

CONFIDENTIAL



Water Authority of the Cayman Islands

Minutes of 330th Meeting held on 21 September 2022
at the Water Authority of the Cayman Islands' Headquarters,
13G Red Gate Road

Members Present:

Chairman:	Mr D Rankine
Members:	Mr N DaCosta- <i>virtual</i> Mr H B Ebanks Mr G Ebanks Mrs L Ryan - <i>telephone</i> Mr M Scotland Mrs I Simms
Secretary:	Dr G Frederick-van Genderen
Apologies:	Mr D Ebanks Mr W Welcome Ms A Owens

Call to Order

The Chairman welcomed all members and called the meeting to order at 1:35pm after ascertaining that there was a quorum. The Chairman noted absence for Mr D Ebanks and apologies for Ms A Owens and Mr W Welcome. He then invited Mrs L Ryan to open the meeting with prayer.

Members agreed to defer to the October 2022 Board Meeting, discussion on the Trucked Water Rate Modification Proposal item (b) on the agenda under Current Business.

Confirmation of Minutes of the 329th Meeting held on 17 August 2022

The Minutes having been circulated, taken as read, and amendments made, the Chairman asked for confirmation of the Minutes of the 329th Meeting held on 17 August

2022. Mr G Ebanks then moved the motion to accept the Minutes, Mr N DaCosta seconded the motion and the motion passed unanimously by members able to vote.

Declaration of Conflicts of Interest

No declarations of interest were made.

Matters Arising

a) **Cayman Brac Infrastructure Upgrade & Expansion Project - Update & Presentation.**

The Secretary reported that the approximately 200 metres (600 feet) of 80mm diameter (3-inch) pipeline along an un-named road west of Frigate Drive had been pressure tested, disinfected and flushed, and commissioned.

The New Works Pipelaying Crew carried out road reinstatement in the Surf Lane, Frigate Drive area, then moved excavated material to the Bluff site and cleared bush at the Bluff site and installed new gate posts for the Bluff site security gate.

The crew resumed work on the extension of the main pipeline along Bight Road, from Surf Lane towards Watering Place. By 09 September 2022 they had installed 150m (500 feet) of 200mm (8-inch) pipe, out of a total of approximately 950 metres (3,000 feet) to the next in-line valve at Blazer Drive (Watering Place).

As mentioned previously, the current four-man crew is almost too small to work comfortably along the main road. Unfortunately, on 16 September 2022 one of the Assistant Operators tendered his resignation, which will reduce the crew complement to three by mid-October 2022. The Authority is trying to find suitable candidates to fill the vacant Heavy Equipment operator and labourer positions as soon as possible.

Ten new water service connections were installed since mid-August 2022.

West End Water Works Pump House

During the first eight months (January–August) of 2022 the total water sales in Cayman Brac were approximately 1.9% less than during the same period last year. Pipeline sales were up 7.0%, but trucked water sales were down 14.2%, compared to the same period last year. The reduction in trucked water sales was likely due to the relatively 'wet' months of March through July compared to previous years, as well as the slight increase in piped water customers.

West End Water Works RO Plants

Campbell's Welding started repairs to the RO vessel support frames of the old RO plant (Plant #1) on 13 September 2022. The containerised RO plant (Plant

#2) was operated fulltime whilst the old RO plant was off-line. The welding work at the old RO plant (Plant #1) was completed by 16 September 2022. The welding repairs on the stainless-steel pipework in the containerised plant started on 17 September 2022, and were completed on 18 September 2022.

Brac Bluff Water Works

The Secretary reported no further developments.

b) New Red Gate RO Plant – Update.

The Secretary reported that in preparation of the foundation construction the contractor removed approximately 1-2 feet of the existing fill/loose material, up to the native marl, and filled the resulting excavation with Cayman rock fill and compacted it to 95% of dry density.

c) New Water Storage Tanks at North Side Water Works – Update.

The Secretary reported that on 12 September 2022, Jairam Ltd, the contractor for the supply and erection of two bolted steel tanks for water storage at the North Side Water Works, poured the concrete for the perimeter footer for the first tank. The contractor placed concrete in the first quadrant of the base slab for that tank on 21 September 2022.

Additionally, the contractor is nearing completion of the grading and compaction for the base slab as well as the excavation for the perimeter footer for the second tank.

d) 31 December 2021 Audit of Consolidated, Island & Divisional Statements – Update

31 December 2021 Audit – Consolidated, Divisional and Island Financial Statements for Water, Wastewater and Statutory

The Secretary advised that the Chief Financial Officer (CFO) was pleased to provide the 2021 Divisional and Island statements for the Board's approval. The Secretary apologised that these were not included in the Board package, however they were only received from KPMG by the CFO this morning.

KPMG has confirmed that the statements provided are "Final Drafts" as they have yet to clear the final stages of KPMG's internal review. The Board was respectfully requested to approve the statements provided that there are no material changes and to authorise the Chairman, Director and the CFO to sign the statements on behalf of the Authority once the final statements are received. The motion to approve the request was moved by Mr N DaCosta, seconded by Mr H B Ebanks and passed unanimously by all members able to vote.

31 December 2021 Non-Defined Benefits (DB) Employees Post-Retirement Healthcare

The Secretary reported that there was nothing new to report.

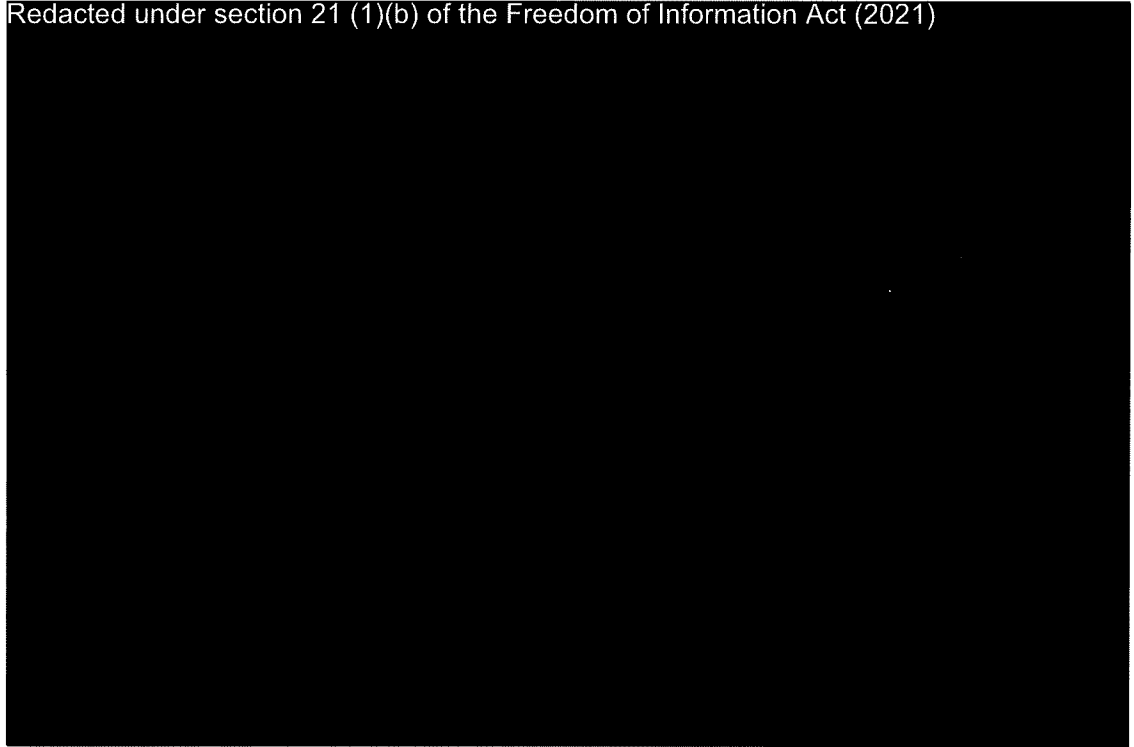
Annual Report 2021

The Secretary reported that the Authority was advised by the Ministry that the 2021 Annual Report will be tabled in Parliament at the next sitting.

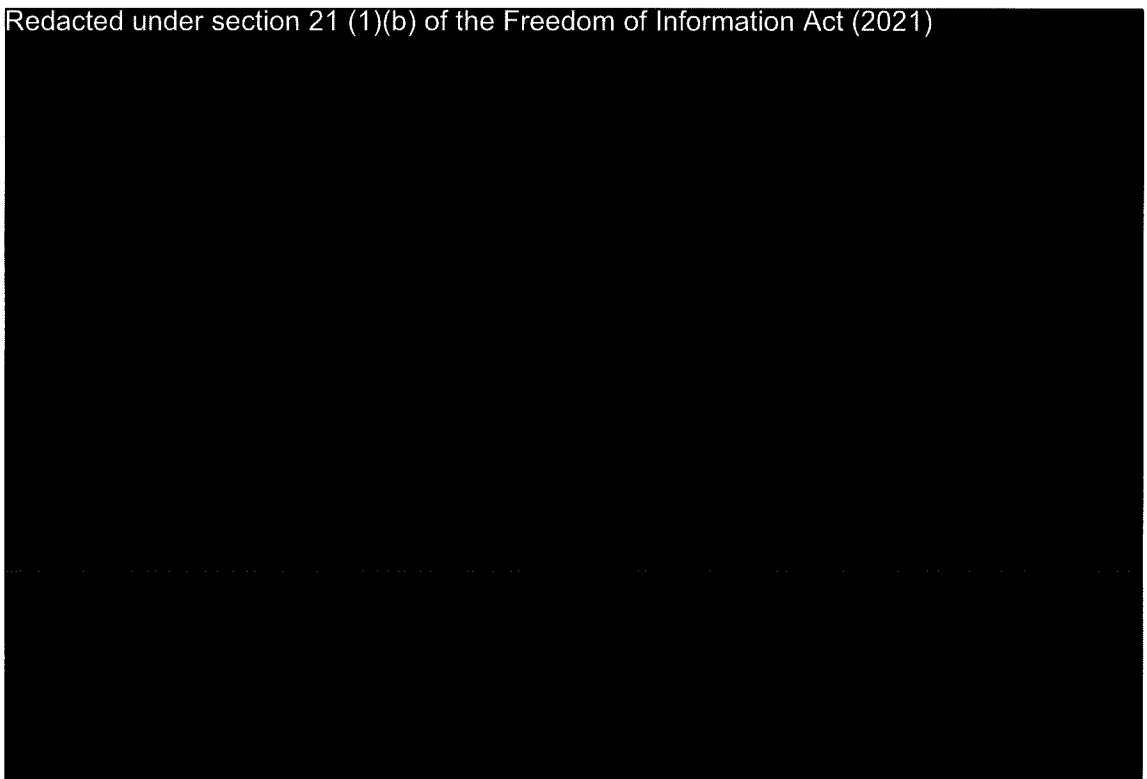
Audit Tendering Process

The Secretary reported that was nothing new to report on this matter.


e) Redacted under section 21 (1)(b) of the Freedom of Information Act (2021)



f) Redacted under section 21 (1)(b) of the Freedom of Information Act (2021)



Redacted under section 21 (1)(b) of the Freedom of Information Act (2021)



g)

Department Updates

a) Finance


Redacted under section 21 (1)(b) of the Freedom of Information Act (2021 Revision)



Redacted under section 21 (1)(b) of the Freedom of Information Act (2021 Revision)



Redacted under section 21 (1)(b) of the Freedom of Information Act (2021)



b) Engineering Services**1) Engineering**

The Secretary reported that on 29 August 2022 CUES Inc sent a preliminary report on the manhole project, and on 08 September 2022 a Zoom meeting was arranged CUES Inc to review the deliverables and resolve any inconsistencies and anomalies in the Executive Summary of the report.

A brief summary of the findings is provided below:

- In total 392 manholes were inspected (the number reported at the last meeting was 450, however, the final CUES report indicated that the Water Authority crew identified 458 manholes, but not all were inspected using the CUES SPiDER Scanner. A total of 66 manholes were not inspected, leaving 392 that were inspected. The report summarises the reasons why these manholes were not inspected.
- Major structural condition deficiencies (high priority) were found in 44 (12%) of the manholes.
- Less significant structural deficiencies (medium priority) were found in 135 (34%) of the manholes. This was mostly due to corroded benches and channels
- Insignificant structural deficiencies (low priority) were found in 213 (54%) of the manholes.

As the Secretary reported at the August Board meeting, CUES will produce a MACP (Manhole Assessment Certification Protocol) report for each manhole inspected by Water Authority including SPiDER Webviewer files (inclusive measurements and notes) and various other deliverables.

Due to size of the video and point cloud files, and to facilitate hyperlinking, these will need to be stored on a separate server at the Water Authority. CUES and the Engineering Services Department (as well as the Senior Development Control Technologist who is more familiar with ArcGIS) will liaise with IT regarding the server location as well as the installation of the SPiDER web viewer software on the various machines within the Engineering Services Department.

On 16 September 2022, CUES sent the final report as a PDF for one final review before printing it. As per the contract, CUES will arrange training sessions as required to ensure the Authority is able to get the most out of the ArcGIS dataset (e.g., querying the data, viewing the Webviewer files and videos from various angles etc.).

Redacted under section 21 (1)(b) of the Freedom of Information Act (2021)

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2) *New Works Division*

The Secretary reported that since mid-August 2022 the New Works pipelaying crew in Grand Cayman completed a number of short sections of pipeline:

- Approximately 110 metres (350 feet) of 80mm (3-inch) pipeline along Dorset Drive (off Walkers Rd) was tested, disinfected and flushed. The tying-in and commissioning of this pipeline was not completed due to the work required along Shamrock Road (between Destiny Drive and Savannah Avenue as well due to the pipeline installation along Linford Pierson Highway. The customers along this road are still connected to the existing 32mm pipeline which was not disturbed during the installation of the new pipeline. The new pipeline will be commissioned, and customers connected to the new pipeline, this week.
- Approximately 155 metres (520 feet) of 300mm (12-inch) pipeline along Shamrock Road, Savannah (between Lancelot Drive & Savannah Avenue) was pressure tested, disinfected and flushed, and has been commissioned.

On 23 August 2022 the New Works crew commenced the installation of approximately 640 metres (2,100 feet) of 300mm (12-inch) pipe along the new section of the Linford Pierson Highway from the intersection with Agnes Way to the new roundabout at Bobby Thompson Way. By 09 September 2022 approximately 260 metres (850 feet) of pipeline had been installed.

After the pipeline installation along Linford Pierson Highway has been completed, work will continue along Bobby Thompson Way towards the intersection with Smith Road (an additional length of approximately 500 metres (1,640 feet), also 300mm (12-inch) pipe).

3) *Water Distribution & Treatment Division*

The Secretary reported that on 12 September 2022 Operations-Water Supply started the relaying of approximately 1,200 metres (4,000 feet) of 150mm (6-inch) pipe along Marina Drive. This work is expected to be completed by early December 2022.

During the first eight months (January - August) of 2022 the total water sales on Grand Cayman were approximately 2.7% higher than during the same period last year.

4) *Water Production Division*

As mentioned previously, the RO membranes must be replaced as soon as possible in order to ensure the reliable operation of the Lower Valley RO Plant. The Secretary reports that the order was delivered to the Lower Valley RO Plant on 09 September 2022. The membranes will be replaced one train at a time, so that half of the water production capacity can be maintained. The membrane replacement will likely be scheduled immediately after the end of the Hurricane Season, as the membrane replacement will take approximately one week per train, and it will take another week to fill up the reservoirs at Lower Valley. As the reservoirs must be full during a hurricane, at least two weeks of uninterrupted time is required to carry out the membrane replacement.

5) *Wastewater Collection & Treatment Division*

In August 2022 the design hydraulic capacity of the wastewater treatment plant (2.5 mgd) was exceeded on one day (or 3% of the time). The average daily wastewater inflow from West Bay Road during August 2022 was 2.37 mgd (or nearly 95% of the design treatment capacity). This is approximately 20.5% less than the average influent measurement during the same month in the previous year (2.98 mgd), which was a much 'wetter' month.

6) *Cayman Brac Water Works*

Updates under Current Business on the Agenda.

7) *Policy for Independent Water Meter Testing and Account Adjustment (Proposed Modification)*

The Secretary reported that the Deputy Director had prepared a report "Policy for Independent Water Meter Testing and Account Adjustment (Proposed Modification)" which has been provided to members. The report provides background on the Water Authority's policy for water meter testing and account adjustment as well as the reasons why the modification is being proposed.

In summary, the only independent water meter testing agency that agreed to provide independent water meter testing for the Water Authority utilises a

different standard for accuracy limits than the previous company used when the policy was last revised in 2010. The now closed Elster/Honeywell testing facility in Ocala, Florida, tested meters in accordance with ISO 4064 for accuracy limits. The Water Authority reached agreement with Mid America Meter, Inc in Minnesota, to provide the independent water meter testing. However, this company only carries out water meter testing in accordance with AWWA M6 and provides certified test results according to AWWA/NIST standards. Requesting the testing agency to modify their standard testing protocols to accommodate the ISO 4064 testing requirements is not a feasible option.

Therefore, a water meter shall be deemed accurate if the meter accuracy is within $\pm 2\%$ at all three test flow rates as per AWWA M6:

- for 3/4-inch (PSM20) meters: at 0.5, 3 and 25 gpm (or 113, 681 and 5,678 l/h respectively)
- for 1-inch (PSM25) meters: at 0.75, 4 and 40 gpm (or 170, 908 and 9,084 l/h respectively)

If a water meter tests outside of the above Accuracy Limits, it is considered "inaccurate" and will be removed from the water distribution system. In fact, any water meter that has been removed from the water distribution system to accommodate the independent accuracy testing is not re-installed, regardless of its accuracy.

The Minimum Flow Rates for the 3/4" and 1" water meters under AWWA M6 are significantly higher than even the Transition Flow Rates under ISO 4064 (demonstrated in the Appendix attached to the report), but, in addition to the practical consideration of having a USA-based testing agency use AWWA M6 test flow rates, these test flow rates are considered to better reflect actual domestic water usage than the test flow rates as per ISO 4064:

- more than 85% of domestic water consumption typically occurs at flow rates larger than 100 litres/hr (0.44 gpm), or at flow rates much higher than the Transition Flow Rate for the 3/4" and 1" water meters under ISO 4064, and much closer to the Minimum Flow Rate under AWWA M6, for example:
 - kitchen sink faucets typically achieve flow rates of 1-3 gpm;
 - a single 1.8 gpf flush toilet tank will take less than 1.5 minute to fill, or a flow rate larger than 1 gpm.
- most of the water volume used at flow rates less than 100 litres/hr (0.44 gpm) is caused by small leaks on the customer's premises:

The Volumetric Positive Displacement water meters that are used by the Water Authority (Elster PSM) achieve a very high level of accuracy. However, as any other measuring device, a water meter is not a perfect instrument.

As explained in the report, positive displacement water meters are predisposed to under-register water consumption, and this under-registration is more pronounced at low flow rates. This is evident from the accuracy curve of any water meter, indicating larger measuring errors at the low flow range (see Graph 1 in the report). Typically, the accuracy of a water meter decays at a faster rate at low flows, and the under-registration (particularly at low flows) will increase over time to the detriment of the Water Authority, not the customer.

The Secretary advised that three modifications are proposed:

1. Test the water meters at the test flow rates as per AWWA M6.
2. If the tested meter is determined to be inaccurate and fast (i.e., the meter registers more water than actually passes through it) at one or more of the tested flow rates, the customer's account will be adjusted to reflect the amount of over-registration. The adjustment will be the difference between the highest of the "fast" accuracy percentages and 102%, and it will only be made for the time period in dispute and up until the meter was removed from service.
3. If the tested meter is determined to be inaccurate and slow at one of the tested flow rates and inaccurate and fast at one or all of the other tested flow rates, the customer's account will be adjusted. The adjustment will be the difference between the highest of the "fast" accuracy percentages and 102%, and it will only be made for the time period in dispute and up until the meter was removed from service.

Modifications 2 and 3 are required to amend an oversight in the original policy: under the proposed revised policy, water meters that are tested within $\pm 2\%$ at flow rates at all three test flow rates are deemed to be accurate. Therefore, any correction should be for over-registration above 102%, not above 100%.

No other modifications are proposed to the current Water Authority policy.

Example (for illustration purposes):

A meter which has been tested 92% accurate at the Minimum Flow Rate, 100% accurate at the Intermediate Flow Rate and 103.5% accurate at the Maximum Flow Rate is a failed meter. With this policy this consumer will have their bill reduced by 1.5%. Even though the meter tested inaccurate and slow at the Minimum Flow Rate, it also tested inaccurate and fast at the Maximum Flow Rate. Therefore, to the benefit of the consumer the bills (for the time period in dispute and up until the meter was removed from service) will be adjusted down by 1.5% (the percentage over 102%).

The Secretary respectfully sought members decision on the proposed modifications. Members discussed the report and the proposed modifications. After discussion members agreed to the three modifications proposed to the current meter testing policy. The motion was moved by Mr

D Rankine, seconded by Mrs I Simms and passed by members able to vote with the abstention of Mr N DaCosta. Members requested that the Secretary provide members with a copy of the meter testing policy showing the three modifications as tracked changes.

c) **Customer Service**

Customer Statistics

The Secretary reported that as of 31 August 2022, the Authority had the following active accounts:

	Jan22	Feb22	Mar22	Apr22	May22	Jun22	Jul22	Aug22
GCM piped water	19,828	19,859	19,884	19,928	20,006	20,094	20,121	20,207
GCM Septage	9	9	9	9	9	9	9	9
CYB Trucked	704	685	688	715	726	676	666	465
GCM Sewer	467	471	472	472	474	474	470	472
CYB piped water	446	448	453	457	460	460	462	474

There were 214 accounts disconnected in August 2022 of which 190 were reconnected. There are currently 113 Special Payment Agreements (SPAs) issued for a total of \$138,326.79.

Recognition of 20000th Customer

The Secretary reported that on 29 August 2022, the 20,000th piped water customer, Mr Elton Turner was presented with a gift certificate of \$200, while the representative from the Cayman Food Bank was also present to accept the donation of \$2,000 on behalf of the Cayman Food Bank; both were very appreciative of the recognition from Water Authority-Cayman.

On-going Promotions

Promotions demonstrating that Cayman Brac piped water is cheaper than trucked water initiative are underway and so is the 'do not restrict access to the meter' messaging. Recently, the Authority has had a lot of issues with customers restricting access by way of fence construction, garbage containers, etc.

Customer Portal

The Secretary noted that Netclues delivered the test product for the Customer Portal on 15 September 2022. Testing is to be carried out as a team effort by Customer Service, IT and Finance over the next two weeks and after which the team will be in a better position to update on delivery. It is noted however that once completed, the GP upgrade needs to be completed before the Customer Portal can go live.

Call for your Balance

The Secretary reported that for the month of August 2022, the system handled 772 calls. The highest number of calls were 51 received on 15 August 2022.

d) Human Resources*Recruitment & Staffing*

The Secretary reported that the successful Superintendent-Water Supply candidate is expected to commence work in late September 2022, pending approval from WORC. The successful candidates for the Customer Relations Supervisor and IT Help Desk Technician positions are expected to commence work in October 2022. The successful candidate for the Operator-Wastewater Treatment accepted the position and start date is pending relocation arrangements and WORC approval.

Interviews were recently held for Labourer and Heavy Equipment Operator for New Works, Cayman Brac with the second round of interviews scheduled for later this week.

Recruitment for the Civil Engineer positions; Operations Manager-Wastewater; Senior Operator-Wastewater Treatment Plant; Learning & Development Coordinator are all on-going.

As reported at previous Board meetings, these vacancies significantly impact the Authority's progress on major projects and priority will continue to be given to critical infrastructure projects that impact water and wastewater.

Redacted under section 23 of The Freedom of Information Act (2021 Revision)



Members noted that engineering scholarship students should be encouraged to consider specialising the focus of their engineering degree towards areas of highest relevance to the Water Authority's operations.

COVID-19

The Secretary reported that the 14 September 2022, 0.7% of employees were COVID-19 positive.

Job Evaluation –Portfolio of Civil Service.

No further information.

FOI updates – No new FOI questions were received since the 17 August 2022 Board meeting as indicated in the report provided to members. The status of the FOI question received in July 2022 is noted in the report provided to members.

e) Information Services*Great Plains Software Upgrade*

The Secretary advised that Cogsdale recommended additional testing which is nearly complete. Since it is Cogsdale doing the upgrade in the Cloud environment, it was agreed to follow their recommendation. The selected weekend for upgrades has to be one that does not coincide with month-end and other critical functions; therefore, 14 October 2022 is the next feasible date. The Secretary would like to close the office to the public to facilitate the upgrade on 14 October 2022. The closure will allow Cogsdale to perform the upgrade the evening of the 13th and for Water Authority staff to upgrade machines and test the upgrade with the expectation to re-open the office to the public on Monday, 17 October 2022 with the full upgrade in place. Members noted the office closure to facilitate the upgrade.

Telephone System Upgrade

The Secretary reported that the upgrade is progressing reasonably well given the transformational shift in the technology of the new system as it will be fully integrated into the Water Authority's IT network. Technical work dealing with SIP trunking, IP addressing, and interface modules, etc. is underway. Four of the five software modules have been loaded and activated, and some of the basic user extension information has been uploaded to the various databases. The current best estimate is that everything should be completed and fully tested by end of October, and once training is complete, a date will be set for the cutover.

Locally Developed IVR System

The stress test of the IVR Collections calling was conducted on 19 August 2022. IT is working on sorting out the necessary set-up and working with Cogsdale to get the necessary report from the table in Cogsdale.

Building Access Control

The Secretary reported that regarding the Verex Access Control Replacement, Island Electronics advised that they expect to receive the card readers during the week of 19 September 2022 but they still do not have a delivery date for the fobs.

f) Water Resources & Quality Control*Geology Education Week*

Further to the report at the previous Board meeting, Geology Education Week has now been scheduled for 24 October through 28 October 2022.

Redacted under section 21 (1)(b) of The Freedom of Information Act (2021 Revision)

**g) Director's Office***Review of proposed Water Sector Regulation (Licences and Fees) Regulations, 2022*

The Secretary advised there is nothing further to report on this matter.

Redacted under section 21 (1)(b) of The Freedom of Information Act (2021 Revision)



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Annual Staff Meeting

The Secretary reminded members that the Annual Staff Meeting is scheduled for 30 September 2022 at the Harquail Theatre starting at 12:00pm. The Honourable Minister and Chairman will be asked to speak and Board members are encouraged to attend. The Chairman reminded members that their attendance would be very much appreciated.

CWWA's 18th High Level Forum (HLF-18) of Caribbean Ministers Responsible for Water

The Secretary advised that she has been invited to attend the HLF-18 at the Atlantis Resort, The Bahamas that is being held in conjunction with the 31st Conference of the Caribbean Water & Wastewater Association. The Honourable Minister previously indicated that she plans to attend as well. The event will take place 18-19 October 2022.

Current Business

a) Management Accounts July 2022.

The Secretary reported that a copy of the financial statements for the seven-months ended 30 July 2022 is available for members' review.

Although sales are 5.8% higher than the same period in 2021, the Authority's overall net income is down by 24% over prior year as the cost of doing business has increased worldwide and across the island. Price increases are reflected in all areas of the business, but notably in utility costs, gas prices and associated staff costs.

Operating expenses alone have increased 20.4% with the majority attributed to the increased energy costs in water production and repairs and maintenance. Repairs and maintenance increase is concentrated on emergency and routine sewer repairs carried out on the Water Authority's infrastructure (replacement on Slate Drive, manhole replacement, replacement on Camelot Dr etc.).

Members will note a change in presentation under "Other Income", whereby the Royalties received from Cayman Water Company (CWC) have been differentiated from the Statutory Fees received from Water Authority customers. In previous management accounts these two figures were consolidated and the new presentation clearly shows the contribution of CWC and Water Authority customers to the statutory functions of the Authority.

Administrative expenses have increased by 6.6% which is consistent with prior months and within management expectation. A reminder that the increase in information systems is the cost of the NetClues project.

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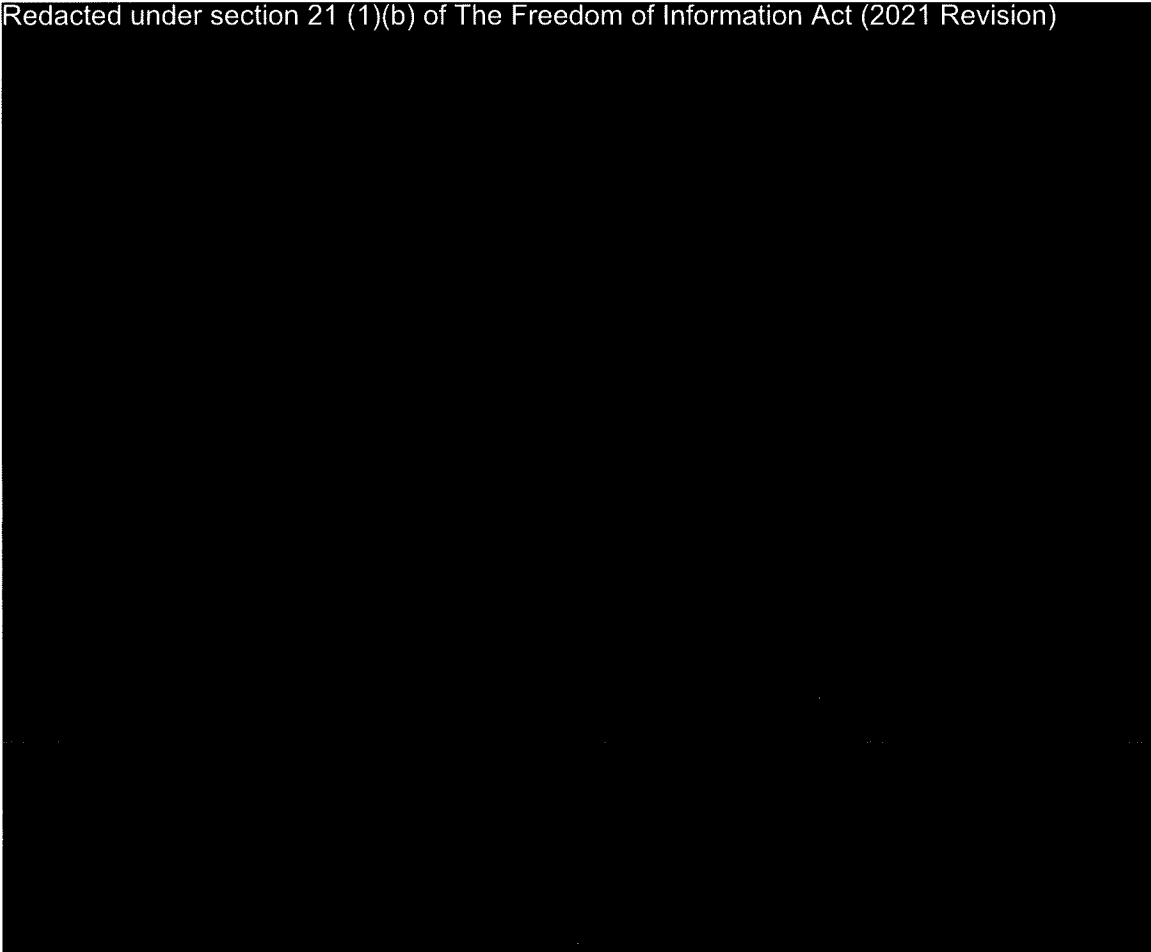
In summary, the Authority remains a robust and financially independent organisation with a strong operating income and cash reserves for essential capital and maintenance projects.

Mrs L Ryan requested to be excused and left the meeting at this point.

b) **Trucked Water Rate Modification Proposal.**

Members agreed to defer discussion on this item to the October 2022 Water Authority Board Meeting to be held in Cayman Brac.

c) Redacted under section 21 (1)(b) of The Freedom of Information Act (2021 Revision)



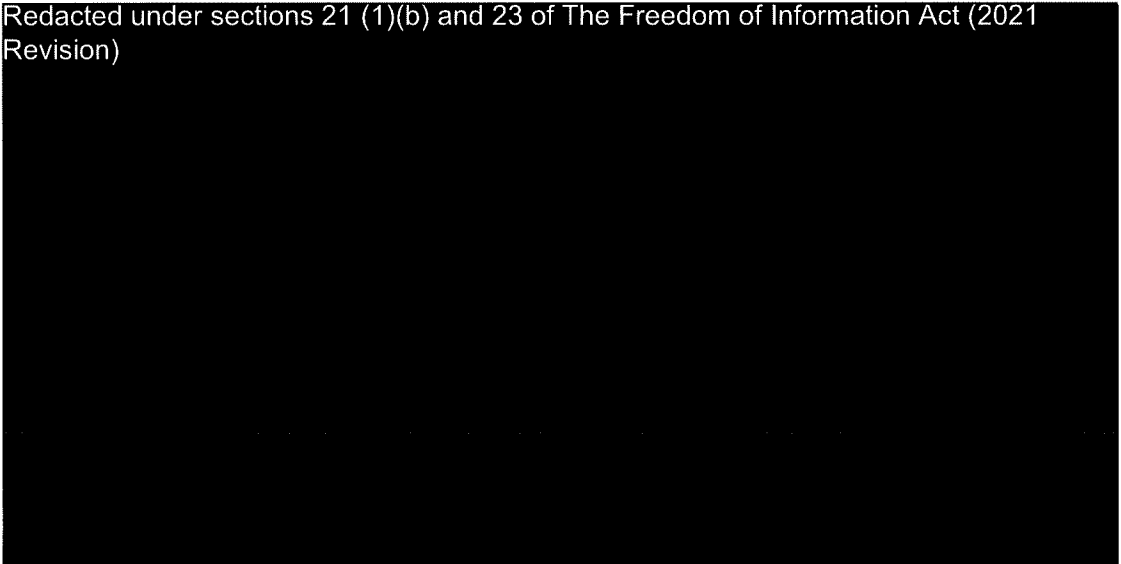
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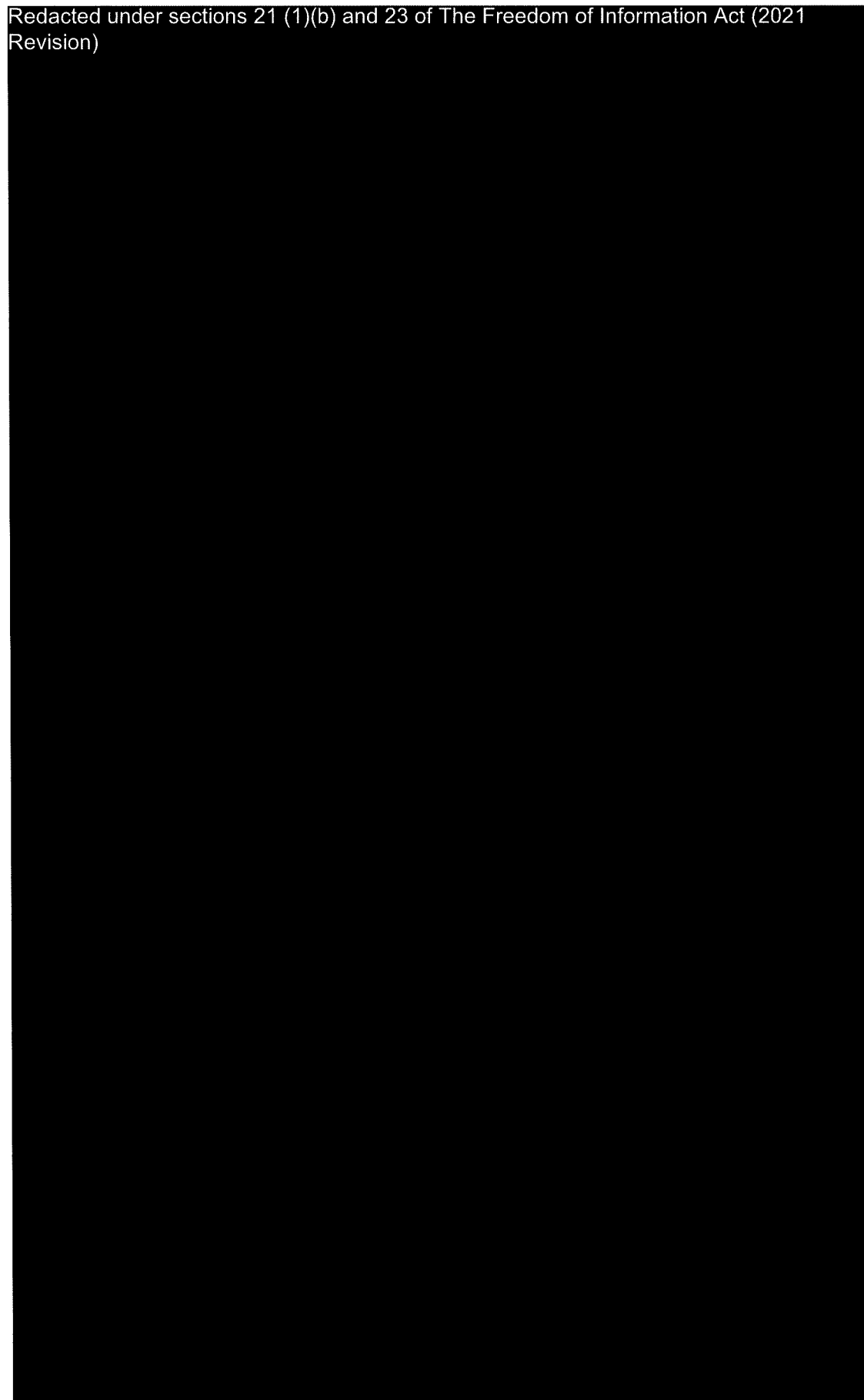
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Any Other Business

- a) Redacted under sections 21 (1)(b) and 23 of The Freedom of Information Act (2021 Revision)
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Redacted under sections 21 (1)(b) and 23 of The Freedom of Information Act (2021 Revision)



Redacted under sections 21 (1)(b) and 23 of The Freedom of Information Act (2021 Revision)

b) Redacted under section 21 (1)(b) of the Freedom of Information Act (2021 Revision)

Donation Requests

The Secretary advised that the Sponsorship Assessment Sub-committee will meet after the Board meeting to deal with the following requests for assistance:

- a) *Ratify* - Cayman Islands Tourism Association (CITA) - Restaurant Month Oct 2022.
- b) CI Volleyball Federation - NORCECA Beach Volleyball 2022 Tours.

There being no other business the Chairman thanked members and the meeting was then adjourned at 4:47pm.

This is a true and accurate account of the proceedings.



The Chairman


The Secretary