sword and Kapua Sproat motioned and seconded respectively, the Adoption Resolution No. 921, 2021, Authorizing Up to \$200,000,000 Principal Amount Series Bonds.

DISCUSSION: Chair Bryan Andaya asked Board Secretary Ms. Cruz-Achui, if there were there any written testimony submitted. Ms. Cruz-Achui responded there was no written testimony. Chair Andaya asked Mr. Norstrom, if there was anyone waiting to testify by telephone. Mr. Norstrom responded there were no telephone testifiers.

Chair Andaya asked Manager Lau if he had any comments.

Manager Ernest Lau stated Resolution No. 921, 2021 allows BWS to sell revenue bonds to help finance the BWS annual Capital Improvement Program (CIP). He mentioned an analysis was done a few years ago to determine the most cost-effective way to finance the BWS CIP projects using cash from the operating revenues and floating municipal bonds. The BWS hopes to sell the bonds in March with the approval and authorization

of the Board. The BWS recently completed rating presentations with S&P Global and Fitch Ratings and are awaiting rating scores.

Mr. Joseph Cooper confirmed that the BWS is in the process of being evaluated by rating agencies. The BWS is confident that the rating agencies will uphold the same rating from Fiscal Year 2020, which was AA+ from Fitch Ratings and AAA from S&P Global and places the BWS in an excellent financial position to issue bonds.

Manager Lau stated the BWS is looking at \$61 million in new money to finance the Bond projects.

Mr. Cooper agreed with Manager Lau and also mentioned that BWS is looking to refund some current bonds in the 2012 and 2014 series. However, the exact number of bonds will not be determined until mid-March when pricing is done and dependent on the fluctuating interest rates. Mr. Cooper stated that the current interest rate environment is still favorable to BWS to issue bonds.

Manager Lau confirmed that the authorization of \$200 million was a combination of the selling of new bonds and the refunding or refinancing of the existing bonds to create interest savings.

Manager Lau recognized and thanked the BWS Bond team: Mr. Cooper, Waterworks Controller, Mr. Barry Usagawa, Water Resources Program Administrator, Ms. Kathleen Elliott-Pahinui, Communications Office Information Officer, and Ms. Ellen Kitamura, Deputy Manager and Chief Engineer. He also expressed his appreciation to the BWS staff, who contributed vital information to complete the preliminary official statement required to sell the BWS bonds. Lastly, Manager Lau thanked Director Andrew Kawano and the Department of Budget and Fiscal Services (BFS) team for their support throughout the whole process.

For the benefit of the public viewing the Board Meeting, Chair Andaya reiterated that the BWS bond offering is possible because of the favorable interest rates and the BWS strong bond rating.

Manager Lau concurred.

Chair Andaya inquired if the Board Members had any questions.

Board Member Jade Butay inquired what is the outstanding balance on the BWS bond at this time?

Mr. Cooper replied the BWS has an outstanding balance of \$250 million based on past bond sales.

Mr. Cooper stated as part of the BWS's LRFP; the BWS is hoping to implement an aggressive Water Master Plan (WMP) over the next ten years, which is funded by issuing bonds. Mr. Cooper mentioned that the BWS's team effort to maintain a superior bond rating is reflected by the BWS management and governance.

Manager Lau also acknowledged the Board Members' leadership in setting financial policies and adjusting rates to ensure the reliability of the BWS water system to serve the community.

Board Member Ray Soon commented that his understanding is \$61 million is new money, and \$139 million is going towards refinancing some old bonds. Mr. Soon requested that the BWS report back to the Board with the total amount that the BWS is saving with the bond issuance.

Manager Lau replied that the bond sale would be completed by the end of March and final savings can be reported in the April Board Meeting

Mr. Cooper agreed to update the Board with the final totals in the April Board meeting and stated the last year's savings were in the range of \$5 million.

Chair Andaya asked if there were any further discussion. Since there was no further discussion, Chair Andaya requested that Board Secretary Ms. Cruz-Achiu conduct the roll call vote.

Ms. Cruz-Achiu conducted a roll call vote: Vice Chair Kapua Sproat, aye; Board Member Ray Soon, aye; Board Member Max Sword, aye; Board Member Na'alehu Anthony, aye; Board Member Jade Butay, aye; Board Member Roger Babcock, aye; and Chair Bryan Andaya, aye.

Ms. Cruz-Achiu announced that the motion passed with seven ayes.

ADOPTION OF RESOLUTION NO. 921, 2021, AUTHORIZING UP TO \$200,000,000 PRINCIPAL AMOUNT OF SERIES 2021 BONDS, ADOPTED FEBRUARY 22, 2021			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD	X		
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR.	X		

**BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU, HAWAII**

**WATER SYSTEM REVENUE BOND
SERIES 2021 RESOLUTION NO. 921, 2021**

**AUTHORIZING UP TO
\$200,000,000 PRINCIPAL AMOUNT OF SERIES 2021 BONDS**

ADOPTED FEBRUARY 22, 2021

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WATER SYSTEM REVENUE BOND
SERIES 2021 RESOLUTION

AUTHORIZING UP TO
\$200,000,000 PRINCIPAL AMOUNT OF SERIES 2021 BONDS

BE IT RESOLVED by the Board of Water Supply of the City and County of Honolulu, Hawaii, as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

Section 1.01. *Series 2021 Resolution.* (1) This Water System Revenue Bond Series 2021 Resolution, authorizing up to \$200,000,000 principal amount of Series 2021 Bonds, is supplemental to, and constitutes a Series Resolution within the meaning of and is adopted in accordance with Article X of, the Resolution, as hereinafter defined.

(2) It is hereby found and determined that it is necessary and required that the Board authorize and issue at this time a Series of Bonds to be designated as herein provided to provide monies to carry out one or more purposes of the Board.

Section 1.02. *Definitions.* (1) All terms which are defined in Section 1.01 of the Resolution shall have the same meanings, respectively, in this Series Resolution as such terms are given in said Section 1.01 of the Resolution.

(2) In addition, as used in this Series Resolution, unless the context shall otherwise require, the following terms shall have the following respective meanings:

“*Authorized Officer*” means the Manager, the Waterworks Controller or other officer designated by resolution of the Board.

“*Resolution*” means that certain resolution adopted by the Board on April 26, 2001, entitled “A Resolution Authorizing and Providing for the Issuance of Revenue Bonds of the Board of Water Supply of the City and County of Honolulu, Hawaii, for the Purposes of the Water System of Said City and County; Covenanting as to the Establishment, Maintenance, Revision and Collection of Charges and Rates for the Use and Services of Said Water System and the Collection and Disbursement of the Revenues Derived Therefrom; Pledging the Net Revenues Derived from Said Water System to the Payment of the Principal of and Interest on Said Bonds as the Same Fall Due; Creating and Establishing Certain Funds and Accounts; Setting Forth the Limitations or Conditions Upon the Issuance by the Board of Additional Bonds

Payable from the Aforesaid Revenues; and Making Other Covenants and Agreements in Connection with the Foregoing,” as amended and supplemented.

“*Series 2021 Bonds*” means the Bonds authorized by Article II of this Series 2021 Resolution.

“*Series 2021 Resolution*” means this Water System Revenue Bond Series 2021 Resolution authorizing up to \$200,000,000 principal amount of the Series 2021 Bonds.

“*Taxable Bonds*” means any Series 2021 Bonds which are not intended by the Board to be Tax-exempt Bonds.

“*Tax Certificate*” means the Tax Certificate executed by an Authorized Officer of the Board in connection with the issuance of the Series 2021 Bonds that are Tax-exempt Bonds.

(3) Words of any gender shall be deemed and construed to include correlative words of the other genders. Unless the context shall otherwise indicate, words importing the singular number shall include the plural number and vice versa, and words importing persons shall include firms, associations and corporations, including public bodies, as well as natural persons.

(4) The terms “hereby,” “hereof,” “hereto,” “herein,” “hereunder,” and any similar terms, as used in this Series 2021 Resolution, refer to the Series 2021 Resolution.

Section 1.03. *Authority for the Series 2021 Resolution.* This Series 2021 Resolution is adopted pursuant to the provisions of the Act and the Resolution.

ARTICLE II

AUTHORIZATION, TERMS AND ISSUANCE OF SERIES 2021 BONDS

Section 2.01. *Authorization of Series 2021 Bonds, Principal Amount, Designation and Series.* One or more Series of Bonds entitled to the benefit, protection and security of the Resolution are hereby authorized to be issued in an aggregate principal amount not to exceed \$200,000,000. Each such Series of Bonds shall be designated as and shall be distinguished from the Bonds of all other Series by the title “Water System Revenue Bonds, Series _____,” (having inserted in such blank the year of issuance and any appropriate letter designation), pursuant to and subject to the terms, conditions and limitations established in the Resolution and this Series 2021 Resolution.

Section 2.02. *Purposes.* The purposes for which the Series 2021 Bonds are being issued are (1) to pay the Costs of Improvements authorized in the capital budget of the Board; (2) to pay the costs of issuance of the Series 2021 Bonds; and (3) to fund a trust fund to provide for the refunding and redemption of all or a portion of the Board’s Water System Revenue Bonds, Series 2012A, the Board’s Water System Revenue Bonds, Series 2014A, and/or the Board’s Water System Revenue Bonds, Series 2014B (the “Outstanding Bonds”).

Section 2.03. *Delegation of Authority.* (1) There is hereby delegated to any Authorized Officer of the Board, subject to the limitations contained herein and in the Resolution and the Act, the power with respect to the Series 2021 Bonds to determine and carry out the following:

(a) The sale of the Series 2021 Bonds at public or private sale and, if at private sale, the underwriter or underwriters; provided, however, that in the case of a private sale the purchase price paid by the purchasers thereof shall not be less than ninety percent (90%) of the principal amount of the Series 2021 Bonds so sold;

(b) The principal amount of Series 2021 Bonds to be issued; *provided, however,* that the principal amount of Series 2021 Bonds shall not exceed \$200,000,000;

(c) The specific Improvements to be financed from the proceeds of the Series 2021 Bonds;

(d) The Series designation of each Series of the Series 2021 Bonds, the date or dates, maturity date or dates and principal amount of each maturity of the Series 2021 Bonds or the method for calculating such dates and amounts, the amount and date of each Sinking Fund Installment, if any, or the method for calculating the Sinking Fund Installments and which Series 2021 Bonds are Serial Bonds or Term Bonds, if any, and the Record Date or Record Dates of the Series 2021 Bonds for which the Record Date or Record Dates is other than the fifteenth (15th) day (whether or not a Business Day) of the month next preceding an interest payment date for such Bonds;

(e) The interest rate or rates, if any, of the Series 2021 Bonds or the manner of determining such rate or rates, the date from which interest on the Series 2021 Bonds shall accrue, the dates on which interest on the Series 2021 Bonds shall be payable, if any, and if any Series 2021 Bonds are Variable Rate Bonds, the Maximum Interest Rate and the Minimum Interest Rate for such Bonds, and the provisions, if any, as to the calculation or change of variable interest rates; provided, however, that the true interest cost (as determined by an Authorized Officer of the Board, which determination shall be conclusive) on the Series 2021 Bonds shall not exceed eight percent (8%) per annum in the case of Tax-exempt Bonds or ten percent (10%) per annum in the case of Taxable Bonds;

(f) The Series 2021 Bonds which are Capital Appreciation Bonds, if any, the Valuation Dates for such Bonds and the Accreted Value on each such Valuation Date;

(g) The Series 2021 Bonds which are Deferred Income Bonds, if any, the Valuation Dates for such Bonds, the Appreciated Value on each such Valuation Date and the Interest Commencement Date for such Bonds;

(h) If any Series 2021 Bonds are Capital Appreciation Bonds or Deferred Income Bonds, the manner in which and the period during which principal and interest shall be deemed to accrue on such Series 2021 Bonds;

(i) If any Series 2021 Bonds are Option Bonds, (1) provisions regarding tender for purchase or redemption thereof and payment of the purchase or Redemption Price thereof; and (2) provisions regarding the appointment of a Remarketing Agent;

(j) The denomination or denominations of and the manner of numbering the Series 2021 Bonds;

(k) The Series 2021 Bonds which are Book Entry Bonds, if any, and the Depository therefor;

(l) The Paying Agent or Paying Agents for the Series 2021 Bonds and the place or places of payment of the principal, Sinking Fund Installments, if any, or Redemption Price of and interest on the Series 2021 Bonds;

(m) The Redemption Price or Redemption Prices, if any, and, subject to Article V of the Resolution, the redemption terms, if any, for the Series 2021 Bonds; provided, however, that the Redemption Price of Series 2021 Bonds at the election or direction of the Board shall not be greater than one hundred three percent (103%) of the principal amount of the Series 2021 Bonds to be redeemed, plus accrued interest thereon to the date of redemption; provided that the Redemption Price for any redemption of Taxable Bonds may be such higher price as may be appropriate for the sale of such Taxable Bonds;

(n) The form of the Series 2021 Bonds and the form of the Paying Agent's certificate of authentication thereon;

(o) Whether the Series 2021 Bonds shall be entitled to the benefit of the Common Reserve Account, and if so entitled, the amount of the Common Reserve Account Requirement and the method of funding or providing for such Common Reserve Account Requirement, the terms and provisions and credit quality of any Support Facility to be deposited therein, and any provisions with respect to subaccounts therein, if applicable;

(p) Any provisions with respect to funds and accounts and subaccounts therein, if applicable, and the Revenues and application thereof, as provided in Article VI of the Resolution;

(q) If the Series 2021 Bonds shall not be entitled to the benefit of the Common Reserve Account, whether a Series Reserve Account will be established for any of the Series 2021 Bonds, and if so determined to be established, the amount of the Series Reserve Account Requirement and the method of funding or providing for such Series Reserve Account Requirement, the terms and provisions and credit quality of any Support Facility to be deposited therein, and any provisions with respect to subaccounts therein, if applicable;

(r) Which Outstanding Bonds shall be refunded from proceeds of the Series 2021 Bonds and other available moneys, and directions for the application of the

* proceeds of the Series 2021 Bonds, including directions with respect to the refunding of such Outstanding Bonds;

(s) Whether a Support Facility shall be obtained or an Interest Rate Exchange Agreement shall be entered into with respect to the Series 2021 Bonds, and if any Series 2021 Bonds are Option Bonds, (i) the appointment of a Support Facility Provider which shall supply a Support Facility with respect to such Series 2021 Bonds; and (ii) provisions for the establishment of separate accounts in which amounts drawn under a Support Facility for the Series 2021 Bonds are to be deposited;

(t) Directions for the application of the proceeds of the Series 2021 Bonds, including the interest on any Series 2021 Bonds to be capitalized from the proceeds thereof, if any, and the date or dates to which such capitalized interest shall accrue;

(u) [reserved];

(v) Which Series 2021 Bonds are to be issued as Tax-exempt Bonds and which, if any, are to be issued as Taxable Bonds; and

(w) Any other provisions deemed advisable by an Authorized Officer of the Board, not in conflict with the provisions hereof or of the Resolution.

(2) Such Authorized Officer shall execute one or more Series Certificates evidencing determinations or other actions taken pursuant to the authority granted herein or in the Resolution and any such Series Certificate shall be conclusive evidence of the action or determination of such Authorized Officer as to the matters stated therein.

(3) All Series 2021 Bonds of like Series, maturity and tenor issued pursuant to this Series 2021 Resolution shall be identical in all respects, except as to denominations and numbers.

Section 2.04. Authority to Enter into Agreements. (1) In the event any of the Series 2021 Bonds are sold at private sale as provided in clause (a) of subsection (1) of Section 2.03, any Authorized Officer of the Board is hereby authorized to execute one or more Bond Purchase Contracts in the name and on behalf of the Board in substantially the form as presented to and on file with the Board, which form is hereby approved, with such changes, insertions and omissions as may be approved by such Authorized Officer, such execution being conclusive evidence of such approval.

(2) The form of the Continuing Disclosure Certificate, as presented to and on file with the Board, is hereby approved. Any Authorized Officer of the Board is hereby authorized to execute one or more Continuing Disclosure Certificates substantially in such form, with such changes, insertions and omissions as may be approved by such Authorized Officer, such execution being conclusive evidence of such approval.

(3) The form of the Escrow Agreement by and between the Board and a financial institution as trustee thereunder, as presented to and on file with the Board, is hereby approved. Any Authorized Officer of the Board is hereby authorized to select a qualified financial

institution to serve as trustee and to execute the Escrow Agreement in the name and on behalf of the Board substantially in such form, with such changes, insertions and omissions as may be approved by such Authorized Officer, such execution being conclusive evidence of such approval.

Section 2.05. *Official Statements.* (1) The form of Preliminary Official Statement, as presented to and on file with the Board, is hereby approved. The distribution in connection with the offering and sale of the Series 2021 Bonds of one or more Preliminary Official Statements in such form, with such changes, insertions and omissions as an Authorized Officer of the Board deems advisable, is hereby authorized.

(2) Any Authorized Officer of the Board is hereby authorized to execute and deliver, in the name and on behalf of the Board, one or more final Official Statements in substantially the form of the Preliminary Official Statement, with such changes, insertions and omissions as such Authorized Officer deems advisable, and to permit the distribution of said Official Statement or Official Statements in connection with the offering and sale of the Series 2021 Bonds.

Section 2.06. *Execution of Documents.* Any Authorized Officer of the Board is hereby authorized to execute and deliver, in the name and on behalf of the Board, any and all documents and instruments, and to do and cause to be done any and all acts and things, said Authorized Officer deems necessary or advisable in connection with the offering, sale and issuance of the Series 2021 Bonds and to carry out the transactions contemplated by this Series 2021 Resolution.

ARTICLE III

EXECUTION AND AUTHENTICATION OF THE SERIES 2021 BONDS

Section 3.01. *Execution and Authentication of Series 2021 Bonds.* (1) Pursuant to the provisions of Sections 4.02 and 4.03 of the Resolution, the Chair or Vice-Chair of the Board is hereby authorized and directed to execute by his or her manual or facsimile signature the Series 2021 Bonds in the name of the Board; the program administrator, Finance Division, as the Waterworks Controller, is hereby authorized and directed to countersign by his or her manual or facsimile signature the Series 2021 Bonds, and the seal of the Board shall be affixed or a facsimile of such seal shall be imprinted on the Series 2021 Bonds.

(2) If a Paying Agent for the Series 2021 Bonds is appointed as provided in clause (1) of subsection (1) of Section 2.03, such Paying Agent is hereby authorized to authenticate by manual signature the Series 2021 Bonds, and deliver the same to or upon the order of the Board, in such amounts and at such times as such Paying Agent shall be directed in writing by an Authorized Officer.

ARTICLE IV

APPLICATION OF PROCEEDS

Section 4.01. *Application of Proceeds and Deposit of Moneys.* On the date of delivery of the Series 2021 Bonds, the proceeds of the sale of the Series 2021 Bonds shall be applied in accordance with the written direction of any Authorized Officer given pursuant to Section 2.03(l)(r) of this Series 2021 Resolution.

ARTICLE V

SPECIAL COVENANTS

Section 5.01. *Tax Status.* The interest on the Series 2021 Bonds that are Tax-exempt Bonds is intended to be excluded from gross income for purposes of federal income taxation. In order to maintain such exclusion, the Board affirms that the tax covenants made in Section 8.13 of the Resolution shall apply to the Series 2021 Bonds that are Tax-exempt Bonds. In furtherance of the foregoing, the Board shall comply with the provisions of the Tax Certificate executed by any Authorized Officer of the Board in connection with the applicable Series 2021 Bonds that are Tax-exempt Bonds.

Section 5.02. *Survival of Covenant.* The obligation of the Board to comply with the provisions of the Tax Certificate with respect to any required payments to the Department of the Treasury of the United States of America shall remain in full force and effect so long as the Board shall be required by the Code to make such payments, notwithstanding that the Series 2021 Bonds that are Tax-Exempt Bonds are no longer Outstanding.

ARTICLE VI

MISCELLANEOUS

Section 6.01. *Effectiveness.* The Series 2021 Resolution shall become effective immediately upon its adoption.

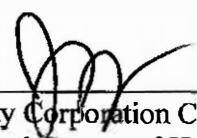
INTRODUCED BY:


Bryan P. Andaya, Chair

Date of Introduction: February 22, 2021

RESOLUTION NO. 921, 2021, AUTHORIZING UP TO \$200,000,000 PRINCIPAL AMOUNT OF SERIES 2021 BONDS ADOPTED ON FEBRUARY 22, 2021			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD	X		
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR.	X		

The above and foregoing resolution is hereby approved as to form and legality this February 22, 2021.


Deputy Corporation Counsel
City and County of Honolulu
JESSICA Y. WONG

ITEM FOR INFORMATION NO. 1

"February 22, 2021

CAPITAL
IMPROVEMENT
PROGRAM
QUARTERLY
UPDATE

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Capital Improvement Program Quarterly Update

Jason Takaki, Program Administrator, Capital Projects Division, will provide an update on the Capital Improvement Program.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:

Jason Takaki, Program Administrator, Capital Projects Division, gave the report.

Chair Bryan Andaya asked if the active projects and pipeline replacement programs are included in the increasing Capital Improvement Program (CIP) funding and the Long-Range Financial Plan (LRFP).

Mr. Jason Takaki responded that both active and pipeline replacement programs are part of the CIP and the LRFP.

Manager Lau added the plan is to replace up to 21 miles per year within the next ten years.

Board Member Ray Soon inquired if any issues may prevent the BWS from meeting the projected budget to reach the goal of 21 miles.

Mr. Takaki stated this year, the BWS is a little behind in projects due to the pandemic which has not only impacted our staff but also contributed to delays in obtaining other agency and permit application approvals. He stated the BWS may need to advertise projects for bid before obtaining the final approved permits. Last year, the BWS staff's capacity was stretched to get the jobs out due to the amount of CIP projects. Through the first two quarters of the current fiscal year, the BWS staff has reached the existing staff's capacity; therefore, continuous recruitment to fill vacancies is necessary. The BWS must fill vacancies in the experienced engineer levels CE IV, CE V, and EE IV in order to move forward with increasing CIP projects.

Quarterly Capital Improvement Program Status Report
All Divisions
as of December 31, 2020

Quarter Awarded	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Awarded to Date	Total Budgeted
Design Contracts Awarded (#/\$)	0	\$0.00	2	\$1,423,875.02	0	\$0.00	0	\$0.00	\$1,423,875.02	\$17,510,000.00
Construction Contracts Awarded (#/\$)	6	\$1,338,697.25	3	\$718,633.66	0	\$0.00	0	\$0.00	\$2,057,330.91	\$151,525,000.00
Land Purchases (#/\$)	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	\$0.00	\$100,000.00
Project Totals	6	\$1,338,697.25	5	\$2,142,508.68	0	\$0.00	0	\$0.00	\$3,481,205.93	\$169,135,000.00

Quarter Completed	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Totals
Design Contracts Completed (#/\$)	2	\$178,072.00	0	\$0.00	0	\$0.00	0	\$0.00	\$178,072.00
Construction Contracts Completed (#/\$)	1	\$4,584,284.00	0	\$0.00	0	\$0.00	0	\$0.00	\$4,584,284.00
Totals	3	\$4,762,356.00	0	\$0.00	0	\$0.00	0	\$0.00	\$4,762,356.00

Ongoing Projects	
Ongoing Design Projects (#)	244
Ongoing Design Projects (\$)	\$107,026,025.83
Ongoing Construction Projects (#)	153
Ongoing Construction Projects (\$)	\$342,472,578.07

Quarterly Capital Improvement Program Status Report
All Divisions

DESIGN AND CONSTRUCTION PROJECTS AWARDED - SECOND QUARTER FY 2021

Item #	Project Title	Expend Type	Budget Amount	Awarded
21-009E	Hoaeae Wells: Replace Pump 6 Bowl Assembly	CONST	53,679.67	53,679.67
2021-027	Lower Mariners Ridge Water System Improvements	P&E	1,000,000.00	923,875.02
2021-036PE	GAC Interior Corrosion Control at Various Locations	P&E	\$500,000.00	\$500,000.00
21-041T	Kalauao Wells Control Building Reroofing	CONST	131,562.38	131,562.38
21-041K	Aliamanu 180 Reservoir Repainting and Booster Reroofing/Repainting	CONST	533,391.61	533,391.61
2nd Quarter totals			\$2,164,953.99	\$2,142,508.68

DESIGN AND CONSTRUCTION PROJECTS COMPLETED - SECOND QUARTER FY 2021

Job #	Project Title	Completion Date	Contract Amount
	No contract completions reported for this quarter.		
2nd Quarter totals			\$0.00

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Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

Quarterly Capital Improvement Program Status Report All Divisions as of December 31, 2020

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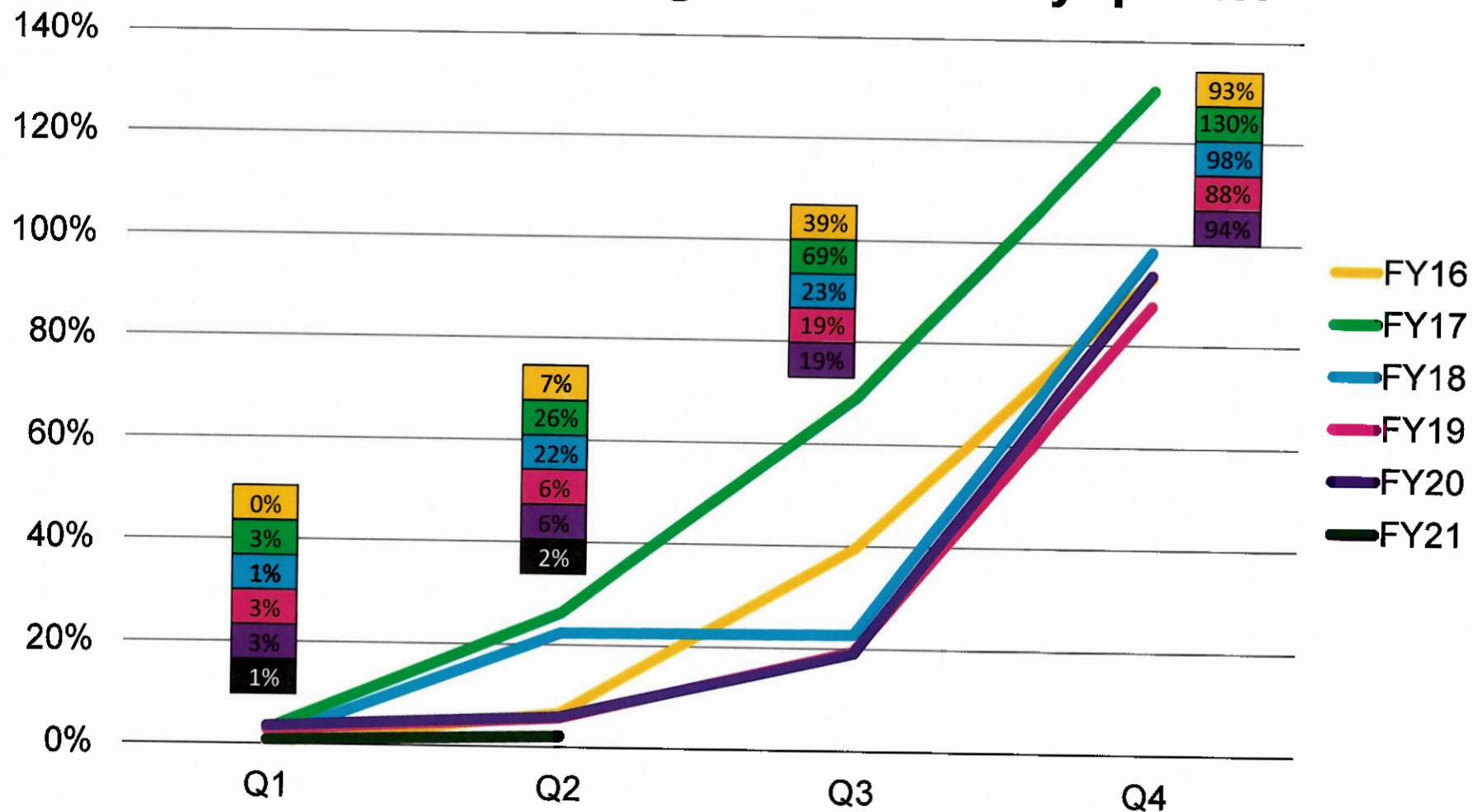
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City and County of Honolulu

Cumulative % budget execution by quarter



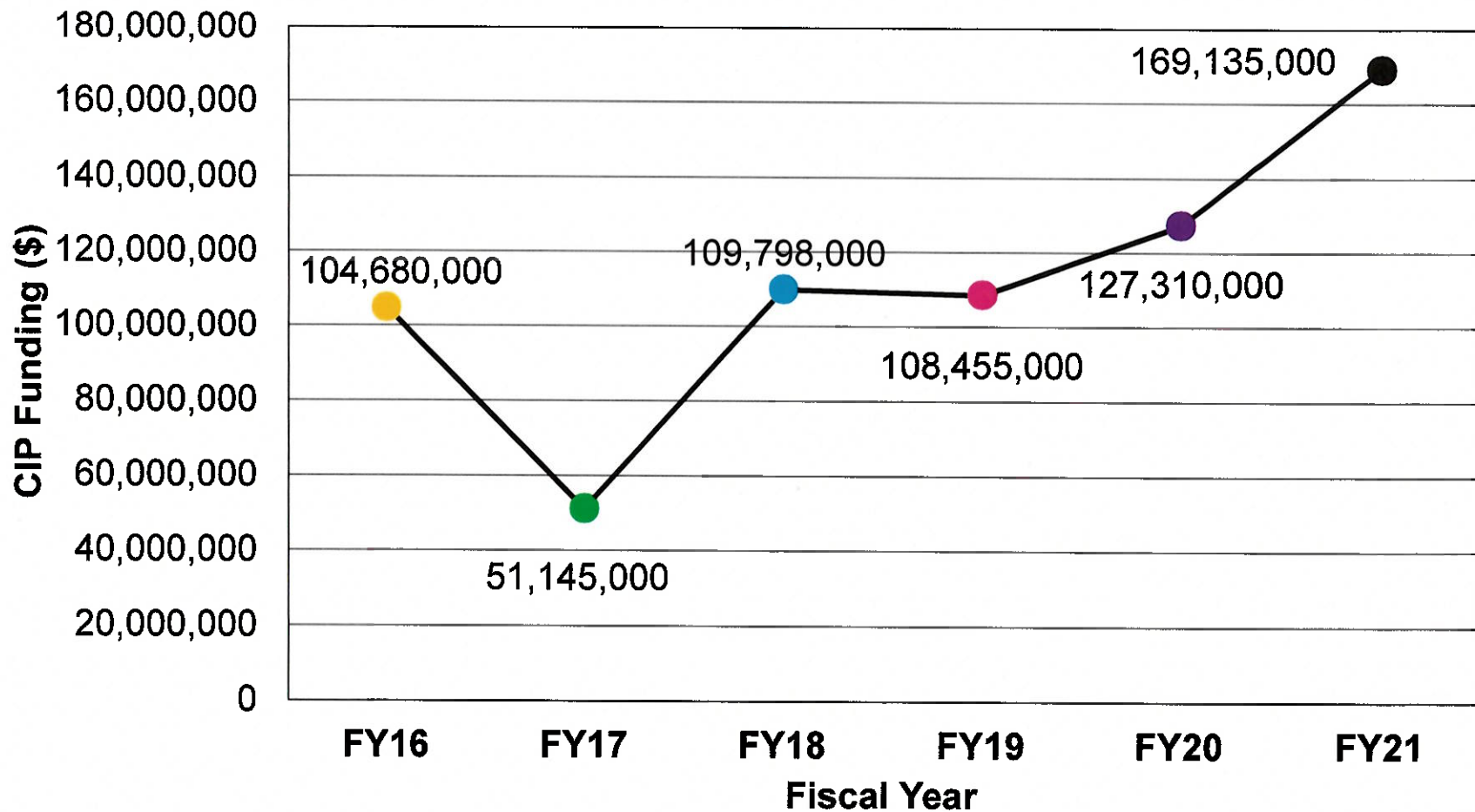
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Board of Water Supply
City and County of Honolulu

Annual CIP funding



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Board of Water Supply
City and County of Honolulu

Quarterly Capital Improvement Program Status Report All Divisions as of December 31, 2020

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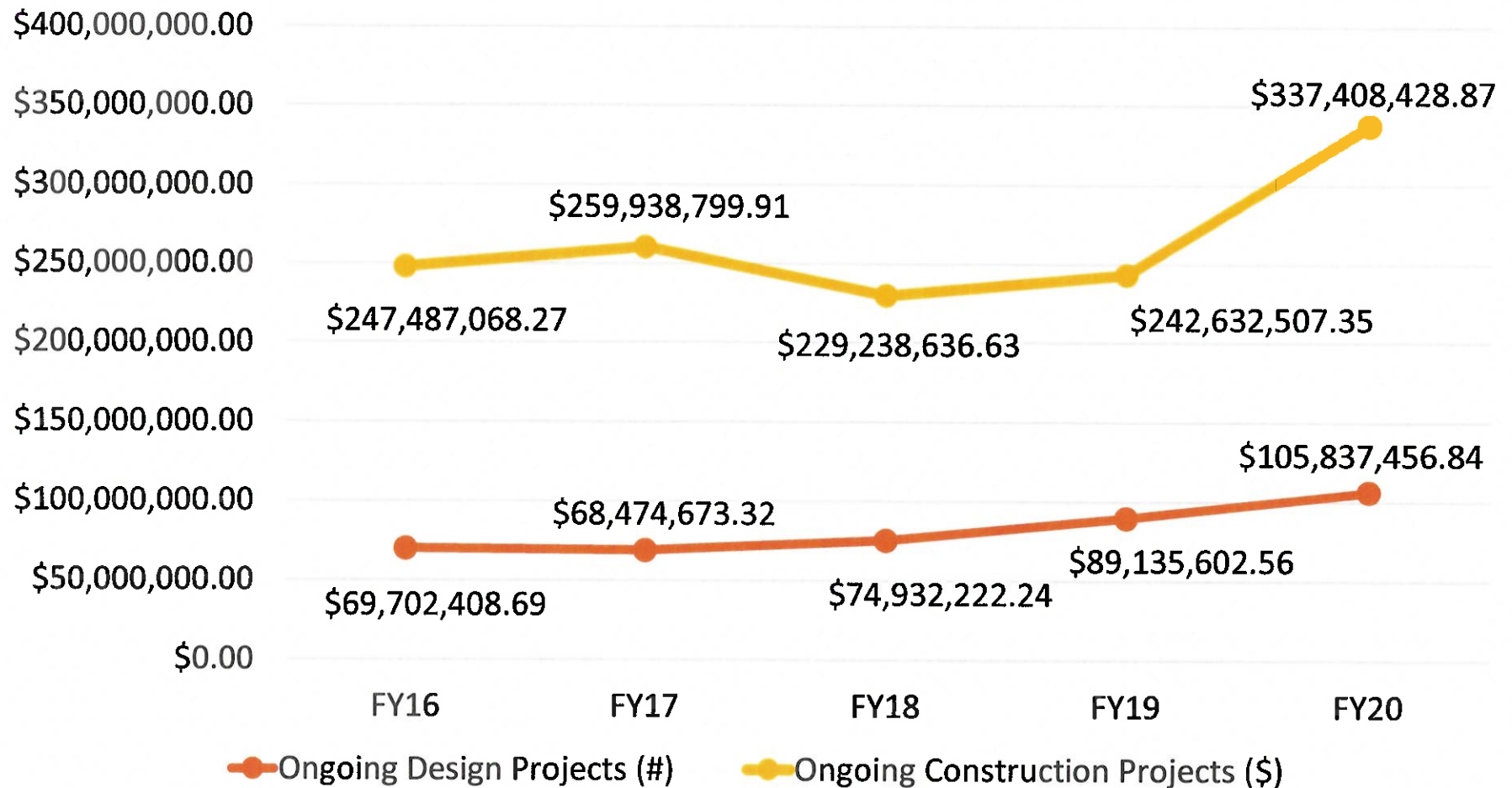
Quarter Completed	JUL - SEP		OCT - DEC		JAN - MAR		APR - JUN		Totals
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Ongoing Design Projects (#)	244
Ongoing Design Projects (\$)	\$107,026,025.83
Ongoing Construction Projects (#)	153
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Active Projects in Dollars



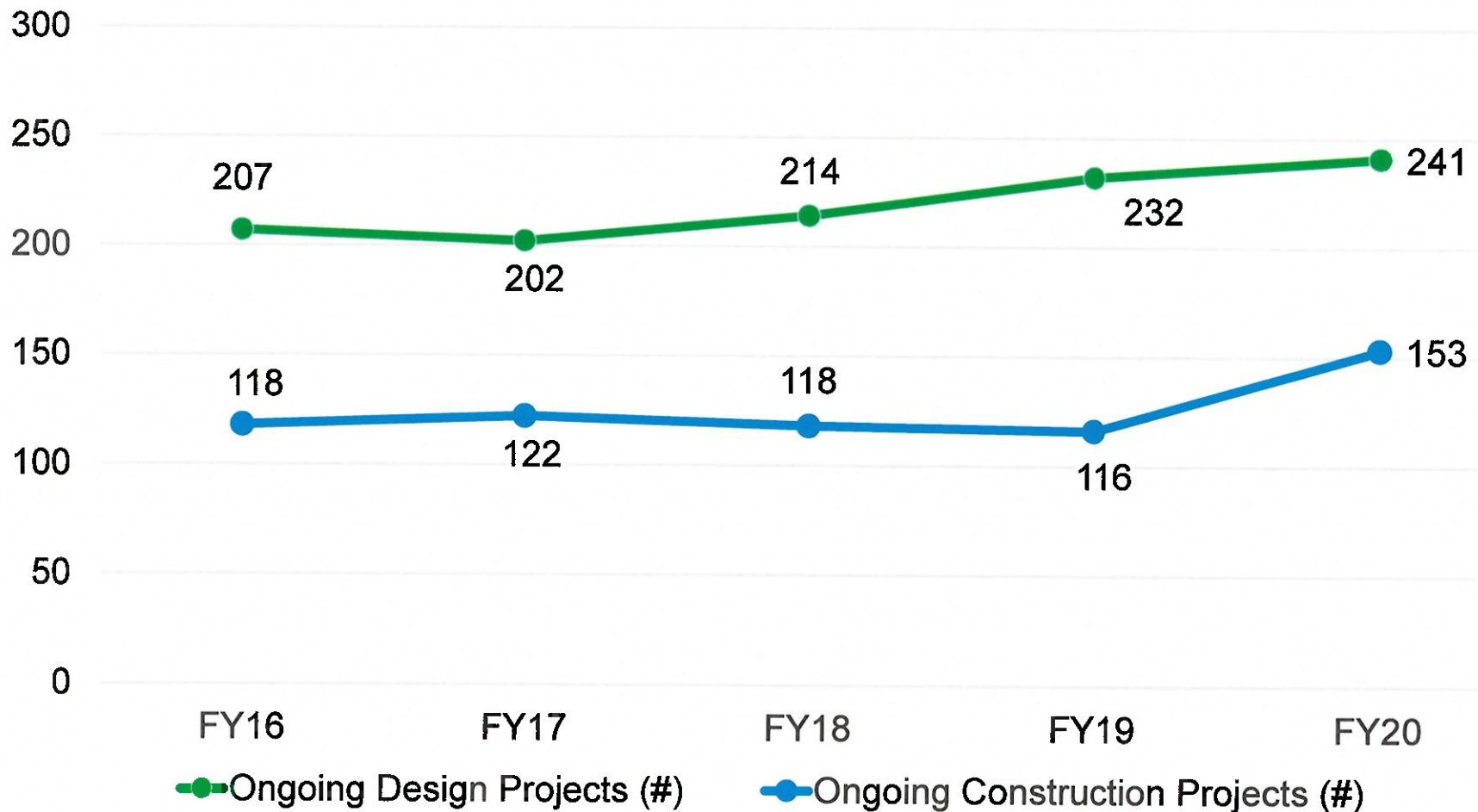
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City and County of Honolulu

Active Project Counts



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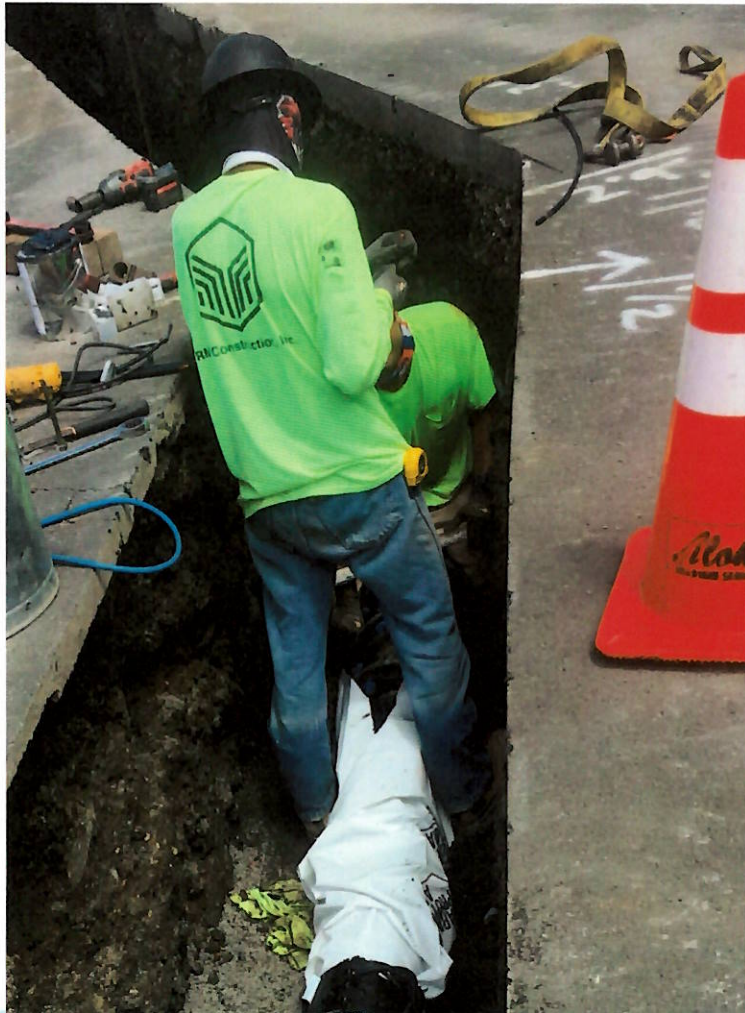
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Board of Water Supply
City and County of Honolulu

Active Projects

Ala Aolani 12-Inch Water Main



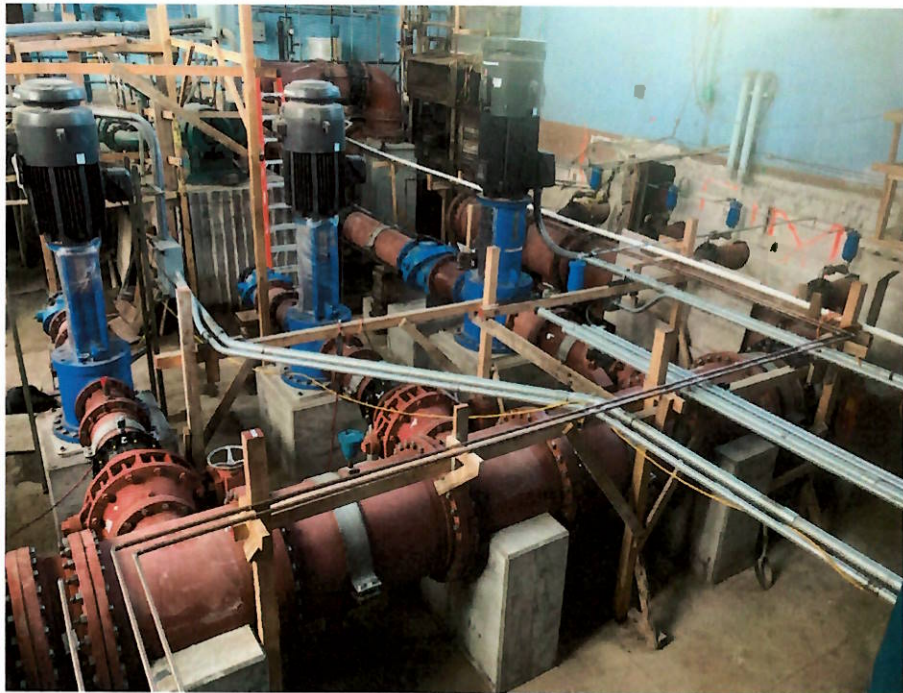
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Active Projects



Kalihi Pump Station Low and High Service Renovation



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City and County of Honolulu

Active Projects

Beretania Emergency Generator System Upgrade



**Emergency Generators at
Kalihi Yard and Shaft, Halawa
Shaft, and Kunia Wells I**



ITEM FOR INFORMATION NO. 2

"February 22, 2021

FINANCIAL
STATEMENT AND
SUPPLEMENTARY
INFORMATION
WITH
INDEPENDENT
AUDITORS'
REPORT, FISCAL
YEARS ENDED
JUNE 30, 2020,
AND 2019

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Financial Statements and Supplementary Information with
Independent Auditors' Report, Fiscal Years Ended June 30,
2020, and 2019

Our auditors, N&K CPAs, Inc., have completed the audit of the financial statements and federal awards of the Board of Water Supply and issued an unmodified opinion. They have indicated that there are no weaknesses on internal control over financial reporting.

Attached is the auditors' required communication letter dated November 6, 2020. Copies of the financial statements of the Board of Water Supply and the reports thereon by N&K CPAs, Inc., covering the results of their examination of the accounts and financial status of the Board of Water Supply for the years ended June 30, 2020 and 2019 as required under Article VII, Section 7-108 of the Revised Charter, are also attached.

Lawrence Chew and Ryan Iwane from N&K CPAs, Inc. will present highlights from the auditors' report.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:

Chair Andaya recognized Mr. Cooper, Waterworks Controller. Mr. Cooper stated that BWS is required by Charter to complete a financial audit and an audit of all federal awards annually.

Mr. Cooper introduced Lawrence Chew, Principal Auditor & Ryan Iwane, Senior Certified Public Accountant, N&K CPAs, Inc., to give the report.

Mr. Ryan Iwane thanked Manager Lau, the BWS team, and especially the Finance Division. Despite the challenges in 2020 caused by the pandemic, N&K CPA and the BWS were able to conduct a smooth audit.

Manager Ernest Lau expressed his gratitude to Mr. Cooper, Ms. Leanne Matsumoto, Assistant Waterworks Controller, and the Finance Division for gathering information and assisting N&K CPA with the yearly audit.

Chair Bryan Andaya expressed his appreciation to Mr. Iwane and Mr. Chew of N&K CPA, Manager Lau, Mr. Cooper, Finance Division, and the BWS, who made it possible for a clean audit.

November 6, 2020

Board of Directors
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

We have audited the financial statements of the Board of Water Supply ("BWS"), a component unit of the City and County of Honolulu, as of and for the fiscal year ended June 30, 2020. Professional standards require that we provide you with information about our responsibilities under auditing standards generally accepted in the United States of America, *Government Auditing Standards* and the Uniform Guidance, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated July 21, 2020. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the BWS are described in Note B to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during 2020. We noted no transactions entered into by the BWS during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the BWS's financial statements were:

1. Valuation allowance for receivables
2. Depreciation of capital assets
3. Net pension liability
4. Postemployment benefits other than pensions (OPEB) liability
5. Accrued workers' compensation liability
6. Claims and judgments

Management's estimate of the valuation allowances for receivables is based on historical collection experience and the length of time individual receivables are past due. We evaluated the key factors and assumptions used for the valuation allowance in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of depreciation recorded on capital assets is based in part on the estimated useful lives of those capital assets. We evaluated the key factors and assumptions used to estimate depreciation of the BWS's capital assets in determining that it is reasonable in relation to the financial statements taken as a whole.

The collective net pension liability, deferred inflows of resources, deferred outflows of resources, and pension expense of the cost-sharing multiple employer defined pension plan administered by the State of Hawaii's Employee Retirement System was determined by an actuarial valuation. The BWS's proportionate share of the collective net pension liability, deferred inflows of resources, deferred outflow of resources, and pension expense was based on the BWS's contributions to the pension plan relative to the contributions of all participating employers during the measurement period. We evaluated the key factors and assumptions used to estimate the BWS's proportionate share of the collective net pension liability, deferred inflows of resources, deferred outflow of resources in determining that it is reasonable in relation to the financial statements taken as a whole.

The net OPEB liability was measured as the portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service, net of the OPEB plan's fiduciary net position. We evaluated the key factors and assumptions used to estimate the net OPEB liability and related deferred inflows of resources, deferred outflows of resources, and OPEB expense in determining that it is reasonable in relation to the financial statements taken as a whole.

The accrued workers' compensation liability was determined using an actuarial analysis performed by a third-party specialist. We evaluated the key factors and assumptions used to estimate the accrued workers' compensation liability in determining that it is reasonable in relation to the financial statements taken as a whole.

The estimated liability for claims and judgments presented as other liabilities in the BWS's statement of net position is reported if 1) information available indicates that it is probable that a liability has been incurred at the date of the financial statements and, 2) the amount of loss can be reasonably estimated. We evaluated the key factors and assumptions used to estimate the liability for claims and judgments in determining that it is reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosure affecting the financial statements was the disclosure of the net pension and OPEB liability and related expense of the BWS in Note M to the financial statements. The net pension and OPEB liability were both determined by an actuarial valuation that required the use of several significant actuarial assumptions, which are also described in Note M.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. The attached schedule summarizes uncorrected misstatements of the financial statements. Management has determined that their effects are immaterial, both individually and in the aggregate, to the financial statements taken as a whole. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the BWS's financial statements taken as a whole.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated November 6, 2020.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the BWS's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the BWS's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to management's discussion and analysis 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), which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding 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 did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the schedules of expenditures of federal awards, bonds payable and net revenue requirement, which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory section, which accompanies the financial statements but is not RSI. Such information 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.

N&K CPAs, Inc.

ACCOUNTANTS | CONSULTANTS

Restriction on Use

This information is intended solely for the information and use of the board of directors and management of the BWS and is not intended to be, and should not be, used by anyone other than these specified parties.

Sincerely,

N + K CPAs, INC.

LMTC:ri
Enclosure

Summary of Uncorrected Misstatements

<u>Account</u>	<u>Description</u>	<u>Debit</u>	<u>Credit</u>
Proposed Journal Entries			
Proposed Journal Entries JE # 201			
To properly reclassify FY 2020 loan fees.			
4915	MISCELLANEOUS FINANCIAL EXPE	115,790.00	
7071	INTEREST EXPENSE		115,790.00
Total		115,790.00	115,790.00
Proposed Journal Entries JE # 202			
To restate beginning net position to properly account for the asset retirement obligation as of 6/30/19.			
2910	RETAINED EARNINGS	247,500.00	
8032	AMORTIZATION OF ASSET RETIRE		247,500.00
Total		247,500.00	247,500.00
Proposed Journal Entries JE # 203			
To properly state legal claims liability balance as of 6/30/2020.			
6350	CLAIMS FOR PERS INJ & PROP D	100,000.00	
NK23	Claims - Property Damage and Legal		100,000.00
Total		100,000.00	100,000.00



N&K CPAs, Inc.
ACCOUNTANTS|CONSULTANTS



Board of Water Supply

City and County of Honolulu

Single Audit for the Fiscal Year Ended

June 30, 2020

Scope of Services

- To express an opinion on the fair presentation of the Board of Water Supply's financial statements as of and for the fiscal year ended June 30, 2020.
- To express an opinion on compliance with applicable federal requirements that could have a direct and material effect on each of the Board of Water Supply's major federal programs for the fiscal year ended June 30, 2020.
- Our audit was performed in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, and the audit requirements of the Uniform Guidance (Title 2 CFR Part 200)

Summary of Auditor's Results

Financial Statements

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP:

Unmodified

Internal control over financial reporting:

Material weakness(es) identified?

___ yes

✓ no

Significant deficiency(ies) identified?

___ yes

✓ none reported

Noncompliance material to financial statements noted?

___ yes

✓ no

Federal Awards

Internal control over major federal programs:

Material weakness(es) identified?

___ yes

✓ no

Significant deficiency(ies) identified?

___ yes

✓ none reported

Type of auditor's report issued on compliance for major federal programs:

Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?

___ yes

✓ no

Summary of Auditor's Results (Continued)

Identification of major federal programs:

CFDA Number

66.468

Name of Federal Program or Cluster

Capitalization Grants for Drinking
Water State Revolving Funds

Dollar threshold used to distinguish between type A
and type B programs:

\$750,000

Auditee qualified as a low-risk auditee?

☒ yes ☐ no

SECTION II - FINANCIAL STATEMENT FINDINGS

No matters were reported.

SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

No matters were reported.

Required Communication with Those Charged with Governance at the Conclusion of the Audit

- Auditor's views about the BWS's significant accounting policies, sensitive accounting estimates and financial statement disclosures.
- No significant difficulties were encountered during the audit.
- No disagreements with management about financial accounting, reporting, or auditing matters arose during the course of the audit.
- None of the misstatements detected as a result of audit procedures were considered material, either individually or in the aggregate, to the BWS's financial statements taken as a whole.



N&K CPAs, Inc.

ACCOUNTANTS|CONSULTANTS

**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
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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.

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- 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;

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- 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%.

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

**Board of Water Supply
City and County of Honolulu
MANAGEMENT'S DISCUSSION AND ANALYSIS
Fiscal Years Ended June 30, 2020 and 2019**

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

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MANAGEMENT'S DISCUSSION AND ANALYSIS
Fiscal Years Ended June 30, 2020 and 2019**

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.

**Board of Water Supply
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MANAGEMENT'S DISCUSSION AND ANALYSIS
Fiscal Years Ended June 30, 2020 and 2019**

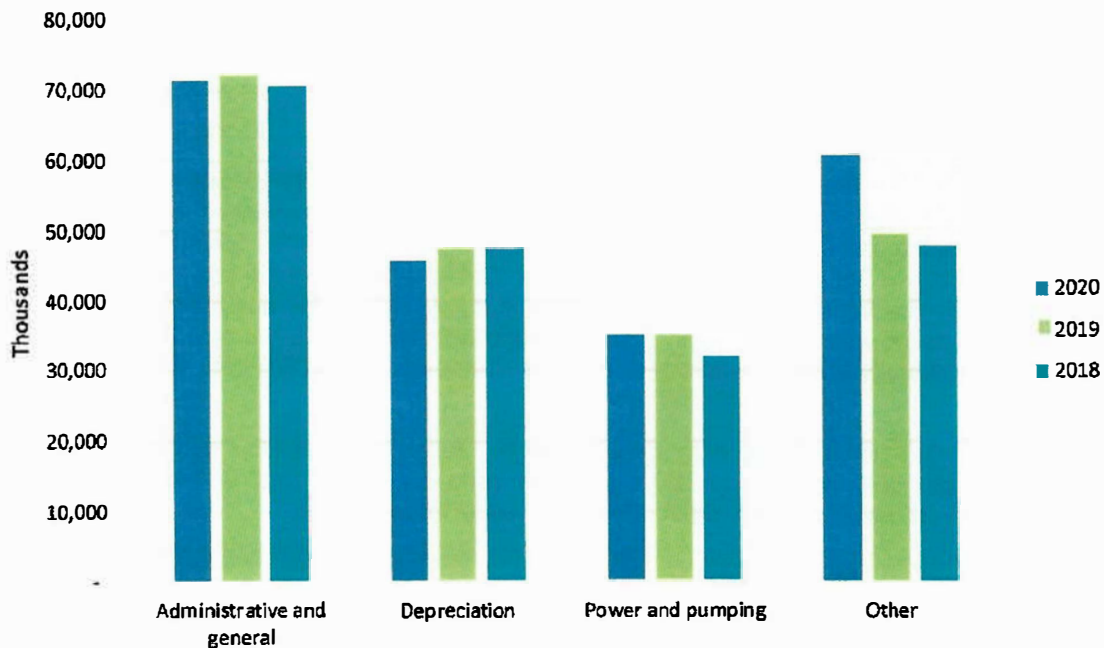
Total operating expenses increased by \$6.2 million in fiscal year 2019. Factors contributing to this change are explained below:

- 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.

Expenditures by Functional Class



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

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Fiscal Years Ended June 30, 2020 and 2019**

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.

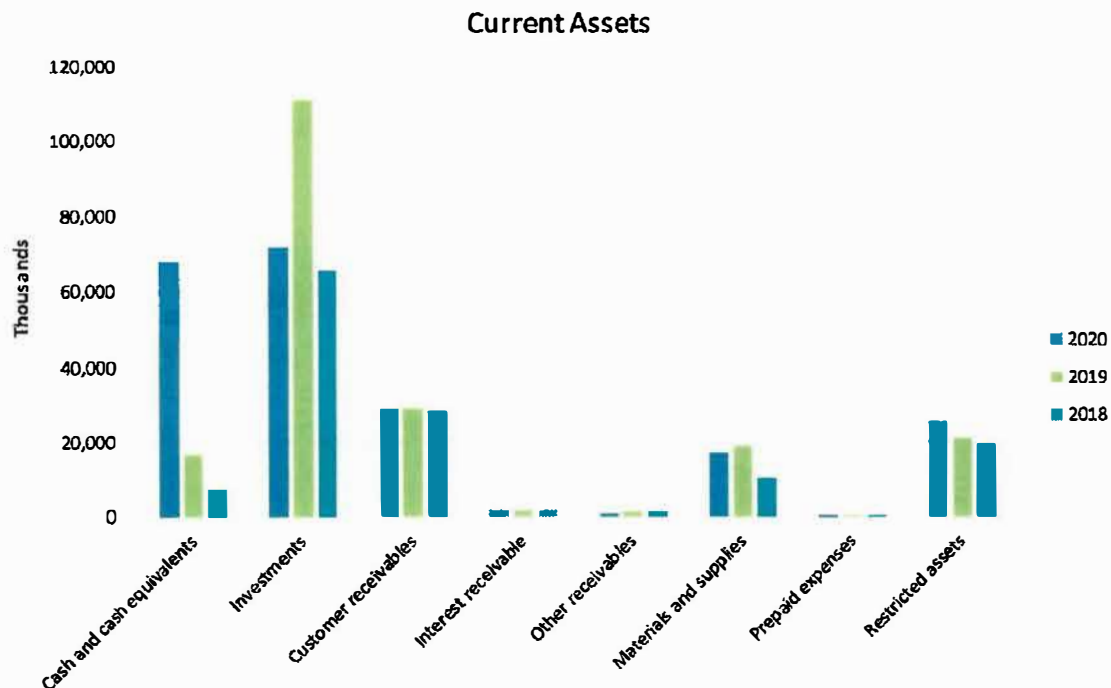
Financial Condition

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%

**Board of Water Supply
City and County of Honolulu
MANAGEMENT'S DISCUSSION AND ANALYSIS
Fiscal Years Ended June 30, 2020 and 2019**

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.

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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.

**Board of Water Supply
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MANAGEMENT'S DISCUSSION AND ANALYSIS
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**

	<u>2020</u>	<u>2019</u>
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	<u>214,591,436</u>	<u>200,950,606</u>
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
	<u>2,124,391,774</u>	<u>2,071,203,759</u>
Less accumulated depreciation	<u>(1,118,403,479)</u>	<u>(1,073,891,290)</u>
	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	<u>1,630,380,672</u>	<u>1,497,135,562</u>
Total assets	<u>1,844,972,108</u>	<u>1,698,086,168</u>
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	<u>48,194,700</u>	<u>53,064,278</u>
Total assets and deferred outflows of resources	<u>\$ 1,893,166,808</u>	<u>\$ 1,751,150,446</u>

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**

	<u>2020</u>	<u>2019</u>
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	<u>3,677,477</u>	<u>2,997,372</u>
Total payable from current assets	<u>36,921,525</u>	<u>32,809,122</u>
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	<u>362,237</u>	<u>—</u>
Total payable from restricted assets	<u>25,589,110</u>	<u>21,236,291</u>
Total current liabilities	<u>62,510,635</u>	<u>54,045,413</u>
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	<u>3,898,713</u>	<u>2,737,613</u>
Total noncurrent liabilities	<u>568,489,995</u>	<u>497,184,801</u>
Total liabilities	<u>631,000,630</u>	<u>551,230,214</u>
DEFERRED INFLOWS OF RESOURCES		
Deferred inflows of resources related to pensions	10,283,163	3,450,266
Deferred inflows of resources related to OPEB	<u>1,467,196</u>	<u>2,957,650</u>
Total deferred inflows of resources	<u>11,750,359</u>	<u>6,407,916</u>
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	<u>291,541,624</u>	<u>269,235,478</u>
Total net position	<u>1,250,415,819</u>	<u>1,193,512,316</u>
Total liabilities, deferred inflows of resources and net position	<u>\$ 1,893,166,808</u>	<u>\$ 1,751,150,446</u>

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**

	<u>2020</u>	<u>2019</u>
OPERATING REVENUES		
Water sales	\$ 228,467,575	\$ 226,347,969
Other, principally contract and service fees	<u>2,639,953</u>	<u>2,313,872</u>
Total operating revenues	<u>231,107,528</u>	<u>228,661,841</u>
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	<u>384,146</u>	<u>--</u>
Total operating expenses	<u>212,718,613</u>	<u>203,999,113</u>
Operating income	<u>18,388,915</u>	<u>24,662,728</u>
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	<u>267,177</u>	<u>383,673</u>
Total nonoperating revenues	<u>10,627,911</u>	<u>8,597,967</u>
CONTRIBUTIONS IN AID OF CONSTRUCTION	<u>27,886,677</u>	<u>12,976,364</u>
Change in net position	56,903,503	46,237,059
NET POSITION		
Beginning of year	<u>1,193,512,316</u>	<u>1,147,275,257</u>
End of year	\$ <u>1,250,415,819</u>	\$ <u>1,193,512,316</u>

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**

	<u>2020</u>	<u>2019</u>
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	<u>78,779,752</u>	<u>74,318,814</u>
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	<u>(8,472,182)</u>	<u>(71,037,208)</u>
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	<u>46,877,999</u>	<u>11,693,135</u>
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	\$ <u>158,360,462</u>	\$ <u>41,174,893</u>
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
	<u>\$ 158,360,462</u>	<u>\$ 41,174,893</u>

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**

	<u>2020</u>	<u>2019</u>
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	\$ <u>78,779,752</u>	\$ <u>74,318,814</u>
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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

The ranges of insurance limits and deductibles are as follows:

<u>Policy</u>	<u>Limits (Millions)</u>	<u>Deductibles</u>
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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

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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
	<u>\$ 374,921,234</u>	<u>\$ 389,619,592</u>	<u>\$ 412,071,035</u>	<u>\$ 416,060,014</u>

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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%	—
	<u>100%</u>	<u>\$ 389,619,592</u>	<u>100%</u>	<u>\$ 416,060,014</u>

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
	<u>\$ 389,619,592</u>	<u>\$ 73,842,742</u>	<u>\$ 315,776,850</u>

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
	<u>\$ 416,060,014</u>	<u>\$ 122,011,393</u>	<u>\$ 294,048,621</u>

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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:

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

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.

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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	<u>70,361,210</u>	<u>--</u>	<u>70,361,210</u>	<u>--</u>
	<u>\$ 389,619,592</u>	<u>\$ 319,258,382</u>	<u>\$ 70,361,210</u>	<u>\$ --</u>

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	<u>78,309,374</u>	<u>--</u>	<u>78,309,374</u>	<u>--</u>
	<u>\$ 416,060,014</u>	<u>\$ 337,750,640</u>	<u>\$ 78,309,374</u>	<u>\$ --</u>

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	<u>\$ 1,188,906,480</u>	<u>\$ 71,873,935</u>	<u>\$ (12,404,540)</u>	<u>\$ (676,037)</u>	<u>\$ 1,247,699,838</u>

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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

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NOTE G - BONDS PAYABLE (Continued)

	<u>2020</u>	<u>2019</u>
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%.	<u>47,530,000</u>	<u>--</u>
	260,490,000	206,290,000
Add: unamortized premium	<u>17,056,345</u>	<u>16,310,455</u>
	277,546,345	222,600,455
Less: current portion	<u>9,910,000</u>	<u>8,820,000</u>
Noncurrent portion	<u>\$ 267,636,345</u>	<u>\$ 213,780,455</u>

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.

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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:

<u>Fiscal Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
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	<u>\$ 260,490,000</u>	<u>\$ 99,232,000</u>	<u>\$ 359,722,000</u>

NOTE H - NOTES PAYABLE

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

	<u>2020</u>	<u>2019</u>
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.	\$ <u>3,525,273</u>	\$ <u>3,767,710</u>
Balance brought forward	\$ <u>3,525,273</u>	\$ <u>3,767,710</u>

**Board of Water Supply
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NOTES TO FINANCIAL STATEMENTS
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NOTE H - NOTES PAYABLE (Continued)

	<u>2020</u>	<u>2019</u>
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.	<u>4,318,459</u>	<u>4,547,788</u>
Balance brought forward	\$ <u>73,962,033</u>	\$ <u>73,302,359</u>

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NOTE H - NOTES PAYABLE (Continued)

	<u>2020</u>	<u>2019</u>
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.	<u>845,727</u>	<u>985,044</u>
	103,720,590	82,287,403
Less current maturities	<u>5,754,780</u>	<u>4,124,240</u>
	\$ <u>97,965,810</u>	\$ <u>78,163,163</u>

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.

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NOTE H - NOTES PAYABLE (Continued)

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

<u>Fiscal Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Loan Fee</u>	<u>Total</u>
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
	<u>\$ 103,721,000</u>	<u>\$ 2,488,000</u>	<u>\$ 9,260,000</u>	<u>\$ 115,469,000</u>

NOTE I - LONG-TERM LIABILITIES

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

	<u>Balance July 1, 2019</u>	<u>Additions</u>	<u>Reductions</u>	<u>Balance June 30, 2020</u>	<u>Current Portion</u>
Bonds payable	\$ 206,290,000	\$ 106,636,000	\$ (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	—
	<u>\$ 320,662,733</u>	<u>\$ 160,225,856</u>	<u>\$ (81,235,680)</u>	<u>\$ 399,652,909</u>	<u>\$ 19,785,990</u>

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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	<u>18,052,342</u>	<u>--</u>	<u>(1,741,887)</u>	<u>16,310,455</u>	<u>--</u>
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	<u>3,704,937</u>	<u>1,404,304</u>	<u>(2,371,628)</u>	<u>2,737,613</u>	<u>--</u>
	<u>\$ 316,203,470</u>	<u>\$ 29,974,300</u>	<u>\$ (25,515,037)</u>	<u>\$ 320,662,733</u>	<u>\$ 16,953,956</u>

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	<u>67,566,445</u>	<u>2,203,682</u>
	<u>929,869,437</u>	<u>885,599,654</u>
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	<u>(362,237)</u>	<u>--</u>
	<u>29,004,758</u>	<u>38,677,184</u>
Unrestricted	<u>291,541,624</u>	<u>269,235,478</u>
	<u>\$ 1,250,415,819</u>	<u>\$ 1,193,512,316</u>

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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
	<u>\$ (828,000)</u>	<u>\$ 1,190,000</u>

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.

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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.

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NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

Noncontributory Class

- o *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.
- o *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.
- o *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

- o *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.
- o *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.

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NOTE M - EMPLOYEE BENEFIT PLANS (Continued)

- o *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

- o *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.
- o *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

- o *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.
- o *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.

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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.

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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	--
	<u>\$ 21,818,025</u>	<u>\$ 10,283,163</u>

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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	<u>7,387,857</u>	<u>--</u>
	\$ <u>27,773,118</u>	\$ <u>3,450,266</u>

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	<u>(520,700)</u>
	\$ <u>2,123,515</u>

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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:

	<u>2019</u>	<u>2018</u>
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.

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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:

Strategic Allocation (Risk-Based Classes)	Target Allocation	June 30, 2019	
		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%
	<u>100.00%</u>		

* Uses an expected inflation of 2.25%

Strategic Allocation (Risk-Based Classes)	Target Allocation	June 30, 2018	
		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%
	<u>100.00%</u>		

* Uses an expected inflation of 2.25%

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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	\$ <u>148,949,493</u>	\$ <u>114,807,821</u>	\$ <u>90,226,450</u>
June 30, 2019			
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Proportionate share of the net pension liability	\$ <u>156,493,555</u>	\$ <u>120,348,341</u>	\$ <u>90,552,169</u>

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.

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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
	<u>1,215</u>	<u>1,212</u>

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.

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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

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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.

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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:

Asset Class	2020		2019	
	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%
	<u>100.00%</u>		<u>100.00%</u>	

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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

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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	\$ <u>54,216,408</u>	\$ <u>73,815,255</u>	\$ <u>98,973,632</u>
	June 30, 2019		
	1% Decrease	Current Healthcare Cost Trend Rates	1% Increase
Net OPEB Liability	\$ <u>54,329,692</u>	\$ <u>73,127,683</u>	\$ <u>97,393,040</u>

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	<u>8,165,000</u>	<u>--</u>
	\$ <u>11,596,553</u>	\$ <u>1,467,196</u>

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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	—
	<u>\$ 9,718,371</u>	<u>\$ 2,957,650</u>

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
	<u>\$ 1,964,357</u>

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO FINANCIAL STATEMENTS
June 30, 2020 and 2019**

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.

**Board of Water Supply
City and County of Honolulu
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
REQUIRED BY GASB STATEMENT NO. 68
Fiscal Years Ended June 30, 2020 and 2019**

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 ***

	<u>2020</u>	<u>2019</u>	<u>2018</u>
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	<u>(5,985,550)</u>	<u>(5,855,338)</u>	<u>(5,724,727)</u>
Net change in total OPEB liability	8,423,211	6,624,864	6,364,872
Total OPEB liability - Beginning	<u>153,014,513</u>	<u>146,389,649</u>	<u>140,024,777</u>
Total OPEB liability - Ending	\$ <u>161,437,724</u>	\$ <u>153,014,513</u>	\$ <u>146,389,649</u>
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	<u>2,370,283</u>	<u>—</u>	<u>78,200</u>
Net change in plan fiduciary net position	7,735,639	8,219,104	12,094,132
Plan fiduciary net position - Beginning	<u>79,886,830</u>	<u>71,667,726</u>	<u>59,573,594</u>
Plan fiduciary net position - Ending	\$ <u>87,622,469</u>	\$ <u>79,886,830</u>	\$ <u>71,667,726</u>
Net OPEB liability	\$ <u>73,815,255</u>	\$ <u>73,127,683</u>	\$ <u>74,721,923</u>
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%

**Board of Water Supply
City and County of Honolulu
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
REQUIRED BY GASB STATEMENT NO. 75 (Continued)
Fiscal Years Ended June 30, 2020 and 2019**

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%

**Board of Water Supply
City and County of Honolulu
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
REQUIRED BY GASB STATEMENT NO. 75 (Continued)
Fiscal Years Ended June 30, 2020 and 2019**

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**

	<u>Interest Rate</u>	<u>Bond Dated</u>	<u>Maturing Serially From</u>	<u>Call Dates (1)</u>	<u>Outstanding June 30, 2020</u>
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
					<u>27,115,000</u>
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
					<u>101,655,000</u>
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
					<u>\$ 25,085,000</u>

(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**

	<u>Interest Rate</u>	<u>Bond Dated</u>	<u>Maturing Serially From</u>	<u>Call Dates (1)</u>	<u>Outstanding June 30, 2020</u>
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	<u>3,165,000</u>
					\$ <u>59,105,000</u>

(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**

	<u>Interest Rate</u>	<u>Bond Dated</u>	<u>Maturing Serially From</u>	<u>Call Dates (1)</u>	<u>Outstanding June 30, 2020</u>
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
					<u>47,530,000</u>
					<u>\$ 260,490,000</u>

(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**

	<u>2020</u>	<u>2019</u>
REVENUES		
Water sales	\$ 228,467,575	\$ 226,347,969
Interest	7,994,046	7,549,495
Other	<u>3,565,485</u>	<u>2,697,545</u>
Total revenues	<u>240,027,106</u>	<u>236,595,009</u>
DEDUCTIONS		
Operating expenses	212,718,613	203,999,113
Less: depreciation expense	(45,796,106)	(47,266,015)
Less: allocated depreciation charges	<u>(1,709,271)</u>	<u>(1,515,219)</u>
Total deductions	<u>165,213,236</u>	<u>155,217,879</u>
Net revenues	\$ <u>74,813,870</u>	\$ <u>81,377,130</u>
NET REVENUE REQUIREMENT		
Greater of:		
1) Aggregate debt service	\$ 18,464,913	\$ 17,875,798
Required deposits	<u>—</u>	<u>—</u>
	\$ <u>18,464,913</u>	\$ <u>17,875,798</u>
2) Aggregate debt service	\$ 18,464,913	\$ 17,875,798
Minimum required debt service ratio	x <u>1.20</u>	x <u>1.20</u>
Net revenue requirement	\$ <u>22,157,896</u>	\$ <u>21,450,958</u>
Net revenue to aggregate debt service ratio	<u>4.05</u>	<u>4.55</u>

**BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU**

SINGLE AUDIT REPORTS

Fiscal Year Ended June 30, 2020

**BOARD OF WATER SUPPLY
CITY AND COUNTY OF HONOLULU**

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PART I

**REPORT ON INTERNAL CONTROL OVER FINANCIAL
REPORTING AND ON COMPLIANCE AND OTHER MATTERS**

**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN
ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

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

We have audited, in accordance with the 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, the financial statements of the Board of Water Supply ("BWS"), a component unit of the City and County of Honolulu, as of and for the fiscal year ended June 30, 2020, and the related notes to the financial statements, and have issued our report thereon dated November 6, 2020.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the BWS's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the BWS's internal control. Accordingly, we do not express an opinion on the effectiveness of the BWS's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the BWS's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

N + K CPAs, INC.

Honolulu, Hawai'i
November 6, 2020

Our understanding of internal control was the basis for our opinion on the financial statements of the entity and was not designed to identify or measure or estimate control risk or to measure or estimate the degree of control risk. Our understanding of internal control was the basis for our opinion on the financial statements of the entity and was not designed to identify or measure or estimate control risk or to measure or estimate the degree of control risk. Our understanding of internal control was the basis for our opinion on the financial statements of the entity and was not designed to identify or measure or estimate control risk or to measure or estimate the degree of control risk.

Internal Control and Control System

It is not an objective of the audit to express an opinion on the effectiveness of the entity's internal control system. The auditor's responsibility is to express an opinion on the financial statements of the entity and to identify and measure or estimate control risk. The auditor's understanding of internal control was the basis for our opinion on the financial statements of the entity and was not designed to identify or measure or estimate control risk or to measure or estimate the degree of control risk.

PART II

REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE

**INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE FOR EACH MAJOR
FEDERAL PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE;
AND REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
REQUIRED BY THE UNIFORM GUIDANCE**

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

Report on Compliance for Each Major Federal Program

We have audited the Board of Water Supply's ("BWS") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the BWS's major federal programs for the fiscal year ended June 30, 2020. The BWS's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditor's Responsibility

Our responsibility is to express an opinion on compliance for each of the BWS's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements

referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the BWS's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the BWS's compliance.

Opinion on Each Major Federal Program

In our opinion, the BWS complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the fiscal year ended June 30, 2020.

Report on Internal Control over Compliance

Management of the BWS is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the BWS's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the BWS's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

N&K CPAs, Inc.

ACCOUNTANTS | CONSULTANTS

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the financial statements of the BWS as of and for the fiscal year ended June 30, 2020, and have issued our report thereon dated November 6, 2020, which contained an unmodified opinion on those financial statements. Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the financial statements as a whole.

N + K CPAs, INC.

Honolulu, Hawai'i
November 6, 2020

**Board of Water Supply
City and County of Honolulu
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
Fiscal Year Ended June 30, 2020**

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Total Federal Expenditures
DEPARTMENT OF THE INTERIOR			
Partners for Fish and Wildlife	15.631		\$ <u>25,000</u>
Total Department of the Interior			<u>25,000</u>
DEPARTMENT OF THE TREASURY			
Pass-through City and County of Honolulu			
Coronavirus Relief Fund	21.019	N/A	<u>540,120</u>
Total Department of the Treasury			<u>540,120</u>
ENVIRONMENTAL PROTECTION AGENCY			
Pass-through Department of Health, State of Hawai'i			
Capitalization Grants for Drinking Water State Revolving Funds	66.468	ASO Log 17-118 ASO Log 20-151	4,147,277 <u>11,004,000</u> 15,151,277
Diesel Emissions Reduction Act (DERA) State Grants	66.040	N/A	<u>93,235</u>
Total Environmental Protection Agency			<u>15,244,512</u>
TOTAL EXPENDITURES OF FEDERAL AWARDS			\$ <u>15,809,632</u>

The accompanying notes are an integral part of this schedule.

**Board of Water Supply
City and County of Honolulu
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
Fiscal Year Ended June 30, 2020**

NOTE A - BASIS OF PRESENTATION

The accompanying schedule of expenditures of federal awards (the "Schedule") includes the federal award activity of BWS under programs of the federal government for the fiscal year ended June 30, 2020. The information in this Schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of BWS, it is not intended to and does not present the financial position, changes in net position, or cash flows of BWS.

NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Expenditures under the Capitalization Grants for Drinking Water State Revolving Funds program are reported when incurred and when reimbursed by federal loan proceeds received from the pass-through entity during the audit period. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement.

NOTE C - INDIRECT COST RATE

BWS has elected not to use the 10% de minimis indirect cost rate allowed under the Uniform Guidance.

NOTES TO THE FINANCIAL STATEMENTS

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements have been prepared on the basis of accounting principles generally accepted in the United States of America. The Company's accounting policies are consistent with those of the United States of America.

PART III

SCHEDULE OF FINDINGS AND QUESTIONED COSTS

**Board of Water Supply
City and County of Honolulu
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
Fiscal Year Ended June 30, 2020**

SECTION I - SUMMARY OF AUDITOR'S RESULTS

Financial Statements

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP:

Unmodified

Internal control over financial reporting:

Material weakness(es) identified?

☐ yes ☒ no

Significant deficiency(ies) identified?

☐ yes ☒ none reported

Noncompliance material to financial statements noted?

☐ yes ☒ no

Federal Awards

Internal control over major federal programs:

Material weakness(es) identified?

☐ yes ☒ no

Significant deficiency(ies) identified?

☐ yes ☒ none reported

Type of auditor's report issued on compliance for major federal programs:

Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?

☐ yes ☒ no

Identification of major federal programs:

CFDA Number

Name of Federal Program or Cluster

66.468

Capitalization Grants for Drinking Water State Revolving Funds

Dollar threshold used to distinguish between type A and type B programs:

\$750,000

Auditee qualified as a low-risk auditee?

☒ yes ☐ no

SECTION II - FINANCIAL STATEMENT FINDINGS

No matters were reported.

SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS

No matters were reported.

SECTION - SUMMARY OF AUDIT FINDINGS

Financial Statements

The audit of the financial statements was conducted in accordance with the standards of the American Institute of Certified Public Accountants (AICPA) and the standards of the Government Auditing Standards (GAS) issued by the Comptroller General of the United States.

The audit was conducted in accordance with the standards of the American Institute of Certified Public Accountants (AICPA) and the standards of the Government Auditing Standards (GAS) issued by the Comptroller General of the United States.

The audit was conducted in accordance with the standards of the American Institute of Certified Public Accountants (AICPA) and the standards of the Government Auditing Standards (GAS) issued by the Comptroller General of the United States.

PART IV

SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS

**Board of Water Supply
City and County of Honolulu
Status Report
Fiscal Year Ended June 30, 2020**

No prior audit findings which apply under the current criteria of the Uniform Guidance were noted.

ITEM FOR INFORMATION NO. 3

"February 22, 2021

**FINANCIAL
UPDATE FOR
THE QUARTER
ENDED
DECEMBER 31,
2020**

**Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843**

Chair and Members:

Subject: Financial Update for the Quarter Ended December 31, 2020

The following Board of Water Supply's financial reports and graphs are attached:

- **Budget vs Actual Revenue and Expense Totals**
- **Statement of Revenues, Expenses and Change in Net Assets**
- **Balance Sheet**
- **Budget vs Actual Appropriation Budget – Total BWS Summary**
- **Graph Representing Operating Expenditures by Category**
- **Graphs of Total Budgeted Operating Expenditures and Total Budgeted Operating Revenues**

Respectfully submitted,

**/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer**

Attachment"

The foregoing was for information only.

DISCUSSION: Joseph Cooper, Waterworks Controller, Finance Division, gave the report.

Chair Bryan Andaya inquired if the Board Members had any questions. The Board Members had no questions on the report.

Chair Andaya inquired why the BWS is over budget in the Debt Services category.

Mr. Joseph Cooper responded that the budget process occurs before we receive the amortization schedule for the State Revolving Fund (SRF) loan. BWS has to estimate the debt service schedule because we have not finished drawing on the SRF loans.

Board Member Ray Soon expressed his concern that the BWS revenues continue to rise Mr. Soon agreed with Mr. Takaki's statement that the BWS is not recruiting enough staff to complete projects to meet the BWS CIP budget expenditures. He stressed to Manager Lau the urgency to resolve the shortage of engineers, stating that the BWS raised the water rate to meet projected expenditures and improve the water system.

Manager Lau explained that filling engineering positions is sometimes a challenge since both government and private entities are continuously seeking to fill the same vacant positions. At the end of 2020, many senior staff from the Capital Projects Division retired; therefore, the BWS Human Resources Office (HRO) is aggressively trying to fill those positions.

Manager Lau stated The BWS net revenues are higher because the BWS intentionally restricted division budgets as a precaution in the event the BWS faced impacts from the pandemic. Internal projects and items that were more discretionary were moved into the future. However, the updated LRFP is predicting that delinquencies will start to decrease and the economy will slowly recover.

Manager Lau also mentioned that the BWS executes 92% of the operating budget. Manager Lau stated in 2020, the BWS saw an increase in revenue due to the six to eight months that our island experienced arid conditions. He explained when the weather is dry; the BWS sees an increase in water usage, which is reflected in our net revenues. The increase in revenues helped offset the increase in delinquencies due to the pandemic. In March 2020, when the pandemic began, we saw a shift in water usage from commercial to residential. The increase in residential usage helped offset the drop in revenues from the commercial sector.

Manager Lau stated he agreed with Board Member Soon that the BWS needs to fill the engineer positions. However, the BWS is structured in a civil service system. The BWS is trying different strategies to hire engineers. One method is reaching out to high schools such as the Academy of Engineers at Waipahu High School to expose them to STEM careers and, perhaps, a career with the BWS. Manager Lau stated it is a challenge to find experienced engineers and believes the demand is greater than the supply.

Board member Soon stated he's been in government for many years, and it's been a constant problem, but feels there is a solution. He suggested the BWS get creative and maybe look into working with the unions.

Manager Lau stated the BWS is working with the City and County (C&C) to use the State's Wiki Hire Program. Manager Lau mentioned hiring engineering interns from the University of Hawaii (UH). He asked Board Member Soon for any suggestions on how the BWS can fill the engineering positions efficiently.

Chair Andaya commented that the revenues shows a difference of 6% between the actual and budgeted. He recalled that in the past, the percentage in double digits and stated difference of 6% is a remarkable improvement from prior years.

Manager Lau stated the projected revenue and budget are closer.

Mr. Cooper stated each year, the BWS has been working on improvements to the budgeting process. Mr. Cooper indicated that the difference between

the budgeted and actual is smaller than in the past years, but there is still have room for improvements.

Chair Andaya suggested lifting the budget restrictions on the operating expenses and look into investments in technology and and advertisements to attract more applicants for BWS positions..

Mr. Cooper commented that the operating expenses had gone up from last year. At this same time last year, the expenses were \$81 million, whereas this year's expenses are at \$92 million. Since the pandemic, the BWS began to restrict the budget in mid-2020. The BWS is working on getting the budgeted and actual percentage closer in line.

Manager Lau added despite the drawbacks, the BWS is doing its best to be responsible and stay within the revenue requirements. He expressed his appreciation to the Board for adopting an Operating Budget and CIP each year. He explained that the BWS does all that is possible to keep the projected revenue and expenses incurred close and put careful thought into how money is expended. Manager Lau encourages the BWS staff to be as efficient as possible when spending funds each year.

Budget vs. Actual
Revenue and Expense Totals
As of December 31, 2020

	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	129,655	122,546	7,109
Operating Expenses	(92,201)	(99,833)	7,632
Net Revenues (expenditures)	<u>37,454</u>	<u>22,713</u>	<u>14,741</u>

Board Of Water Supply
Balance Sheet
As of December 31, 2020

Description	***** Amounts *****			***** Change *****	
	Current	Last Month End	Last Year End	This Month	This Year
ASSETS					
CURRENT ASSETS	60,502,090.71	61,382,876.68	56,419,645.28	(880,785.97)	4,082,445.43
RESTRICTED ASSETS	17,334,197.75	13,582,214.80	23,456,087.56	3,751,982.95	(6,121,889.81)
INVESTMENTS	498,299,732.89	503,620,057.18	515,240,358.86	(5,320,324.29)	(16,940,625.97)
OTHER ASSETS	12,793,083.00	13,419,372.89	13,968,245.87	(626,289.89)	(1,175,162.87)
PROPERTY / PLANT	1,272,629,489.79	1,266,230,067.41	1,247,699,840.49	6,399,422.38	24,929,649.30
DEFERRED OUTFLOWS OF RESOURCE	11,596,553.00	11,596,553.00	11,596,553.00	-	-
DEFERRED OUTFLOWS OF RESOURCE	25,223,322.33	25,223,322.33	25,223,322.33	-	-
ASSETS	<u>1,898,378,469.47</u>	<u>1,895,054,464.29</u>	<u>1,893,604,053.39</u>	<u>3,324,005.18</u>	<u>4,774,416.08</u>
LIABILITIES					
CURRENT LIABILITIES	21,885,557.72	19,699,740.01	48,594,932.54	2,185,817.71	(26,709,374.82)
OTHER LIABILITIES	36,119,315.97	36,261,215.68	37,378,035.59	(141,899.71)	(1,258,719.62)
BONDS PAYABLE, NONCURRENT	355,875,137.90	354,956,479.24	353,454,863.02	918,658.66	2,420,274.88
NET PENSION LIABILITY	114,807,821.00	114,807,821.00	114,807,821.00	-	-
NET OPEB LIABILITY	75,282,451.00	75,282,451.00	75,282,451.00	-	-
DEFERRED INFLOWS OF RESOURCES	13,670,127.00	13,670,127.00	13,670,127.00	-	-
LIABILITIES	<u>617,640,410.59</u>	<u>614,677,833.93</u>	<u>643,188,230.15</u>	<u>2,962,576.66</u>	<u>(25,547,819.56)</u>
NET ASSETS					
RETAINED EARNINGS	363,611,956.38	353,409,816.99	301,919,295.49	-	-
FUND BALANCE	594,633,831.66	594,633,831.66	594,633,831.66	-	-
RESERVE FOR ENCUMBRANCES	292,170,035.20	302,372,174.59	353,862,696.09	-	-
CURRENT YEAR CHANGES TO FU	30,322,235.64	29,960,807.12		361,428.52	30,322,235.64
NET ASSETS	<u>1,280,738,058.88</u>	<u>1,280,376,630.36</u>	<u>1,250,415,823.24</u>	<u>361,428.52</u>	<u>30,322,235.64</u>
TOTAL LIABILITIES AND NET ASSETS	<u>1,898,378,469.47</u>	<u>1,895,054,464.29</u>	<u>1,893,604,053.39</u>	<u>3,324,005.18</u>	<u>4,774,416.08</u>

Budget vs Actual Appropriation Budget - Total BWS Summary

(\$000's)

CIFIS 21820-3021

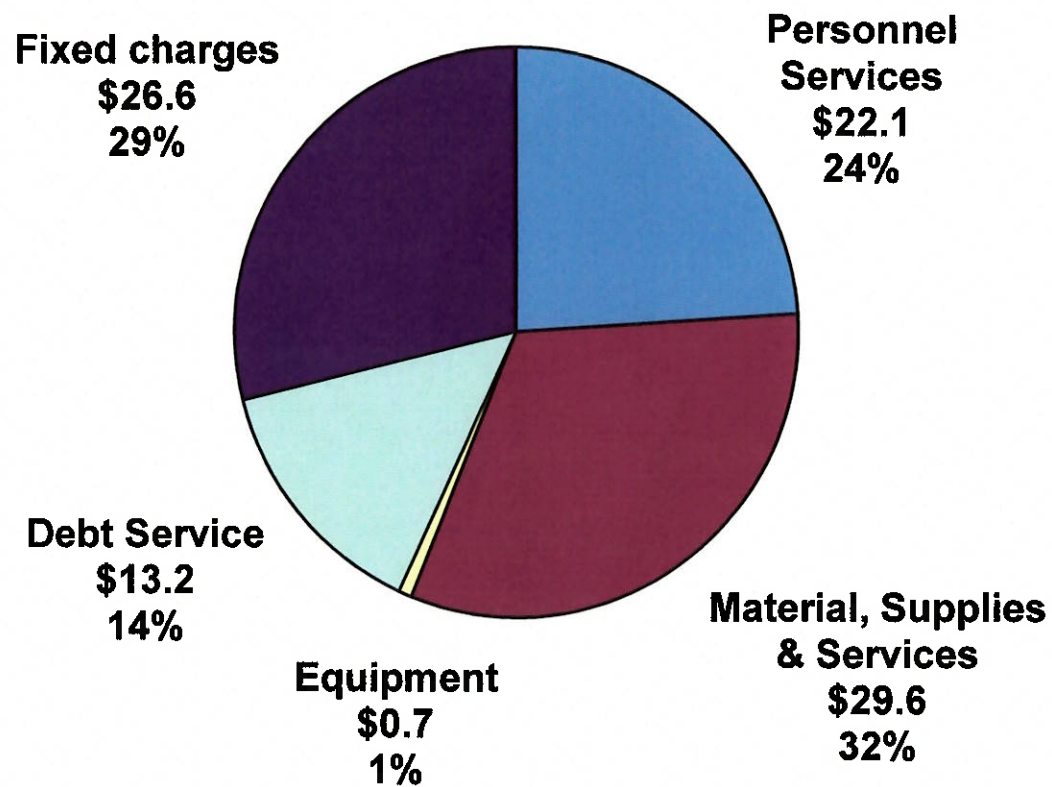
AS OF 12/31/2020

OPER UNIT ALL

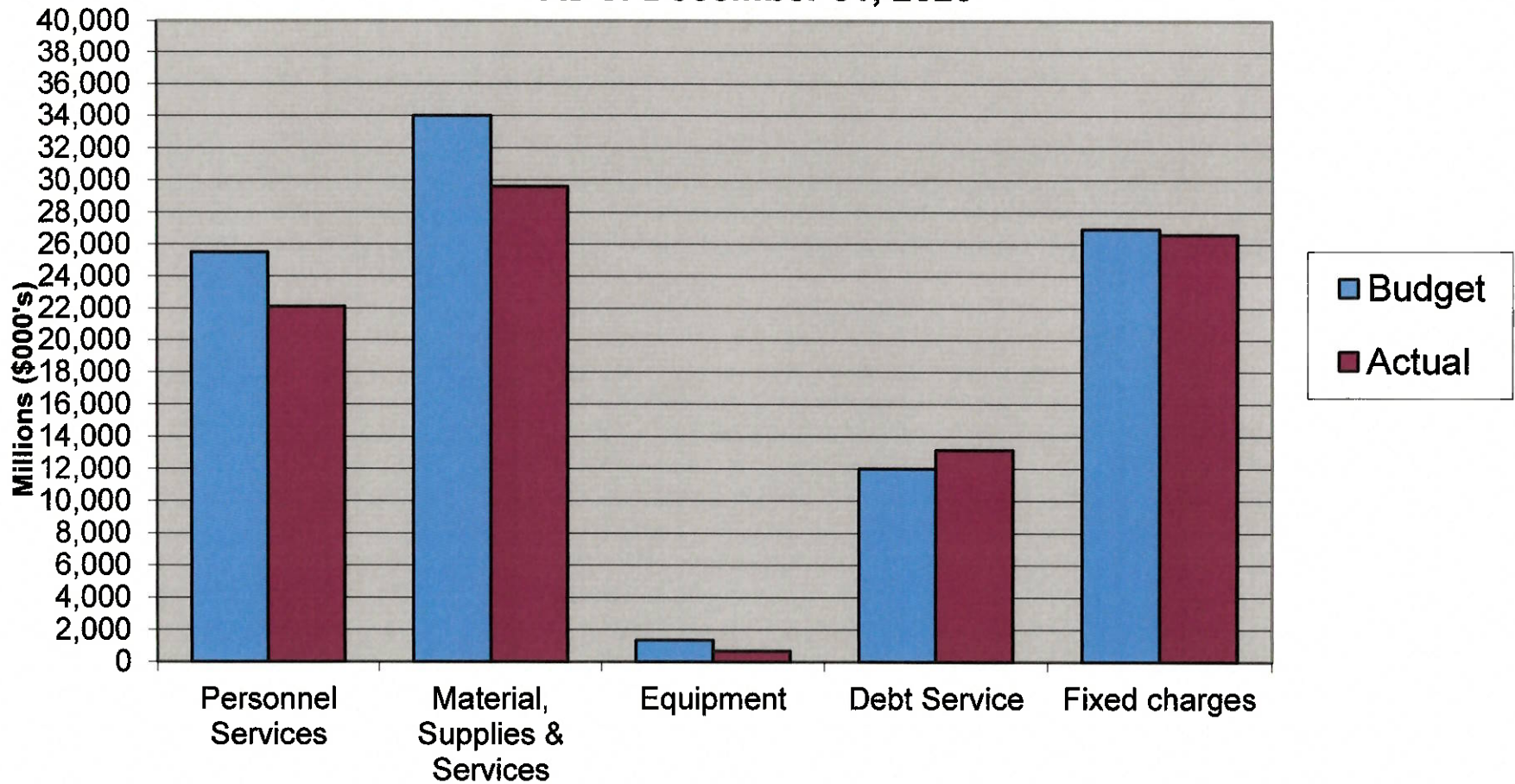
BUSINESS UNIT ALL

YTD-TO-DATE				Object Description	FOR THE FISCAL YEAR				
YTD Actuals	YTD Budget	Avail/ (Over)	%		Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
<u>129,655</u>	<u>122,546</u>	<u>(7,109)</u>	<u>5.80-</u>	<u>REVENUE</u>	<u>129,655</u>		<u>245,091</u>	<u>115,436</u>	<u>47.10</u>
				OPERATING EXPENSES:					
22,097	25,520	3,423	13.41	Personnel Services	22,097		51,061	28,964	56.72
				MATERIALS AND SUPPLIES					
18,715	17,692	(1,023)	5.78-	Services	8,374	10,341	40,465	21,750	53.75
4,718	7,475	2,757	36.88	Supplies	3,302	1,416	14,029	9,311	66.37
18	231	213	92.21	Education & Training	14	4	592	574	96.96
	1	1	100.00	Utilities			2	2	100.00
902	1,709	807	47.22	Repairs & Maint	465	437	3,336	2,434	72.96
5,262	6,882	1,620	23.54	Misc	4,734	528	13,665	8,403	61.49
689	1,344	655	48.74	Equipment	32	657	6,579	5,890	89.53
13,179	12,017	(1,162)	9.67-	Debt Service	13,179		24,214	11,035	45.57
				FIXED CHARGES:					
11,426	13,181	1,755	13.31	Utilities	11,426		26,362	14,936	56.66
1,650	1,650			Case Fees	1,650		3,300	1,650	50.00
7,191	6,000	(1,191)	19.85-	Retirement System Contribution	7,191		12,000	4,809	40.08
6,354	6,131	(223)	3.64-	Misc Employees' Benefits	6,354		12,247	5,893	48.12
<u>92,201</u>	<u>99,833</u>	<u>7,632</u>	<u>7.64</u>	<u>TOTAL OPERATING EXPENDITURES</u>	<u>78,818</u>	<u>13,383</u>	<u>207,852</u>	<u>115,651</u>	<u>55.64</u>
37,454	22,713	(14,741)		NET REVENUES (EXPENDITURES)	50,837	(13,383)	37,239	(215)	

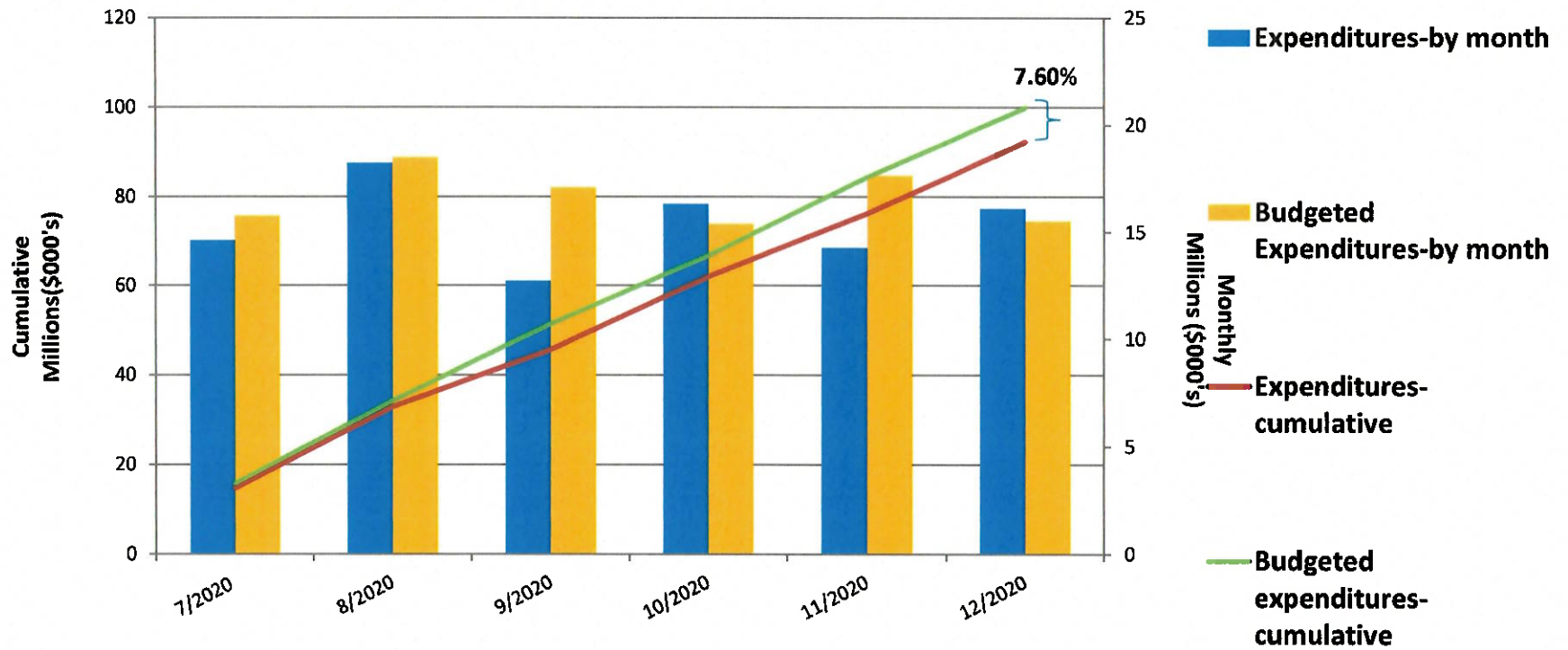
Total Operating Expenditures - \$92.2
As of December 31, 2020
(millions of dollars)



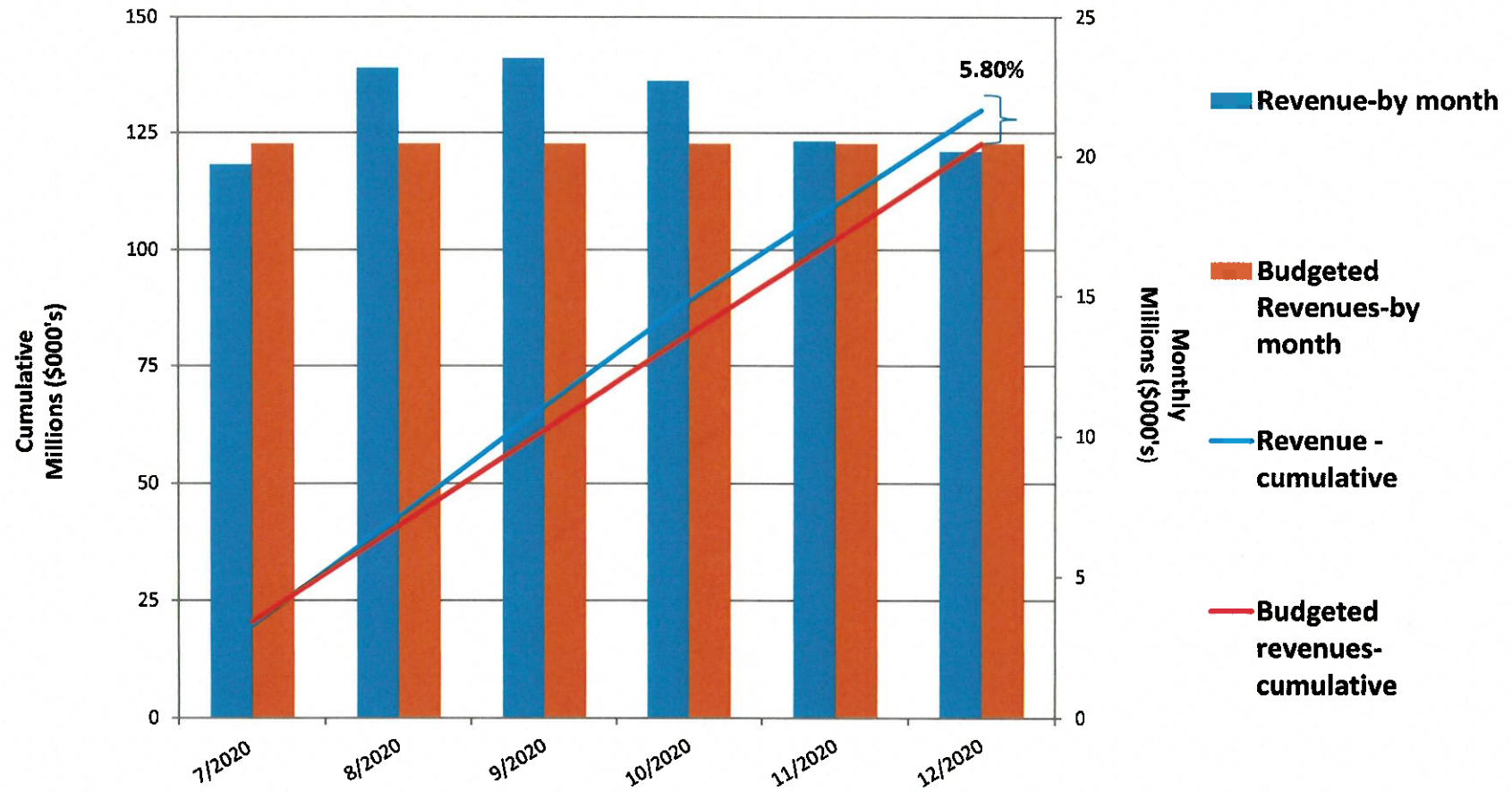
**Operating Expenditures by Category (Budget vs. Actual)
As of December 31, 2020**



BUDGETED OPERATING EXPENDITURES FY 2021



BUDGETED OPERATING REVENUES FY 2021



WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

Financial Performance

July 2020 – December 2020





Budget to Actual July 2020 – December 2020

- Actual Revenue \$129.7 million vs. Budgeted Revenue \$122.5 million
- Operating costs are \$92 million vs. Budgeted costs of \$100 million
- Actual Net Revenue \$37.5 million vs. Budgeted Net Revenue \$22.7 million



Cost Drivers

Year to Date December 2020

	Actual (millions)	Budget (millions)
• Personnel	\$22.1	\$25.5
• Material/Serv/Supplies	\$29.6	\$34.1
• Equipment	\$ 0.7	\$ 1.3
• Debt Service	\$13.2	\$12.0
• Utilities	\$11.4	\$13.2

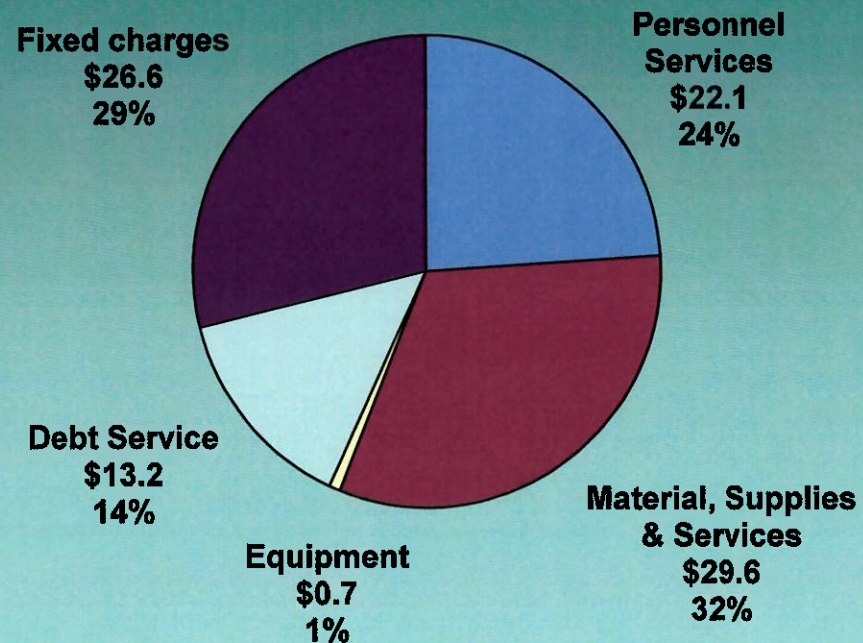
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Board of Water Supply
City and County of Honolulu

Total Operating Expenditures - \$92.2
As of December 31, 2020
(millions of dollars)



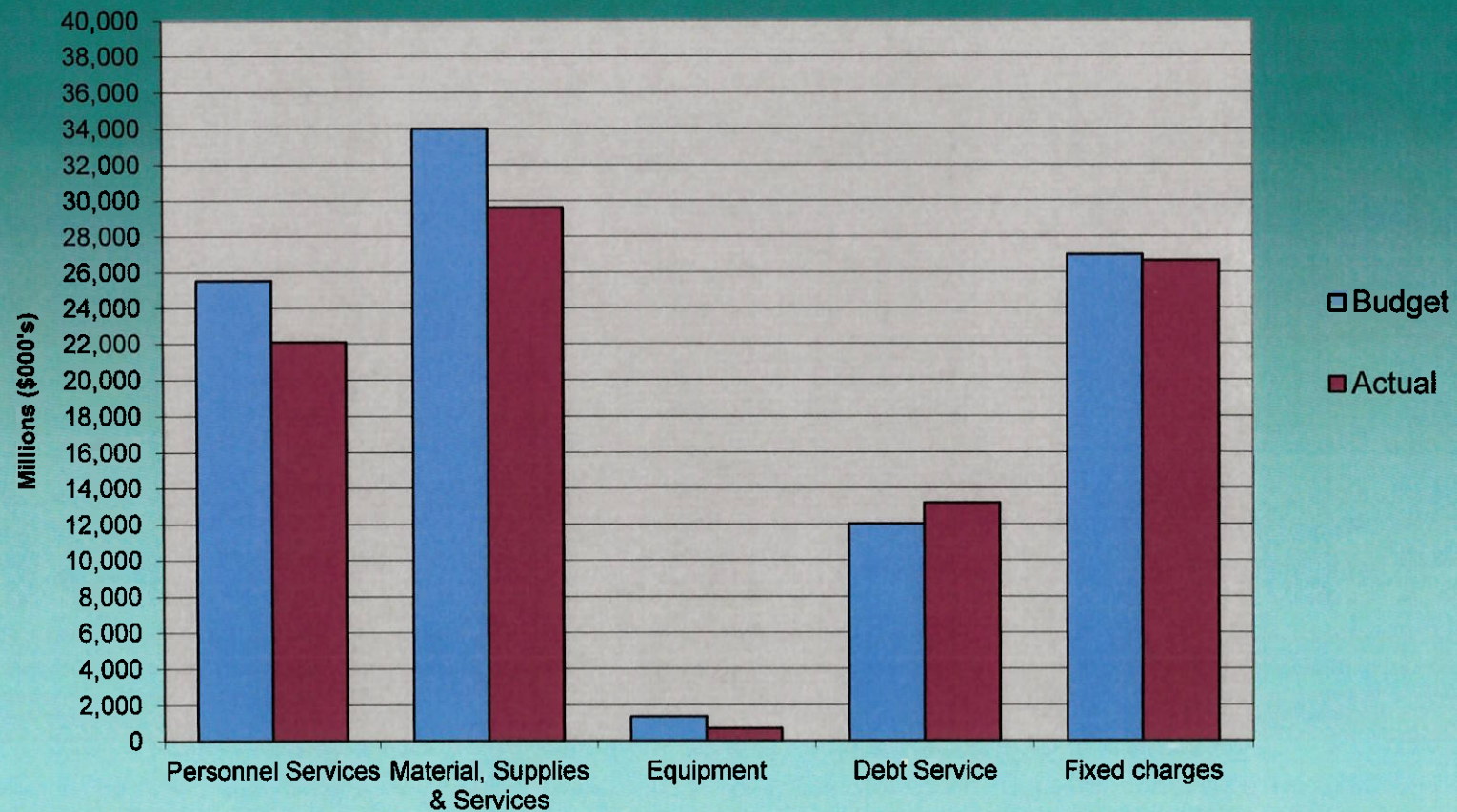
WATER FOR LIFE

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Board of Water Supply
City and County of Honolulu

**Operating Expenditures by Category (Budget vs. Actual)
As of December 31, 2020**



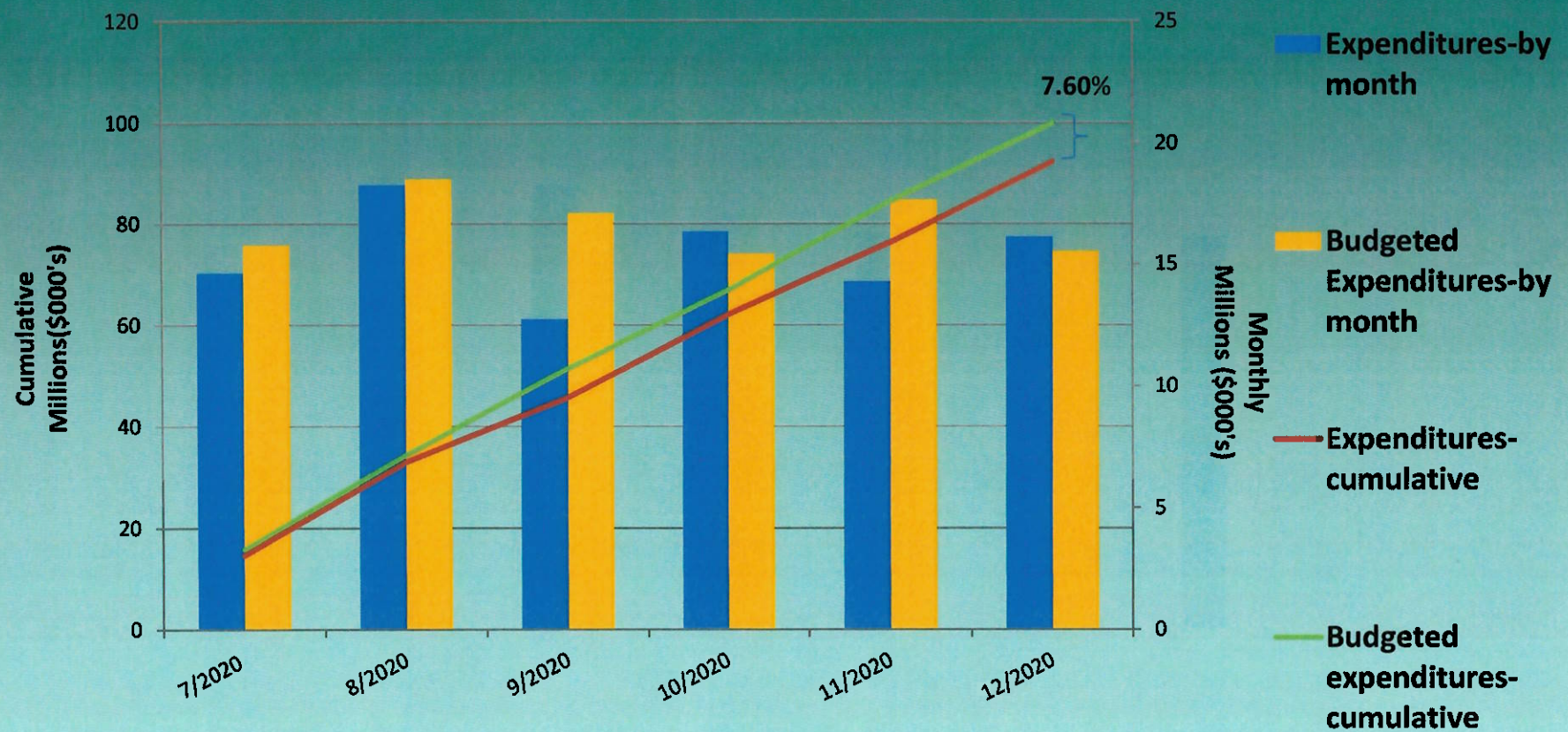
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Board of Water Supply
City and County of Honolulu

BUDGETED OPERATING EXPENDITURES FY 2021



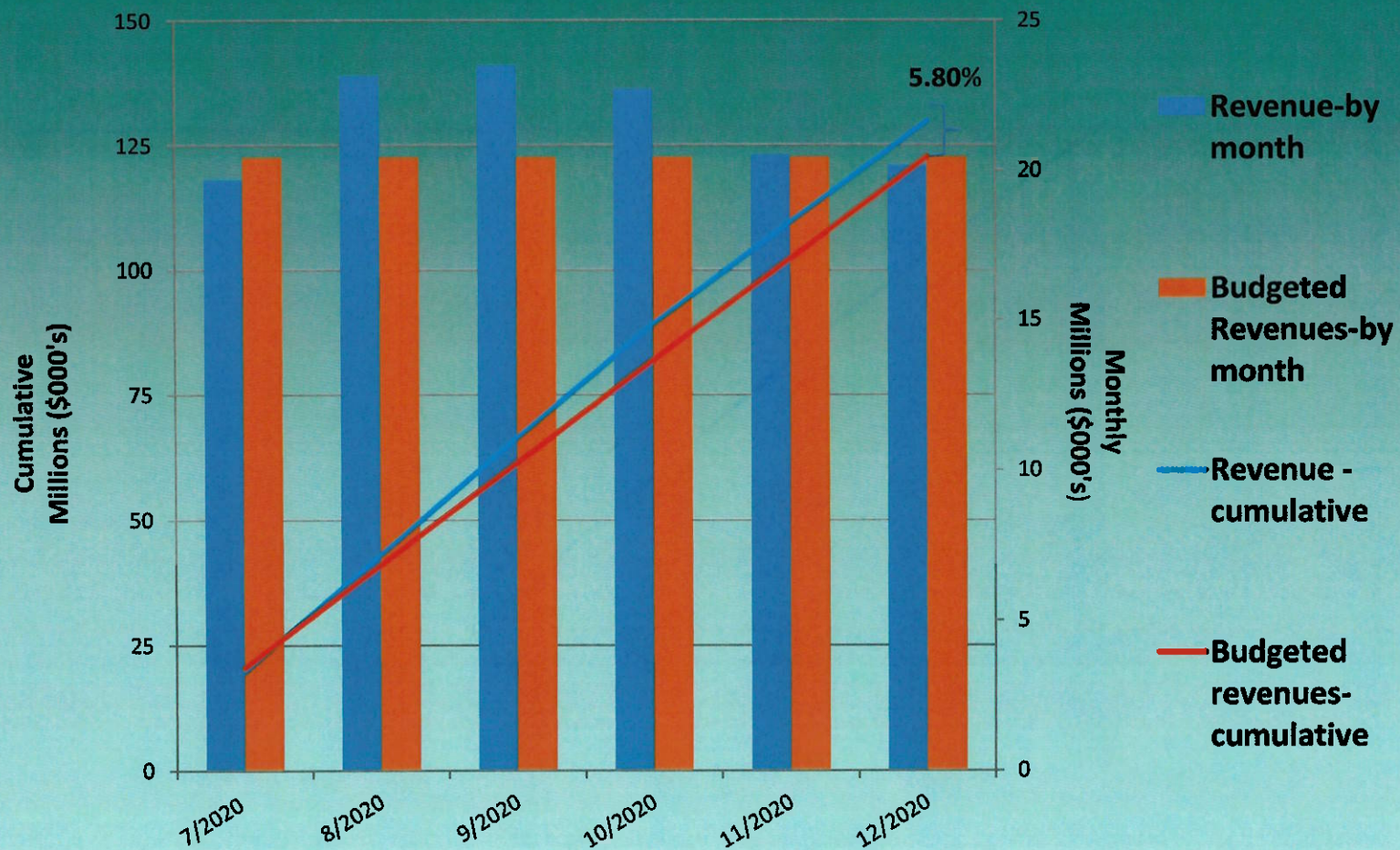
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Board of Water Supply
City and County of Honolulu

BUDGETED OPERATING REVENUES FY 2021



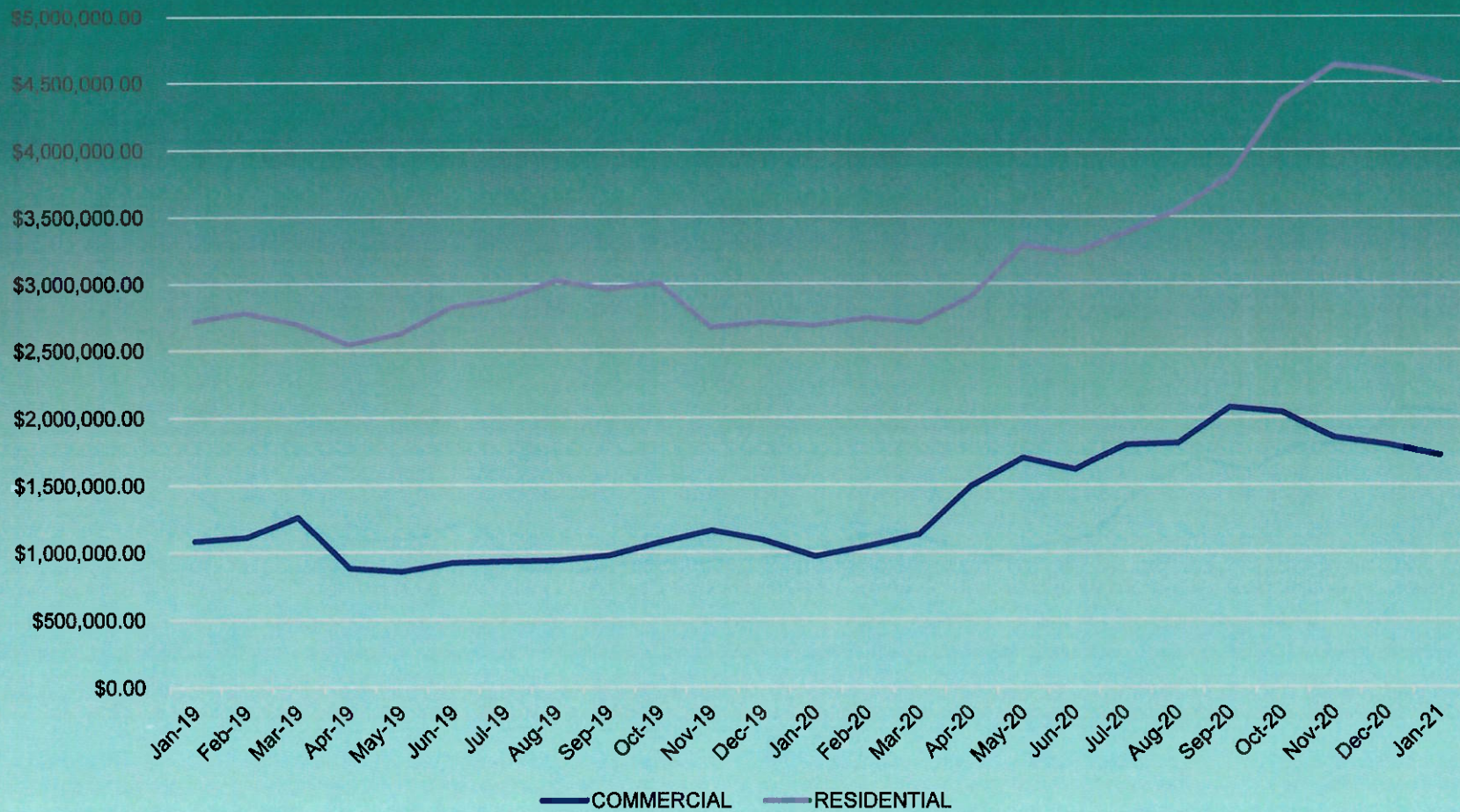
WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

MONTHLY DELINQUENCY AMOUNT BY ACCOUNT TYPE
January 2019 to Present



WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City and County of Honolulu

Questions
or
Comments

ITEM FOR INFORMATION NO. 4

"February 22, 2021

RECRUITMENT
STATUS Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Subject: Recruitment Status

Michele L. Thomas, Executive Assistant, Human Resources Office, will be presenting an update on the Recruitment Status for the period of November 2020 to January 2021.

Respectfully submitted,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

Attachment

DISCUSSION: Michele Thomas, Executive Assistant, Human Resources Office, gave the report.

Board Member Ray Soon asked Ms. Michele Thomas what is happening at the City & County (C&C), making it difficult for the BWS to recruit?

Ms. Thomas explained while the BWS is continuing with recruitment, the C&C is slowing down its efforts due to budget constraints. Therefore, the change has caused more scrutiny of the BWS on recruitment efforts.

Manager Ernest Lau explained that the C&C is working to stay within budget; therefore, the C&C is being selective and careful regarding which positions they are recruiting and filling. He stated he does not know what the C&C budget drivers are, only that the BWS has been informed that the C&C is slowing down on their recruitments. However, the BWS will continue recruiting and filling critical positions with the anticipation that the BWS will be undergoing the same scrutiny as other C&C departments.

Board Member Soon inquired if the Mayor or the City Council has asked the BWS to monitor recruiting.

Manager Lau replied the C&C hasn't asked the BWS to slow down recruiting. The BWS will continue to recruit for positions that are in dire need to be filled but will be prudent on other positions. Manager Lau pointed out the number of retirements the BWS had at the end of December 2020 throughout the different departments, which may partially be the pandemic's effects.

Board Member Max Sword asked why the BWS would be under scrutiny for recruiting employees?

Manager Lau responded that the C&C Department of Human Resources (DHR) must validate why a position needs to be filled since the C&C is working on adjusting its budget.

Board Member Sword commented he understands why the C&C would be putting a halt to their recruitment but doesn't know why it would affect the BWS since the BWS has its own budget.

Manager Lau stated the BWS is semi-autonomous but still part of the C&C therefore the BWS will continue to recruit with the anticipation of being under greater scrutiny.

Manager Lau mentioned that next year the BWS is working on a new rate schedule that will be presented to the Board. He explained that the current water rates that the Board adopted would be expiring in FY 2023; therefore, the BWS will begin a water rate study to determine the next water rate increase that will last another five years. He expressed his appreciation to the Board for adopting the previous water rates. He hopes that the Board can adopt a new, more moderate rate increase, which will provide the same service to the ratepayers, fill critical positions, manage water system operations, and carry out CIP projects. Manager Lau added the BWS would like to continue to help ratepayers knowing that people are still trying to recover from the pandemic. He commented it's a delicate balance between wanting to provide the service and accomplish the BWS mission and services.

Board Member Soon conveyed his concern about holding onto money and not expending funds since Mr. Cooper reported that the BWS has a net revenue of \$15 Million.

Manager Lau stated the BWS does not hold onto money. It is carried over from the previous fiscal year's working capital that is within the BWS policies.

Board Member Soon stated what he is concerned about is hiring the personnel needed to complete the BWS plan of repairing 21 miles of pipeline.

Manager Lau agreed with Board Member Soon that the BWS must hire and fill positions critical to carry out the plans the BWS set forth. However, in doing so, Manager Lau explained that the BWS will have to continue working with DHR and prepare for a rigorous process. The BWS does not have a hiring freeze and Manager Lau indicated that the Board will continue to hire and fill position. Unfortunately, the BWS still faces quite a few employee turnovers and vacancies; nevertheless, the BWS will continue to do all it can to fill vacancies to build more capacity and deliver a larger CIP program.

Chair Bryan Andaya summarized what he gathered from the discussion is that the BWS will continue to recruit to fill all of 741 positions aggressively but may be faced with justifying each position and scrutiny. However,

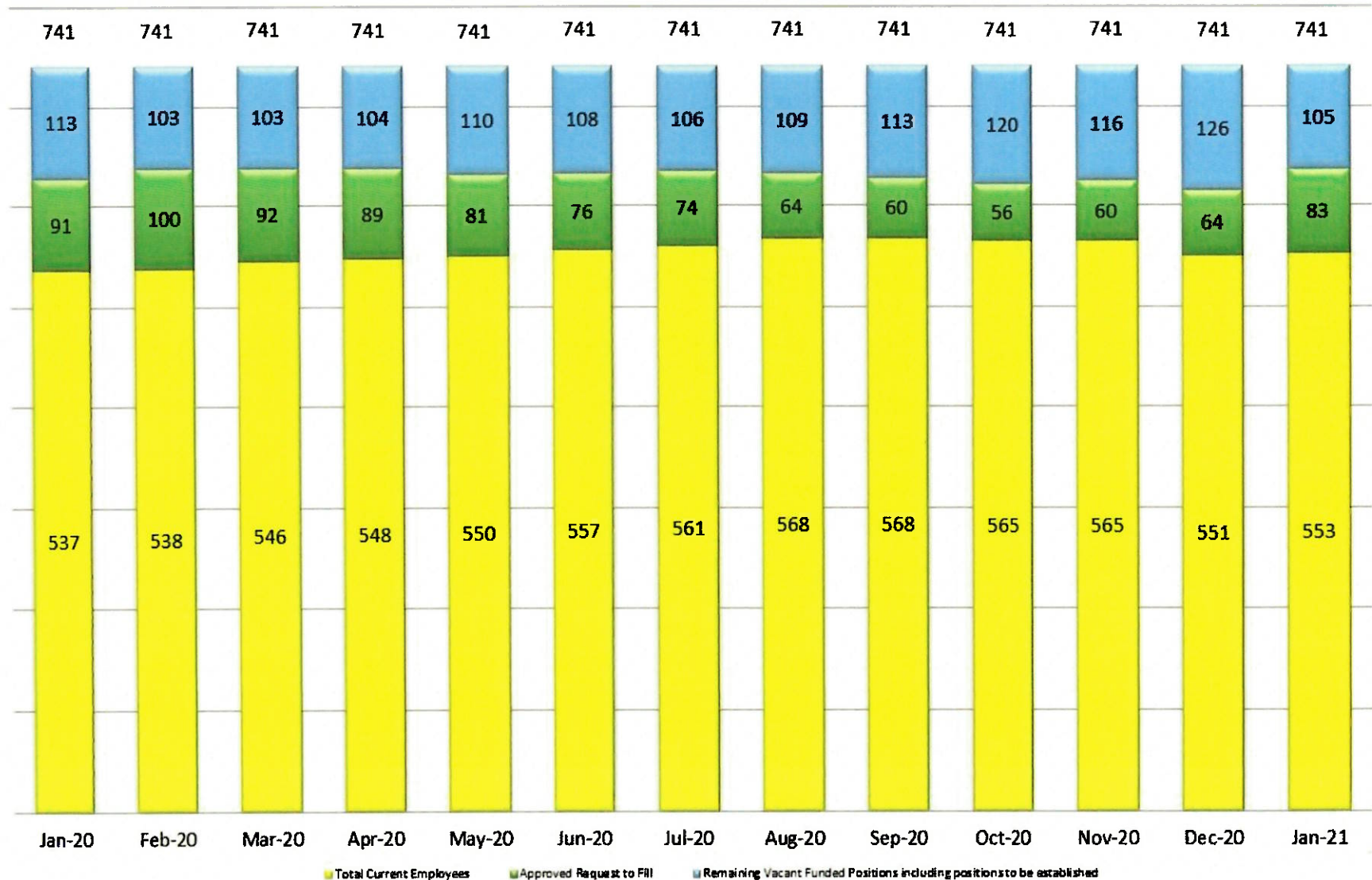
despite the challenges, the BWS will continue to pursue the plan of replacing 21 miles of pipeline.

Manager Lau concurred with Chair Andaya's summary and added that the BWS is carefully monitoring expenditures.

Chair Andaya stated that the Board wants to ensure that the BWS continues to pursue with the plans and projects budgeted for.

Manager Lau assures the Board that he understands.

Positions Filled January 1, 2020 through January 31, 2021



For the Period Nov20-Jan21 Actions: 7 New hires, 6 Promotions, 2 Demotions, 19 Separations, 44 New approvals to fill, 2 Cancelled requests

BOARD OF WATER SUPPLY

City and County of Honolulu

RECRUITMENT AND SEPARATION STATUS For Period November 30, 2020 to January 31, 2021

Status of Positions Under Recruitment

	as of		
	11/30/2020	12/31/2020	1/31/2021
Pending DHR Open List	22	17	23
Pending IDCE	1	4	17
Pending Interview Questions	9	11	17
Pending Interviews	20	22	19
Anticipated Starts	4	6	7
Total Positions Under Recruitment	56	60	83

Filled Positions

Month	Nov-20	Dec-20	Jan-21
Open list	2	1	4
IDCE list	2	2	4

Separations

Month	Nov-20	Dec-20	Jan-21
Retire	2	15	1
Resign	0	0	1

Legend:

DHR = Department of Human Resources City and County of Honolulu

IDCE = Intra-Departmental Competitive Examination

ITEM FOR INFORMATION NO. 5

"February 22, 2021

STATUS
UPDATE OF
GROUNDWATER
LEVELS AT ALL
INDEX STATIONS

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Subject: Status Update of Groundwater Levels at All Index Stations

There was one aquifer index station in low groundwater condition for the production month of December 2020. Punaluu is in Caution status. The monthly production average for December 2020 was 130.82 million gallons per day, which is slightly above the 5-year monthly average. Most monitoring stations are exhibiting slightly declining water level trends.

The Board of Water Supply (BWS) rainfall index for the month of December 2020 was 58 percent of normal, with a 5-month moving average of 53 percent. As of January 5, 2021, the Hawaii Drought Monitor shows abnormally dry conditions in the coastal areas of Waimanalo and Honolulu through Central Oahu and portions of the North Shore; and moderate drought conditions on the leeward coast from Ewa Beach to Makaha. The National Weather Service is forecasting La Nina conditions continuing through the spring months, with potential above-normal rainfall through June 2021.

As reported at the October 26 Board Meeting, BWS initiated a voluntary conservation notice of 10 percent for Windward and East Honolulu, due to declining water levels coupled with unusually hot weather and low rainfall conditions for the previous 7 months. We recognize that many customers continue to use water wisely and reduce water waste; we commend them for their efforts. Due to only one station currently being in caution status (Punaluu), we intend to lift the voluntary conservation notice at the end of January.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:

Barry Usagawa, Program Administrator, Water Resources Division, gave the report. There were no comments or discussion.

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF JANUARY 2021**

POTABLE

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.00
WAILUPE	0.12
AINA KOA	0.04
AINA KOA II	0.71
MANOA II	0.54
PALOLO	1.04
KAIMUKI HIGH	0.69
KAIMUKI LOW	1.41
WILDER	7.02
BERETANIA HIGH	6.51
BERETANIA LOW	0.92
KALIHI HIGH	0.00
KALIHI LOW	0.00
KAPALAMA	1.51
KALIHI SHAFT	7.58
MOANALUA	1.30
HALAWA SHAFT	6.92
KAAMILO	0.86
KALAUAO	4.70
PUNANANI	10.52
KAAHUMANU	0.23
HECO WAIU	2.68
MANANA	0.27
WELLS SUBTOTAL:	55.57
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.00
GRAVITY SUBTOTAL:	0.17
HONO. SUBTOTAL:	55.74

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.15
WAIMANALO III	0.00
KUOU I	0.92
KUOU II	0.05
KUOU III	0.74
LULUKU	0.90
HAIKU	0.00
IOLEKAA	0.00
KAHALUU	0.66
KAHANA	0.97
PUNALUU I	0.00
PUNALUU II	2.10
PUNALUU III	0.85
KALUANUI	1.23
MAAKUA	0.25
HAUULA	0.27
WELLS SUBTOTAL:	9.08
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.13
WAIHEE TUNNEL	3.68
LULUKU TUNNEL	0.18
HAIKU TUNNEL	0.96
KAHALUU TUNNEL	1.74
GRAVITY SUBTOTAL:	6.88
WIND. SUBTOTAL:	15.96

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.29
OPANA	0.11
WAIALEE I	0.43
WAIALEE II	0.49
HALEIWA	0.00
WAIALUA	1.75
N.SHORE SUBTOTAL:	3.06

STATION	MGD
MILILANI (4)	
MILILANI I	1.40
MILILANI II	0.00
MILILANI III	0.53
MILILANI IV	2.19
MILILANI SUBTOTAL:	4.11

STATION	MGD
WAIHAWA (5)	
WAIHAWA	0.93
WAIHAWA II	2.00
WAIHAWA SUBTOTAL:	2.94

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.61
HALAWA 550	0.00
AIEA	1.14
AIEA GULCH 497	0.31
AIEA GULCH 550	0.21
KAONOHI I	1.16
WAIMALU I	0.00
NEWTOWN	0.76
WAIU	0.65
PEARL CITY I	0.82
PEARL CITY II	1.04
PEARL CITY III	0.26
PEARL CITY SHAFT	0.93
PEARL CITY-HALAWA SUBTOTAL:	7.91

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	1.22
WAIPIO HTS. I	0.71
WAIPIO HTS. II	0.25
WAIPIO HTS. III	1.15
WAIPAHU	5.28
WAIPAHU II	2.24
WAIPAHU III	1.58
WAIPAHU IV	2.83
KUNIA I	4.32
KUNIA II	1.95
KUNIA III	1.41
HOAEAE	5.50
HONOULIULI I	0.00
HONOULIULI II	5.63
MAKAKILO	0.15
WAIPAHU-EWA SUBTOTAL:	34.23

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.00
MAKAHA II	0.10
MAKAHA III	0.35
MAKAHA V	0.22
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.06
WAIANAE I	0.13
WAIANAE II	0.44
WAIANAE III	0.66
WELLS SUBTOTAL:	1.97
WAI. C&C TUNNEL	1.40
WAI. PLANT. TUNNELS	0.23
GRAVITY SUBTOTAL:	1.63
WAIANAE SUBTOTAL:	3.61

NONPOTABLE

NONPOTABLE	MGD
KALAUAO SPRINGS	0.35
BARBERS POINT WELL	1.03
GLOVER TUNNEL NP	0.31
NONPOTABLE TOTAL:	1.69

RECYCLED WATER (DECEMBER 2020)

RECYCLED WATER	MGD
HONOULIULI WRF R-1	6.51
HONOULIULI WRF RO	1.30
RECYCLED WATER TOTAL:	7.81

**PRODUCTION, HEAD AND RAINFALL REPORT
MONTH OF JANUARY 2021**

PRODUCTION SUMMARIES

TOTAL WATER	MGD
PUMPAGE	118.87
GRAVITY	8.68
POTABLE TOTAL:	127.56
NONPOTABLE	1.69
RECYCLED WATER	7.81
TOTAL WATER:	137.06

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS				
POTABLE SOURCES				
WATER USE DISTRICTS		A	B	C
		PERMITTED USE/ BWS YLDS	JAN 2021	DIFF. A-B
1	HONOLULU	82.93	55.57	27.36
2	WINDWARD	25.02	12.15	12.87
3	NORTH SHORE	4.70	3.06	1.63
4	MILILANI	7.53	4.11	3.42
5	WAHIAWA	4.27	2.94	1.33
6	PEARL CITY-HALAWA	12.25	7.91	4.34
7	WAIPAHU-EWA	50.63	34.23	16.40
8	WAIANAE	4.34	1.97	2.37
TOTAL:		191.67	121.94	69.72

CWRM PERMITTED USE FOR BWS				
NONPOTABLE SOURCES				
WATER USE DISTRICTS		A	B	C
		PERMITTED USE	JAN 2021	DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.03	-0.03
TOTAL:		1.00	1.03	-0.03

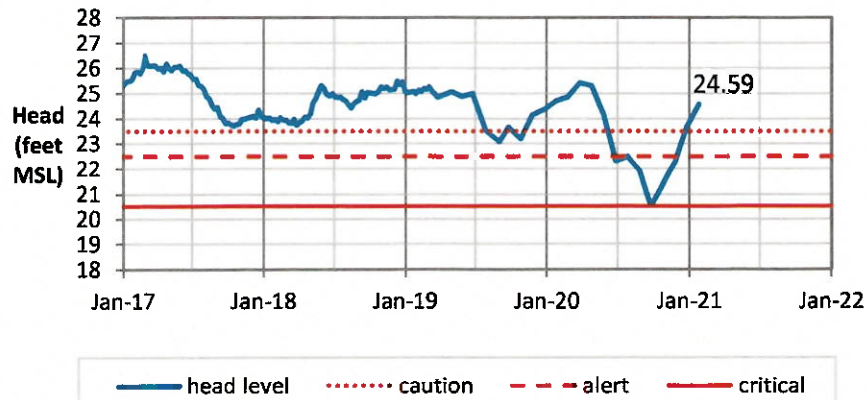
EFFECTIVE WATER DEMAND PER DISTRICT

IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	1.13
7	8	BARBERS PT LB	6.02

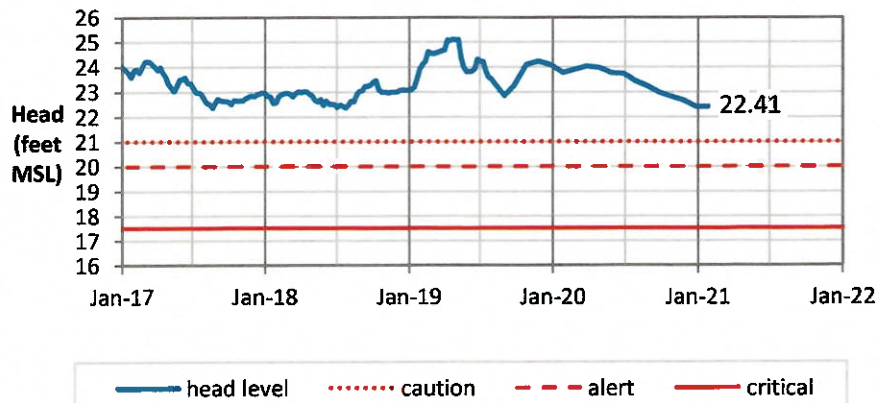
WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	55.57	1.13	-	56.70
2	WINDWARD	12.15	-	1.13	11.02
3	NORTH SHORE	3.06	-	-	3.06
4	MILILANI	4.11	-	-	4.11
5	WAHIAWA	2.94	-	-	2.94
6	PEARL CITY-HALAWA	7.91	-	-	7.91
7	WAIPAHU-EWA	34.23	-	6.02	28.20
8	WAIANAE	1.97	6.02	-	8.00
TOTAL:		121.94	7.15	7.15	121.94

Head Report

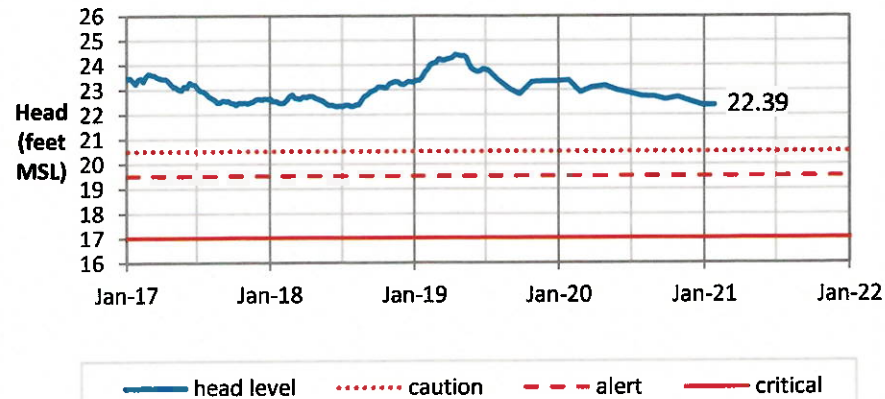
Kaimuki 02/01/21



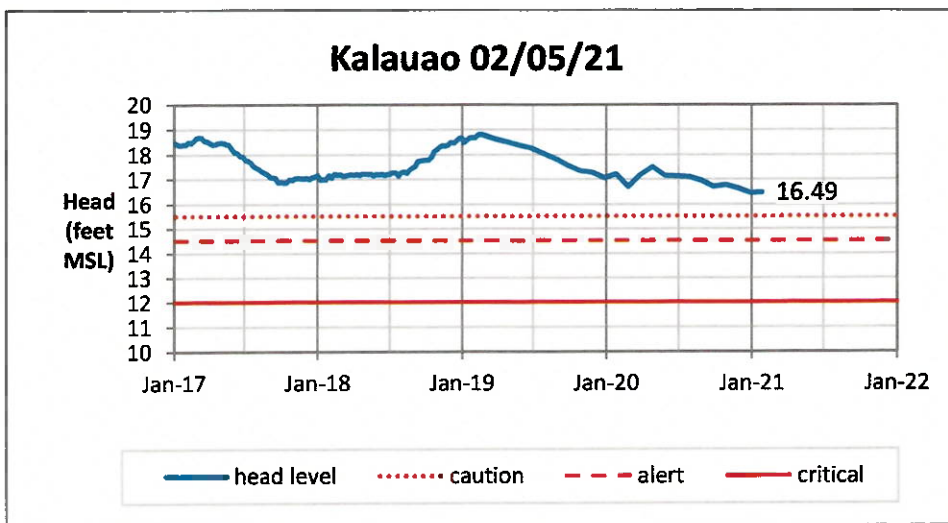
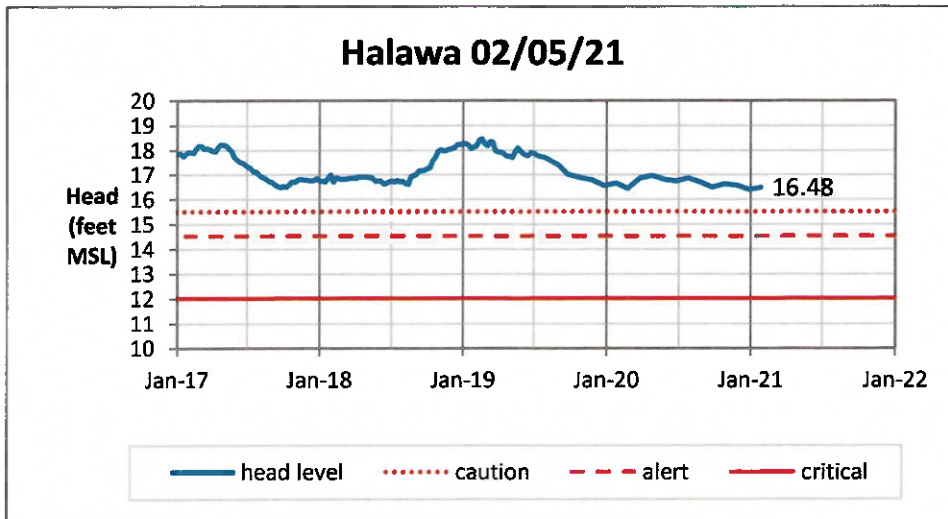
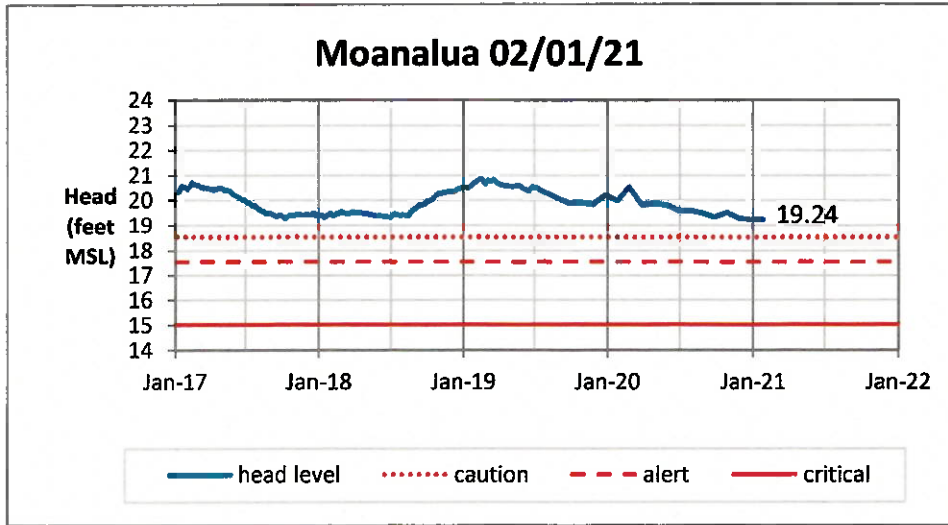
Beretania 02/01/21



Kalihi 02/01/21

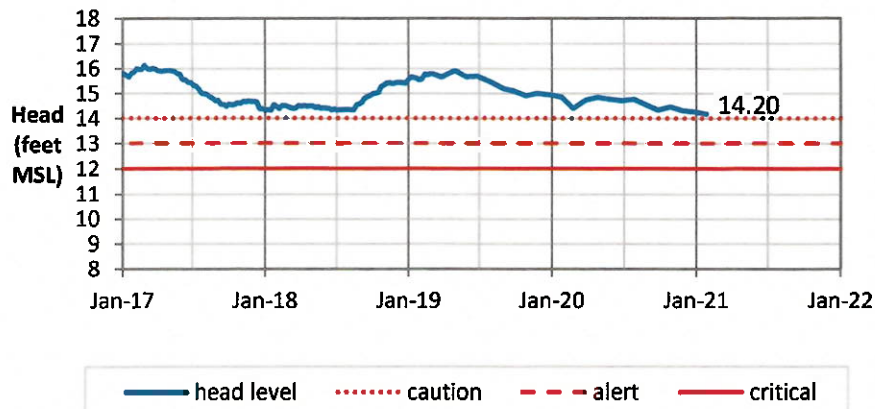


Head Report

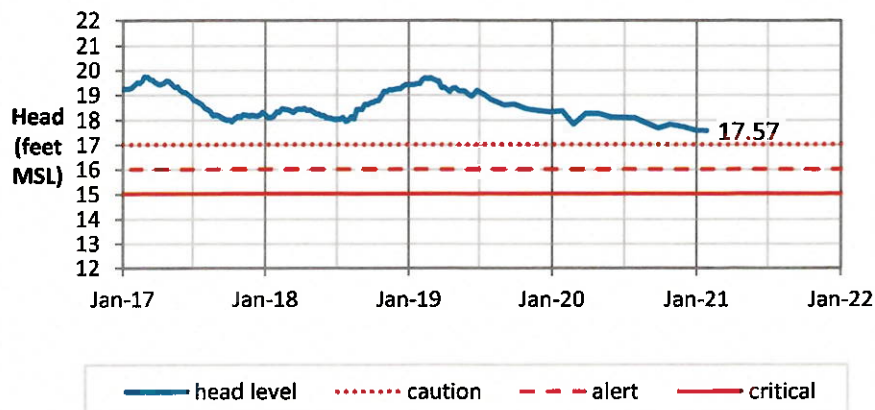


Head Report

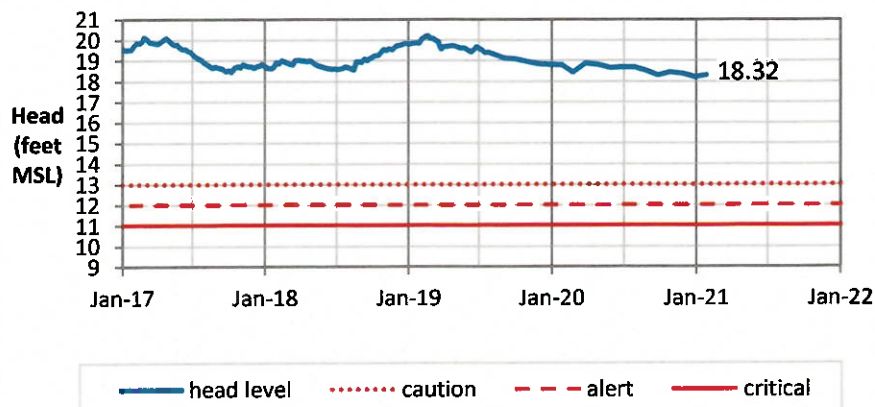
Pearl City 02/05/21



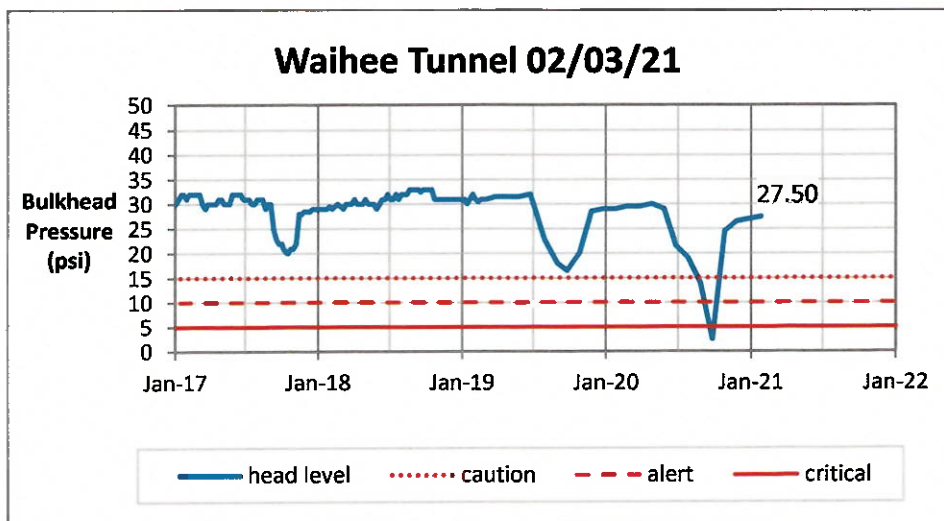
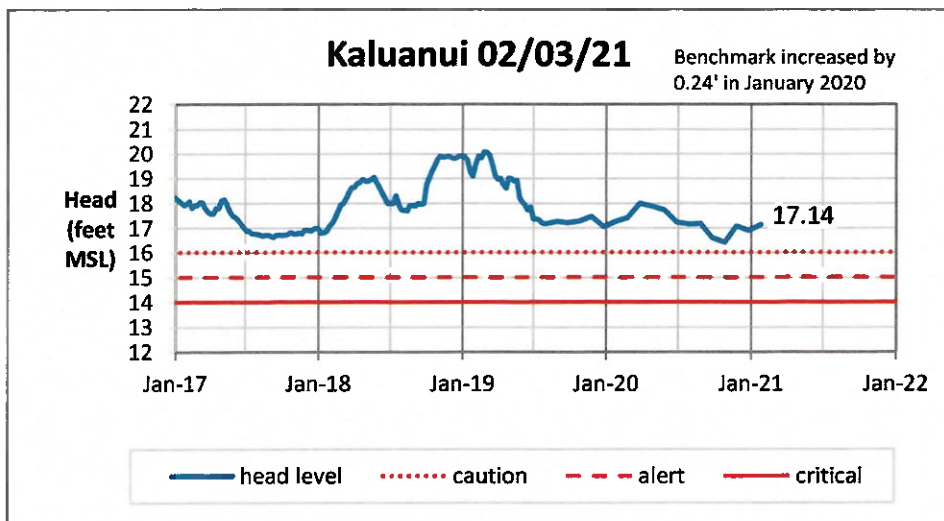
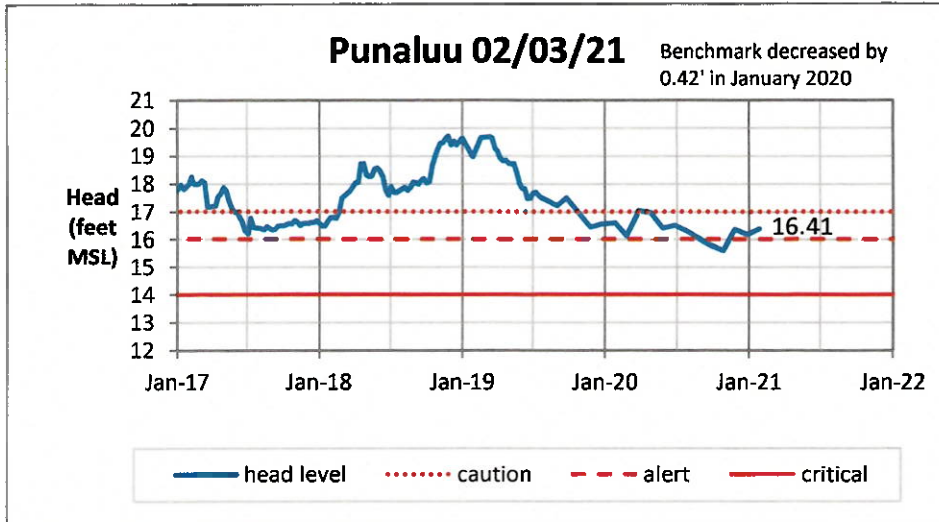
Waipahu 02/02/21



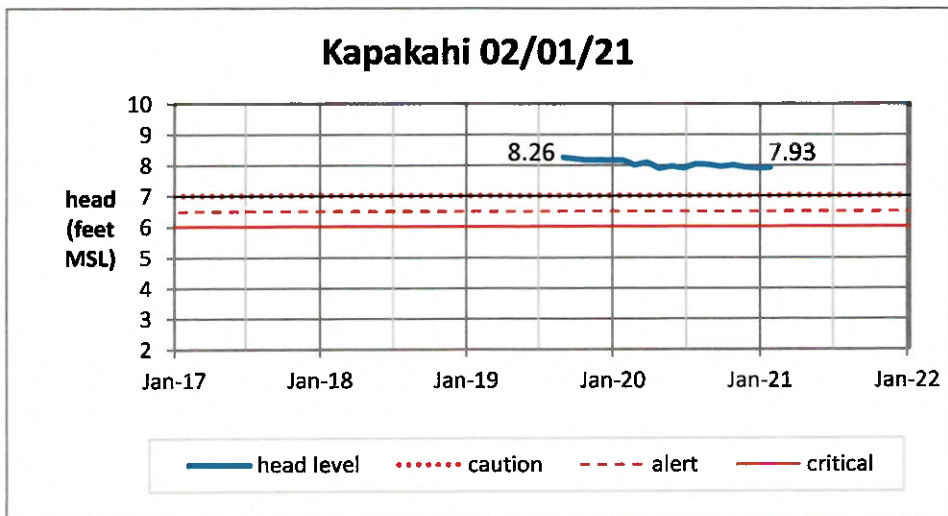
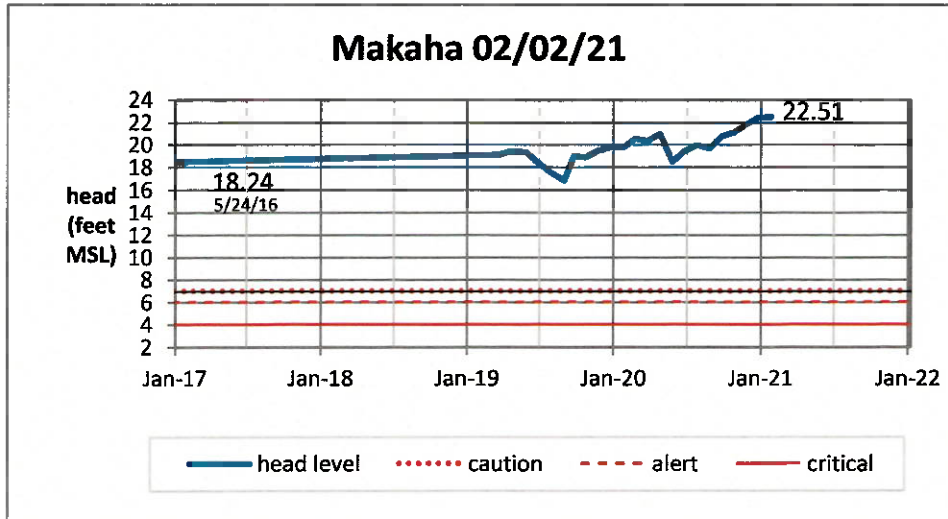
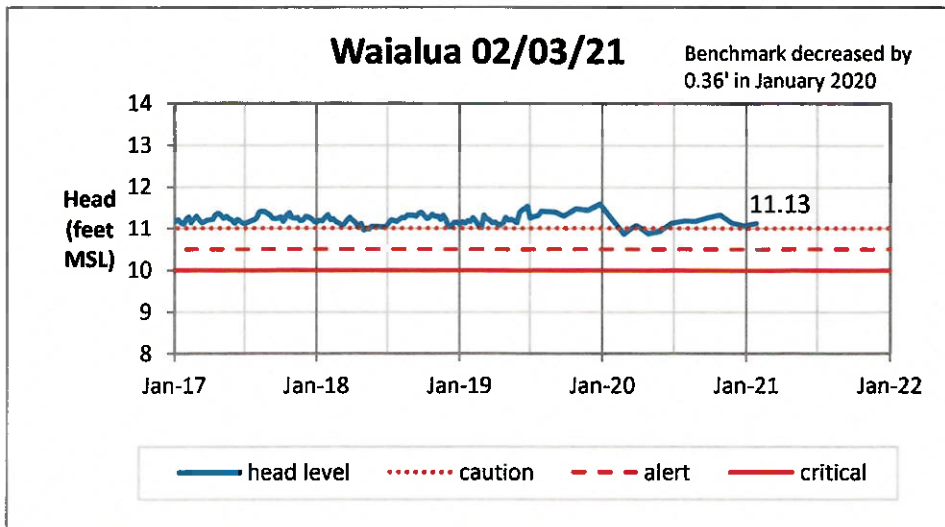
Hoeae-Kunia 02/02/21

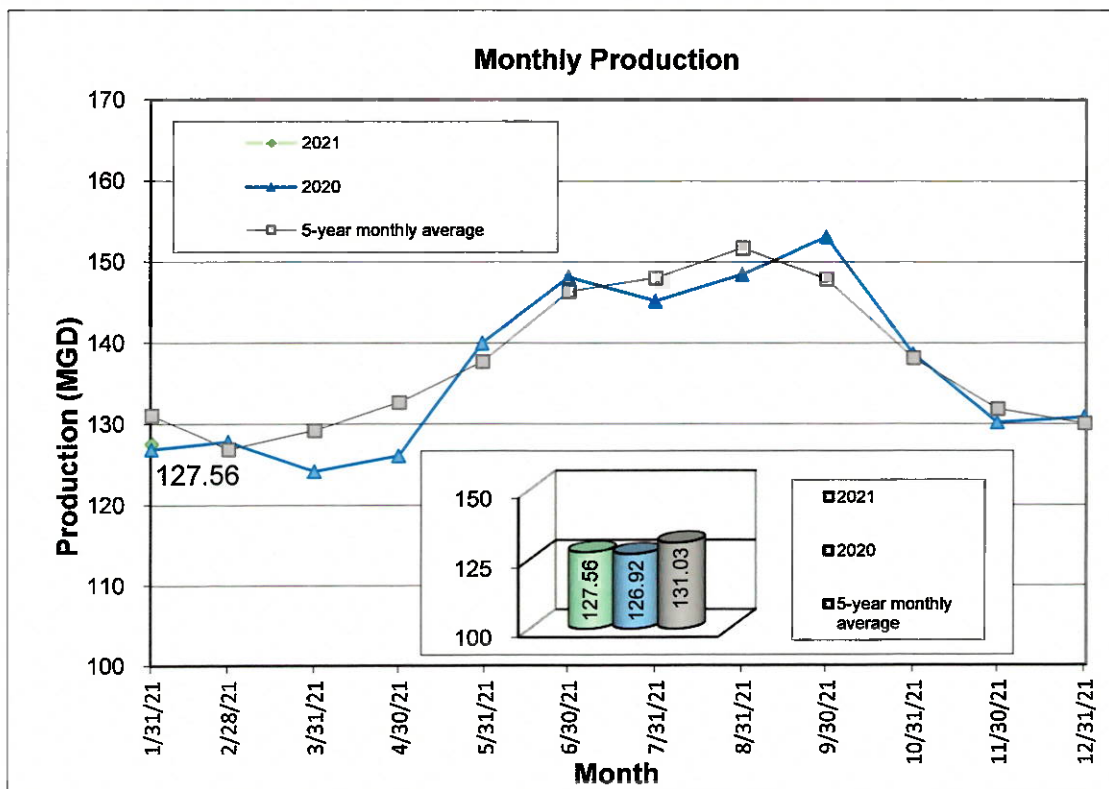
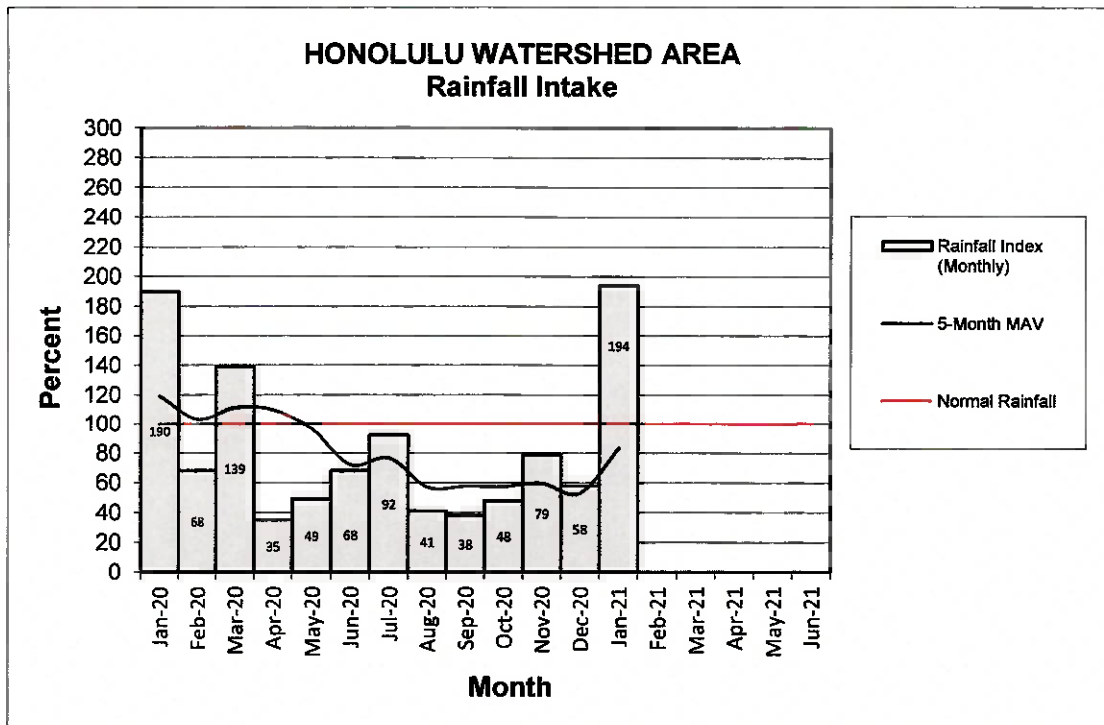


Head Report



Head Report





ITEM FOR INFORMATION NO. 6

"February 22, 2021

WATER MAIN
REPAIR
REPORT FOR
JANUARY
2021

Chair and Members
Board of Water Supply
City and County of Honolulu
Honolulu, Hawaii 96843

Chair and Members:

Subject: Water Main Repair Report for January 2021

Michael Fuke, Program Administrator, Field Operations Division, will report on water main repair work for the month of November 2020.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E
Manager and Chief Engineer

Attachment"

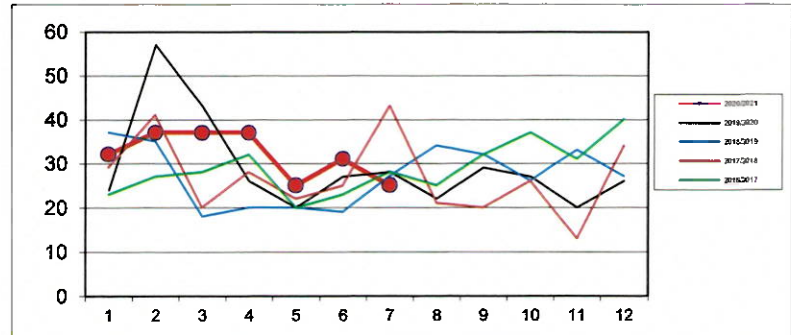
The foregoing was for information only.

DISCUSSION: Michael Fuke, Program Administrator, Field Operations Division, gave the report. There were no comments or discussion.

WATER MAIN REPAIR REPORT for January 2021

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2020/2021	32	37	37	37	25	31	25						224
2019/2020	24	57	43	26	20	27	28	22	29	27	20	26	349
2018/2019	37	35	18	20	20	19	27	34	32	26	33	27	328
2017/2018	29	41	20	28	22	25	43	21	20	26	13	34	322
2016/2017	23	27	28	32	20	23	28	25	32	37	31	40	346

Date	Address	Size (In)	Pipe Type
1/1/2021	91-746 Pohakupuna Rd, Ewa Beach	12	CI
1/3/2021	99-629 Haaheo Pl, Aiea	8	PVC
1/4/2021	533 Kaaahi St, Honolulu	12	CI
1/5/2021	3827 Sierra Dr, Honolulu	8	PVC
1/8/2021	741 Pumehana St, Honolulu	8	DI
1/8/2021	94-601 Honowai St, Waipahu	12	CI
1/11/2021	1314 Houghtailing St, Honolulu	12	CI
1/11/2021	86-228 Kawili St, Waianae	8	PVC
1/12/2021	2360 Amokemoke St, Pearl City	8	CI
1/14/2021	968 Ala Kapua St, Honolulu	8	CI
1/15/2021	1254 Kainui Dr, Kailua	12	CI
1/19/2021	70 Puiwa Rd, Honolulu	12	PVC
1/20/2021	137 Kaiolena Dr, Kailua	8	PVC
1/22/2021	1344 Lunalilo Home Rd, Honolulu	8	DI
1/22/2021	2138 Kanealii Ave, Honolulu	8	CI
1/23/2021	94-525 Hiapaiole Loop, Waipahu	8	CI
1/24/2021	2117 Kono Pl, Honolulu	8	CI
1/24/2021	805 Alewa Dr, Honolulu	8	PVC
1/26/2021	3458 Kumu St, Honolulu	12	DI
1/26/2021	91-059 Hanua St, Kapolei	12	AC
1/28/2021	926 Aalapapa Dr, Kailua	12	PVC
1/29/2021	1234 Mokulua Dr, Kailua	8	PVC
1/30/2021	91-1345 Puuhala St, Ewa Beach	8	DI
1/31/2021	86-253 Kawili St, Waianae	8	PVC
1/31/2021	86-277 Kawili St, Waianae	8	PVC



20 miles of pipeline were surveyed by the Leak Detection Team in the month of January.

**MOTION TO
RECESS INTO
EXECUTIVE
SESSION**

There being no further business Chair Andaya called for motion to adjourn the Open Session. Max Sword so moved; seconded Kapua Sproat.

Upon unanimous approved motion, the Board recessed into Executive Session Pursuant to [HRS § 92-5(a)(4)] at 3:31 PM to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session.

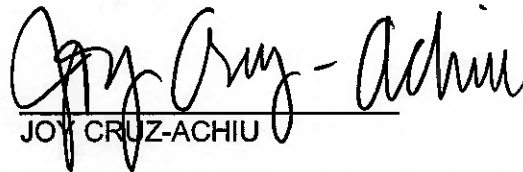
**OPEN
SESSION**

The Board reconvened in Open Session at 4:12 PM.

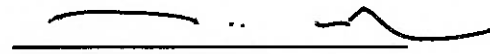
**MOTION TO
ADJOURN**

There being no further business Chair Andaya at 4:13 PM called for a motion to adjourn the Open Session. Max Sword so moved; seconded by Ray Soon and unanimously carried.

The minutes of the Regular Meeting held on February 22, 2021 are respectfully submitted,


JOY CRUZ-ACHIU

APPROVED:


BRYAN P. ANDAYA
Chair of the Board
MAR 29 2021

Date

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON FEBRUARY 22, 2021 WERE APPROVED AT THE MARCH 29, 2021 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT			ABSENT
RAY C. SOON	X		
MAX J. SWORD			ABSENT
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR	X		