

# BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
[www.boardofwatersupply.com](http://www.boardofwatersupply.com)



January 19, 2021

RICK BLANGIARDI, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
RAY C. SOON  
MAX J. SWORD

JADE T. BUTAY, Ex-Officio  
ROGER BABCOCK, 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, January 25, 2021, at 2:00 p.m. in the Boardroom, Public Service Building, 630 South Beretania Street, Honolulu, Hawaii.

Pursuant to the Seventeenth Supplementary Proclamation issued by Governor David Y. Ige on December 16, 2020, 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:

- e Written testimony may be emailed to [board@hbws.org](mailto:board@hbws.org) or faxed to (808) 748-5079.e  
Testimony is due by Monday, January 25, 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](http://boardofwatersupply.com).e
- e Mail written testimony to Board of Water Supply, 630 S. Beretania St., Honolulu, HI 96843. Testimony is due by Monday, January 25, 2021, at noon.e
- e On-line testimony will be accepted at [boardofwatersupply.com/testimony](http://boardofwatersupply.com/testimony). Fill out the testimony form. Due by Monday, January 25, 2021, at noon.e
- e 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.e
- e In-person testimony will not be accepted.e

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](http://www.boardofwatersupply.com/boardmeetings).

### VIEWING THE MEETING

The meeting will be viewable via live streaming on:

(1) Facebook Live: [www.facebook.com/bwshonolulu/live](https://www.facebook.com/bwshonolulu/live) the live stream will appear at the top of the page. You may have to click the arrow on video to start it;e

(2) the BWS website: [www.boardofwatersupply.com/live](http://www.boardofwatersupply.com/live). Video will appear on screen.e  
You may have to click the arrow on video to start it. On both you may have to unmute audio as muted audio tends to be the default setting.e

### 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](mailto:board@hbws.org) at least three business days prior to the meeting date.

The agenda for the January 25, 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 December 14, 2020
2. Adoption of Resolution No. 919, 2021, Acceptance of Gift of Tools to the Board of Water Supply

**ITEMS FOR INFORMATION**

1. Board of Water Supply Long Range Financial Plan Update
2. Status Update of Groundwater Levels at All Index Stations
3. Water Main Repair Report for December 2020

## MINUTES

### THE REGULAR MEETING OF THE BOARD OF WATER SUPPLY

January 25, 2021

At 2:01 PM on January 25, 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  
Jade T. Butay, Board Member, Ex-Officio via WebEx  
Roger Babcock, Board Member, Designate 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  
via Facebook Live  
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 via WebEx  
Jason Nikaido, Assistant Program Administrator,  
Field Operations Division via WebEx  
Joseph Cooper, Waterworks Controller,  
Finance Division via WebEx  
Michele Thomas, Executive Assistant I,  
Human Resources Office via Vimeo  
Henderson Nuuhiwa, Program Administrator,  
Information Technology Division via  
Facebook Live  
Michael Matsuo, Program Administrator,  
Land Division via Vimeo  
Erwin Kawata, Program Administrator,  
Water Quality Division via Vimeo  
Barry Usagawa, Program Administrator,  
Water Resources Division via WebEx  
Kevin Ihu, Program Administrator,  
Water System Operations Division  
via WebEx  
Kathy Mitchell, Administrative Services Officer via  
Vimeo  
David Ebersold, Vice President, CDM Smith  
via WebEx

David Brown, Morgan, Lewis, & Bockius, LLP 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 Conference Call

**Absent:** Max J. Sword

## 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 Jade Butay, aye; Board Member Ray Soon, aye.

Chair Andaya introduced Roger Babcock, Department of Facility Maintenance, Director Designate, serving as Ex-Officio on the board and would be joining via WebEx shortly. Chair Andaya also introduced the newly appointed Board Member Na'alehu Anthony joining via Facebook Live, whose confirmation hearing is scheduled for Wednesday, January 27, 2021. Board Member Max Sword was not present.

Chair Andaya requested all attendees calling-in or video conferencing to please mute their microphone when not speaking to the audience, and 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, and Information Specialist Steven Norstrom. Joining from the City and County Corporation Counsel was Deputy Jeff Lau via WebEx and Deputy Jessica Wong via telephone.

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 submit testimony: Written testimony may be submitted by email to [board@hbws.org](mailto: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](https://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](https://www.boardofwatersupply.com/boardmeeting).

Chair Andaya also announced the Board Meeting is broadcasted live on [facebook.com/bwshonolulu/live](https://facebook.com/bwshonolulu/live) and the BWS website at [www.boardofwatersupply.com/live](https://www.boardofwatersupply.com/live).

APPROVAL OF MEETING	Approval of the Minutes of the Regular Meeting Held on December 14, 2020.
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MOTION TO APPROVE	Ray Soon and Jade Butay motioned and seconded, respectively, to approve the Minutes of the Regular Meeting of December 14, 2020.
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Chair Bryan Andaya welcomed everyone to the first Board of Water Supply (BWS) Board meeting of 2021 and greeted everyone with a Happy New Year.

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.

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." Chair Andaya then inquired if any Board Members would like to object or vote "Nay" on the motion. There were no objections or "Nay" votes. Chair Andaya announced that the motion was unanimously carried.

At 2:05 PM, Board Member Roger Babcock joined the Regular Board Meeting via WebEx.

THE MINUTES OF THE REGULAR MEETING HELD ON DECEMBER 14, 2020, WERE APPROVED AT THE JANUARY 25, 2021 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD			ABSENT
JADE T. BUTAY	X		
ROGER BABCOCK			ABSENT

"January 25, 2021

ADOPTION OF  
RESOLUTION  
NO. 919, 2021,  
ACCEPTANCE  
OF GIFT OF  
TOOLS TO THE  
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. 919, 2021,  
Acceptance of Gift of Tools to the Board of Water  
Supply

We recommend acceptance of the proposed gift to the Honolulu Board of Water Supply (BWS) from Derrick M. Kameoka, a recently retired BWS Body & Fender Repairer, in support of our Automotive operations. The estimated value of this gift is approximately \$400.00.

The gift benefits the Department by making available a premium toolset for the automotive staff to use as they properly and regularly conduct upkeep and servicing of the BWS fleet. This, in turn, ensures that those motor vehicles and crucial construction equipment are ready and safe to operate when used daily and when needed in emergency situations. The donation will also allow the BWS to obtain these assets without additional expense to Oahu ratepayers.

We deeply appreciate the continued support of this Board for our department personnel and the acquisition of resources that enable the BWS to provide a safe, dependable, and affordable water supply to the people of Oahu.

Respectfully Submitted,

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

Attachment"

DISCUSSION: Kevin Ihu, Program Administrator, Water System Operations Division, gave the report. There were no comments or discussion.

MOTION TO ADOPT Jade Butay and Kapua Sproat motioned and seconded respectively, the Adoption Resolution No. 919, 2021, Acceptance of Gift of Tools to the Board of Water Supply.

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." Chair Andaya then inquired if any Board Members would like to object or vote "Nay" on the motion. There were no objections or "Nay" votes. Chair Andaya announced that the motion to accept the generous gift from Mr. Derrick Kameoka was unanimously carried.



Chair Andaya asked Mr. Ihu to convey the Board of Water Supply's (BWS) appreciation to Mr. Kameoka for his generous gift and miss his Service to the Board of Water Supply.

ADOPTION OF RESOLUTION NO. 919, 2021, ACCEPTANCE OF GIFT OF TOOLS TO THE BOARD OF WATER SUPPLY ADOPTED ON JANUARY 25, 2021			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD			ABSENT
JADE T. BUTAY	X		
ROGER BABCOCK			ABSENT

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

**RESOLUTION NO. 919, 2021**

**ACCEPTANCE OF A GIFT OF TOOLS TO THE BOARD OF WATER SUPPLY  
AUTOMOTIVE OPERATIONS**

WHEREAS, the Board of Water Supply's (BWS) Water System Operations Division Automotive Branch provides repair and maintenance services for the BWS vehicles and construction equipment to ensure their readiness and safe operational ability for department employees when used; and

WHEREAS, Derrick M. Kameoka, a retired BWS Body & Fender Repairer is offering an in-kind gift of high quality tools, consisting of a super duty air hammer with assorted chisel set, valued at approximately \$400 in support of the department's Automotive services; and

WHEREAS, the BWS may accept gifts to the Department, as long as it does not provide special consideration, treatment, advantage, privilege, or exemption for or coerces a potential donor; and

WHEREAS, the gift to the BWS benefits the Department because it will assist automotive staff in their efforts to appropriately and effectively perform metal repairs and fabrication work on the department's fleet vehicles and equipment; and

WHEREAS, this gift reduces the need for ratepayer funds that would otherwise be needed to purchase these resources to support the Automotive Branch's day-to-day operations; now, therefore

BE IT RESOLVED that the Board of Water Supply hereby accepts the gift valued at \$400.00 and directs the Manager and Chief Engineer, or his delegate, to accept and thank the various donors for these gifts.

ADOPTED:

  
BRYAN P. ANDAYA  
Chair

Honolulu, Hawaii  
January 25, 2021

ADOPTION OF RESOLUTION NO. 919, 2021, ACCEPTANCE OF GIFT OF TOOLS TO THE BOARD OF WATER SUPPLY ADOPTED ON JANUARY 25, 2021			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
RAY C. SOON	X		
MAX J. SWORD			ABSENT
JADE BUTAY	X		
ROGER BABCOCK			ABSENT

ITEM FOR INFORMATION NO. 1

"January 25, 2021

BOARD OF  
WATER  
SUPPLY  
LONG RANGE  
FINANCIAL  
PLAN  
UPDATE

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

Chair and Members:

Subject: Board of Water Supply Long Range Financial Plan Update

In 2018, the Board adopted the Long Range Financial Plan to help guide our financial planning. Because the effects of the COVID-19 pandemic were not expected at that time, we are updating the plan. Joe Cooper, Waterworks Controller, and the consultant who is assisting us in revising this plan, Dave Ebersold of CDM Smith, will provide an update.

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, and Dave Ebersold, President of CDM Smith, gave the report.

Board Member Jade Butay referred to the PowerPoint slide 42, bullet four, which stated, the money currently collected from Water System Facilities Charge is insufficient to cover costs or growth-related projects, and slide 16 Capital Improvement Program (CIP) Adjustments Total 2% over 10 Years. He asked how much can the BWS delay or postpone CIP projects if the revenue the BWS collects doesn't materialize.

**CIP Adjustments Total 2% over 10 Years**

Fiscal Year	Original	Revised	Difference
2021	\$129.7	\$199.9	\$70.2
2022	\$173.8	\$160.3	(\$13.5)
2023	\$156.0	\$165.4	\$9.4
2024	\$188.8	\$191.2	\$2.3
2025	\$205.1	\$188.4	(\$16.6)
2026	\$192.5	\$202.7	\$10.2
2027	\$237.7	\$217.4	(\$20.3)
2028	\$289.9	\$265.2	(\$24.8)
2029	\$260.8	\$238.5	(\$22.3)
2030	\$230.1	\$210.5	(\$19.6)
2031	\$250.2	\$228.8	(\$21.4)
Total	\$2,314.7	\$2,268.3	(\$46.4)

\$ million

Mr. David Ebersold replied the table shows changes in the CIP year to year within a 10-year timeframe, which vary an average of about \$20 million year to year. The Long Range Financial Plan (LRFP) provides flexibility and allows for adjustments to the timing of projects if revenues don't come in as expected or delinquencies rise. The impacts are that projects are pushed into the future and completed later.

Manager Ernest Lau added in the changing economy, if the water demand and growth rate is slower, the BWS will delay source developments and CIP capacity projects to the future.

Board Member Jade commented the flexibility in the LRFP allows for expenses to be reduced.

Manager Lau stated Mr. Ebersold mentioned the last time the Water System Facility Charge, otherwise known as the impact fees which pay for the new capacity water system, was last updated in the 1990s. He suggested the BWS consider looking into updating the Water System Facility Charge.

Chair Andaya recalled discussing the Water Systems Facility Charge using Permitted Interaction Group (PIG). He requested a meeting be scheduled within the next month to report back to the Board Members.

Manager Lau confirmed using a PIG when discussing the Water Systems Facility Charge with Chair Andaya and Vice Chair Kapua Sproat. He agreed to schedule a meeting in February to discuss the Water Systems Facility Charge.

Vice Chair Kapua Sproat asked Mr. Ebersold since the pandemic affects everyone worldwide, how does Hawai'i align locally or nationally regarding the percentage of uncollectable accounts.

Mr. Ebersold replied the BWS has an uncollectable amount of only 2/10<sup>th</sup> of a percent per year which is a good number. He mentioned conversations with other Hawaii utilities, who commended the people of Hawaii for doing a great job of taking responsibility and paying for their bills. Mr. Ebersold stated when comparing with other utilities and other states; the current delinquencies vary due to the overall socioeconomic makeup of each specific service area. Using California as an example, utilities that serve more disadvantaged communities have more substantial problems. Areas similar to Hawaii with a more diverse economy are seeing less impact and fewer consistent delinquent accounts. He stated the people struggling are struggling more, which is reflected in the rising delinquent dollar amount.

Board Member Ray Soon asked Mr. Cooper if the LRFP included the discount program for affordable housing.

Mr. Cooper responded the calculations are included in the June 2020 – June 2023 rate schedule.

Board Member Soon stated he was glad that our new Board Member Roger Babcock was able to join the Board Meeting.

Board Member Soon requested Manager Lau reach out to Mayor Rick Blangiardi to gain a better understanding of the direction of the new City Administration. Board Member Soon expressed support for the Board's affordable housing waiver program and was interested in learning if the new administration would continue the City's affordable housing initiative.

Manager Lau stated that Mayor Blangiardi contacted him and would be scheduling a meeting in the near future. Manager Lau stated that he would mention the BWS's affordable housing waiver program.

Board Member Butay referred to the 60 to 180-day working capital stating at the Department of Transportation (DOT) uses cash on hand as a financial metric. How would the BWS convert working capital to cash on hand?

Manager Lau stated the BWS operating cost was about \$18M a month.

Mr. Cooper stated the BWS working capital is equivalent to cash on hand. However, it is made up of different funds; encumbered funds may become available in an emergency.

Board Member Soon inquired if adjustments to the LRFP would be voted on at the next Board meeting.

Manager Lau replied he is open for discussion on the LRFP that was presented. The BWS staff intended to complete the LRFP draft for the Board Members to review and comment before the February Board meeting. At the February Board Meeting, the BWS intends to present the final LRFP and ask the Board to revise or adopt the LRFP.

Chair Andaya commented along the same inquires of Board Member Soon and referred to slide 16, CIP Adjustments Total 2% over 10 Years. He requested supporting details behind the figures presented to determine the actual adjustment in real-time.

Manager Lau stated the BWS is working on finalizing a 6-Year CIP that includes a list of projects. The BWS plans to present the 6-Year CIP to the Board in March for adoption. The BWS will also work on identifying projects for the additional 4 years to complete the 10-year plan. The 10-Year CIP will be presented to the Board separate from the LRFP.

Chair Andaya commented he is open to hearing the 6-Year CIP and any suggestions regarding the water system facility charge to assist in addressing the LRFP.

Chair Andaya asked about the budgeting process. He stated prior to the budget workshop, the long range model used to develop the original LRFP projected a budget that was different from the actual budget. He asked if

the budget workshop the Board attends will include the differences between the actual and budget that was presented in the LRFP.

Manager Lau responded that the BWS will highlight the differences in the upcoming budget meeting. He referred to slide 10 of the PowerPoint presentation that noted the drivers that lead to an increase in the budget. He stated that part of the budgeting process refers to the LRFP and long range model to compare and track the BWS financial plan.

Drivers of FY 2020 O&M Budget Increases	
Item	Amount (million)
Materials, Supplies & Services	
Replace RO line for recycled water system	\$2.2
TCP Advanced Treatment Study	\$2.0
AWTA Risk and Resiliency Assessment, Water Resource Protection	\$2.0
Increase in Emergency Road Repairs	\$1.5
Consultant Services for Instrumentation & Control System Upgrades	\$1.2
Equipment	
More for new and replacement vehicles	\$1.2
2 mobile generators, eligible for 75% FEMA reimbursement	\$0.7
Fixed Charges	
Increase in employee retirement system costs	\$1.8
Increase in electricity costs	\$2.0
Total	\$14.6

Chair Andaya commented it's good that the BWS has a model to follow. He suggested since the BWS has the flexibility, the BWS should periodically adjust the LRFP model accordingly to the circumstances and developments.

Manager Lau stated the LRFP is a projection of the finances into the future. Annual revenues and expenditures may differ from the LRFP due to yearly occurrences and new challenges the BWS face. By having this forward looking plan to monitor our finances, the BWS can avoid rate shock and prevent a massive rate increases to catch up with expenses. The LRFP is a valuable tool that foresees the BWS's future operating expenses and the CIP. The Board adopted the LRFP as policy; therefore, the BWS's objective is to abide and stay consistent with this policy.

Chair Andaya thanked Manager Lau for his explanation on the LRFP, commenting no one wants any rate increase surprise.

Manager Lau commented the most challenging obstacle in life is dealing with the unexpected, such as the pandemic, which has affected the world, but we have learned to adapt.

Board Member Soon commented if the LRFP is a tool to help align the BWS's finances, and he wouldn't be opposed to adjusting the LRFP if projects are completed quicker instead of changing the annual budget to match the LRFP.

Manager Lau stated the LRFP is a projected plan and guide that sometimes may encounter some setbacks. He mentioned that the Environmental Protection Agency (EPA) considering implementing amendments to the EPA's Lead and Copper Rule, which could lead to adjustments of CIP projects to abide by the proposed amendments.

Chair Andaya thanks everyone for their input. He asked Board Secretary Joy Cruz-Achiu if there were any testimonies submitted regarding the LRFP. Ms. Cruz-Achiu responded there were no testimonies submitted. Chair Andaya asked Mr. Norstrom, is there anyone to testify by telephone. Mr. Norstrom responded there were no telephone testifiers.



**WATER FOR LIFE**

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



Board of Water Supply  
City and County of Honolulu

Joe Cooper

**BWS Waterworks Controller**

Dave Ebersold

**CDM Smith**

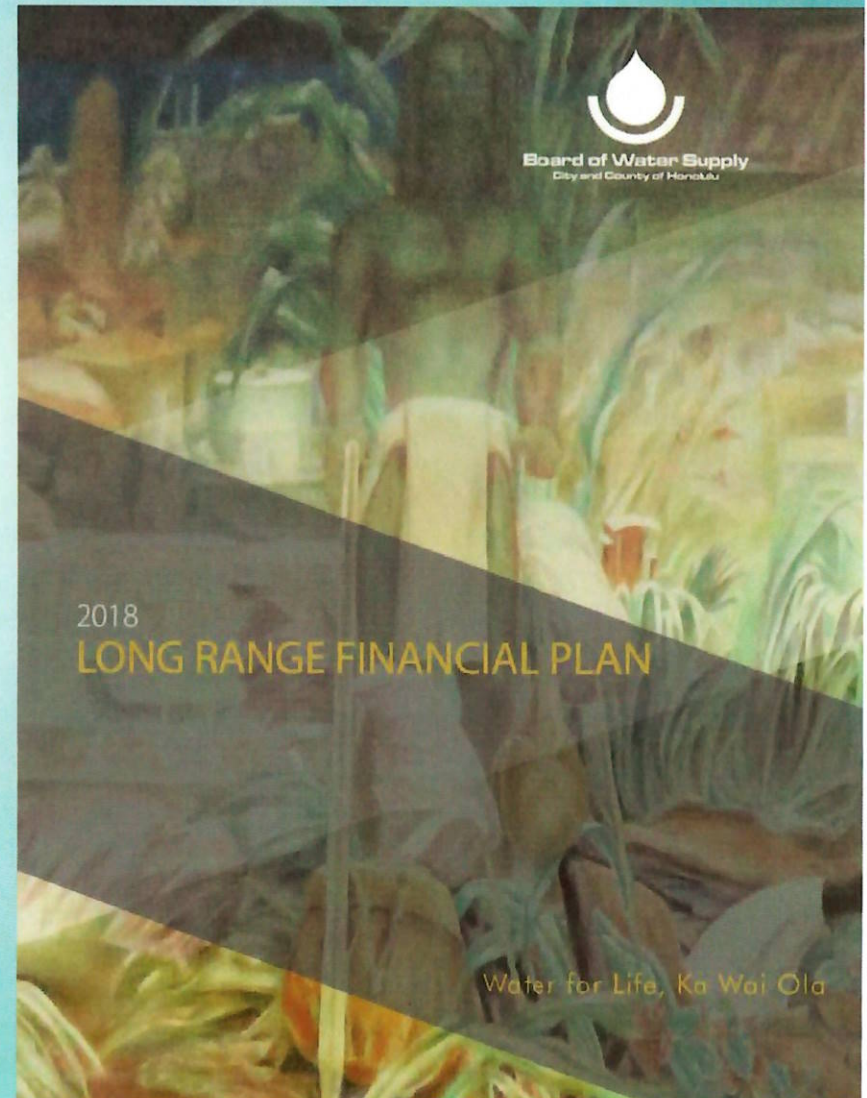
# **LONG RANGE FINANCIAL PLAN UPDATE 2021**





# Updating the Long Range Financial Plan

- Provides the financial framework to support the BWS's 30-year Water Master Plan
- Developed with extensive input from Stakeholder Advisory Group
- Adopted by BWS Board February 2018

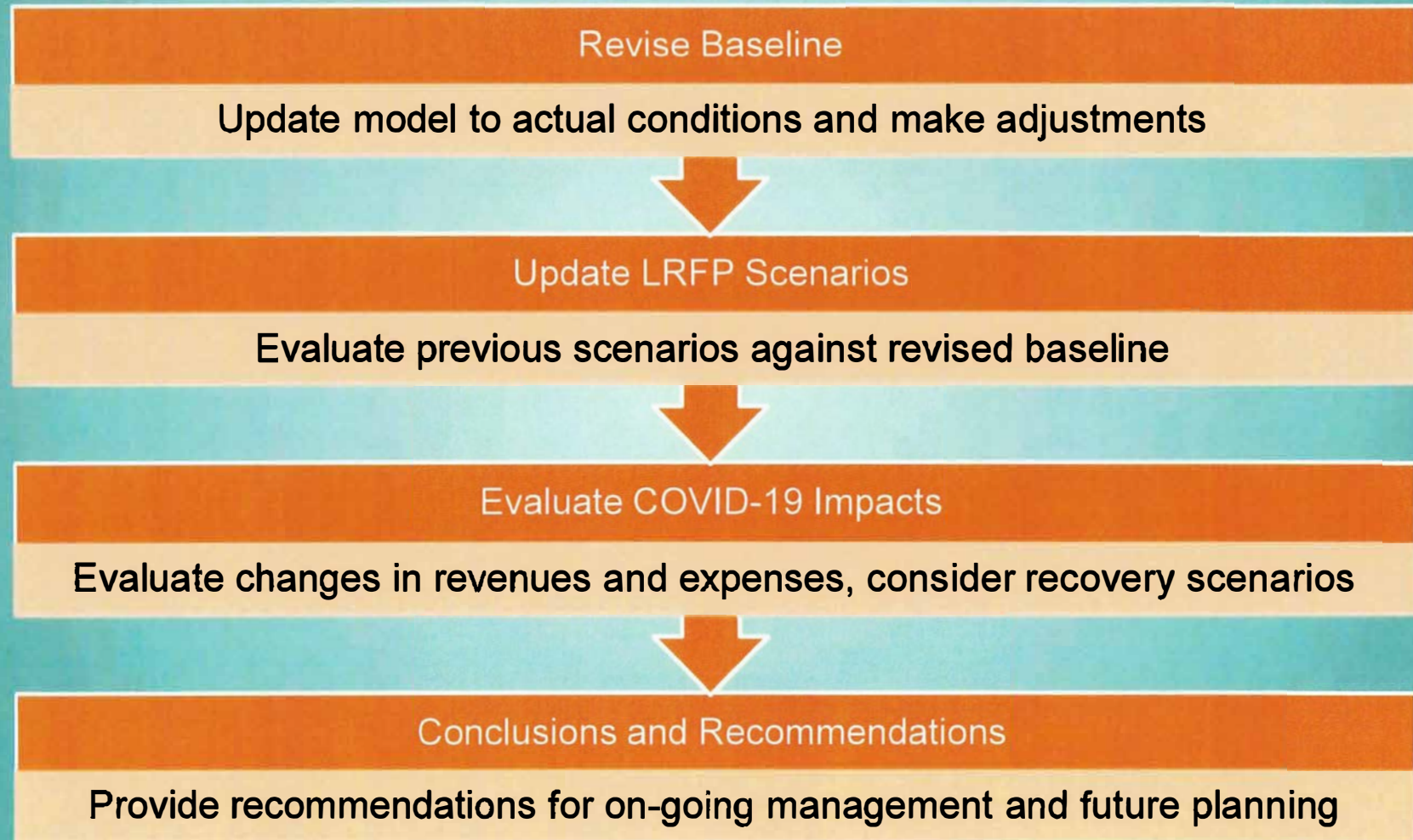


# Why Update the LRFP Now?

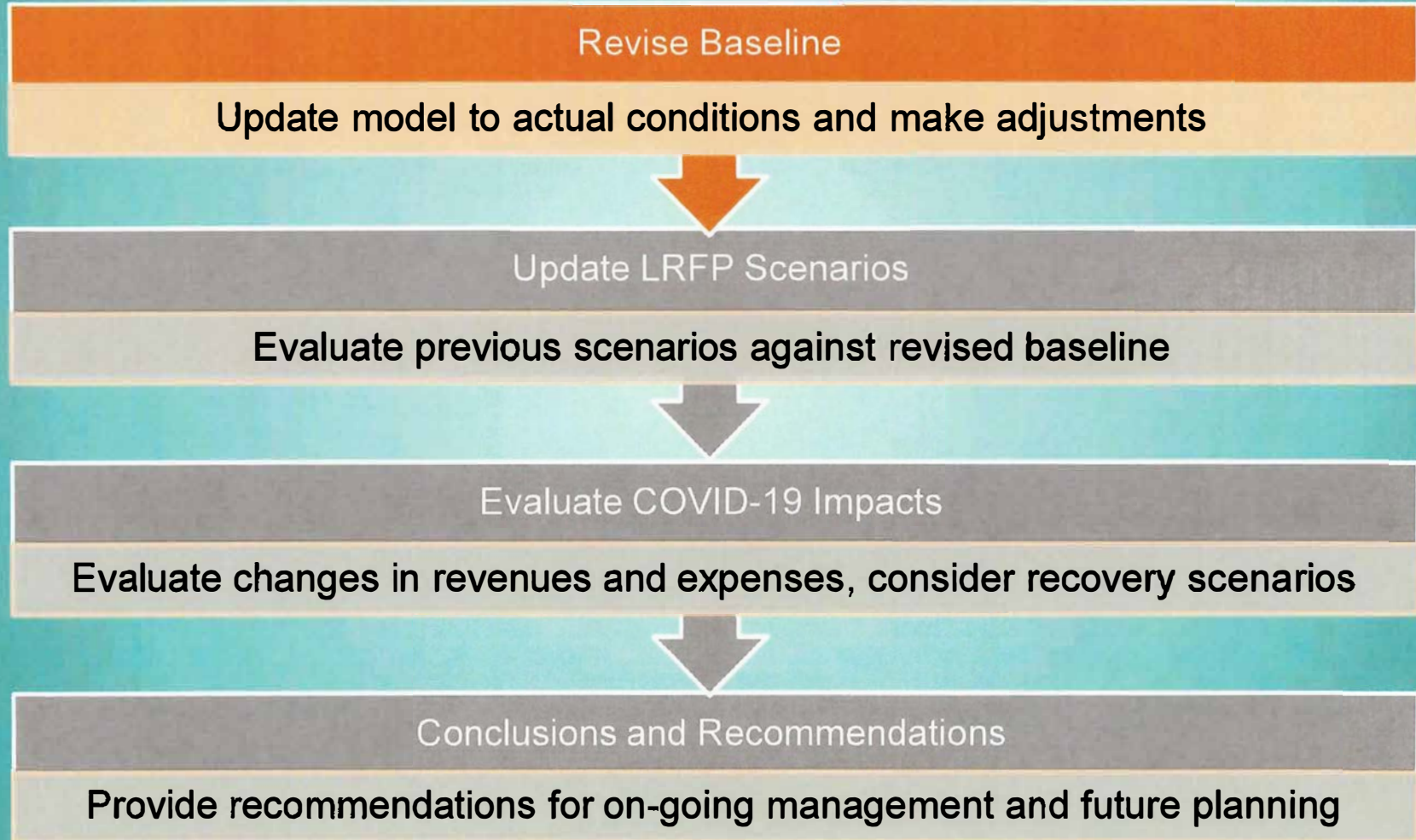
- ◆ Compare actual conditions to what was planned
- ◆ Evaluate impacts of COVID-19 global pandemic and implement appropriate adjustments
- ◆ Commitment to “Live within our means”



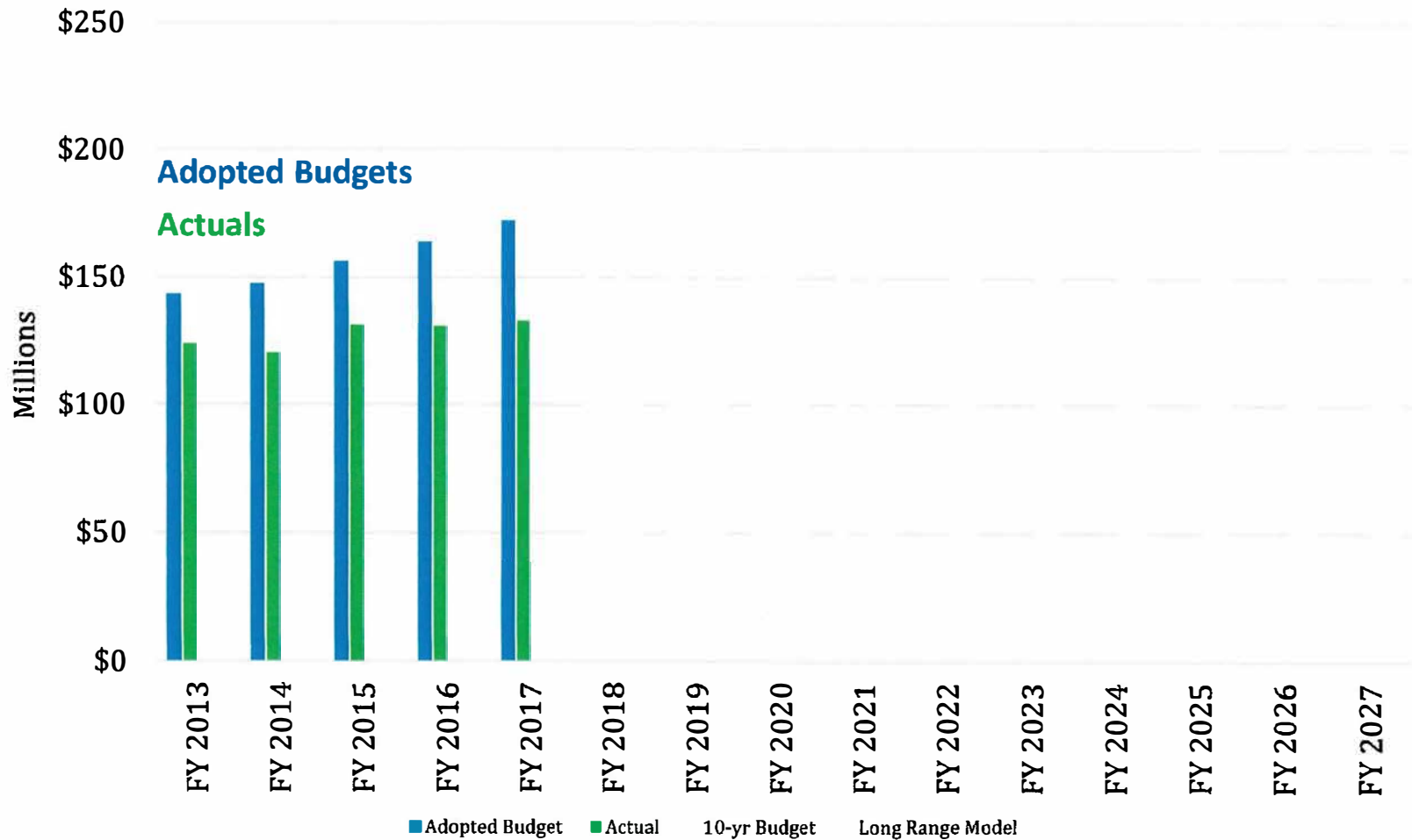
# LRFP Update Process



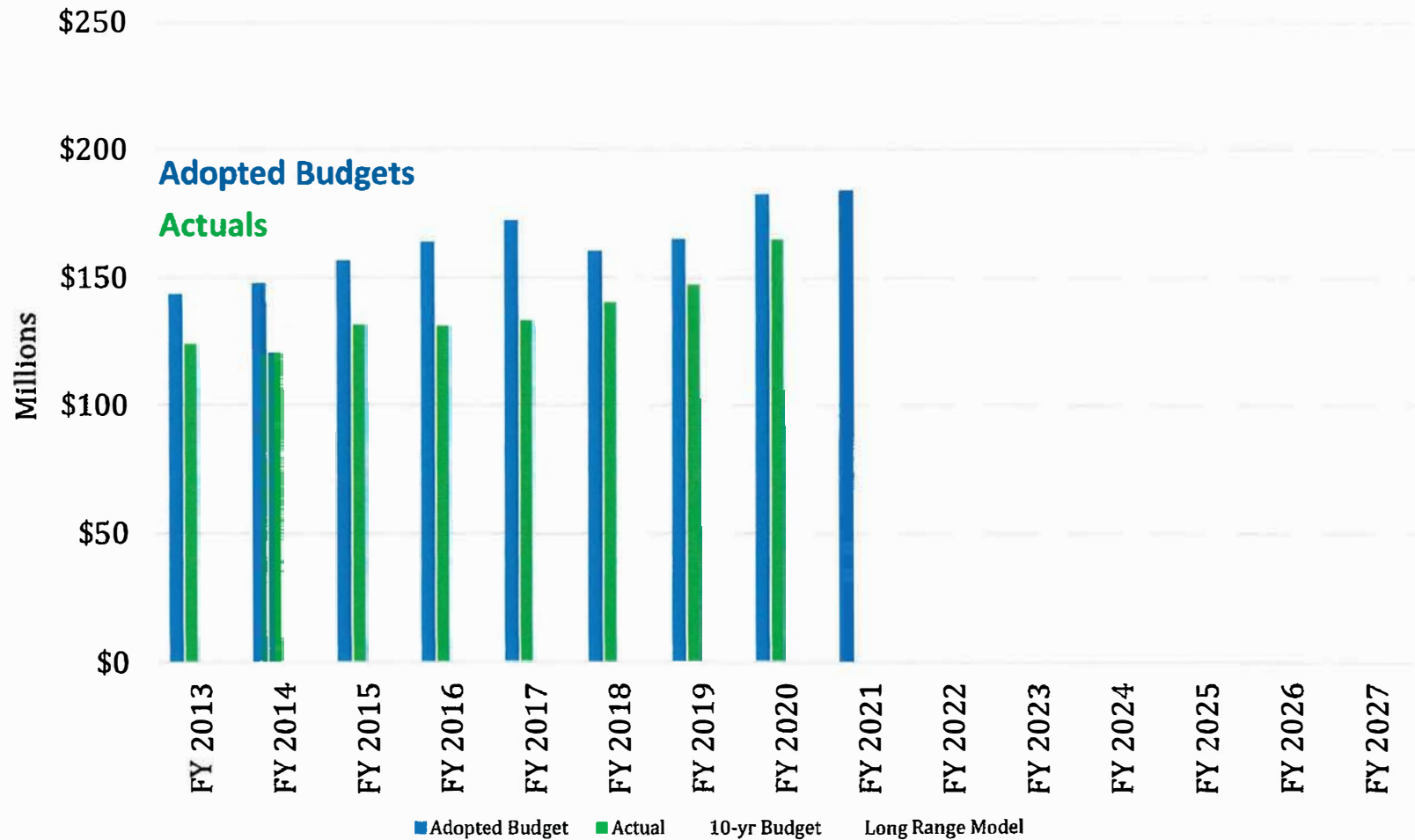
# LRFP Update Process



# Operations & Maintenance Expenses

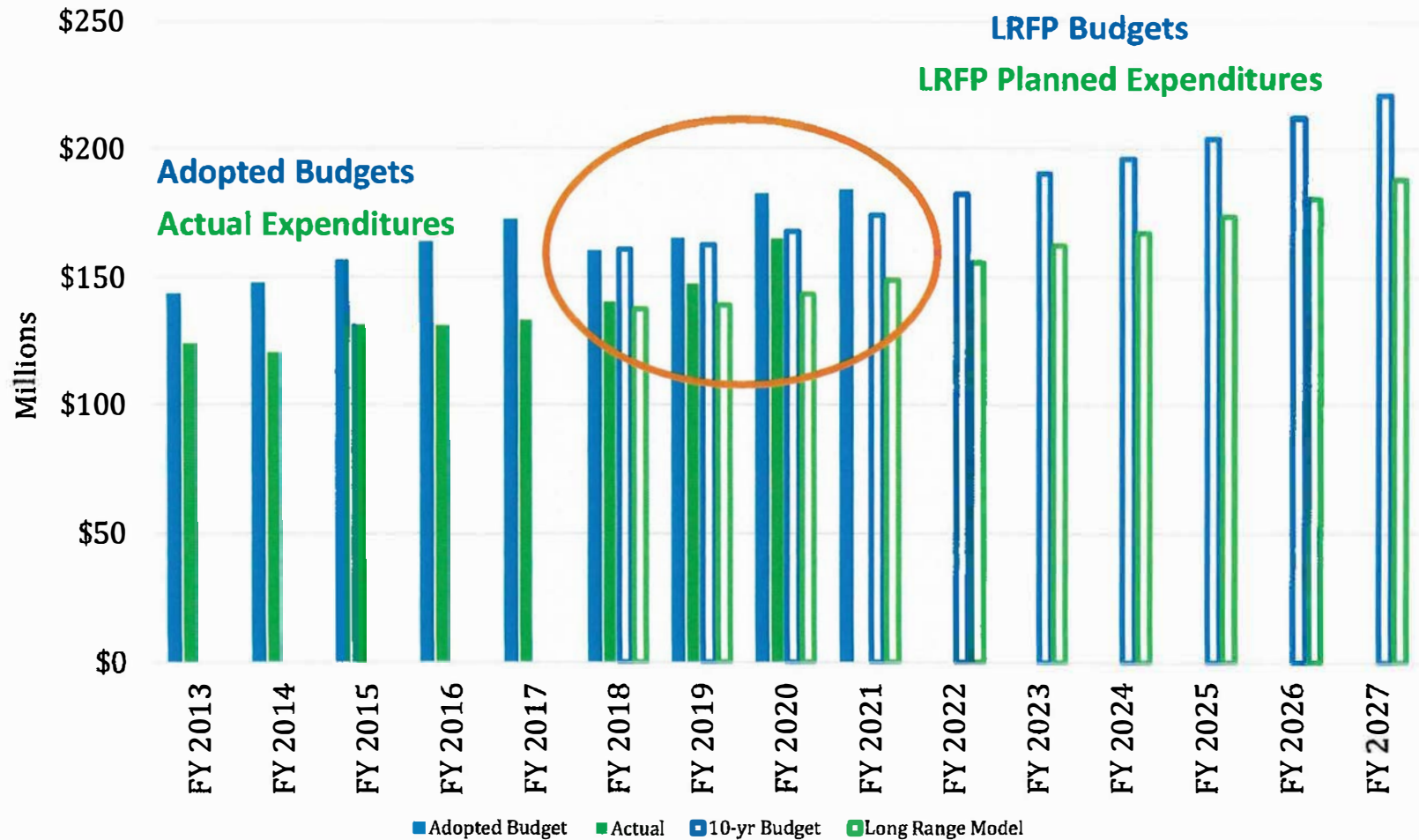


# Operations & Maintenance Expenses





# Operations & Maintenance Expenses



# Actual Operations & Maintenance Expenditures Exceed LRFP

	FY 2018	FY 2019	FY 2020	FY 2021
Adopted Budget	\$159.8	\$164.6	\$182.0	\$183.6
Actual Expenditures	\$139.7	\$147.1	\$164.8	NA
LRFP Planned Expenditures	\$136.9	\$138.4	\$142.9	\$148.4
Difference Actual – LRFP Planned	\$2.9	\$8.7	\$21.8	NA

(1) May 26, 2020

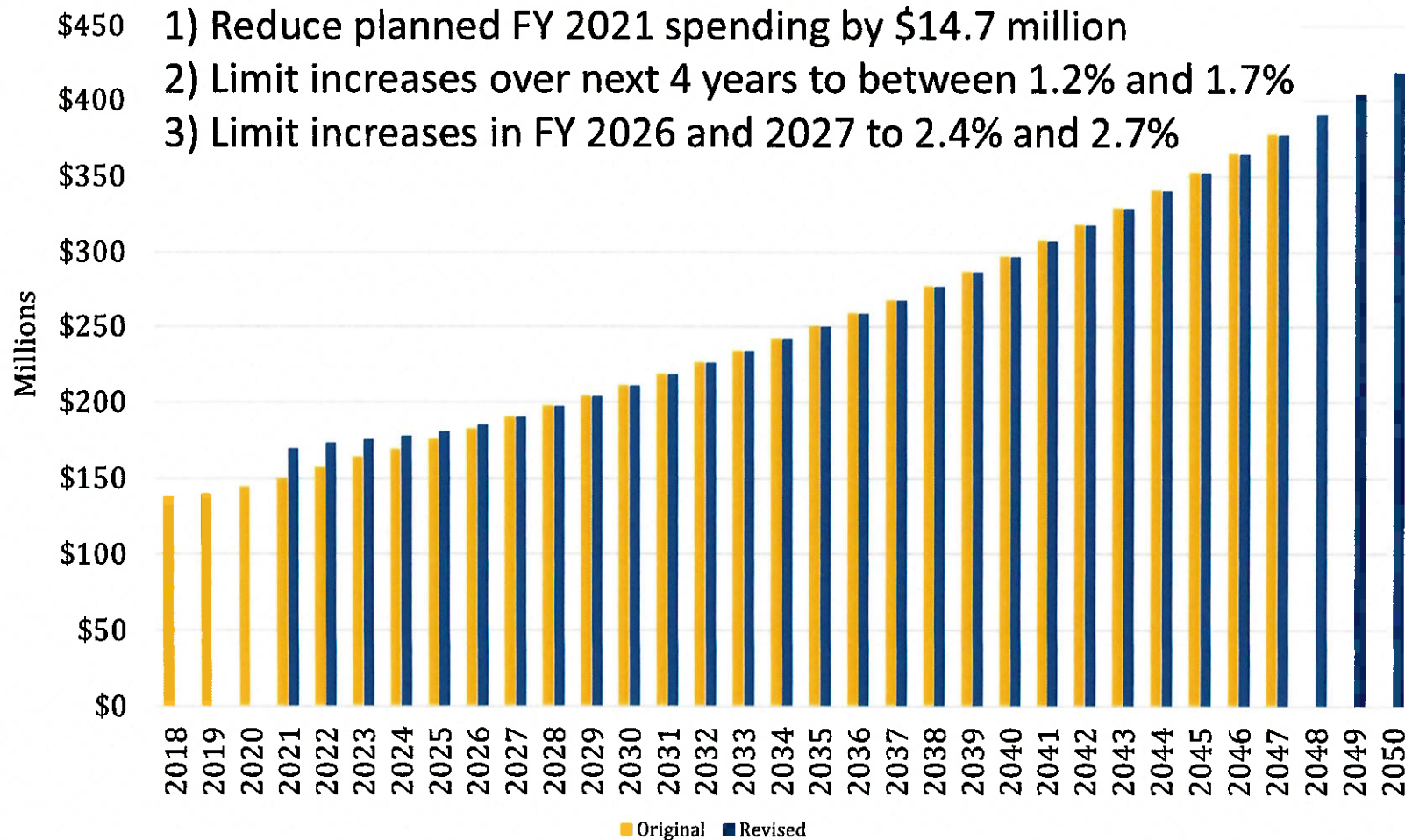
\$ million



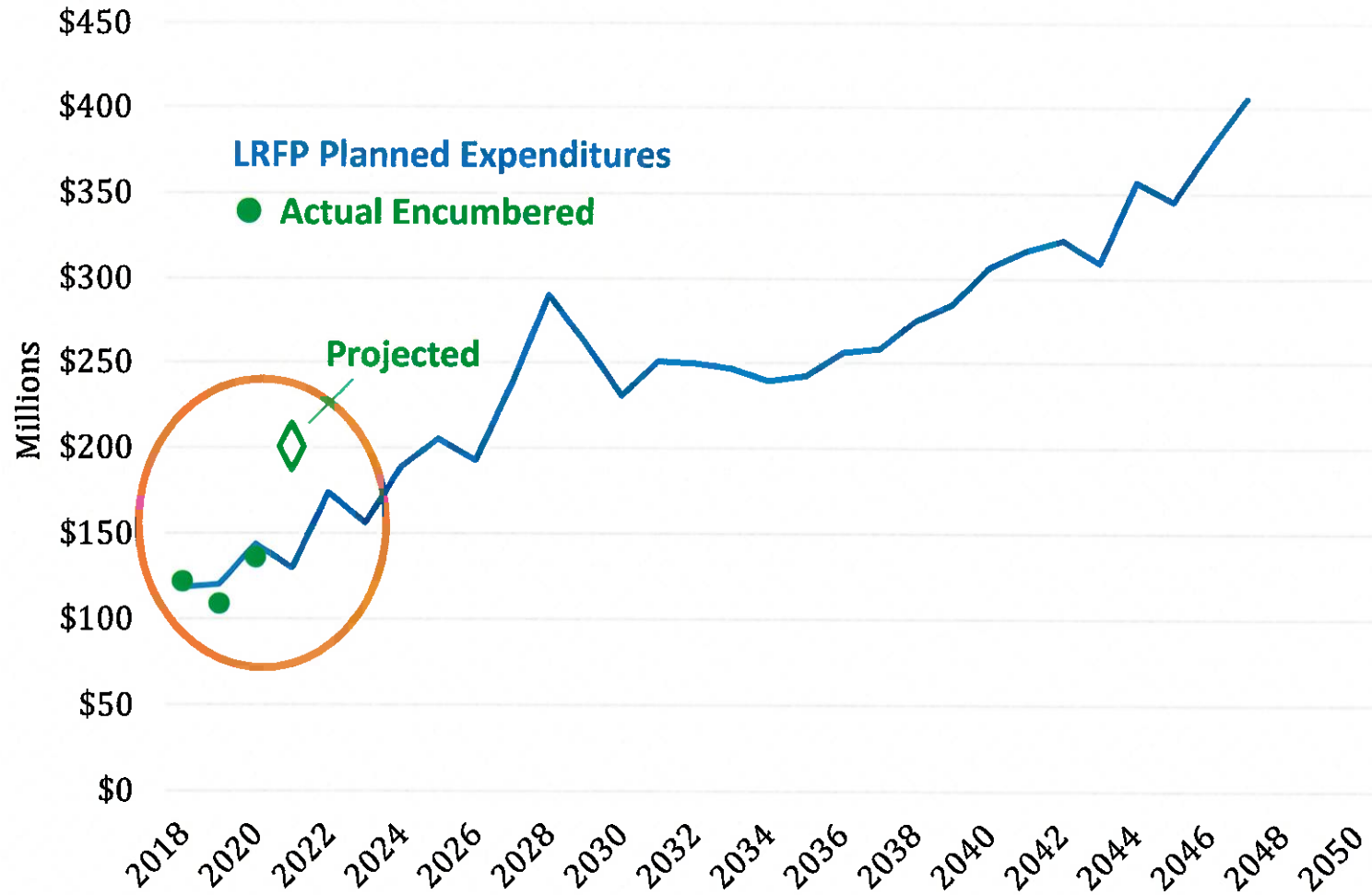
# Drivers of FY 2020 O&M Budget Increases

Item	Amount (million)
<b>Materials, Supplies &amp; Services</b>	
Replace RO line for recycled water system	\$2.2
TCP Advanced Treatment Study	\$2.0
AWIA Risk and Resiliency Assessment, Water Resource Protection	\$2.0
Increase in Emergency Road Repairs	\$1.5
Consultant Services for Instrumentation & Control System Upgrades	\$1.2
<b>Equipment</b>	
More for new and replacement vehicles	\$1.2
2 mobile generators, eligible for 75% FEMA reimbursement	\$0.7
<b>Fixed Charges</b>	
Increase in employee retirement system costs	\$1.8
Increase in electricity costs	\$2.0
<b>Total</b>	<b>\$14.6</b>

# Revised Baseline Realigns O&M Budget with LRFP



# Capital Project Encumbrances





# Actual Capital Encumbrances Expected to Exceed LRFP

	FY 2018	FY 2019	FY 2020	FY 2021
Adopted Capital Budget	\$144.3	\$138.4	\$166.3	\$201.6 (1)
Encumbered Capital	\$121.7	\$108.6	\$135.8	NA
Long Range Model	\$118.4	\$119.9	\$143.6	\$129.7
Difference = Encumbered – Long Range Model	\$3.3	-\$11.4	-\$7.8	NA

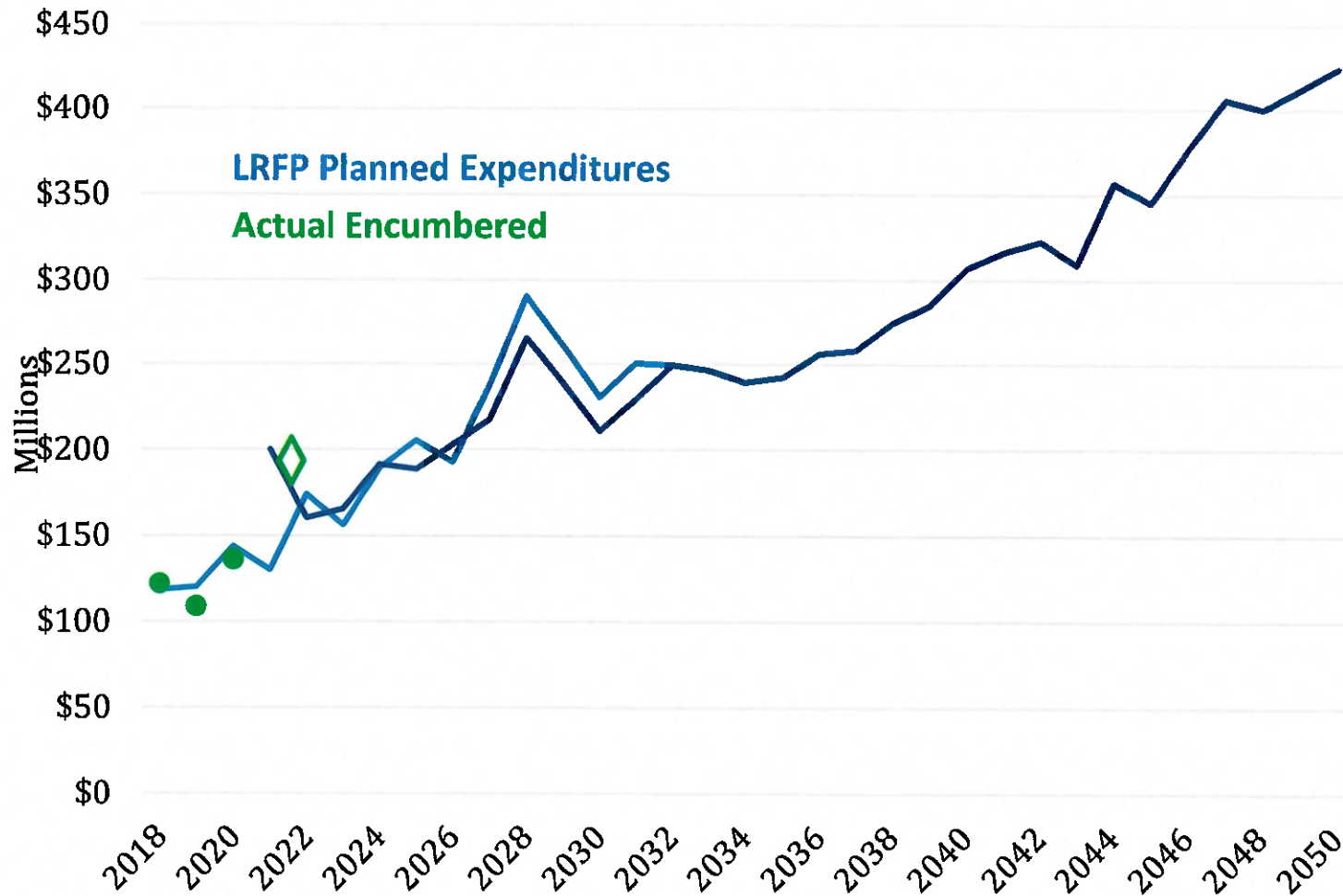
(1) September 28, 2020  
\$ million



## CIP Budget Increased to \$201.6 million

Project	Amount (million)	Comments
Manana Base Yard Secondary Laboratory and Control Center	\$3.3	Expedited with hopes of using CARES funds
Lanikai Water System Improvement Project Part II	\$4.6	Accelerated to avoid construction conflicts in FY 2022
Kalawahine 180 Reservoir Project	\$21.3	New connecting pipelines
Haiku Stairs Design	-\$0.1	No longer needed
Contract Adjustment Account	\$2.3	Adjustments for inflation, minor cost variations
Total	\$31.5	

# Adjustments to CIP to Realign with LRFP





# CIP Adjustments Total 2% over 10 Years

Fiscal Year	Original	Revised	Difference
2021	\$129.7	\$199.9	\$70.2
2022	\$173.8	\$160.3	(\$13.5)
2023	\$156.0	\$165.4	\$9.4
2024	\$188.8	\$191.2	\$2.3
2025	\$205.1	\$188.4	(\$16.6)
2026	\$192.5	\$202.7	\$10.2
2027	\$237.7	\$217.4	(\$20.3)
2028	\$289.9	\$265.2	(\$24.8)
2029	\$260.8	\$238.5	(\$22.3)
2030	\$230.1	\$210.5	(\$19.6)
2031	\$250.2	\$228.8	(\$21.4)
Total	\$2,314.7	\$2,268.3	(\$46.4)

\$ million



# Sources of Funding for Capital Projects

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
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

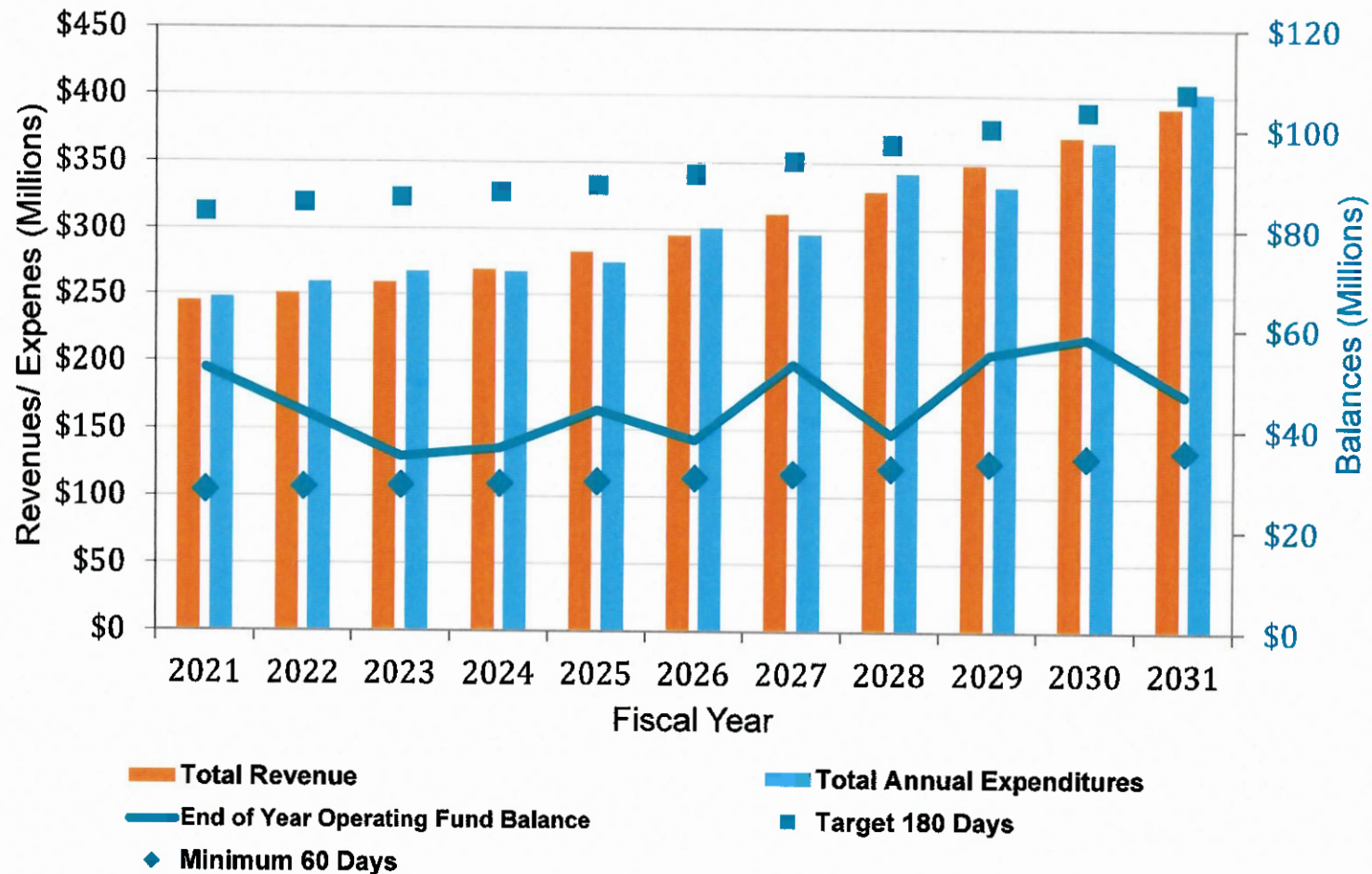
\*May include Drinking Water and Clean Water SRF

\*\* Last updated in 1993

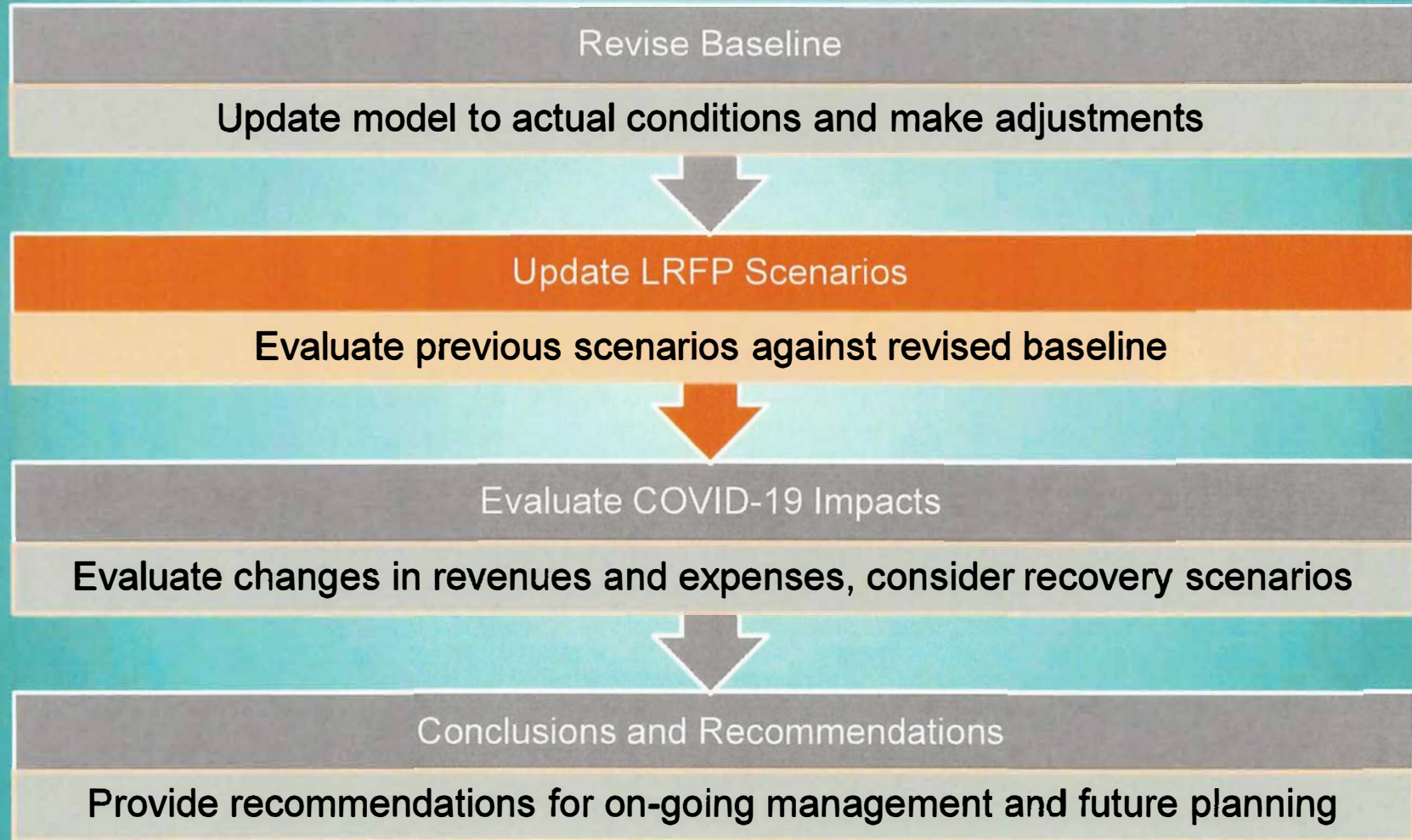
\$ million



# Revised Baseline 10-Year Forecast



# LRFP Update Process



# No Significant Changes to 6 Scenarios



**Aggressive  
Conservation**



**Aggressive  
Growth**



**Natural  
Disaster**



**Source Water  
Contamination**



**Climate  
Change**



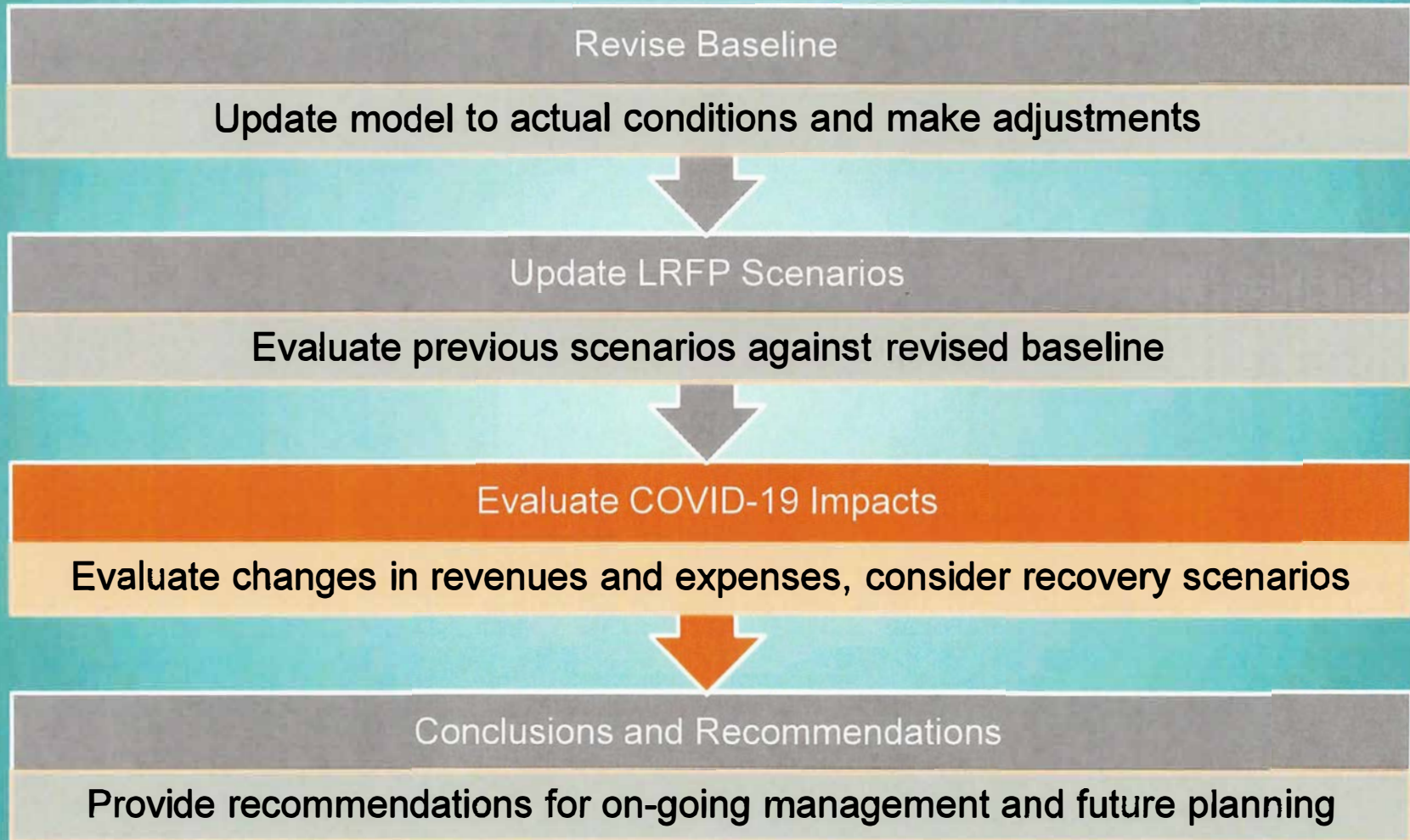
**Economic  
Downturn**



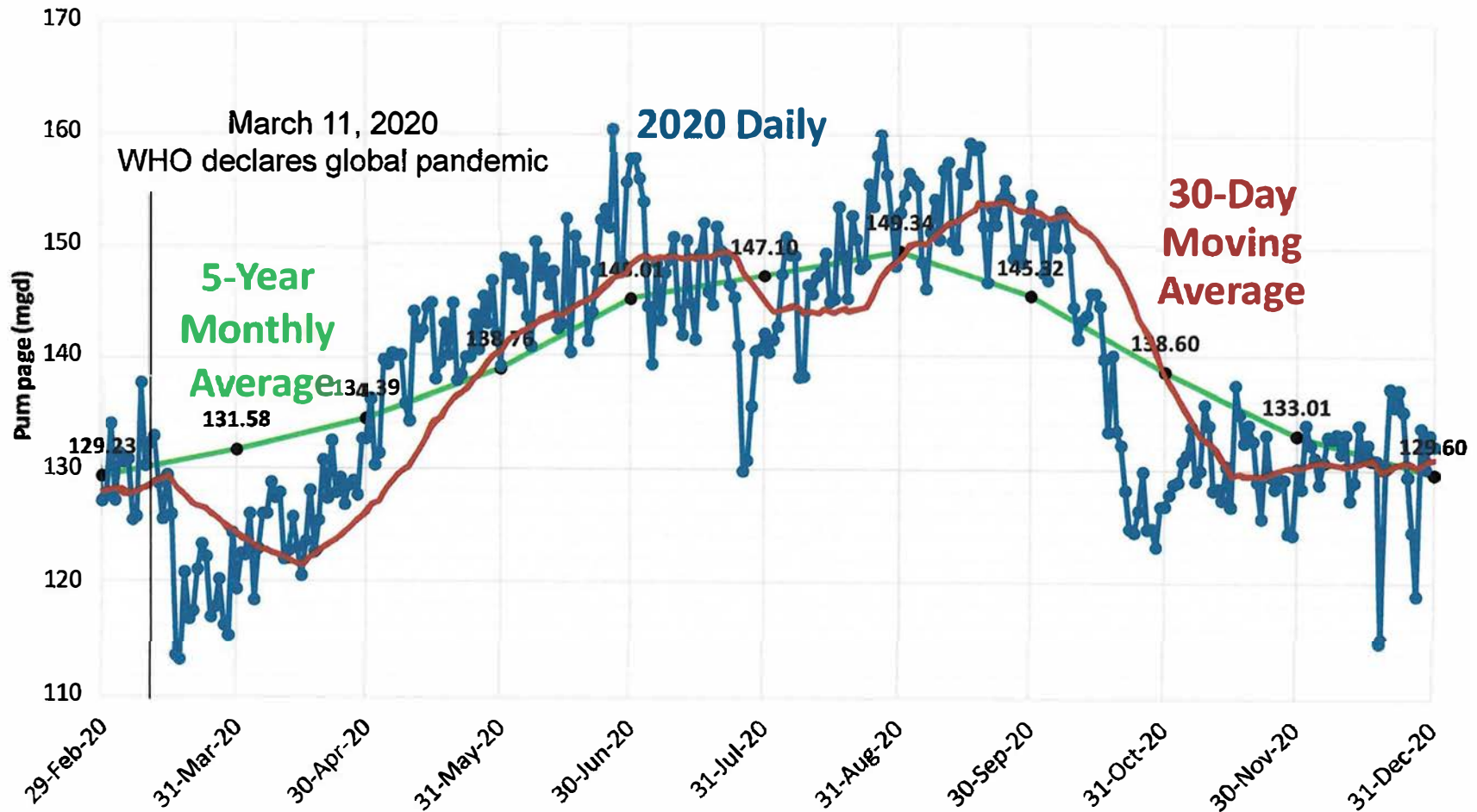
# Conclusions from Long Range Trend Analysis

- 💧 Monitoring using Water Master Plan scorecard and other available metrics important to assessing changing conditions
- 💧 Financial tools available to BWS appear adequate
- 💧 With commitment to Water Master Plan implementation and BWS's financial policies, high rate shock under any scenario not anticipated

# LRFP Update Process

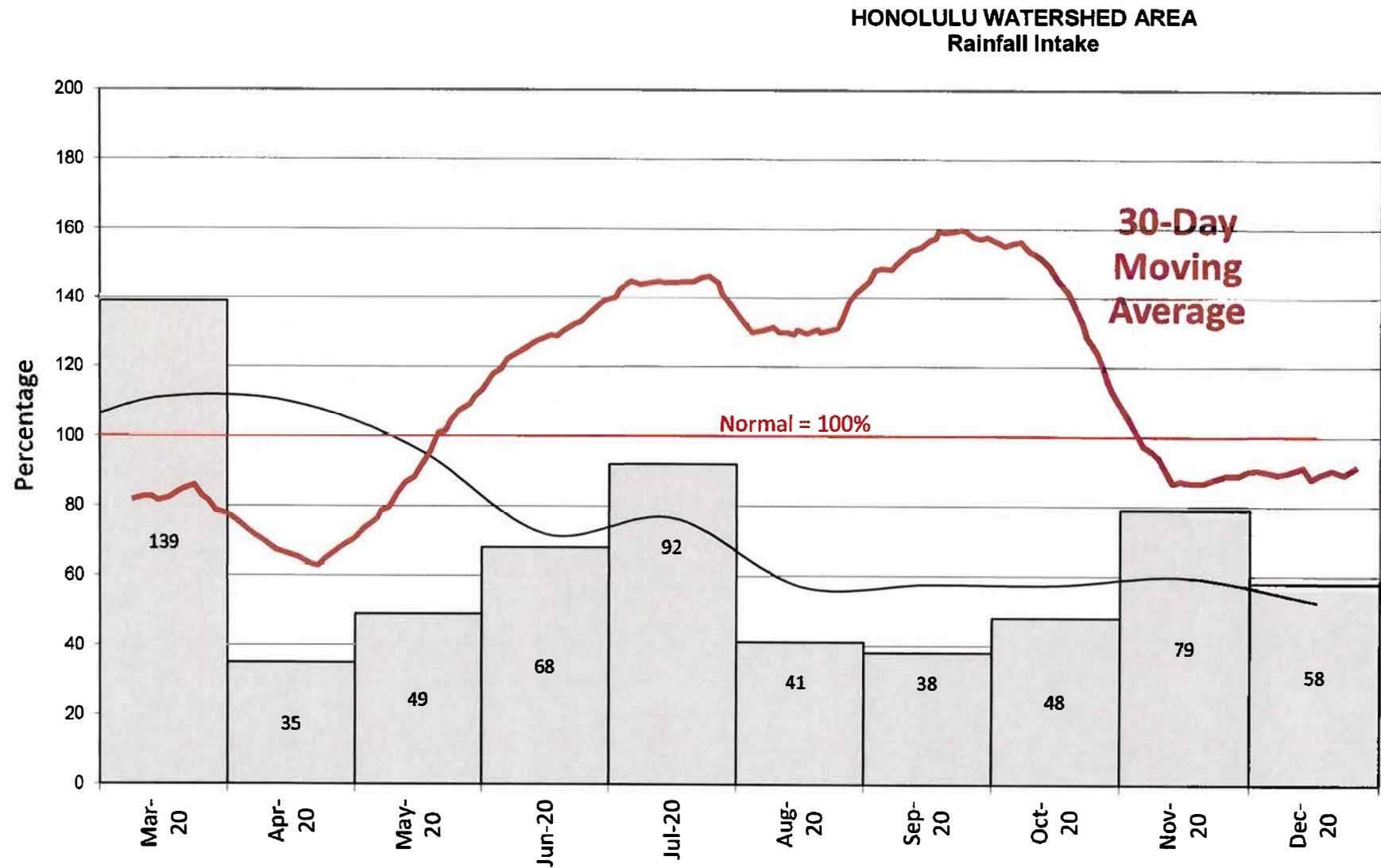


# Total Island Potable Water Production Since March 1, 2020



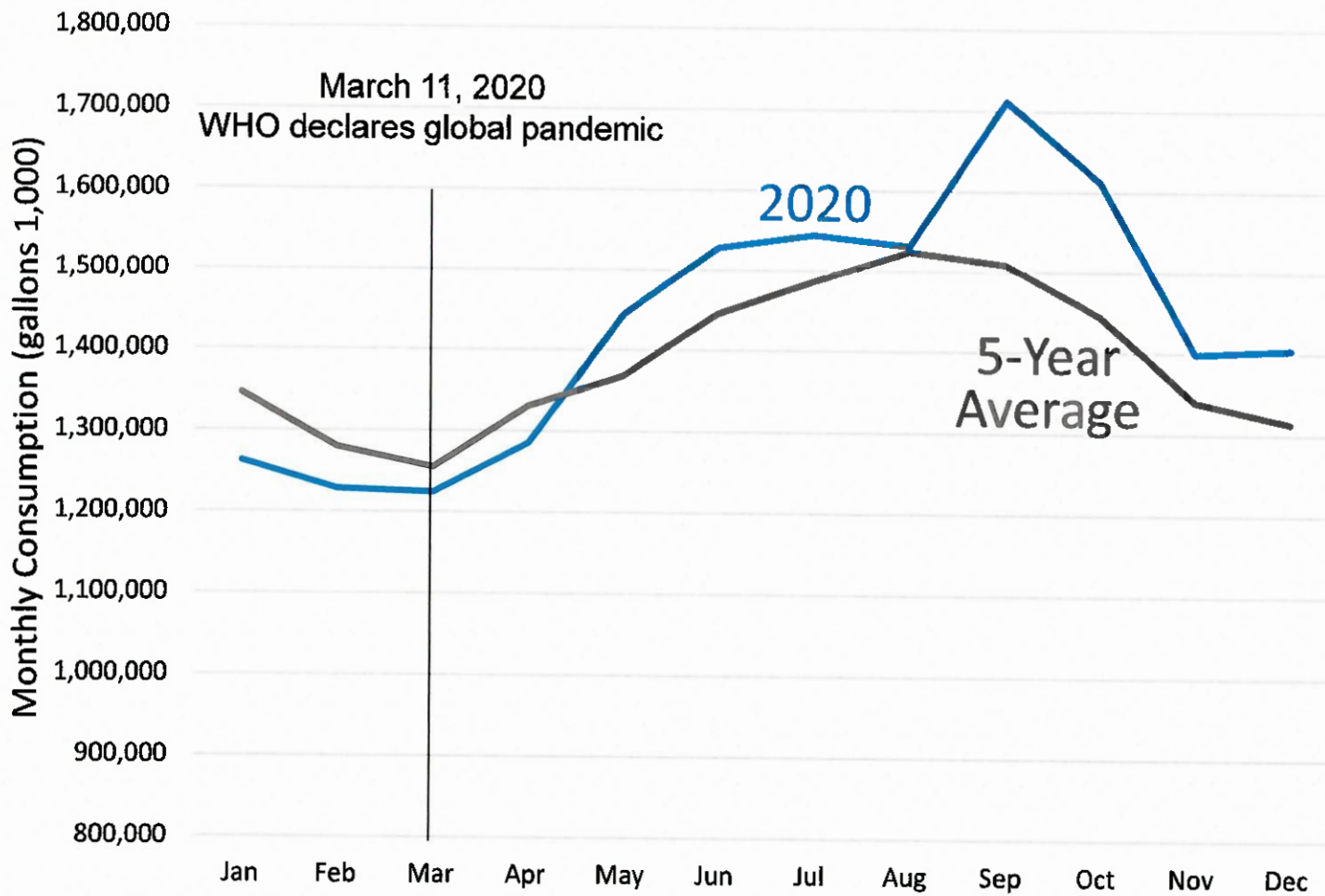
# Rainfall Index

Add notations or legend



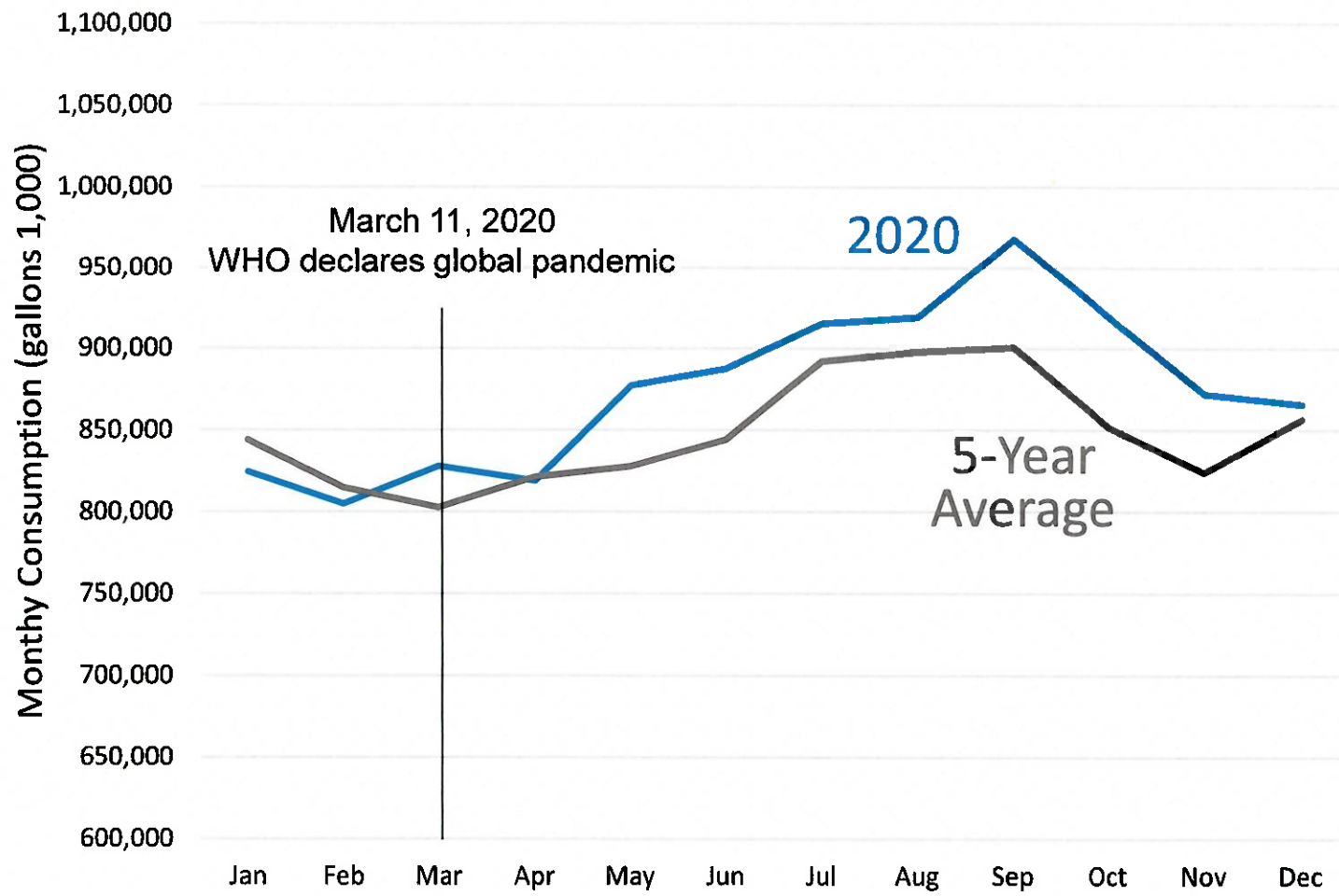


# Single-Family Residential Consumption

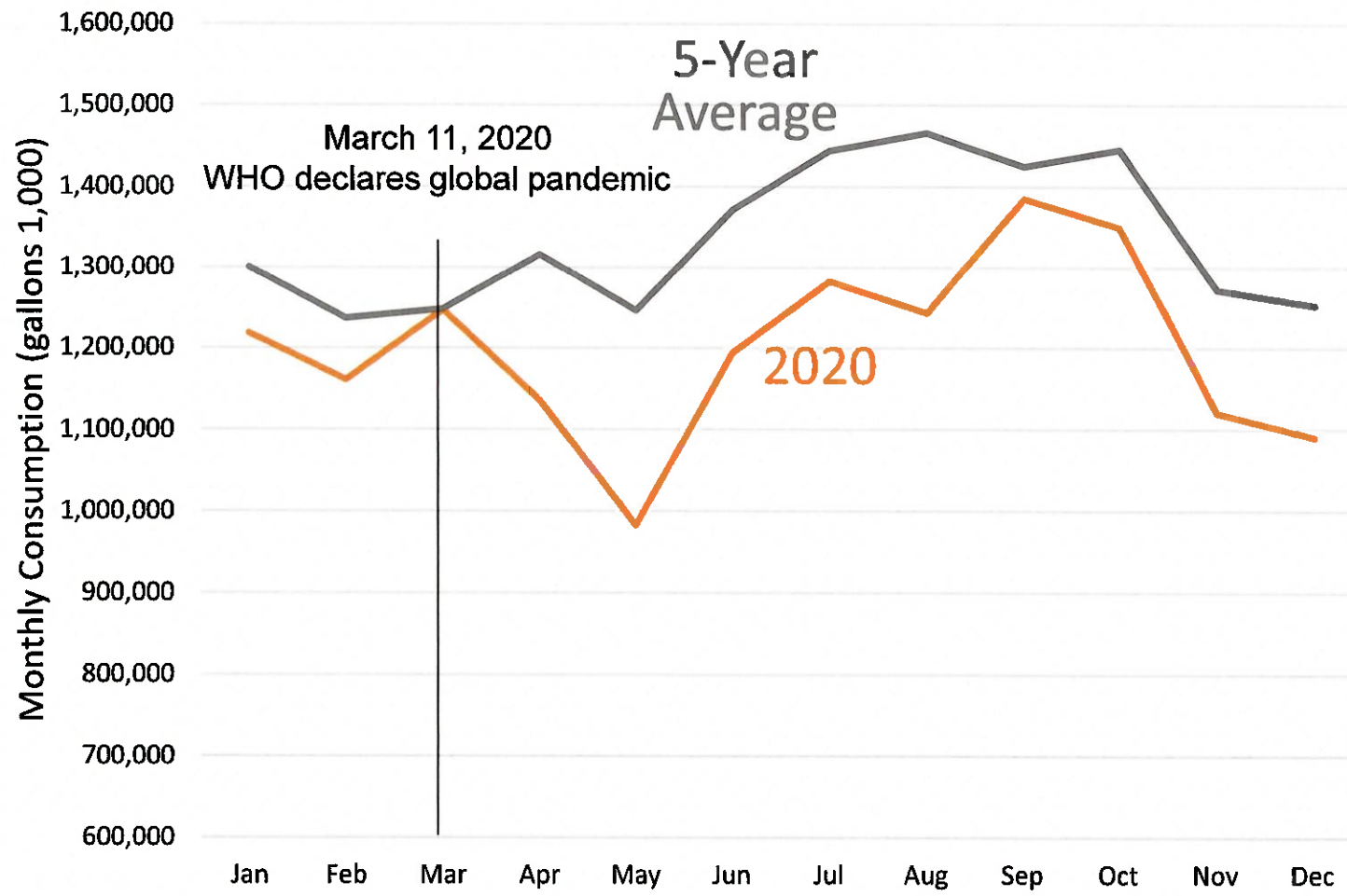




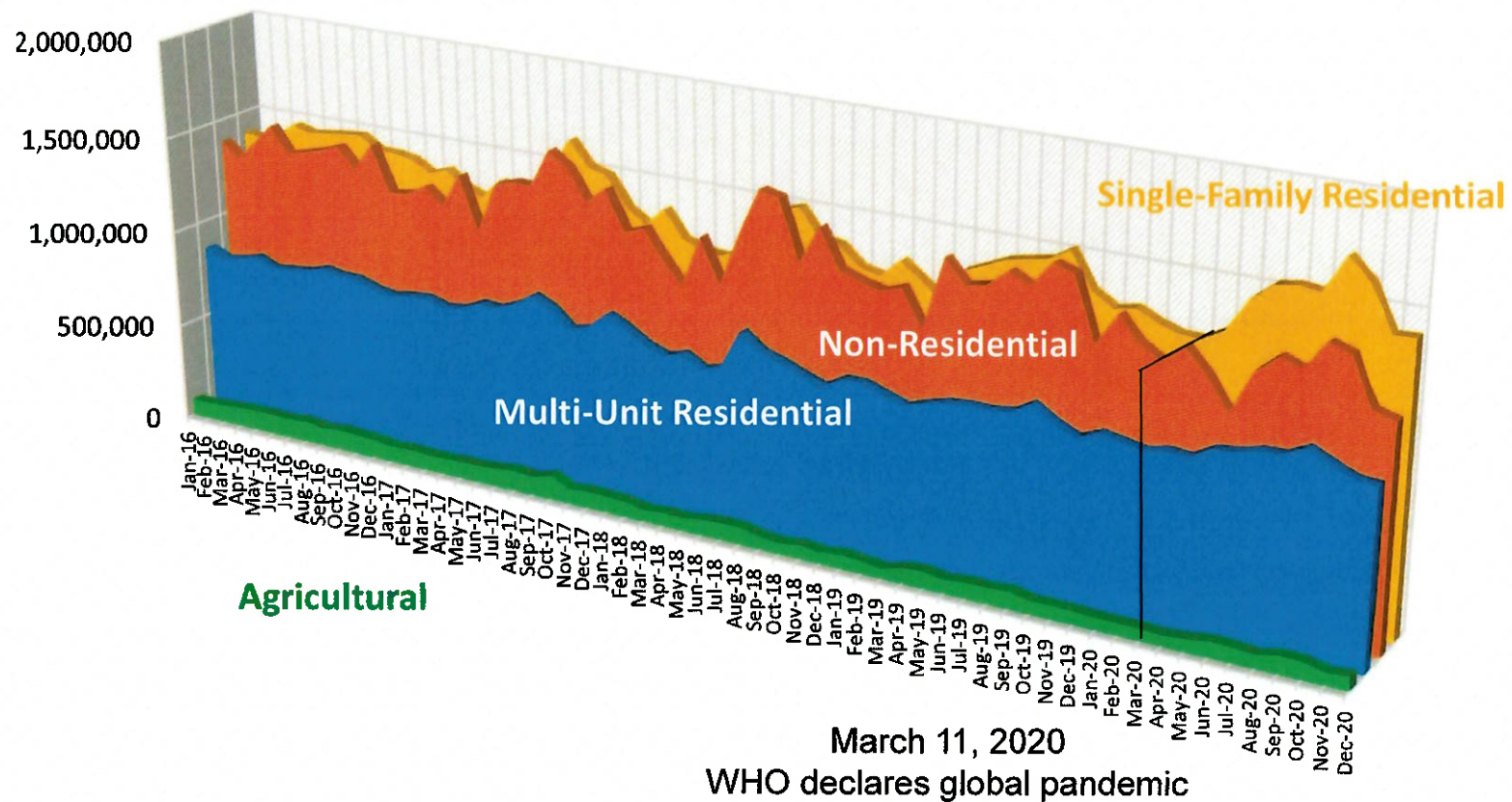
# Multi-Unit Residential Consumption



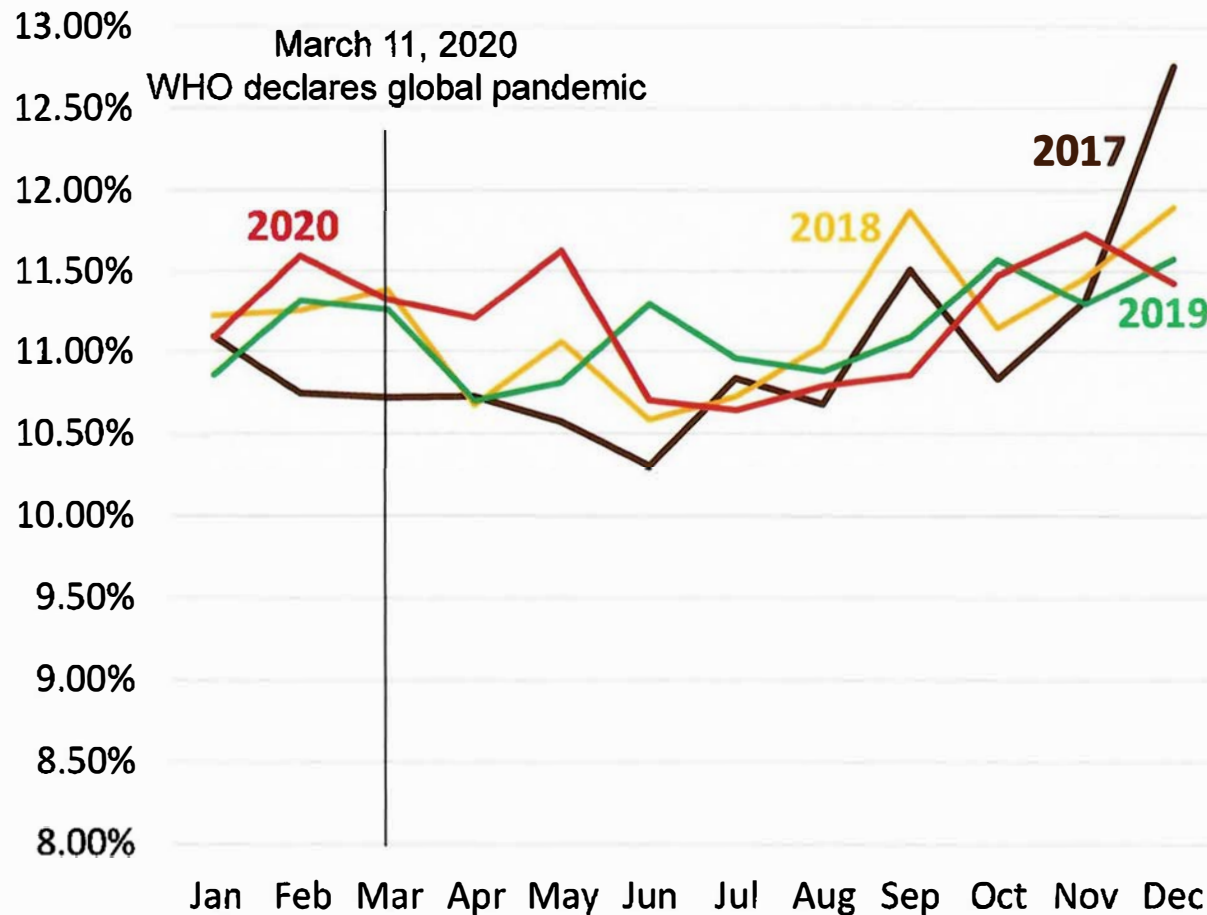
# Non-Residential Consumption



# Historical Water Consumption January 2016 – December 2020

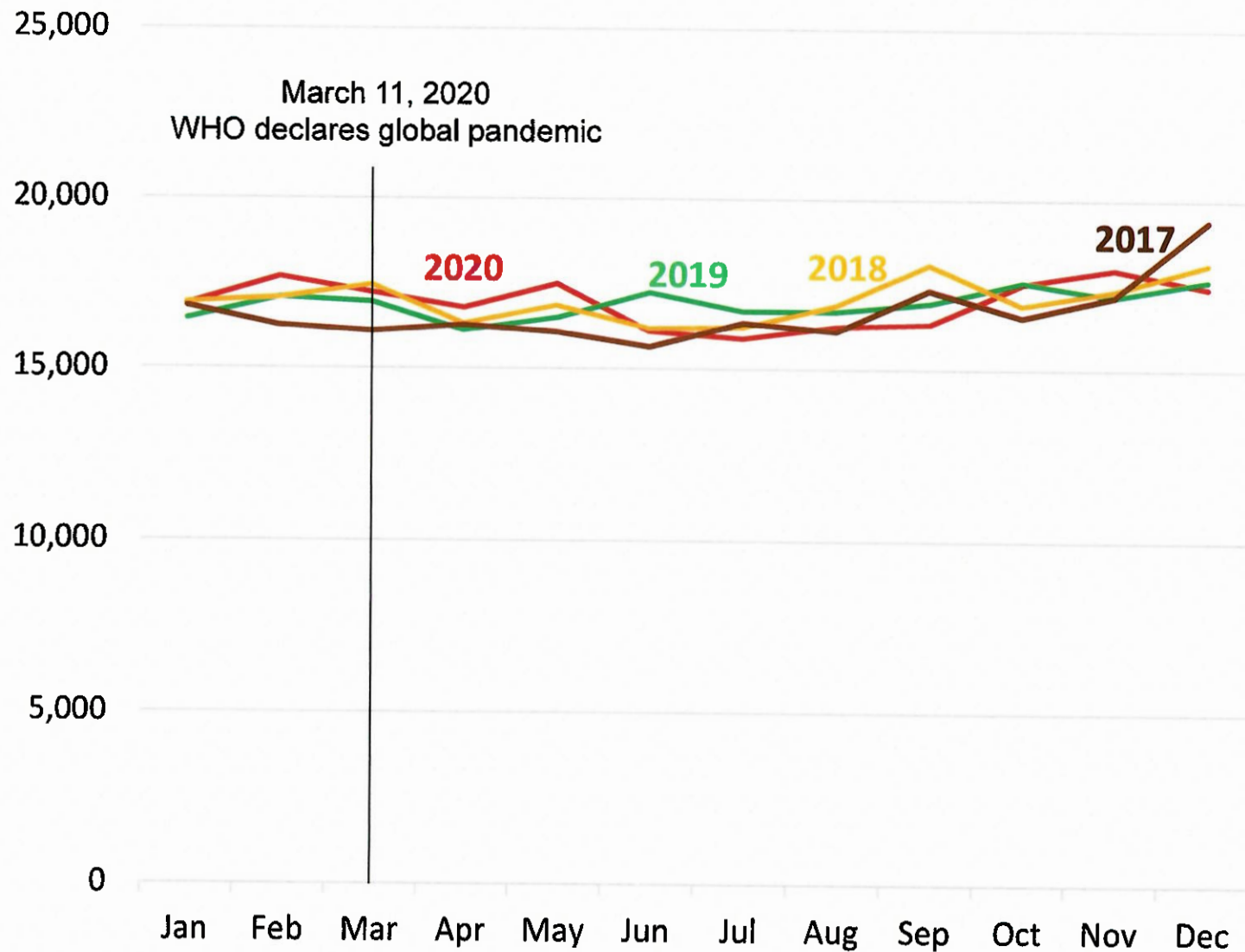


# Percentage of Water Accounts 30 Days Past Due – 2017 to Present



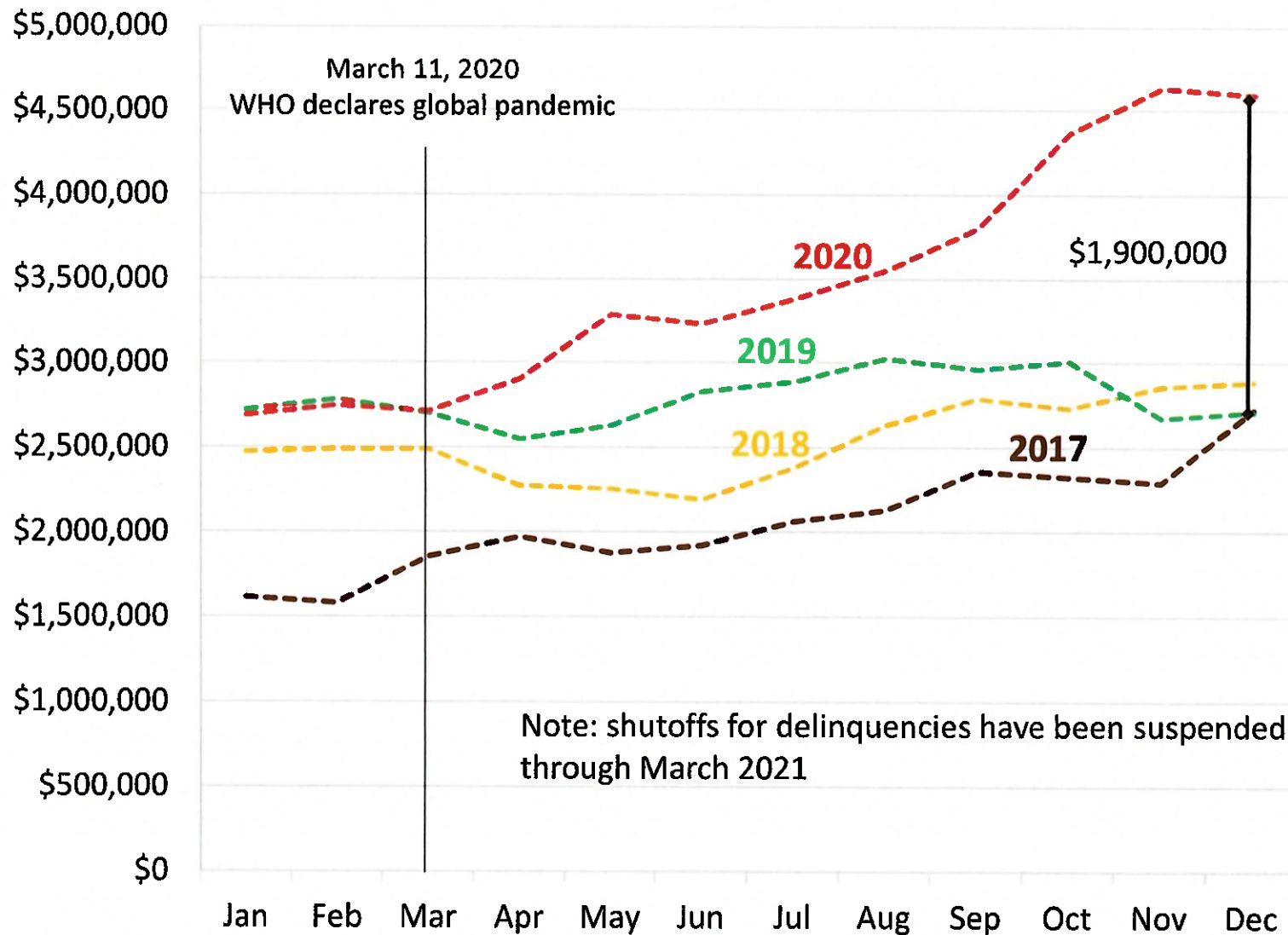
**Note: BWS  
uncollectable  
accounts average  
2015-2019 = 0.2%  
of operating  
revenue  
(\$459,490 annually)**

# Monthly Residential Water Customer Delinquency – 2017 to Present (Number)

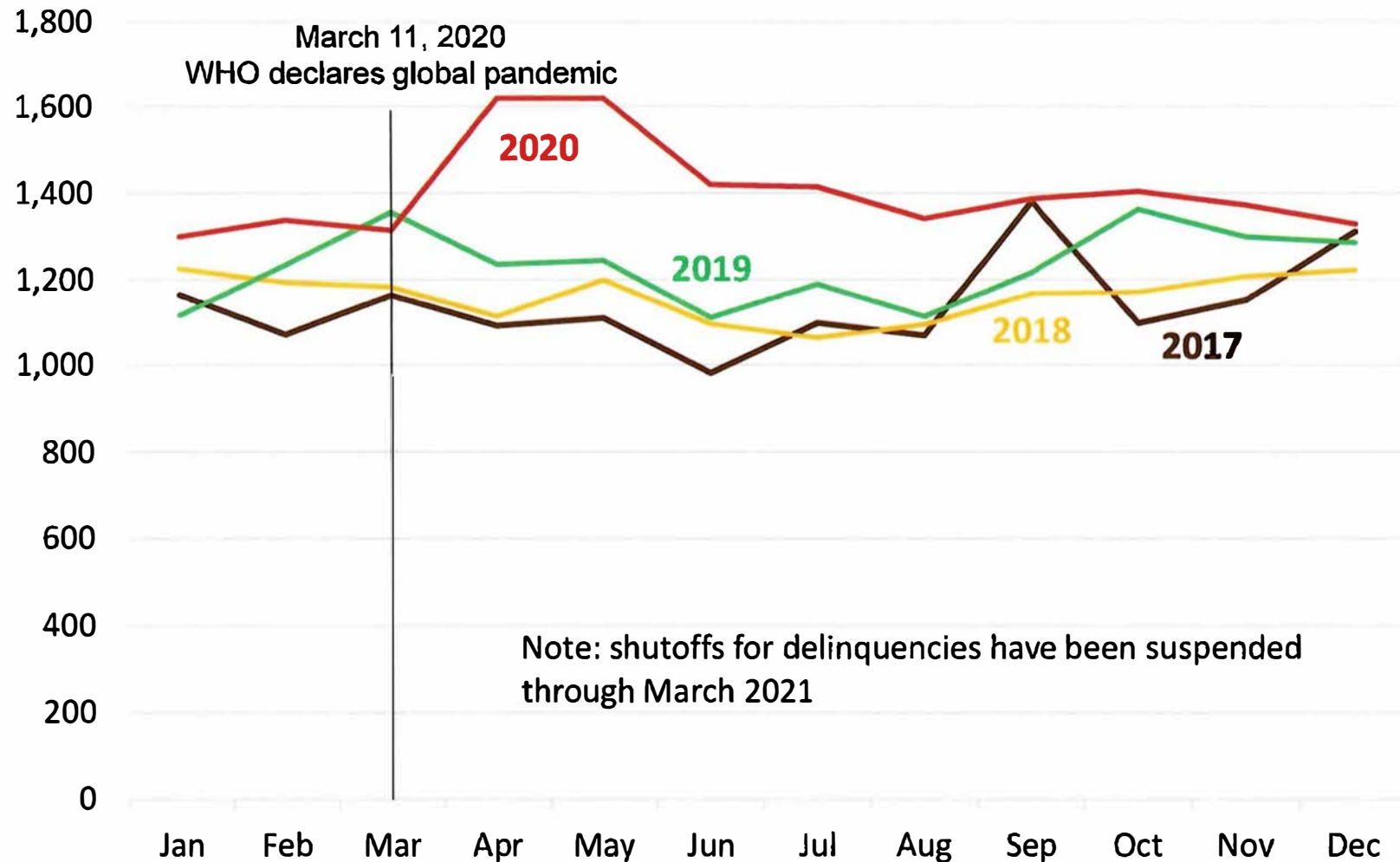




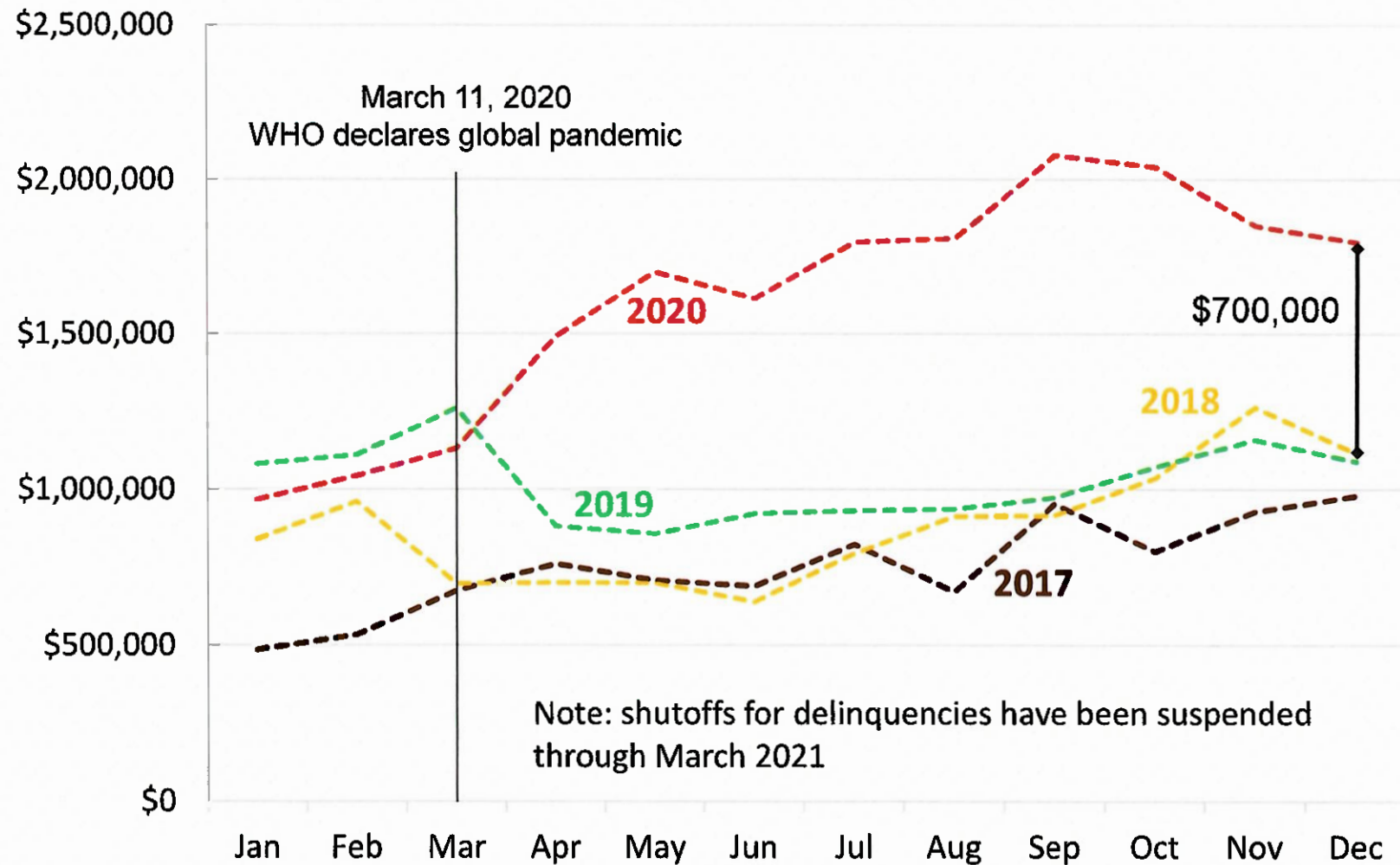
# Monthly Residential Water Customer Delinquency – 2017 to Present (\$)



# Monthly Commercial Water Customer Delinquency – 2017 to Present (Number)



# Monthly Commercial Water Customer Delinquency – 2017 to Present (\$)



# Considering a Range of 3 Scenarios Based on Ability to “Reopen” Tourism

Element	Optimistic	Moderate	<u>Pessimistic</u>
Test-based Reopening	Yes	Yes	Yes
Rapid Testing and Effective Contact Tracing	Yes	No	No
3 <sup>rd</sup> Wave	No	No	Yes
Vaccine	Imminently widely available	Widely available Summer 2021	Widely available late 2021

After UHERO Annual Forecast Update, December 2020



# Stakeholder Advisory Group Input

## October 15, 2020

- ◆ No concerns with scenarios were expressed, just nuances to consider in modeling.
- ◆ Need to factor in that some delinquent funds will never be repaid. BWS will lose money.
- ◆ To recover some or all of that money, BWS may be able to pursue economic relief funding that may not exist today.



# Stakeholder Advisory Group Input

## October 15, 2020 (Continued)

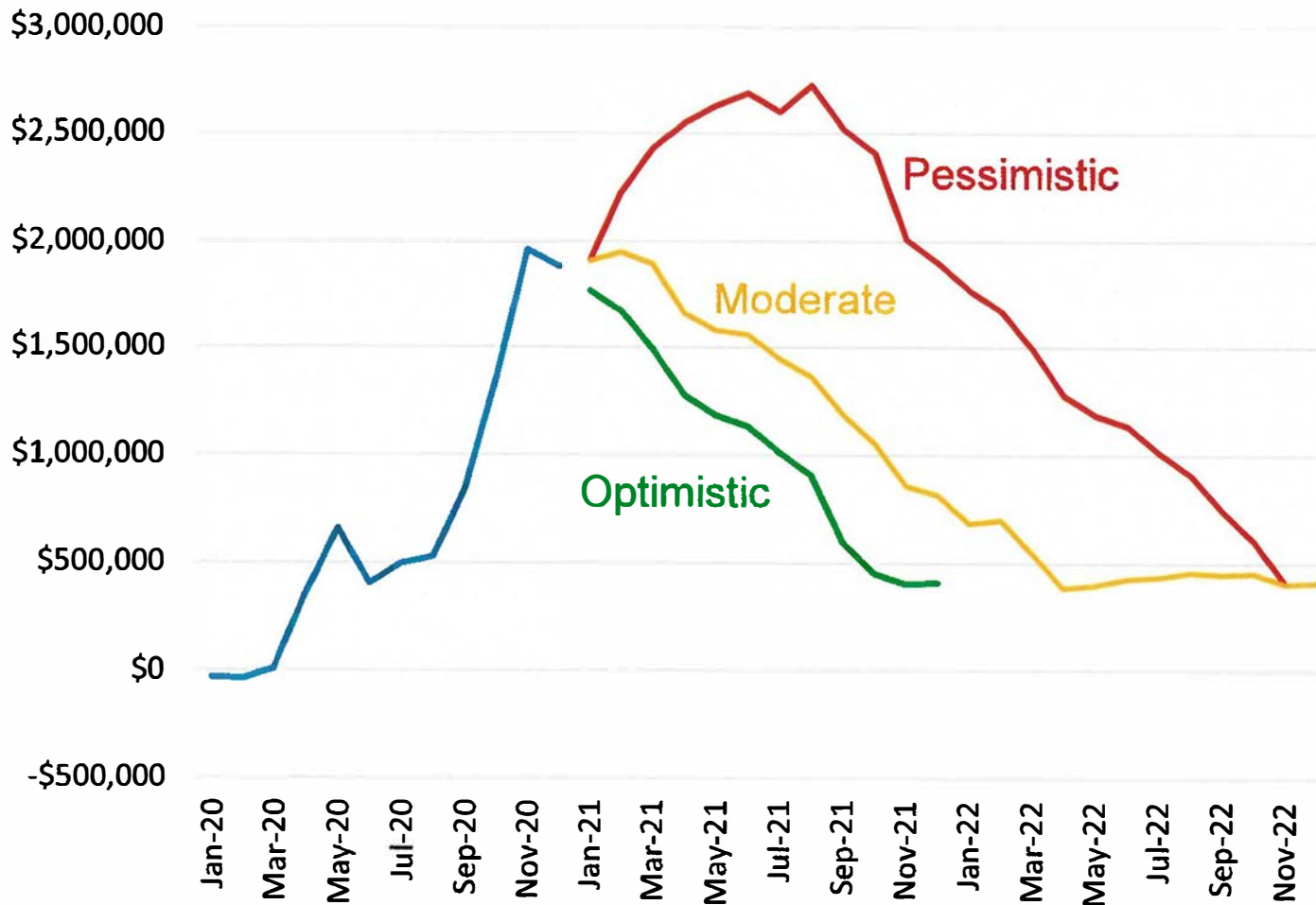
### 💧 Unintended Consequences

- People are gardening at home to put food on the table to save money on groceries.
- The unintended consequence is that they're using much more water and their water bill increases.
- That becomes a bill that's hard to pay, but it can be delinquent where paying for groceries cannot.
- Education on water conservation focused on home gardening will help these people reduce their water consumption without affecting the amount of food they can put on the table.

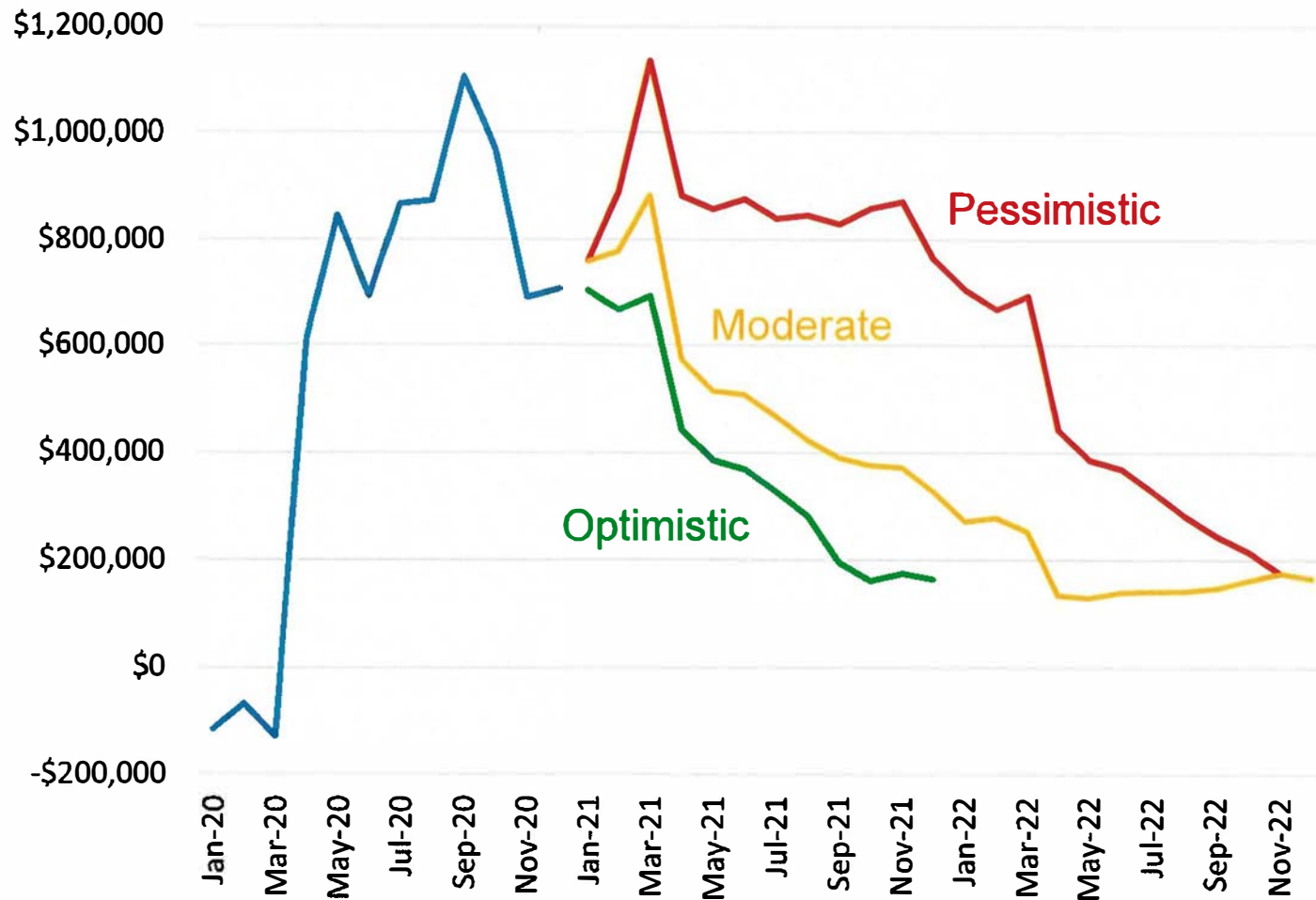
# **CARES Act – Emergency Rental Assistance (Signed Dec. 27, 2020)**

- ◆ \$25 billion to assist households unable to pay rent and utilities
- ◆ Eligible household is a renter household with 1 or more individuals that:
  - Qualifies for unemployment or has experienced a reduction in household income, incurred significant cost, or experienced a financial hardship due to COVID-19
  - Demonstrates a risk of experiencing homelessness or housing instability, and
  - Has a household income at or below 80 percent of the area median

# Residential Delinquency Scenarios due to COVID-19 (Baseline 2019)



# Commercial Delinquency Scenarios due to COVID-19 (Baseline 2019)





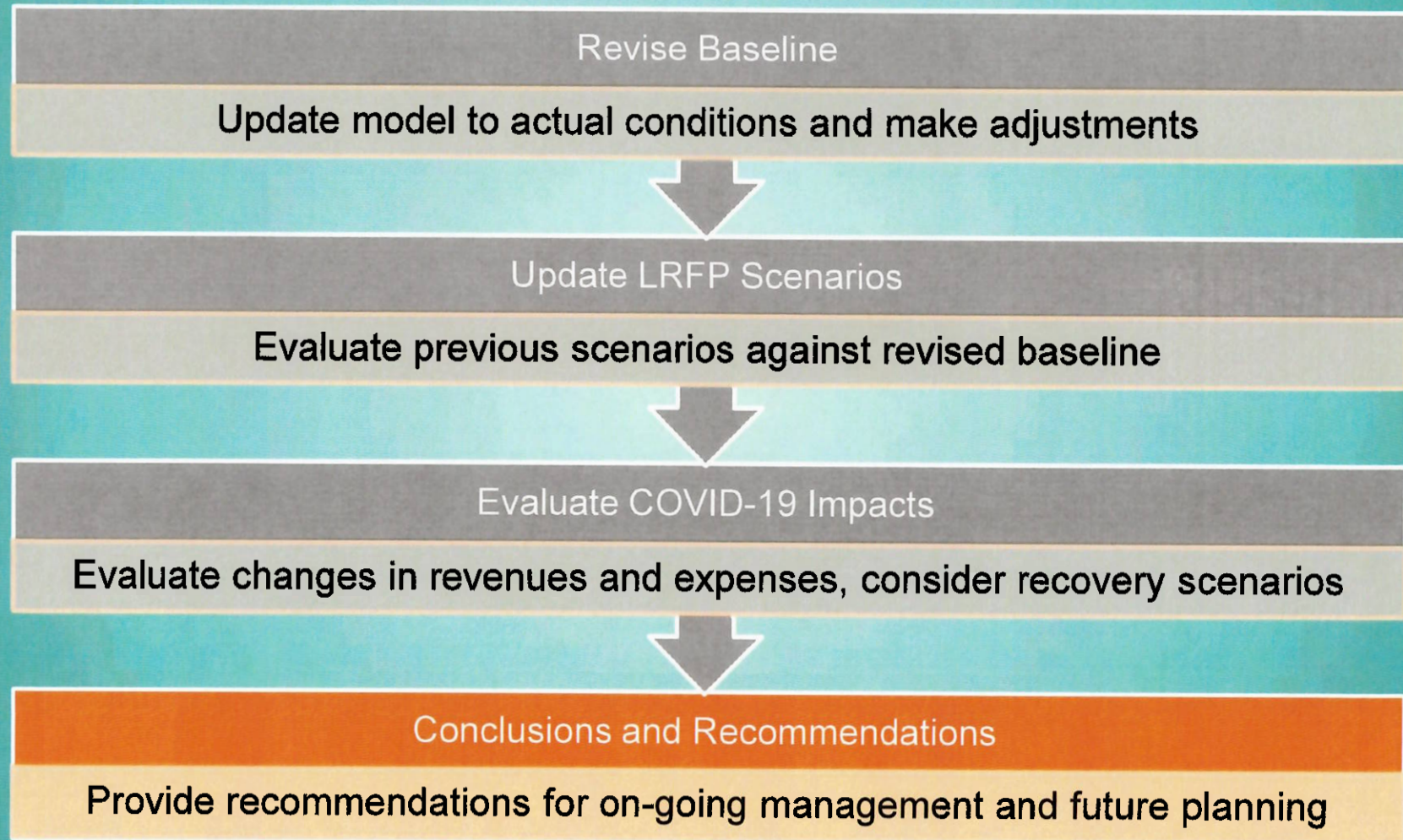
# Scenarios for Uncollectable Debt

Residential			
	Optimistic	Moderate	Pessimistic
Highest Amount of Delinquency	\$1,766,625	\$1,945,885	\$2,720,057
% Uncollectable	5%	10%	15%
\$ Uncollectable	\$88,331	\$194,589	\$408,009

Commercial			
	Optimistic	Moderate	Pessimistic
Highest Amount of Delinquency	\$703,214	\$881,238	\$1,113,020
% Uncollectable	5%	10%	15%
\$ Uncollectable	\$35,161	\$88,124	\$169,953



# LRFP Update Process





## Conclusions and Recommendations

- ◆ Annual budgeting process should be calibrated with LRFP
- ◆ LRFP update resulted in revised baseline and commitment to “live within our means”
- ◆ Revised baseline can be accomplished under current rate schedule and LRFP-anticipated revenue increases
- ◆ \$ currently collected from Water System Facilities Charge are insufficient to cover costs of growth-related projects
- ◆ Update of the Water System Facilities Charge should be completed



## Conclusions and Recommendations (Continued)

- ◆ Reductions in non-residential demands have been offset by increases in residential demands, no overall impact to water use
- ◆ The overall delinquency rate has remained within historical range
- ◆ \$ value of residential delinquencies has increased as much as \$1.96 million (73%) compared to 2019
- ◆ \$ value of commercial delinquencies has increased as much as \$1.1 million (113%) compared to 2019
- ◆ Total delinquencies as of December 2020 are \$2.6 million, about 1.1 % of BWS's total annual budget



## Conclusions and Recommendations (Continued)

- ◆ BWS has worked diligently with customers to establish payment plans, helping to control delinquency amounts
- ◆ Delinquencies result in relatively minor shifts in the timing of cashflows from month to month
- ◆ Projections of \$ that may become uncollectable are not expected to result in significant financial impacts
- ◆ Close monitoring of financial conditions should be continued to confirm conclusions
- ◆ Availability of stimulus funding remains uncertain



# WATER FOR LIFE

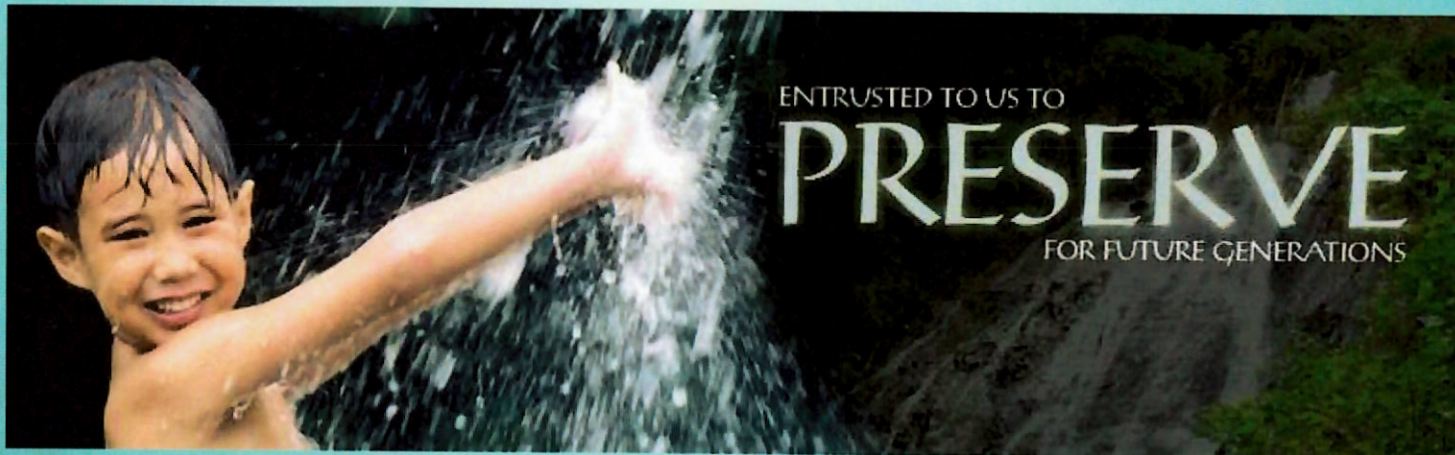
*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

**Mahalo!**

**Questions & Answers**



ITEM FOR INFORMATION NO. 2

"January 25, 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<sup>th</sup> 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.

Chair Andaya expressed his appreciation to the public for conserving water at a crucial time when the island was experiencing a slight drought. It is great news to know that the BWS has the support of the community.



**PRODUCTION, HEAD AND RAINFALL REPORT  
MONTH OF DECEMBER 2020**

**POTABLE**

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.00
WAILUPE	0.13
AINA KOA	0.07
AINA KOA II	0.68
MANOA II	0.67
PALOLO	1.06
KAIMUKI HIGH	0.72
KAIMUKI LOW	1.47
WILDER	6.98
BERETANIA HIGH	6.51
BERETANIA LOW	1.09
KALIHI HIGH	0.00
KALIHI LOW	0.00
KAPALAMA	1.50
KALIHI SHAFT	7.71
MOANALUA	1.32
HALAWA SHAFT	8.23
KAAMILO	0.87
KALAUAO	5.07
PUNANANI	9.82
KAHUMANU	0.26
HECO WAIU	2.68
MANANA	0.27
WELLS SUBTOTAL:	57.10
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.00
GRAVITY SUBTOTAL:	0.17
HONO. SUBTOTAL:	57.27

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.17
WAIMANALO III	0.00
KUOU I	0.98
KUOU II	0.04
KUOU III	0.73
LULUKU	0.82
HAIKU	0.00
IOLEKAA	0.00
KAHALUU	0.65
KAHANA	0.98
PUNALUU I	0.00
PUNALUU II	2.06
PUNALUU III	0.91
KALUANUI	1.25
MAAKUA	0.33
HAUULA	0.25
WELLS SUBTOTAL:	9.18
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.13
WAIHEE TUNNEL	3.82
LULUKU TUNNEL	0.25
HAIKU TUNNEL	0.96
KAHALUU TUNNEL	1.80
GRAVITY SUBTOTAL:	7.15
WIND. SUBTOTAL:	16.33

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.31
OPANA	0.09
WAIALEE I	0.43
WAIALEE II	0.59
HALEIWA	0.00
WAIALUA	1.86
N.SHORE SUBTOTAL:	3.28

STATION	MGD
MILILANI (4)	
MILILANI I	1.78
MILILANI II	0.00
MILILANI III	0.64
MILILANI IV	1.92
MILILANI SUBTOTAL:	4.34

STATION	MGD
WAHIAWA (5)	
WAHIAWA	0.96
WAHIAWA II	2.08
WAHIAWA SUBTOTAL:	3.04

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.64
HALAWA 550	0.00
AIEA	1.19
AIEA GULCH 497	0.33
AIEA GULCH 550	0.24
KAONOHI I	1.04
WAIMALU I	0.00
NEWTOWN	0.86
WAIU	0.76
PEARL CITY I	0.82
PEARL CITY II	1.07
PEARL CITY III	0.26
PEARL CITY SHAFT	0.93
PEARL CITY-HALAWA SUBTOTAL:	8.13

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	1.62
WAIPIO HTS. I	0.88
WAIPIO HTS. II	0.26
WAIPIO HTS. III	1.19
WAIPAHU	5.38
WAIPAHU II	2.20
WAIPAHU III	1.60
WAIPAHU IV	2.91
KUNIA I	4.35
KUNIA II	1.96
KUNIA III	1.42
HOAEAE	5.60
HONOULIULI I	0.00
HONOULIULI II	5.13
MAKAKILO	0.14
WAIPAHU-EWA SUBTOTAL:	34.66

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.00
MAKAHA II	0.29
MAKAHA III	0.30
MAKAHA V	0.11
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.07
WAIANAE I	0.10
WAIANAE II	0.61
WAIANAE III	0.65
WELLS SUBTOTAL:	2.14
WAI. C&C TUNNEL	1.40
WAI. PLANT. TUNNELS	0.25
GRAVITY SUBTOTAL:	1.65
WAIANAE SUBTOTAL:	3.78

**NONPOTABLE**

NONPOTABLE	MGD
KALAUAO SPRINGS	0.38
BARBERS POINT WELL	1.12
GLOVER TUNNEL NP	0.31
NONPOTABLE TOTAL:	1.81

**RECYCLED WATER (NOVEMBER 2020)**

RECYCLED WATER	MGD
HONOULIULI WRF R-1	6.50
HONOULIULI WRF RO	1.28
RECYCLED WATER TOTAL:	7.78

**PRODUCTION, HEAD AND RAINFALL REPORT  
MONTH OF DECEMBER 2020**

**PRODUCTION SUMMARIES**

TOTAL WATER	MGD
PUMPAGE	121.86
GRAVITY	8.97
POTABLE TOTAL:	130.82
NONPOTABLE	1.81
RECYCLED WATER	7.78
TOTAL WATER:	140.41

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS POTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE/ BWS YLDS	B DEC 2020	C DIFF. A-B
1	HONOLULU	82.93	57.10	25.83
2	WINDWARD	25.02	12.38	12.64
3	NORTH SHORE	4.70	3.28	1.42
4	MILILANI	7.53	4.34	3.19
5	WAHIAWA	4.27	3.04	1.23
6	PEARL CITY-HALAWA	12.25	8.13	4.12
7	WAIPAHU-EWA	50.63	34.66	15.97
8	WAIANAE	4.34	2.14	2.20
TOTAL:		191.67	125.06	66.61

CWRM PERMITTED USE FOR BWS NONPOTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE	B DEC 2020	C DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.12	-0.12
TOTAL:		1.00	1.12	-0.12

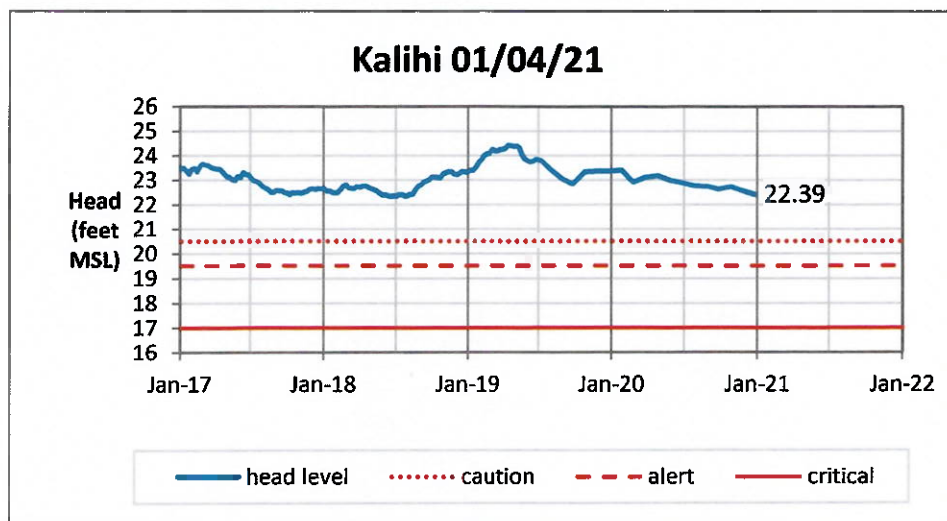
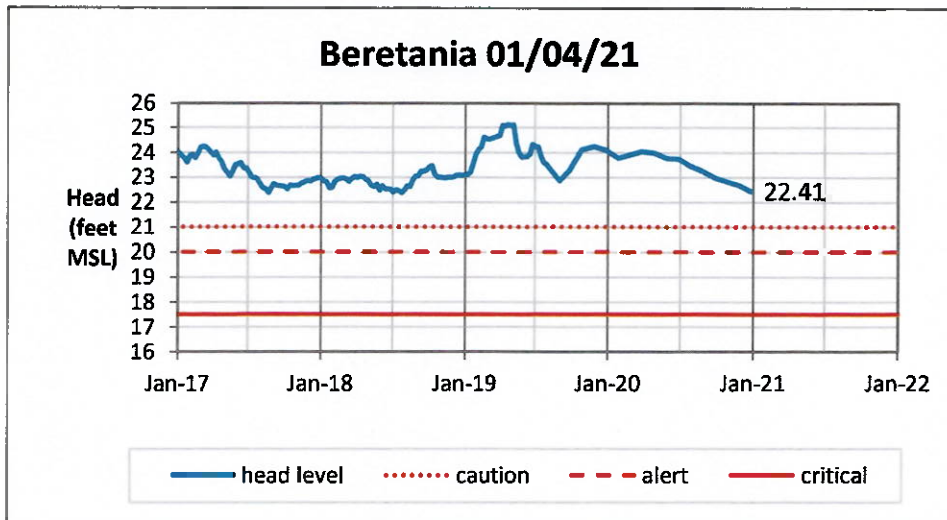
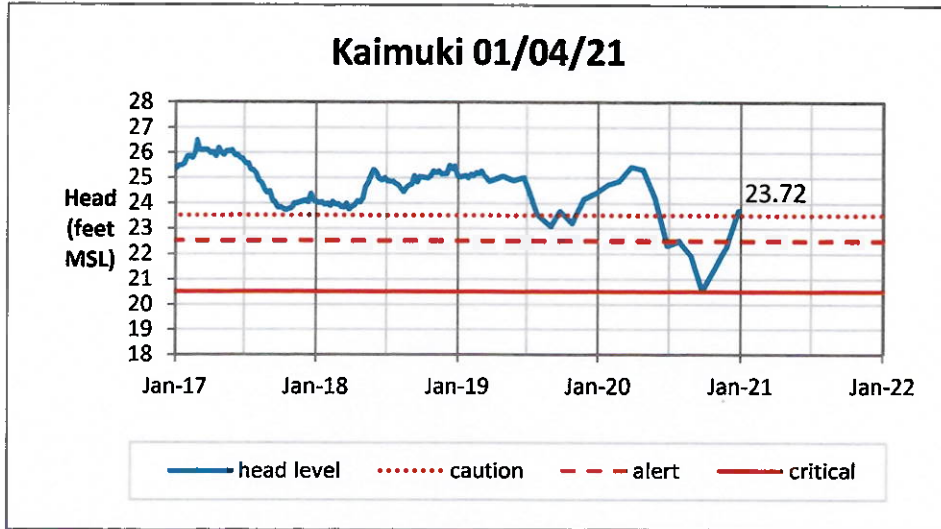
**EFFECTIVE WATER DEMAND PER DISTRICT**

IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	1.20
7	8	BARBERS PT LB	6.15

WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	57.10	1.20	-	58.30
2	WINDWARD	12.38	-	1.20	11.18
3	NORTH SHORE	3.28	-	-	3.28
4	MILILANI	4.34	-	-	4.34
5	WAHIAWA	3.04	-	-	3.04
6	PEARL CITY-HALAWA	8.13	-	-	8.13
7	WAIPAHU-EWA	34.66	-	6.15	28.51
8	WAIANAE	2.14	6.15	-	8.28
TOTAL:		125.06	7.35	7.35	125.06

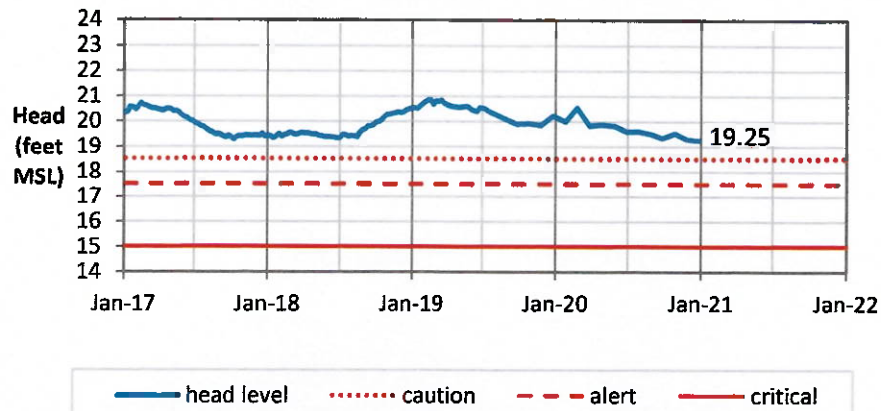


## Head Report

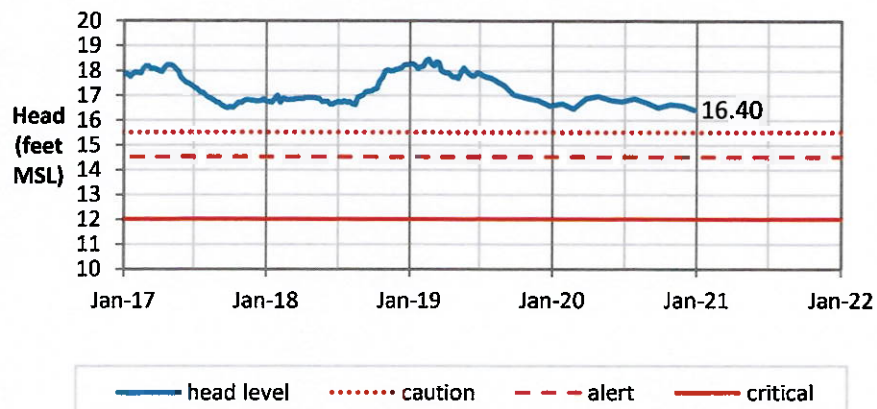


## Head Report

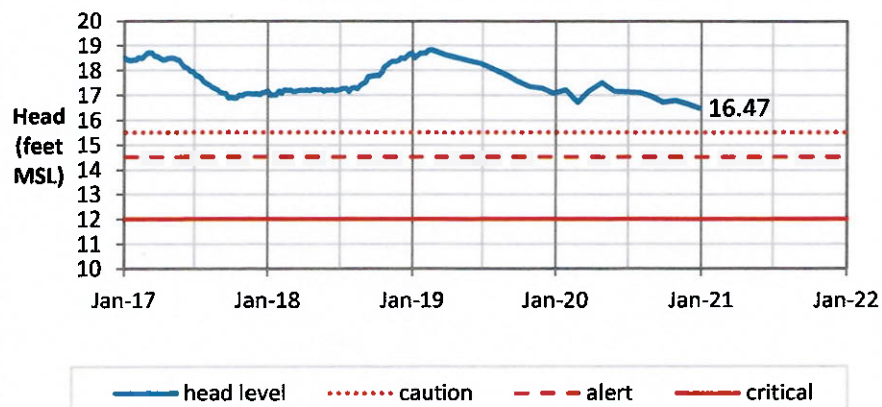
### Moanalua 01/04/21



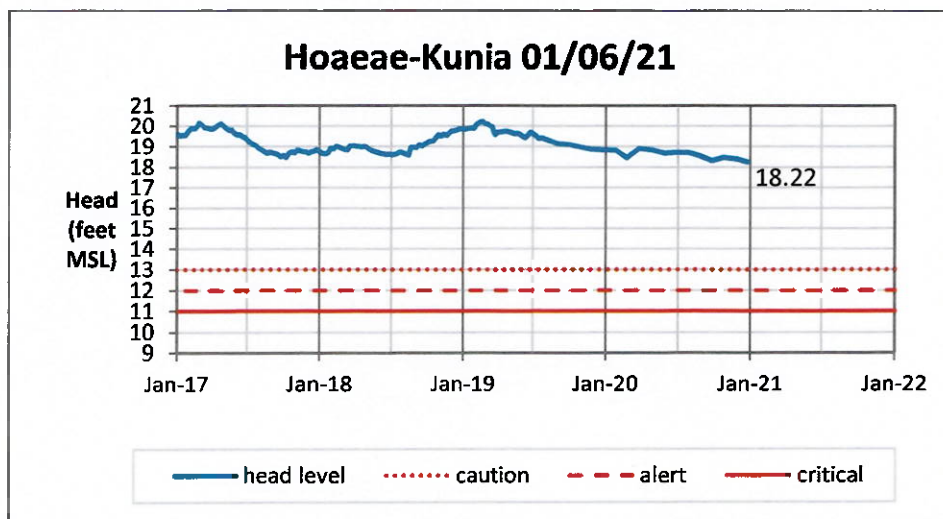
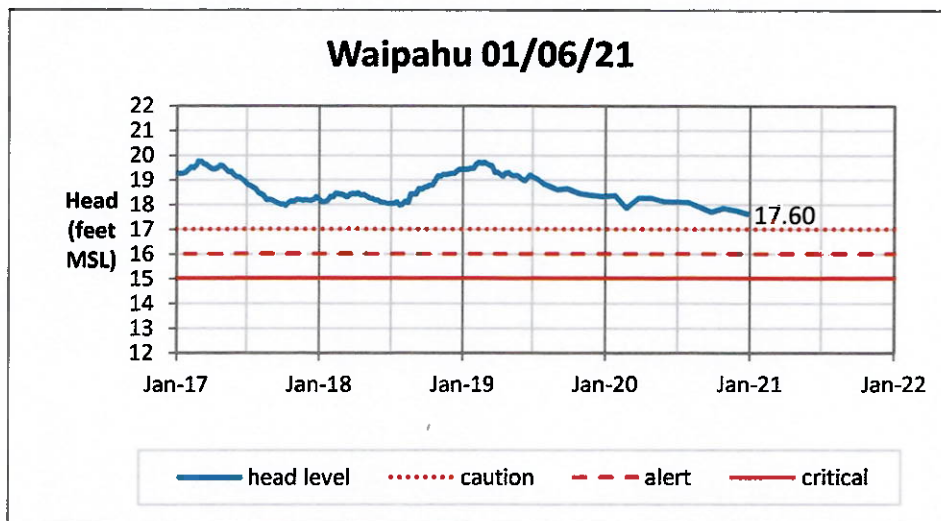
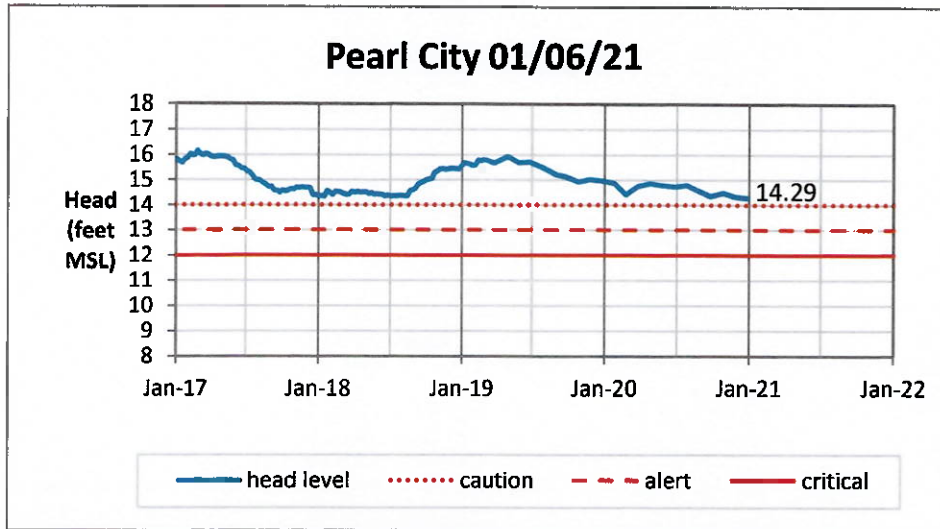
### Halawa 01/08/21



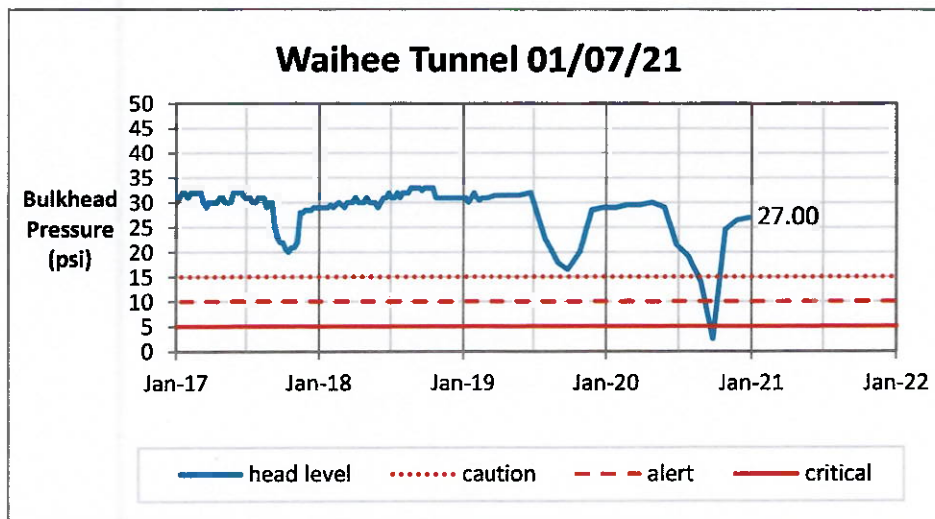
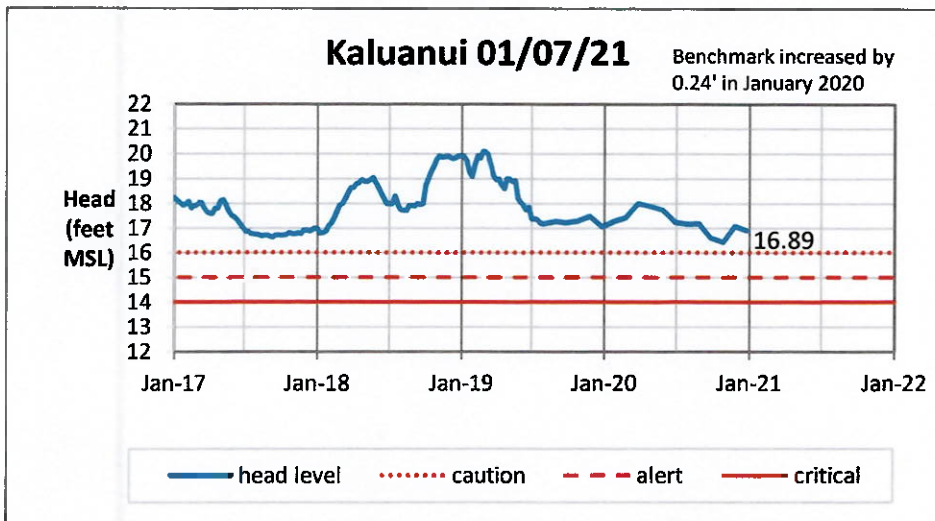
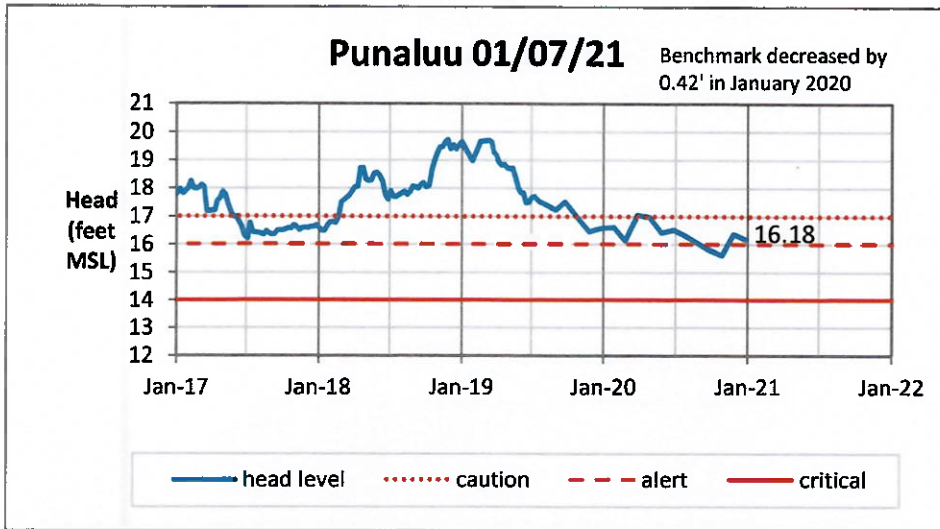
### Kalauao 01/08/21



## Head Report

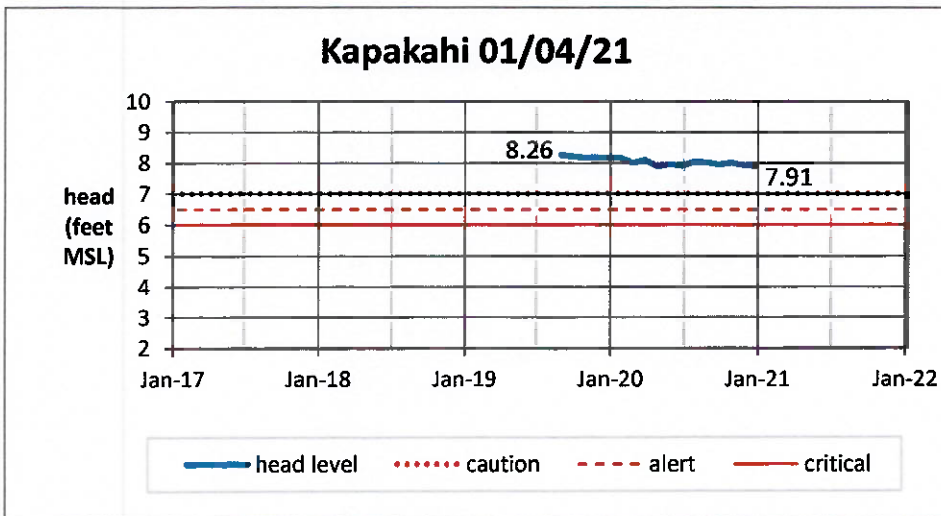
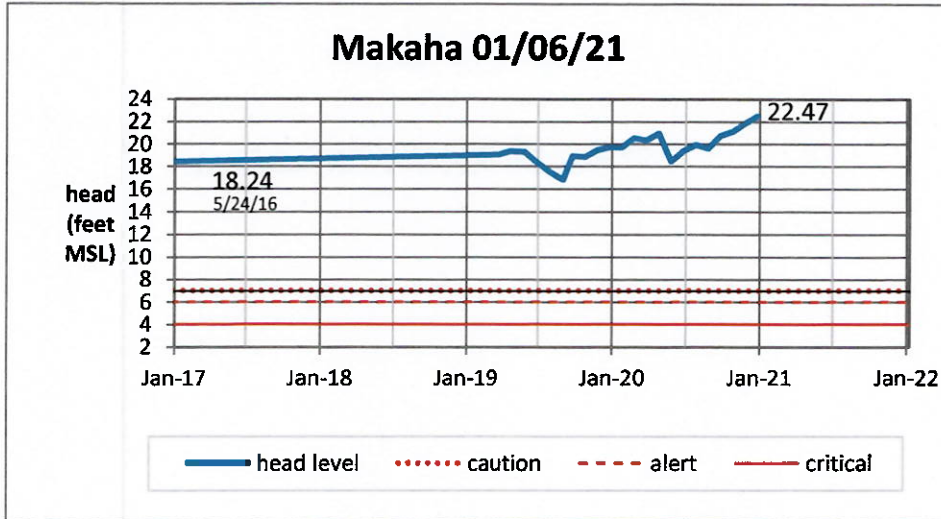
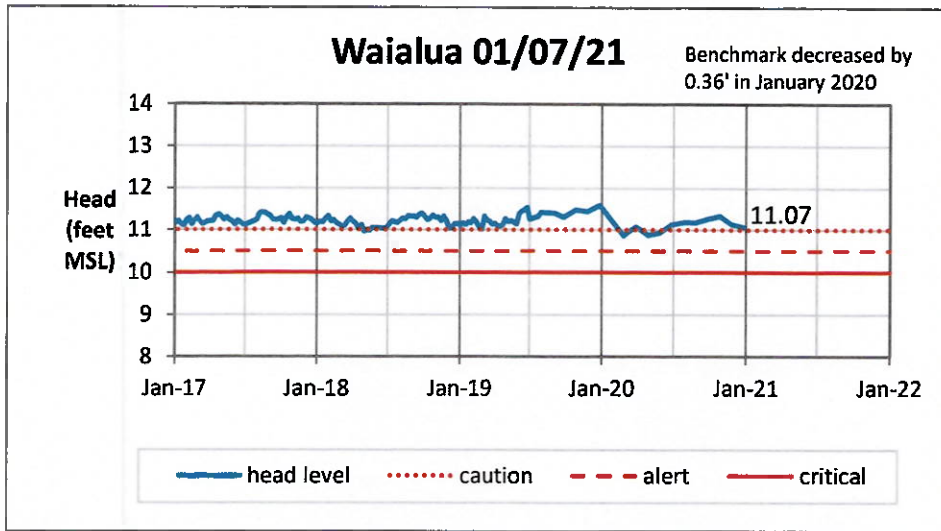


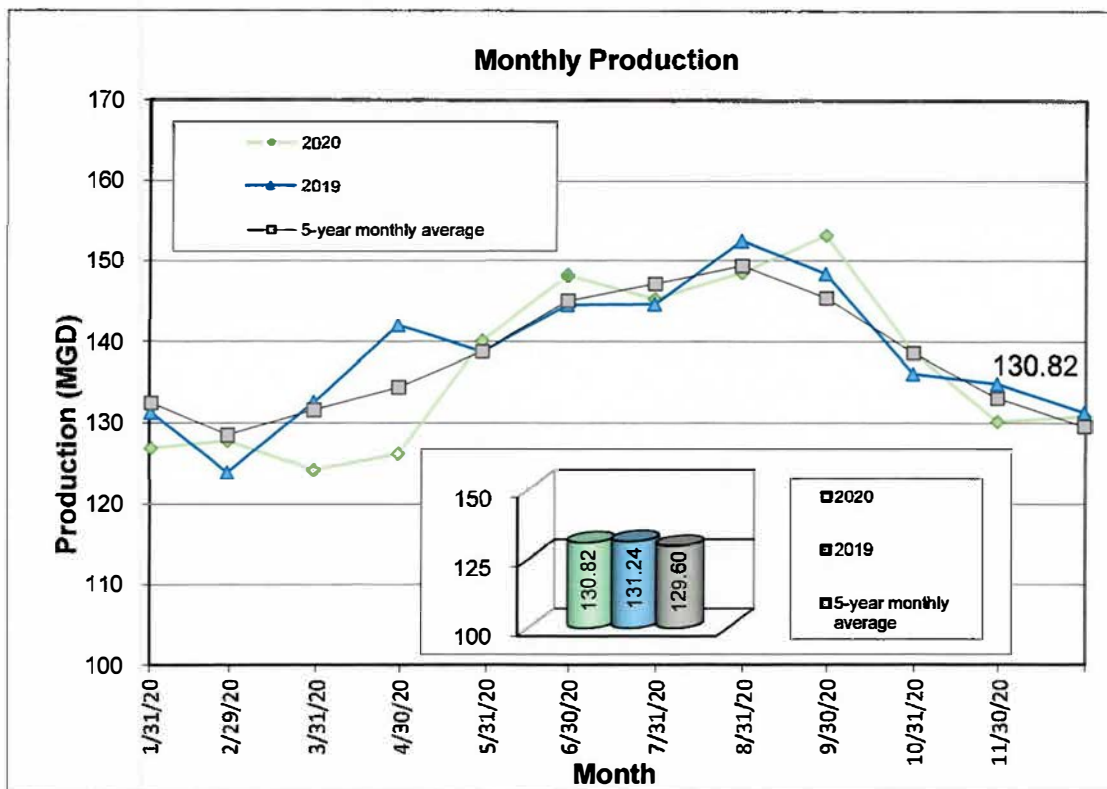
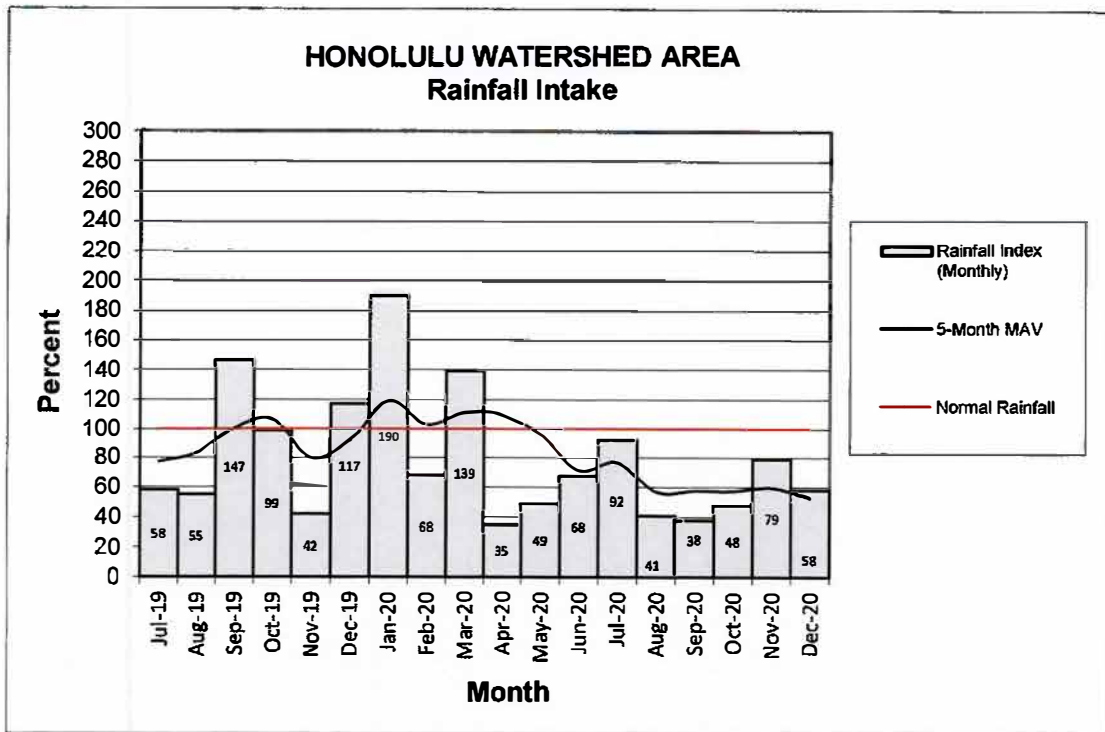
## Head Report





## Head Report





ITEM FOR INFORMATION NO. 3

"January 25, 2021

WATER MAIN  
REPAIR  
REPORT FOR  
DECEMBER  
2020

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

Chair and Members:

Subject: Water Main Repair Report for December 2020

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

Respectfully submitted,

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

Attachment"

The foregoing was for information only.

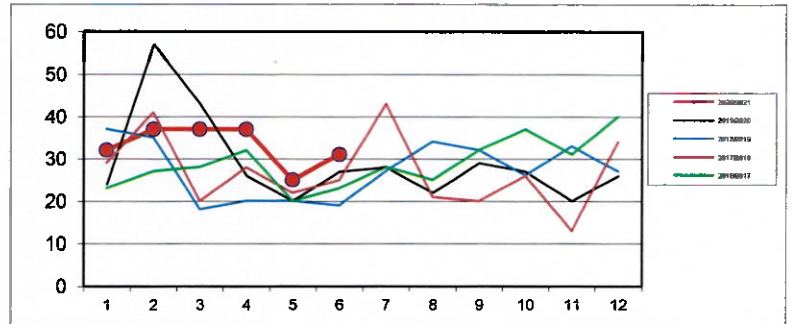
DISCUSSION:

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

## WATER MAIN REPAIR REPORT for December 2020

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2020/2021	32	37	37	37	25	31							199
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
12/1/2020	94-352 Kahuanani St, Waipahu	8	CI
12/1/2020	45-612 Keole St, Kaneohe	4	CI
12/3/2020	1724 Ala Aolani St, Honolulu	12	CI
12/4/2020	1311 Kapiolani Blvd, Honolulu	4	CI
12/5/2020	45-731 Wainana St, Kaneohe	6	CI
12/5/2020	98-429 Kaonohi St, Aiea	12	CI
12/8/2020	3122 Kaloaluliki St, Honolulu	8	CI
12/8/2020	949 Auahi St, Honolulu	8	CI
12/8/2020	1735 Hoowae St, Pearl City	8	CI
12/8/2020	617 Analu St, Honolulu	4	CI
12/8/2020	542 Kaaahi St, Honolulu	12	CI
12/9/2020	Makua Village, Kaaawa	8	CI
12/9/2020	780 Ainapo St, Honolulu	12	PVC
12/13/2020	Mountain line, Waimanalo	6	CI
12/15/2020	91-2301 Old Fort Weaver Rd, Ewa Beach	16	CI
12/16/2020	98-624 Nohoalii St, Aiea	4	DI
12/18/2020	45-27 Holowai Pl, Kaneohe	6	CI
12/19/2020	92-457 Akaula St, Kapolei	8	CI
12/19/2020	2239 Apoepoe St, Pearl City	8	CI
12/20/2020	2239 Apoepoe St, Pearl City	8	CI
12/20/2020	99-502 Iwaiwa St, Aiea	8	CI
12/21/2020	67-421 Alahaka St, Waialua	8	CI
12/22/2020	1835 Ala Moana Blvd, Honolulu	4	CI
12/22/2020	Auahi St, Honolulu	6	CI
12/23/2020	305 Akake Way, Kailua	4	CI
12/23/2020	45-27 Lilipuna Pl, Kaneohe	8	PVC
12/24/2020	1737 Oheke Pl, Honolulu	4	CI
12/25/2020	99-1253 Iwaena St, Aiea	6	AC
12/26/2020	3019 E Manoa Rd, Honolulu	8	PVC
12/31/2020	85-231 McArthur St, Waianae	8	PVC
12/31/2020	41-164 Nalu St, Waimanalo	8	DI



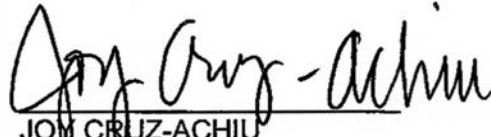
16 miles of pipeline were surveyed by the Leak Detection Team in the month of December.




**MOTION TO  
ADJOURN**

There being no further business Chair Andaya at 3:28 PM called for a motion to adjourn the Regular Session. Jade Butay so moved; seconded by Kapua Sproat and unanimously carried.

The minutes of the Regular Meeting held on January 25, 2021 are respectfully submitted,

  
JOM CRUZ-ACHUI

APPROVED:

  
BRYAN P. ANDAYA  
Chair of the Board  
FEB 22 2021  
Date

THE MINUTES OF THE REGULAR SESSION BOARD MEETING 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	X		
NA'ALEHU ANTHONY	X		
JADE T. BUTAY	X		
ROGER BABCOCK, JR.	X		