



WRA

WATER RESOURCES AUTHORITY

ANNUAL REPORT
2017 / 18





**Water
Resources
Authority**

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VISION

“To have a world class organization providing efficient and reliable services to stakeholders for facilitating integrated water resources in Jamaica.”

MISSION

To secure the sustainability of Jamaica's water resources and the resilience of the nation to droughts and floods through

- ◆ Effective water resources planning;
- ◆ Rational water resources allocation and
- ◆ Conservation and protection

with the support of a cadre of well trained, highly motivated, dedicated staff and empowered Jamaicans.

CORPORATE DATA



**Water
Resources
Authority**

(An Agency of the Ministry of Economic Growth & Job Creation)



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Hope Gardens
Kingston 6



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Water Resources Authority of Jamaica



Water Resources@WRAGovja



ABOUT US



The Water Resources Authority (WRA) is an Agency of the Ministry of Economic Growth and Job Creation. It was established by the Water Resources Act, 1995 and is responsible for the regulation, protection, and controlled allocation of Jamaica's water resources. This is achieved through:

- ◆ **Resource Monitoring** - The WRA monitors stream flows, ground water levels, water quality, abstraction and well drilling across the

island, and provides data to all stakeholders through its web-enabled database.

- ◆ **Resource Assessment-** Determination of the availability of water resources to reliably meet all demands.
- ◆ **Allocation of Resources (Licensing)** - The WRA secures the sustainability of the water resources through a system of permits and licensing for the drilling of wells and the abstraction and use of surface and groundwater resources.

- ◆ **Water Quality Monitoring-** WRA collaborates with other water sector agencies in the monitoring and assessment of pollution and identification of threats to the resource.

- ◆ **Support to Development Approval Process**

- The WRA reviews development applications and Environmental Impact Assessments (EIAs) and comments on the risk to water resources from the proposed treatment and disposal of sewage and other wastes, and on possible impacts of flooding by or on the development.

- ◆ **Flood Warning** - The WRA, working with the ODPEM, has established one real time flood warning system in the Rio Cobre Basin and several community flood alert systems across the island in an effort to reduce the threat to lives and property.

- ◆ **Public Education** - Through its Documentation Centre, and website, the WRA provides information to all stakeholders including students, consultants and the general public regarding hydrology, hydrogeology and water resources of the island. The Authority also celebrates special days (World Water Day), and participates in exhibitions to increase public awareness of water issues.



CHAIRMAN'S MESSAGE



DR. PARRIS LYEW-AYEE

Chairman

It has been another exciting year for the WRA, one in which many projects that have been in the pipeline for years have been realized. Chief among these is the Volume-Based Fees regime, which will be officially launched in 2018/19 financial year, after a series of public information sessions across the island, and many meetings and deliberations with stakeholders before those. This system will promote the effective usage and redistribution of water resources across the island by encouraging efficiency within licensees' own infrastructure. This, in turn, will allow for better water management and for the reallocation of unneeded water to other stakeholders, while also generating additional revenue for the WRA's operations and ability to deliver improved service levels to clients and stakeholders alike. We note



“We have also initiated advanced discussions with other Government of Jamaica stakeholders in revising the present Floodwater Control Act”

the contributions of the previous Managing Director, Basil Fernandez, in this regard, and congratulate the current team in executing this vision.

We have also initiated advanced discussions with other Government of Jamaica stakeholders in revising the present Floodwater Control Act, giving the WRA an enhanced role in predicting flooding and advising on engineering procedures and assumptions. This will bring to bear the technical knowledge and resources of the WRA to other actors in the flood mitigation realm, which is critical given the impacts of flood rains during the period, namely in Central Jamaica in May 2017, and in Montego Bay in November 2017. In both instances, WRA produced the first technical reports and disseminated these to all important stakeholders. Having a formal role defined by the FWCA will present WRA with a proactive role, rather than the current reactive stance post-event. Administratively, the WRA also completed a major organizational review on salaries reclassification and restructuring, in order to make the institution more effective at recruiting and

retaining talent and investing in the organization in the long term. Coupled with this, is the on-going succession planning framework, identifying key talent within and outside (for benchmarking purposes) the organization, and supporting the organization through their respective professional development. The organization also managed to secure additional vehicles for its fleet, to plug a hole in its ability to respond to situations and conduct routine operations alike.

The Board is pleased with the Management and Staff of the organization and congratulates them on their achievements in the year. We have met every month for the period, with committee meetings prior to each Board meeting. In all cases, there have been robust contributions from Management, who have both provided needed information, and acted on recommendations and suggestions. We are satisfied that the organization is being effectively led, and continue to wish the WRA well.

MANAGING DIRECTOR'S REPORT



HERBERT THOMAS

Managing Director

Dear Valued Stakeholders,

In the 2017/2018 fiscal year, the WRA preformed creditably in the discharge of its function to allocate, regulate, conserve, protect and manage the water resources of Jamaica. The efforts of the current staff in their respective Unit's achievements must be applauded.

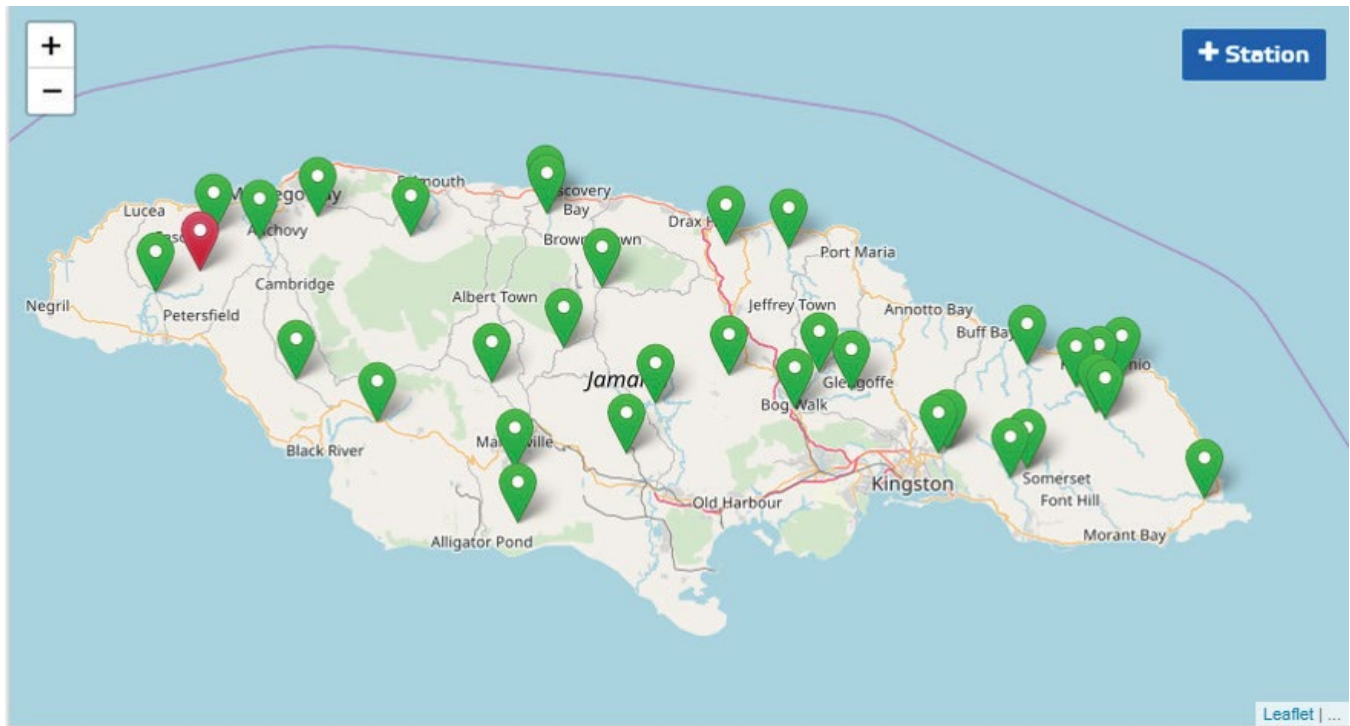
Despite the persistence of the human resource challenge of a largely inexperienced workforce due to attrition over the years and the inadequacy of the compensation package to attract and retain the skilled and experience staff, the WRA remained dedicated and committed to realizing the targets set in the Operational Plan for the 2017/2018 fiscal year.

“Despite the persistence of the human resource challenge of a largely inexperienced workforce due to attrition over the years and the inadequacy of the compensation package to attract and retain the skilled and experience staff, the WRA remained dedicated and committed to realizing the targets set in the Operational Plan for the 2017/2018 fiscal year”

Among the achievements for the 2017/2018 fiscal year are:

- The range of Hydromet data for 2017/2018 that was collected, computed, quality assured and the timely uploading and updating of the web-based; Water Resources Management Information System (WRMIS) which is accessible by all stakeholders.
- Meeting the 2017-18 targets under the World Bank funded Pilot Project for Climate Resilience (PPCR), for the upgrading of the specified Hydromet stations, to enable them to log and transmit data in real-time and the immediate use of the system to facilitate the timely reporting on flooding events in the year.
- The progress made to-date in updating the Water Resources Development Master Plan (WRDMP) where the demand inventory is 90% completed and the resource inventory is at 20%.
- The Technical Assistance given to the public and private sector, and NGOs in data and information dissemination relating to the drought, water supply issues and flooding during the year, to inform important decision making.
- Improvements in the compliance with the laws and regulations by licenced abstractors and well drillers.
- The contribution of the WRA in all deliberations leading to the declaration of the boundaries of the Cockpit Country is also a significant achievement.

The WRA also commenced a program of targeted in-house and external training, based on the gaps identified in all areas of our operations. This is aimed at rebuilding the competencies of the staff for a more productive organization.



THE WAY FORWARD

The following will be the focus in the year ahead:

HUMAN RESOURCE MANAGEMENT

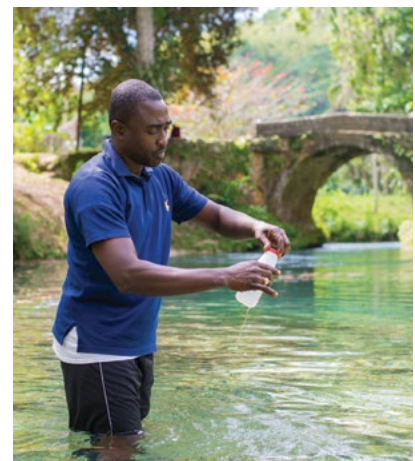
Training will continue as a priority.

- The system for Performance Management and Appraisal (PMAS) will be fully rolled out and the organization's restructuring proposal will be finalized and submitted to the Ministry of Finance and the Public Service (MOFPS) for approval.
- Completion of the reclassification exercise so that salaries will become more competitive with at least our local counterparts.

These activities constitute the strategy for addressing the problem of retaining staff.

- Greater usage of technology for (a) our business processes in order to improve our efficiency and effectiveness, e.g. the current challenges of the Municipal Corporations to locate adequate land areas for cemetery developments will be addressed using GIS to identify suitable lands based on established criteria and (b) the timely production and publication of extreme hydrologic events on the WRA's website.
- With the approval of the Volume Based Fees all the required systems will be implemented to ensure its timely collection.

I look forward to an exciting and rewarding 2018/19 at WRA.





FINANCIAL SUMMARY

The 2017/18 financial year indicates a surplus of \$12.01M (2017: loss of J\$2.5M) or a 1,200% increase over the previous year. The increased surplus arose primarily from increases in fees from applications and renewal of licenses for the abstraction and use of water. These fees increased by approximately J\$10M over the previous year to J\$17M. The performance is attributed to the addition of new licensees and vigorous educational campaign, sensitizing the abstractors to the consequences of non-renewal of licenses and the need for prompt renewals, as well as ensuring that unlicensed sources were regulated as stipulated by the legislation.

There was an increase in GoJ subvention for training to increase the Authority's human capacity and increase its tangible assets.

Although the Authority implemented measures to contain expenses there were noticeable increases in a few areas highlighted below;

Utility Cost represents an increase of 61% over the previous year. The increase electricity cost can be attributable to increasing energy charges. The Authority will have to undertake financial investment in renewable energy to militate against or to maintain meaningful and sustained costs.



Staff Cost was due to the implementation of increases in salaries as a result of negotiation between the GoJ and the Confederation of Trade Unions.

Repair Costs have shown significant increase of (156%) over prior year. This was mainly due to the maintenance of several hydrological stations in different sections of the island and emergency repairs on the office building.

Other increases in expenditure were mainly due to inflationary effects.

Despite these increases, expenses were contained in several areas.

INTERNATIONAL ACCOUNTING STANDARD (IAS)

The Authority has adopted the amendments to IAS 19, Employees Benefit.

This standard requires the Authority to undertake an annual Actuarial Valuation of the fund and report the surplus or deficit on the Balance Sheet as well as report on the pension costs based on the present assessment of the fund.

The disclosure has been recognized in the Statement of Profit or Loss and "Other Comprehensive Income" and the Balance Sheet.

This standard recognizes the fact that the Authority operates a Defined Benefit Plan and any future shortfall arising in the plan's ability to meet its obligations will have to be met by the Authority. Therefore, at a glance, one can now see from the Financial Statements, the future risk to the Authority from the Fund.



BOARD OF DIRECTORS



DR. PARRIS LYEW-AYEE



MS. NADEEN SPENCE



MS. GEORGIA HAMILTON



MS. ALLISON RANGOLAN



MR. GEORGE GRANT



PROF. MICHAEL TAYLOR



MR. MICHAEL BROWN



MS. STEPHANIE ABRAHAMS



MS. NOVELETTE HOWELL



BOARD REPORT



The Board consisting of nine (9) members was appointed by Cabinet Decision of April 12, 2016 on the recommendation of the Minister of Economic Growth and Job Creation. However, due to the resignation of Ms. Carlene Sinclair in May 2016, eight (8) Directors served for the 2017-2018 financial year. The Board convened on the third (3rd) Monday of each month for the 2017-2018 financial year. Its primary responsibilities were to; provide guidance on government policies and consider applications for licenses to abstract and use water as well as permits to drill wells.



“The Board convened on the third (3rd) Monday of each month for the 2017-2018 financial year...to; provide guidance on government policies and consider applications for licenses to abstract and use water as well as permits to drill wells.”

Two (2) committees served for April 1, 2017- March 31, 2018. They were as follows:

FINANCE AND AUDIT COMMITTEE:

The membership of the Finance and Audit Committee were as follows;

Dr. Parris Lyew-Ayee
Ms. Cheyenne McClarthy
Mr. Michael Brown
Ms. Allison Rangolan
Ms. Georgia Hamilton
Mr. Herbert Thomas
Mr. George Grant
Ms. Hermine Downer
Ms. Novelette Howell



TECHNICAL ADVISORY COMMITTEE:

- Dr. Parris Lyew-Ayee
- Prof. Michael Taylor
- Ms. Nadeen Spence
- Ms. Stephanie Abrahams
- Mr. Michael Brown
- Mr. Herbert Thomas
- Mr. Peter Clarke
- Mr. Geoffrey Marshall

MANAGEMENT OF THE AUTHORITY

A three (3) person team had responsibility for the management of the Authority. They are:

1. Mr. Herbert Thomas, Managing Director (MD)
2. Mr. Peter Clarke, Deputy Managing Director (DMD)
3. *Ms. Hermine Downer resumed duties after being on study leave for three (3) years.

ATTENDANCE REPORT

DIRECTORS	APRIL 2017 - MARCH 2018												TOTAL
	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	
Dr. Parris Lyew-Ayee	*	*	*	*	*	*	*	*	*	*	*	*	12
Prof. Michael Taylor	*	*		*		*			*	*	*	*	8
Mr. Michael Brown	*	*		*	*	*	*	*	*	*	*	*	11
Ms. Georgia Hamilton				*							*	*	3
Ms. Nadeen Spence	*	*		*	*	*	*	*	*	*	*		10
Mr. George Grant	*			*	*	*	*		*	*		*	8
Ms. Stephanie Abraham	*	*	*	*	*	*	*	*		*	*	*	11
Ms. Novelette Howell	*	*	*	*		*		*	*	*	*	*	10
Ms. Allison Rangolan											*		1

*Ms. Rangolan was appointed in January 2018



ALLOCATION OF WATER RESOURCES

The WRA continued to ensure that water resources were equitably allocated, and that the conditions stipulated for each licence for ensuring sustainability of the resource were met. For the 2017-2018 financial year, the Board considered one hundred and eight one (181) applications to abstract and use water. One hundred and seventy five (175) or ninety-seven percent (97%) of these applications were processed within the stipulated 60 days. The details are tabulated below;

	2017-2018 APPLICATION TYPES			
	LICENSES	PERMITS	RENEWALS	TOTAL
Number of applications received	111	70	70	251
Number of applications processed within 60 days of receipt	105	70	70	245
Number of licences/ Permits granted	105	70	70	251
Number of applications refused	1	0	0	1
Number of withdrawn applications	1	0	0	1
Number of pending applications	5	0	0	5
Total volume granted (cubic metres per day)	656787.93		342,908.14	999,696.07
Number of applications received in 2016-2017	55	5	42	102

APPLICATIONS REVIEW 2017-2018

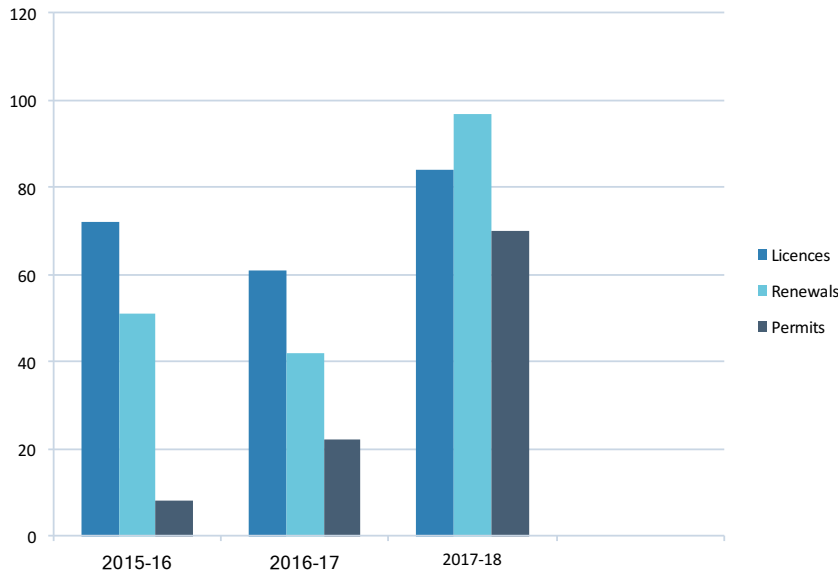
There was 28% increase in the number of applications received to abstract and use water. This can be attributed to the verification exercises conducted by the Permits and Licenses Unit for 690

unlicensed sources for: 393 groundwater sources and 373 surfacewater sources. 26% or one hundred and seventy-six (176) of these un-licensed sources were abstracting illegally. Approximately 48% have submitted an application to the Authority to regularize

their operations. The majority of the applications were made by the National Water Commission. The regularization of unlicensed sources will continue in the 2018-2019 financial year.



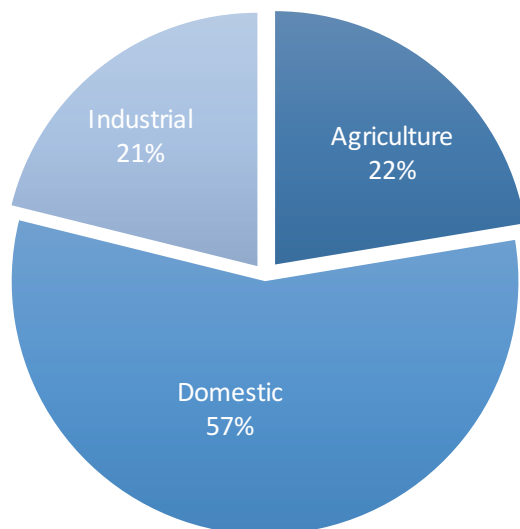
APPLICATIONS RECEIVED COMPARISON



ALLOCATION REVIEW

Approximately 369.8M cubic meters of water was allocated. Eighty-three-percent (83.4%) of the licences granted were for abstraction from groundwater sources while surfacewater sources accounted for 17%. There was a significant increase in the allocation of water to the domestic sector, due largely to the NWC regularizing its operations. Twenty-one percent (21%) of the water allocated was to the industrial sector for use in the tourism, manufacturing and distilleries. A further 22% was allocated to irrigation.

ABSTRACTION LICENCES ALLOCATED BY SECTOR APRIL 2017 TO MARCH 2018



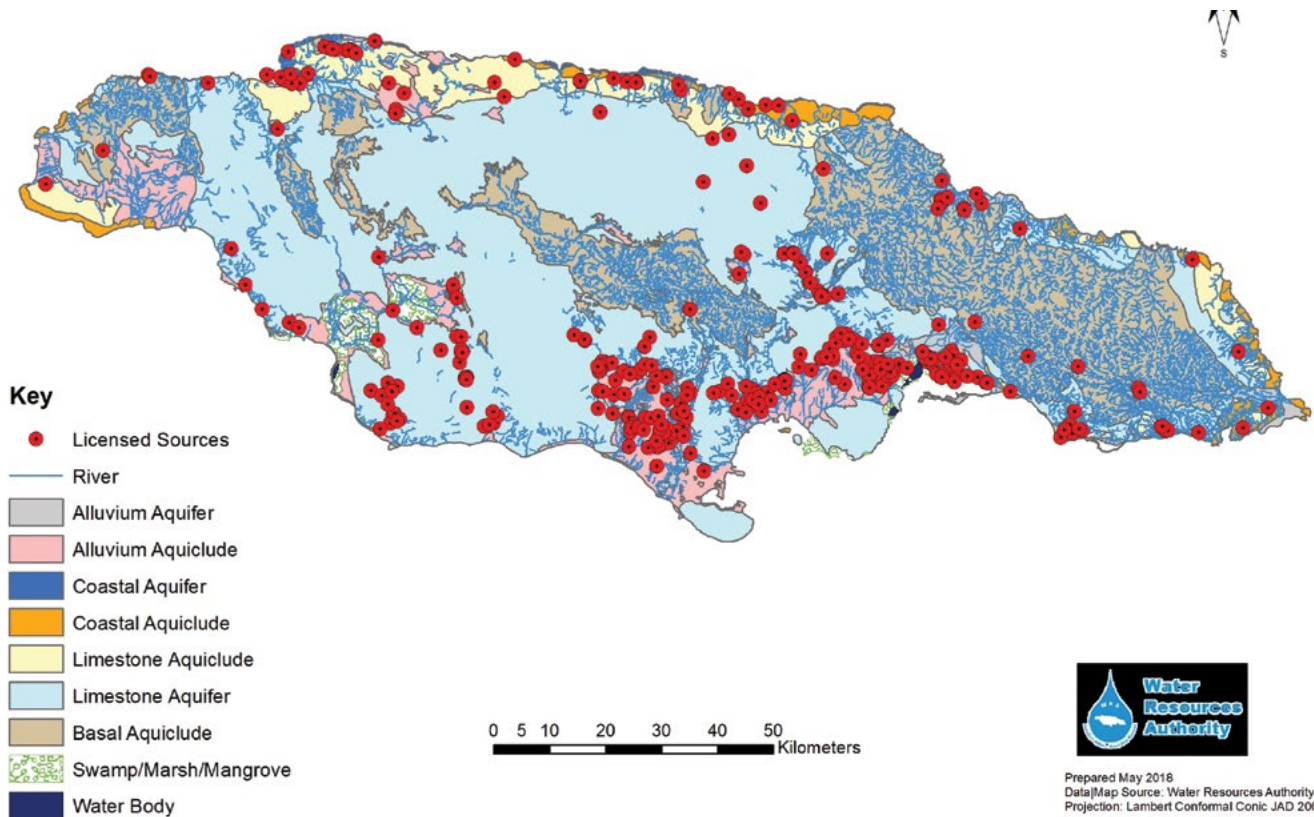
PERMITS TO DRILL

There has been significant increase in the number of applications. Seventy (70) permits were granted for the financial year 2017-2018; seven (7) were for domestic, six (6) for irrigation and fifty-seven (57) for industrial.

At the close of the financial year there were 720 licenses distributed across Jamaica. These licenses are held by 130 entities. Groundwater continues to be the major source accounting for approximately 90% or 3216 cubic metres while surface water accounts for 10% 330 cubic metres.



LOCATION OF LICENSED WELL SOURCES



“The Water Resources Authority (WRA) was established by the Water Resources Act, 1995 and is responsible for the regulation, protection, and controlled allocation of Jamaica’s water resources.”



WATER RESOURCES REGULATION

WATER ABSTRACTION CHARGES

On May 29th, 2017 the Minister of Economic Growth and Job Creation, The Most Honourable Andrew Holness, authorized the Water Resources (Water Abstraction Charges) Regulations, 2017, thereby, allowing the WRA to impose charges based on the volume of water allocated to holders of licenses to abstract and use water from rivers, springs and underground sources.

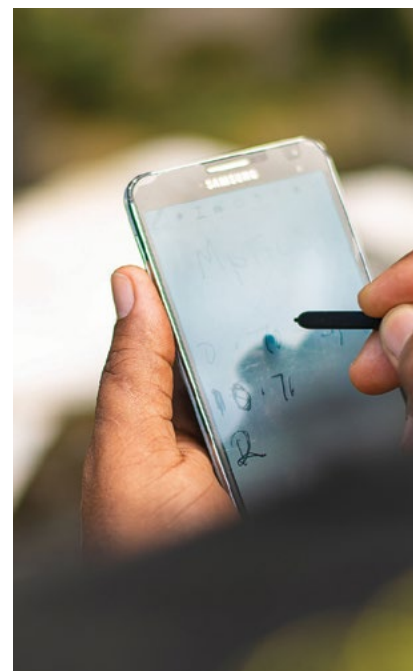
The charges will be levied on six hundred and fifty-two abstraction points as follows:

USES	NUMBER OF LICENSED SOURCES
Domestic/Public Supply	358
Industrial	102
Hydropower/Recreational	11
Agriculture	181
Total	652

In preparation for the imposition of the fees on April 1, 2018, the WRA conducted stakeholders' sensitization sessions across the island.



(Licensees at a VBF sensitization session in Kingston)





“On May 29th, 2017 the Minister of Economic Growth and Job Creation, The Most Honourable Andrew Holness authorized the Water Resources (Water Abstraction Charges) Regulations, 2017...”

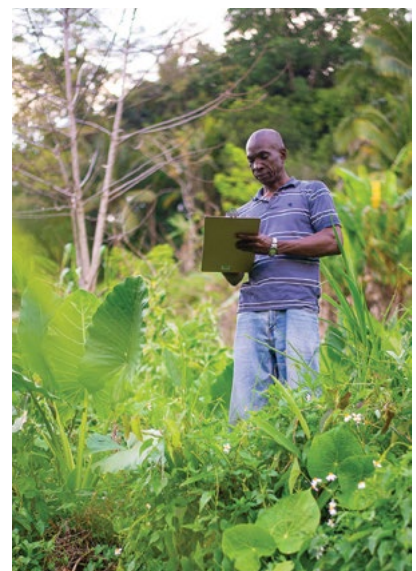
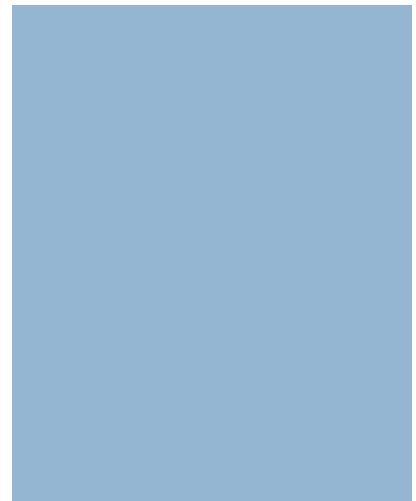
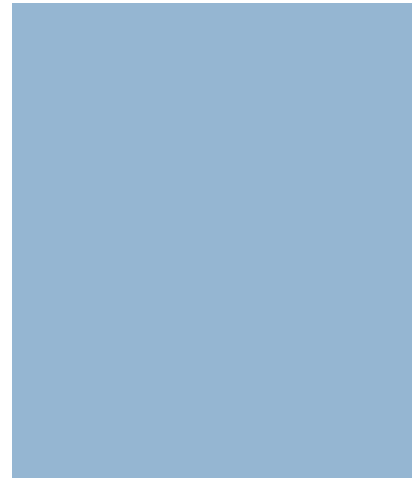
The Water Abstraction Charges are intended to manage water demand by allowing abstractors the opportunity to reduce the volume on their licences to reflect their actual usage. This will ultimately ‘free up’ significant volumes of water for re-allocation in basins with high unmet demands.

The fees will take effect on 1st April 2018 and are based on four (4) categories of use. These are:

USES	CHARGES/M3/ YEAR
Domestic /Public Supply	2.53¢
Industrial	3.79 ¢
Hydropower/Recreational	2.02¢
Agriculture	3.79 ¢



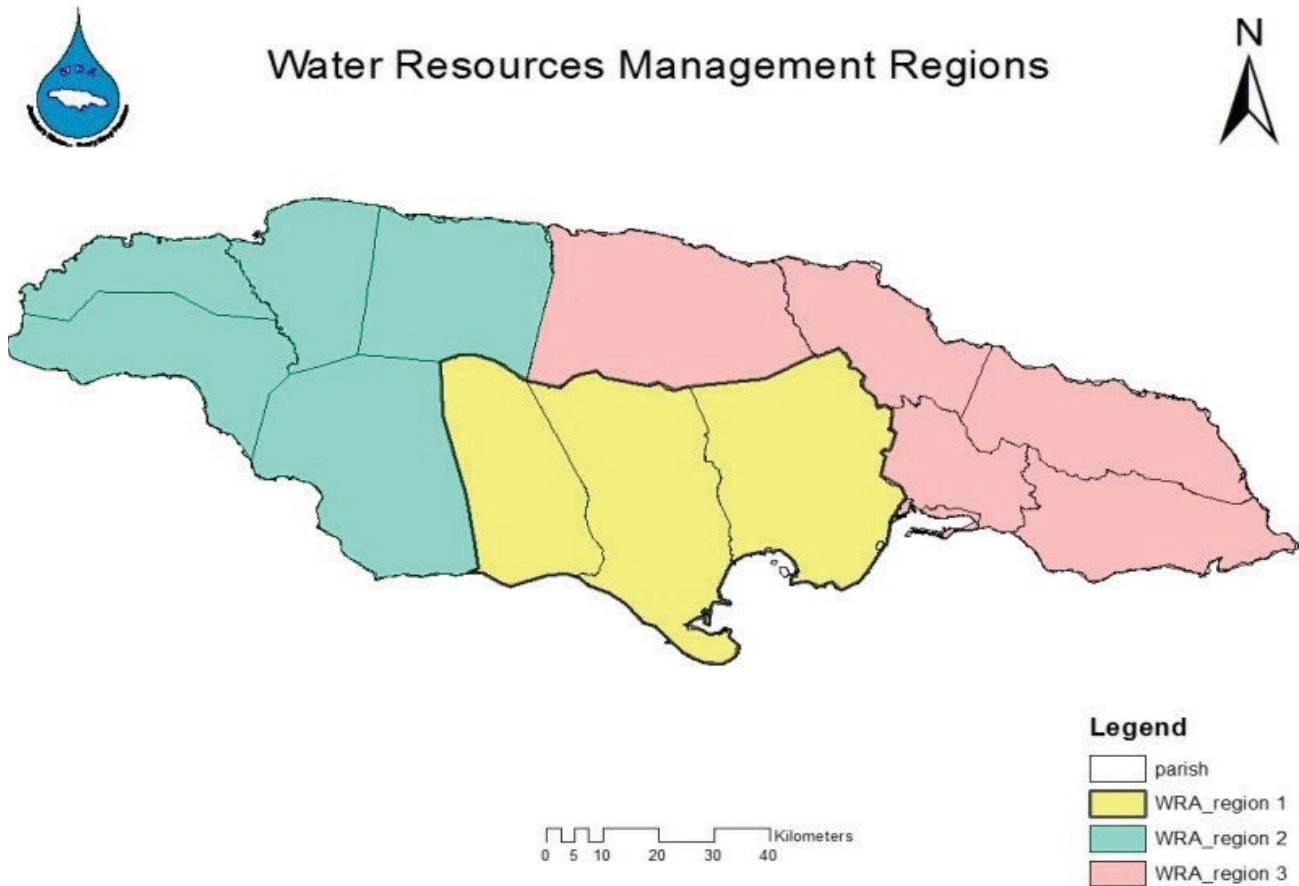
Minister without portfolio in the Ministry of Economic Growth & Job Creation at the Launch of the implementation of VBF in Hope Gardens on February 7, 2017





MONITORING OF WATER RESOURCES

The Island's Hydromet Network consists of 79 Stream Gauging stations (automatic and manual), 56 Spot Measurements sites (ungauged points), 31 Intensity Rain Gauge stations, 2 Soil Moisture Probe stations and 286 Groundwater Monitoring points, distributed across three Regions as indicated below :



MONITORING AREAS	STREAM FLOW GAUGING STATIONS			MONITORING WELLS	ZERO FLOW MEAS.	RAIN GAUGES	FLOOD WARNING SYSTEMS	SOIL MOISTURE PROBES
	RECORDING	MANUAL	SPOT					
Region 1	10	8	21	143	16	8	4	0
Region 2	18	13	5	87	28	14	0	2
Region 3	18	7	30	56	19	9	0	0
TOTAL	46	28	56	286	63	31	4	2



STREAMFLOW MONITORING

Streamflow monitoring suffered several setbacks as five (5) Recording Stream Gauging Stations were washed away during heavy rains. Additionally, there were seven (7) problematic gauging stations which proved difficult to monitor. These were as follows:


NAME OF STATION	REGION	PROBLEMS	REMARKS
Hectors River @ Hectors River	3	Staff gauge washed away due to tidal influence	Staff gauge to be installed up stream
Packi River nr Long Road	3	Staff gauge and backing board washed away	Staff gauge to be reinstalled
Drivers River @ Manchioneal	3	Tidal influence	Staff gauge to be installed further up stream
Montego River @ Montego Bay	2	Station vandalized	Station to be fitted with water level sensor and new solar panel
Y.S River @ Middle Quarters	2	Station collapsing	New Station to be installed
South Elim @ Elim	2	Flow has changed course away from the station	Staff gauge to be installed up stream

Despite the challenges the Data & Resource Monitoring Unit has achieved its annual targets for Streamflow Monitoring as follows:

ACTIVITIES	ANNUAL TARGETS (STATION-MONTHS)	ACHIEVEMENTS (STATION-MONTHS)
SURFACE WATER MONITORING		
COMPUTATION OF 12 MONTHS OF DAILY DISCHARGE FOR 74 GAUGING STATIONS	888 (100%)	804(91 %)
SPOT-MEASUREMENTS OF 51 UNGAUGED STATIONS	672 (100%)	568(85 %)
ZERO FLOW MEASURED AT 63 GAUGING STATIONS	756 (100%)	714(94%)
MAINTENANCE OF 40 GAUGING STATIONS	40(100%)	39(98%)

GROUNDWATER MONITORING

The groundwater monitoring network consists of 286 wells/boreholes that are monitored monthly to determine variations in the island’s groundwater levels. The annual target for the number of measurements from these points is 3432. However, challenges associated with access to the property on which some wells are located, blockage of some wells and the absence of stilling tubes in others, made it impossible to conduct some measurements.



“The Island’s Hydromet Network consists of 79 Stream Gauging stations (automatic and manual), 56 Spot Measurements sites (ungauged points), 31 Intensity Rain Gauge stations, 2 Soil Moisture Probe stations and 286 Groundwater Monitoring points, distributed across three Regions..”



The achievements in the groundwater monitoring by the Data & Resource Monitoring Unit are summarized as follows:

ACTIVITIES	ANNUAL TARGETS	ACHIEVEMENTS
GROUNDWAER MONITORING		
COMPUTATION OF GROUND WATER LEVEL DATA FOR 286 GROUND WATER MONITORING POINTS.	3432 (100%)	3292 (96%)
MAINTENANCE OF 24 MONITORING WELLS	24 (100%)	55(291%)

UPGRADES TO HYDRO-METEOROLOGICAL NETWORK

The “Pilot Programme for Climate Resilience” (PPCR) is a joint project of the Government of Jamaica (GOJ) and the World Bank, being administered by the Planning Institute of Jamaica (PIOJ). This project is slated to be completed in the 2018/2019 financial year.

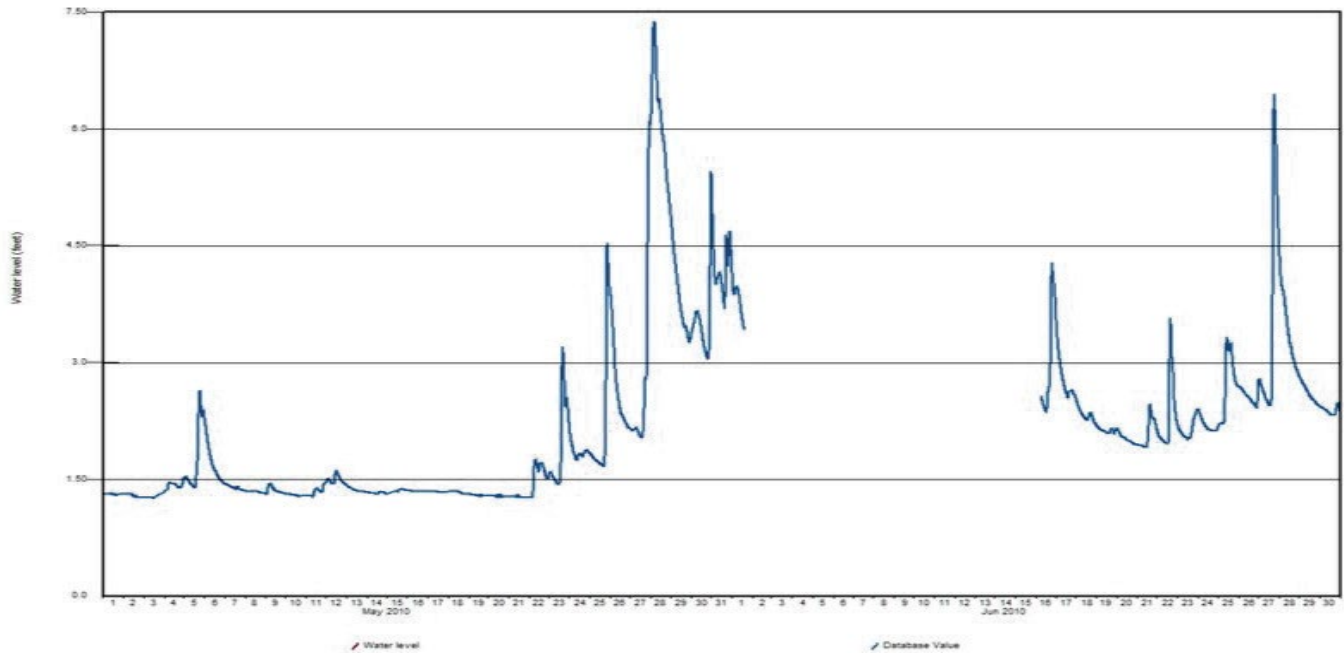
Under the PPCR project, upgrades to the hydro-meteorological network continued with the installation of loggers, water level sensors, transducers, and soil moisture probes at existing stations and the erection of new stations to enhance the coverage of the network. The achievements during this year are as follows:

TARGETS	ACHIEVEMENTS
15 stream flow/river gauging : 6 new, 9 upgrades	3 New, 16 upgrades (Target exceeded)
Upgrades of 18 rainfall intensity gauging stations	3 New, 14 upgrades
11 ground water monitoring loggers	None installed
14 soil moisture probes	4 installed
1 back-up power supplies	installed



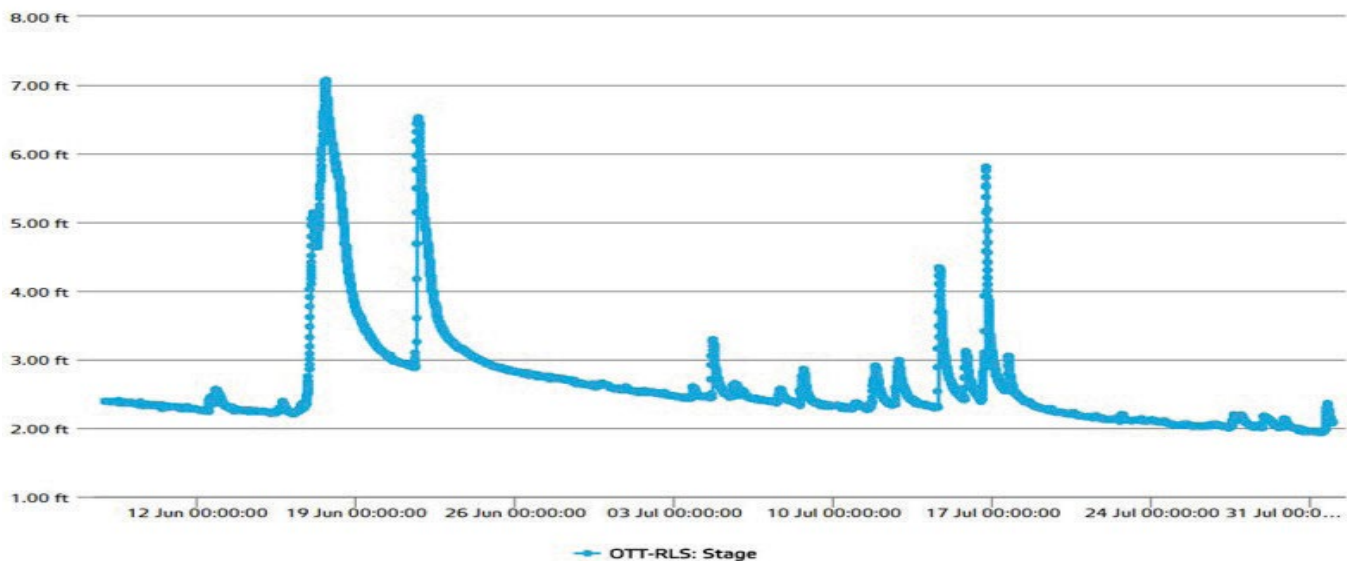


RIO COBRE AT BOGWALK (SAT STATION)



To date, there has been marked improvement in the data collected using upgraded equipment, such as water level sensors (see comparison below). Water level sensors do not come in direct contact with water thereby eliminating the likelihood of data loss due to tape slippage and cable interference as shown in the graph above for a water level recorder where contact with water is maintained.

RIO COBRE AT BOGWALK (EWS) • JUN 8, 2017 - JULY 31, 2017



WATER RESOURCES PLANNING



INVESTIGATION OF UNDERGROUND RIVER FLOW DYNAMICS VIA DYE TRACING IN THE RIO BUENO SUB-WATERSHED MANAGEMENT UNIT

This project focused on monitoring and determining the interaction between ground and surface waters in karstic limestone areas using dye tracing and isotope hydrology methods to gain more knowledge to better enable the WRA to manage and allocate water in the Rio Bueno Basin.

The WRA continued to guide the management and development of Jamaica's water resources by providing information/data on the capacity of Jamaica's water resources to meet present and future demands. This was achieved by the Planning & Investigations Unit through:

- ◆ SSResource Assessments, Field Investigations and Responses to Information Requests.
- ◆ SSProvision of Technical Support to the GoJ.
- ◆ SSAssisting with the Update of the Water Resources Master Plan.
- ◆ SS Investigation of Lower Rio Cobre Alluvium Aquifer Water Quality in the designated Aquifer Protection Zone.
- ◆ SS Investigation of Underground River Flow Dynamics via Dye Tracing in the Rio Bueno sub-WMU.
- ◆ SS Feasibility Study of Inter-Basin Transfer of Water from Dry Harbour Mountains Basin to Rio Cobre and Kingston Basins.



“In May 2017 an initial field reconnaissance in the Rio Bueno Sub-Watershed Management Unit was done to select dye injection sites”



Mr Kevin Chambers injecting dye in
Lowe River

In May 2017 an initial field reconnaissance in the Rio Bueno Sub-Watershed Management Unit was done to select dye injection sites (Quashie River and Lowe River) and install background charcoal receptors at the chosen receptor sites of Dornoch Head (Headwaters of the Rio Bueno), Laughlands Great River and Pear Tree Bottom River.



Dyes were injected at Quashie River and Lowe River in June 2017, and the receptor switching process continued monthly until March 2018. The first analysis of the dye receptors was done in the 2nd quarter of the year, and the final results and final report is to be completed within the 2018-2019 year. The interim results for this investigation indicate positive dye traces from Quashie and Lowe River in Rio Bueno while, there were no traces of the dyes at Pear Tree Bottom and Laughland Great Rivers.

ASSESSMENT OF LOWER RIO COBRE ALLUVIUM AQUIFER (THE AQUIFER PROTECTION ZONE) WATER QUALITY



Ms. Allison Pearce (Hydrologist) on reconnaissance of a well in the Lower Rio Cobre Alluvium Aquifer.

The Lower Rio Cobre Alluvium Aquifer was established as a Protected Zone by the Cabinet in 2004. Notwithstanding this declaration, a number of housing developments were approved and constructed atop the aquifer while others have been proposed. It became necessary to assess the impact of these developments within the Aquifer Protection Zone (APZ) in order to determine any existing trends in groundwater (GW) quality. The major tasks and targets of this study were as follows:

- Preliminary survey to identify historic water quality problems in the aquifer and pre-selection of a representative sampling network according to anthropogenic activities in the zone

- Field reconnaissance to determine the potential influences/threats to groundwater quality, ground-truthing to verify location and functionality of the wells pre-selected for sampling, as well as determine special equipment/tools required for sampling
- Monthly sampling of the monitoring well network
- Selection and Sampling of sources (wells) in Lower Rio Cobre Alluvium Aquifer.
- Analysis of data (water quality, water level)
- Water Quality Database Updated
- Water Quality Assessment report prepared



TARGETED WELLS; AQUIFER PROTECTION ZONE



Sample collection began in August 2017, and will continue into July 2018, after which the analysis of data will be done and the final report prepared.

FEASIBILITY STUDY OF INTER-BASIN TRANSFER OF WATER FROM DRY HARBOUR MOUNTAINS BASIN TO RIO COBRE AND KINGSTON BASINS.

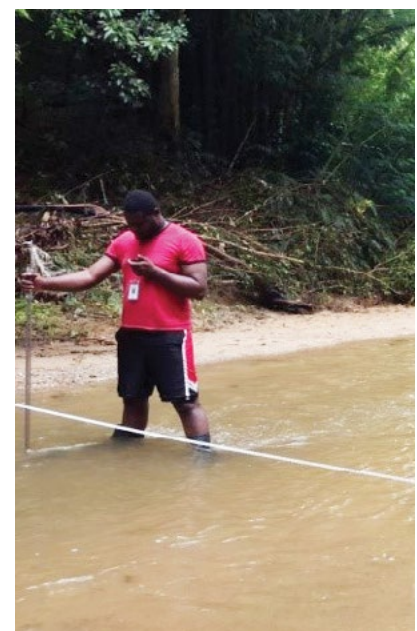
A desk study commenced to ascertain the feasibility of identifying and transferring surplus water from the Dry Harbour Mountains Basin to Rio Cobre and Kingston Basin. The two main goals of this study would be to:

- Identify potential sources of water in Dry Harbour Basin for abstraction and transfer.
- Identify modalities of transfer and storage/usage of water in target basin.

The project will continue into 2018-2019 year.

RESOURCE ASSESSMENTS & FIELD INVESTIGATIONS

The WRA is currently conducting investigations to determine water availability across three parishes as indicated below. These hydrological investigations will be carried out over 12 months and are due to be completed in the 2018-19 financial year.



Stream Flow Measurement at Essex Hall, St. Andrew.



SOURCE	LOCATION	REQUESTED BY	COMPLETION DATE
John Daggy Spring	Warsop, Trelawny	Rural Water Supply Limited	2019
Essex Hall River	Essex Hall, St Andrew	National Water Commission	2019
Noisy Water Spring	Cave Valley, St Ann	National Water Commission	2019

The WRA also carried out 78 field investigations based on requests from public and private enterprises. These field investigations included (but were not limited to) site visits to bauxite companies and cemetery site investigations.

WATER RESOURCES MASTER PLAN

The Demand Consultant submitted an initial draft of the Demand Inventory in March 2018 for review, and the draft has been reviewed by the WRA and resubmitted to the consultant. Review and dialogue is expected to continue and be completed by the end of 2018.

The Resource Consultant submitted revised boundaries for certain sub-Watershed Management Units as well as a revision of the island's hydrostratigraphic classifications. These are under review by the WRA, and dialogue continues into the 2018-2019 financial year regarding the best way forward to complete this aspect of the Master Plan.

PROVISION OF TECHNICAL SUPPORT TO THE GOJ

The WRA provided technical support to the GoJ via participation in the Development Approval

Process, at meetings and workshops as requested. During the 2017-2018 financial year, the Planning & Investigations Unit completed 185 of 209 (89%) technical responses to the National Environment and Planning Agency and Municipal Corporations within the requested 30 day period. This compares to the 97% (278/287) for the previous year.

While there was a slight decline in the number of responses for the Development Approval Process there was an increase in the number of meetings which required representation by the Authority. Some of these meetings include the following (not an exhaustive list):

- NEPA - Subdivision Committee
- NEPA - Technical Review Committee
- Cockpit Country Boundaries Meeting with MSTEM
- NEPA- Development Assistance Centre (DAC) Meeting.

- ODPEM - Climate Change Adaptation TWG Meeting
- Ministry of Tourism - Advisory Committee Meeting
- RAMSAR Committee Meeting
- DAC Meeting
- Stakeholders Meeting Towards the Preparation of the Cemetery Research Planning Paper
- River Rafting Authority Meeting
- Environmental Monitoring meeting - Ewarton Works
- New permit categories and amended regulations of NEPA Meeting.
- Hope/Yallahs PSC Meeting. Hope/Yallahs Special Project Meeting.
- Essex Valley Well Construction Project
- Agro Parks PSC Meeting
- GOJ bauxite/alumina Monitoring Meeting with JBI, NEPA, MGD..
- JAMPRO Meeting.
- NAMA Meeting for Water Sector
- Vision 2030 Planning Workshop



FLOOD ASSESSMENTS

The WRA conducted several Flood Assessments across the island during the 2017-2018 fiscal year.

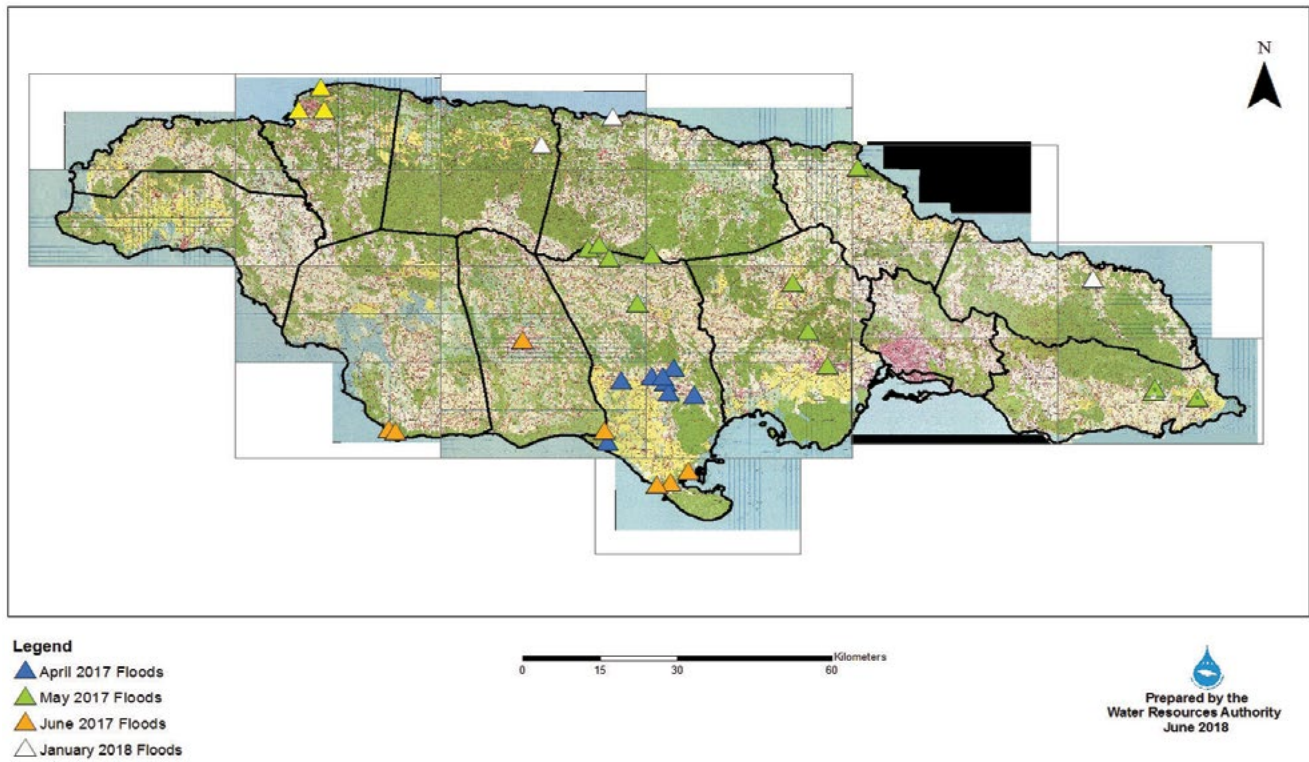


Figure 1: Location Map for Flood Site Visits (2017 -2018)

Locations of Flood Events during the 2017-2018 Fiscal Year

FLOODING IN CLARENDON

Severe localized flooding was experienced in central and southern parts of Clarendon during heavy rainfalls experienced between the 20th and 22nd of April, 2017. The WRA made field visits on April 26, 2017 to the following areas:

- 19 Miles/Palmetto Pen;
- Havana Heights (near Denbigh);
- Howard Avenue near Sevens Plantation;
- Milk River at the Milk River Spa;
- Mineral Heights;
- Osbourne Store; and
- Weston Park.





Member of the Data Unit indicating a Water mark in Osbourne Store, Clarendon

Observations indicate that the engineered drainage systems in the flooded communities were not adequate to serve the communities during these recent storm events.

FLOODING IN EASTERN & CENTRAL JAMAICA

Severe localized flooding occurred in the central and eastern sections of Jamaica during heavy rainfalls experienced May 14th to 16th, 2017. Field visits were made on May 17th, 18th and 19th 2017 to several of the areas such as:

- In the parish of Clarendon: Aeon Town; Bog Hole; and Penants.
- In the parish of St. Ann: Cave Valley; and Douglas Castle.
- In the parish of St. Catherine: Sunnyside; Bog Walk Gorge; and Thompson Pen.
- In the parish of St. Mary: Port Maria
- In the parish of St. Thomas: Access Road to Bath Fountain; Cropper Lane in Bath; and Golden Grove.

All areas were affected by riverine flooding, except for Port Maria in St. Mary and Douglas Castle in St. Ann. It should be noted that Port Maria lies below sea level, and the Douglas Castle area is characterized by depressions, all of which make these areas prone to flooding. All of the areas investigated are naturally prone to flooding due to their proximity to rivers or the natural topography.



Data Unit team members measuring height of water mark in Golden Grove, St. Thomas



Severe localized flooding also occurred in the central and eastern sections of Jamaica during heavy rainfalls June 16 and 17, 2017. The WRA made field visits on June 20th, 21st and 22nd, 2017 to several of these areas. The areas visited were as follows:

- In the parish of St. Elizabeth: Treasure Beach; and Great Bay.
- In the parish of Manchester: Mandeville.
- In the parish of Clarendon: Scott (Milk River); Portland Cottage; Rocky Point; and Mitchell Town.

Except for the community of Scott by the Milk River, all incidences of flooding were caused by inadequate drainage infrastructure.



WRA team member assessing fence toppled over by flood waters in Treasure Beach, St. Elizabeth

The flooding incidence in Runaway Bay was exacerbated by poorly designed drainage systems. A concrete wall that runs along the north side of the A1 highway (at the Runaway Bay city center) prevents runoff from the upper catchments from reaching the ocean. A break in the wall needs to be created to facilitate discharge of runoff to the ocean.

The flooded areas in Jackson Hall were rural areas that lie in major depressions. The residents therefore need to assume the risk associated with their domicile location.

The flooding in Anchovy Gardens was exacerbated by poor construction practices at the Anchovy Wastewater Treatment Plant, which was being upgraded at the time of the flooding event.

FLOODING IN MONTEGO BAY, ST JAMES

Severe localized flooding occurred in the parish of St. James on November 22, 2017 in the communities of Ironshore, Montego Bay and Green Pond.

Indications are that these incidences of flooding experienced were exacerbated by inadequate drainage infrastructure. It was also concluded, that unless proactive action is taken to reduce the vulnerability of the Montego Bay communities, flooding impact of this severity (or worse) will re-occur in the future.



WRA team members observing sediment build-up in the South Gully, Montego Bay, St. James

JANUARY 2018 FLOODS

Severe localized flooding occurred in the parishes of St. Ann, St. Mary, Portland and Trelawny during January 2018. These flooding events occurred at different times and were caused from separate storm events. Visits were made by WRA to Jackson Hall (Trelawny); Runaway Bay (St. Ann); and Anchovy Gardens (Portland)



Concrete wall that runs along east-west alignment near the Runaway Bay Town Center (WRA Team member shown for height reference)



INFORMATION AND COMMUNICATION TECHNOLOGY



The WRA provided a database through its Water Resources Management Information System (WRMIS) for assessing the quantity, quality, and variations in time and space of the surface and underground water resources. This is an online web-based database containing hydrologic and related data for Jamaica. This database has been made available to all stakeholders at <http://wra.gov.jm/webmapjam>, using

the Internet Explorer, Google Chrome, or Mozilla Firefox web browsers.

Data sets were successfully updated with data comprising:

- ◆ Daily discharges measurements for 69 of 75 gauging stations.
- ◆ Monthly spot measurements for of 54 of 54 ungauged stations.
- ◆ Groundwater level data for 281 of 284 monitoring stations.

The system was successfully updated with data sets comprising:

- ◆ Water level data for all ten of Jamaica's Hydrologic Basins.
- ◆ Depressions for five of Jamaica's Hydrologic Basins.
- ◆ Water balance, surplus, deficit, demand for Jamaica.



PUBLIC EDUCATION

PUBLIC EDUCATION ACTIVITIES	2017/2018	2016/2017
Exhibitions	12	12
Guided Tours	2	3
Presentations		2
Newspaper Supplement	2	2
Advertisements	64	6
Research & Technical Assistance	150	190
Distribution of flyers/ Brochures/Posters	4500	6000

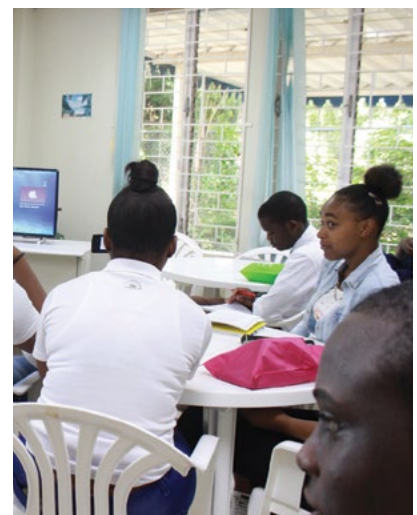
The Authority also engaged members of the public at various levels- schools, community groups and researchers through its participation in public exhibitions in commemoration of various environmental days. Research assistance was made available through the Basil Fernandez Documentation Centre.



The Authority also partnered with the Ministry of Economic Growth and Job Creation to commemorate World Water Day (WWD), celebrated on March 22, under the theme “Nature for Water”. The main events were an exposition, an awards ceremony for winners of the WWD poster competition and a speaker’s forum at the Girl Guide Headquarters in Kingston.

The exposition featured:

- The potential for Rainwater Harvesting;
- Restoration the Yallahs Hope River Watershed; and
- Smart Agriculture (Using less water) Financing Climate Adaptation.





4

WORLD WATER DAY HIGHLIGHTS

1. Mr. Herbert Thomas makes a presentation to one of the winners of the photo competition
2. Mr. Geoffrey Marshall Presenting on Nature-based solutions for water
3. Rainwater Harvesting model on display
4. Section of the audience

HUMAN RESOURCES



The Human Resource Management (HRM) Unit is responsible for coordinating all human resources functions, initiatives, policies, systems and processes to support the overall strategic objectives of the organization. The following strategic HR objectives were met for the 2017-2018 financial year:

- Recruited highly skilled and competent employees to fill 8 vacant positions.
- Trained and developed the skills and competencies of all employees. Employees participated

in a total of nineteen (19) training courses in different areas including: training in Flood Hazard Mapping, Climate Change Adaptation, Approaches in Data Processing and Interpretation Applied to Isotope Hydrology Studies and Government Accounting. (See appendix for full list of training)



Ms. Thashanie Dacres accepts her certificate at Administrative Professionals Workshop

- Facilitated reinforcement of a performance-driven culture through the replacement of the existing Performance Appraisal System with the Performance Management and Appraisal System (PMAS).
- The HR Unit also provided relevant and accurate information in supporting the WRA reclassification/restructuring project carried out by the PricewaterhouseCoopers (PwC) Consultants
- Recruited and trained two (2) cohorts of interns. The two (2) interns completed their hours of work for which they gained credit towards their degrees.
- Facilitated an Apprenticeship under the HOPE programme.



**Water
Resources
Authority**

APPENDICES

AUDITED FINANCIAL STATEMENTS

31 March 2018



**Water
Resources
Authority**





Independent Auditor's Report

To the Members of

Water Resources Authority

Opinion

We have audited the financial statements of Water Resources Authority (the Authority) which comprise the statement of financial position as at March 31, 2018, Statement of Profit or Loss and other comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Authority as at March 31, 2018, and of its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) and the Jamaican Companies Act.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company in accordance with the International Ethics Standards Board for Accountants Code of Ethics for Professional Accountants (IESBA Code) and we have fulfilled our other ethical responsibilities in accordance with the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and the Board of Directors for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with IFRS and the Jamaican Companies Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Authority's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Authority or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is responsible for overseeing the Authority's financial reporting process.

Independent Auditor's Report (Continued)

To the Members of

Water Resources Authority

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Authority's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Authority's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Authority to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that presents a true and fair view.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



Chartered Accountants
Kingston, Jamaica
20 August 2018

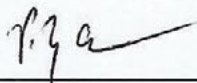


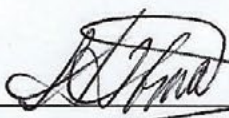
STATEMENT OF FINANCIAL POSITION

31 MARCH 2018

	Notes	2018 \$	2017 \$
ASSETS			
Cash and cash equivalents	3	31,000,744	18,723,401
Investment	4	4,637,286	4,422,951
Accounts receivable	5	4,767,656	6,552,387
Prepayments		972,172	896,702
Retirement benefit asset	6.1	246,038,000	127,556,000
Intangible assets	8	16,267,147	7,212,838
Property, plant and equipment	8b	187,284,801	150,764,279
Total Assets		<u>490,967,806</u>	<u>316,128,558</u>
Reserves			
Reserves and Accumulated Funds			
Capital project subvention	9	1,044,719	1,044,720
Capital project grant	10	7,060,258	2,512,395
Other projects fund	11	-	457,851
Accumulated surplus		84,641,758	72,081,076
Capital reserve	12	74,068,693	61,218,693
Revaluation reserve	13,14	140,945,766	103,213,087
Pension revaluation reserve		177,517,286	66,494,286
		<u>485,420,239</u>	<u>307,022,108</u>
Current liabilities			
Payables & accruals	15	5,689,326	9,106,451
		<u>5,689,326</u>	<u>9,106,451</u>
Total reserves and liabilities		<u>490,967,806</u>	<u>316,128,558</u>

Approved for issue on behalf of the Board of Directors on 20 August 2018 and signed on its behalf by:


Chairman


Managing Director



STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

YEAR ENDED 31 MARCH 2018

	Notes	2018 \$	2017 \$
Income			
Subventions		197,418,524	163,640,472
Other operating income	16	<u>17,594,316</u>	<u>7,967,893</u>
		215,012,840	171,608,365
Expenditure			
Expenses	17	<u>(202,811,073)</u>	<u>(174,078,465)</u>
Surplus/ (Loss) for the year		12,201,768	(2,470,100)
OTHER COMPREHENSIVE INCOME:			
Other comprehensive income(loss) not to be reclassified to income in subsequent period:			
Revaluation gain on land		37,732,678	-
Re-measurement gain on defined benefit plan	6.2	<u>111,023,000</u>	<u>34,273,000</u>
Total income and other comprehensive income		<u><u>160,957,446</u></u>	<u><u>31,802,900</u></u>



STATEMENT OF CASH FLOWS

YEAR ENDED 31 MARCH 2018

	Note	2018 \$	2017 \$
Cash Flows from Operating Activities			
Surplus/ (Loss) for the year		12,201,768	(2,470,100)
Adjustments			
Depreciation and amortization		18,323,420	13,523,061
Gain on disposal		(299,666)	-
Net change in retirement benefits		<u>(7,459,000)</u>	<u>(10,123,001)</u>
Adjusted surplus for the year		22,766,522	929,959
Decrease/(Increase) in current assets			
Change in accounts receivable		1,784,730	(1,648,523)
Change in prepayments		(75,470)	253,470
Change in investment securities		(214,335)	(215,998)
(Decrease)/Increase in current liabilities			
Change in payables and accruals		<u>(3,417,123)</u>	<u>3,862,269</u>
Net cash flow from operation		<u>20,844,324</u>	<u>3,181,177</u>
Cash Flow from Investing Activities			
Proceeds from disposal of fixed assets		331,960	-
Additions to property, plant and equipment		(12,757,444)	(14,169,959)
Additions to intangible assets		<u>(590,423)</u>	<u>-</u>
Net cash flow from investing activities		<u>(13,015,907)</u>	<u>(14,169,959)</u>
CASH FLOW FROM FINANCING ACTIVITIES			
Change in capital projects subventions		<u>4,448,926</u>	<u>(288,763)</u>
Net cash inflow from financing activities		<u>4,448,926</u>	<u>(288,763)</u>
Increase/(decrease) in cash resources		12,277,343	(11,269,545)
Cash and Cash Equivalent at Beginning of Year	3	<u>18,723,401</u>	<u>29,992,947</u>
Cash and Cash Equivalent at End of Year	3	<u>31,000,744</u>	<u>18,723,401</u>



STATEMENT OF CHANGES IN EQUITY

YEAR ENDED 31 MARCH 2018

	Revenue Reserve	Capital Reserve	Revaluation Reserve	Pension Revaluation Reserve	Total
	\$	\$	\$	\$	\$
Balances at 31 March 2016	74,192,262	61,218,693	103,213,087	32,221,286	270,845,328
Capital project grant	358,914	-	-	-	358,914
Change during the year	(2,470,100)	-	-	34,273,000	31,802,900
Balances at 31 March 2017	72,081,076	61,218,693	103,213,087	66,494,286	303,007,142
Capital project grant	358,914	12,850,000	-	-	13,208,914
Change during the year	12,201,768	-	37,732,678	111,023,000	160,957,446
Balances at 31 March 2018	84,641,758	74,068,693	140,945,765	177,517,286	464,323,502



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

1. The Authority

The Water Resources Authority was established under the Water Resources Act of 1995. The Act became effective as of April 7, 1996.

Its main objectives were to promote the conservation and proper use of underground water resources and to control the exploitation of such water resources.

In July 1985 the functions and duties of the authority were transferred from the Ministry of Public Utilities and Transport to the Ministry of Agriculture. However, in 1989, the Ministry of Public Utilities and Transport again assumed responsibility for the Authority. Water Resources Authority is currently being funded by subventions from the Ministry of Water, Land, Environment and Climate Change

The registered office of the Authority is situated at Hope Gardens, Kingston 7, Jamaica.

2. Significant Accounting Policies:

The principal accounting policies applied to the preparation of these financial statements are set out below. These policies have been applied to all the years presented, unless otherwise stated.

Basis of preparation

These financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), and have been prepared under the historical cost convention as modified by the revaluation of available-for-sale investment securities when applicable.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Authority's accounting policies. Although these estimates are based on management's best knowledge of current events and actions, actual results could differ from those estimates

Interpretations and amendments to published standards effective in the current year and are relevant to the authority

There were no standards and interpretations that were applied in the year that affected the presentation and disclosures in these financial statements.

The following additional new and revised Standards and Interpretations have been adopted in these financial statements. Their adoption has not had any impact on the amounts reported in these financial statements but may impact the accounting for future transactions or arrangements.

<u>Amendments to Standards</u>		Effective for annual periods beginning on or after
IAS 7	Statement of Cash Flows -Amendments as a result of the Disclosure initiative	January 1, 2017
IAS 12	Income Taxes - Amendments regarding the recognition of deferred tax assets for unrealised losses	January 1, 2017
IFRS 12,	Amendments arising from 2014 – 2016 Annual Improvements to IFRS (clarifying scope)	January 1, 2017



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued):

Basis of preparation (Continued)

Interpretations and amendments to published standards effective in the current year and are relevant to the authority (Continued)

- ***Amendments to IAS 7 as a result of the Disclosure Initiative***

The amendments require an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both cash and non-cash changes.

The application of these amendments has had no impact as the company has not undertaken any financing activities necessitating disclosure in its statement of cash flows.

Standards and amendments to published standard that are not yet effective and have not been early adopted by the authority

At the date of authorisation of these financial statements, the following Standards and Interpretations were in issue but not effective or early adopted for the financial period being reported on:

<u>New Standards</u>		Effective for annual periods <u>beginning on or after</u>
IFRS 9	Financial Instruments: incorporating requirements for classification and measurement, impairment, general hedge accounting and derecognition	January 1, 2018
IFRS 15	Revenue from Contracts with Customers - Clarifications to IFRS 15	January 1, 2018 January 1, 2018
IFRS 16	Leases	January 1, 2019
IFRS 17	Insurance Contracts	January 1, 2021



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued):

Basis of preparation (Continued)

Standards and amendments to published standard that are not yet effective and have not been early adopted by the authority (Continued)

<u>Revised Standards</u>		<u>Effective for annual periods beginning on or after</u>
IFRS 2	Share-based Payment: - Amendments to clarify the classification and measurement of share-based payment transactions	January 1, 2018
IFRS 7	Financial Instruments: Disclosures - Amendments requiring disclosures about the initial application of IFRS 9 - Additional hedge accounting disclosures (and consequential amendments)	January 1, 2015 (or otherwise when IFRS 9 is first applied) When IFRS 9 is applied
IFRS 4, IFRS 9	Amendments regarding the interaction of IFRS 4 Insurance Contracts and IFRS 9 Financial Instruments - Overlay approach applied retrospectively to qualifying financial assets - Deferral approach	When IFRS 9 is first applied January 1, 2018
IFRS 9	Financial Instruments Amendments regarding prepayment features with negative compensation and modifications of financial liabilities	January 1, 2019
IFRS 1, IAS 28	Amendments arising from 2014 – 2016 Annual Improvements to IFRS - Removing short-term exemptions; Clarifying certain fair value measurements	January 1, 2018
IFRS 2, 11, IAS 12, 23,	Amendments arising from 2015 – 2017 Annual Improvements to IFRS - Measurement of previously held interest; Income tax consequences of dividends; Borrowing costs eligible for capitalisation	January 1, 2019



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued):

Basis of preparation (Continued)

Standards and amendments to published standard that are not yet effective and have not been early adopted by the company (Continued)

		Effective for annual periods beginning on or after
<u>Revised Standards</u> (continued)		
IFRS10, IAS 28 IAS 28	Amendments regarding the sale or contribution of assets between an investor and its associate or joint venture Investments in Associates - Amendments regarding long –term interest in associates and joint ventures	Deferred indefinitely January 1, 2019
IAS 39	Financial Instruments: Recognition and Measurement - Amendments to permit an entity to continue to apply hedge accounting requirements	When IFRS 9 is applied
IAS 40	Investment Property - Amendments to clarify transfers of property to, or from, investment property	January 1, 2018
<u>New Interpretations</u>		
IFRIC 22	Foreign Currency Transactions and Advance Consideration	January 1, 2018
IFRIC 23	Uncertainty over Income Tax Treatments	January 1, 2019

Of the above, the following are considered relevant to the operations of the company and are likely to impact amounts reported in the company's financial statements:

IFRS 9, *Financial Instruments*, (effective for annual reporting periods beginning on or after January 1, 2018), replaces the existing guidance in IAS 39, *Financial Instruments: Recognition and Measurement*. IFRS 9 includes revised guidance on the classification and measurement of financial assets and liabilities, including a new expected credit loss model for calculating impairment of financial assets and the new general hedge accounting requirements. It also carries forward the guidance on recognition and derecognition of financial instruments from IAS 39. Although the permissible measurement bases for financial assets – amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL) – are similar to IAS 39, the criteria for classification into the appropriate measurement category are significantly different. IFRS 9 replaces the „incurred loss“ model in IAS 39 with an “expected credit loss” model, which means that a loss event will no longer need to occur before an impairment allowance is recognized.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued):

Basis of preparation (Continued)

IFRS 9, *Financial Instruments*, (effective for annual reporting periods beginning on or after January 1, 2018) (Continued)

IFRS 9 requires the Company to record expected credit losses on all of its debt securities, loans and receivables, either on a 12-month or lifetime basis. The simplified approach requires the recording of lifetime expected losses on all trade receivables. This is expected to have a significant impact on the company's equity due to unsecured nature of its receivables, but it will need to perform a more detailed analysis, which considers all reasonable and supportable information, including forward-looking elements to determine the extent of the impact.

The authority does not apply hedge accounting so these amendments would not apply.

- **IFRS 15, Revenue from contracts with Customers', (effective for annual periods beginning on or after 1 January 2018).** IFRS 15 establishes principles for reporting useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. Revenue is recognized when a customer obtains control of a good or service and thus has the ability to direct the use and obtain the benefits from the goods or service. The standard replaces IAS 18 "Revenue" and IAS 11 "Construction contracts" and related interpretations.
- **IFRS 16 Leases, (effective for annual periods beginning on or after 1 January 2019).** This new standard requires lessees to account for all leases under a single on-balance sheet model, subject to certain exemptions in a similar way to finance leases under IAS 17. Lessees recognize a liability to pay rentals with a corresponding asset, and recognize interest expense and depreciation separately. The standard provides guidance on the two recognition exemptions for leases – leases of "low value" assets and short-term leases with a term of 12 months or less. Lessor accounting is substantially the same as IAS 17. Early adoption is permitted but not before the Company applies IFRS 15. The directors and management have not yet assessed the impact of the application of this standard on the Company's financial statements.

Summary of accounting policies

The principal accounting policies applied in the presentation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Foreign currency translation

(i) Functional and presentational currency

Items included in the financial statements are measured using the currency of the primary economic environment in which the entity operates (the functional currency) the financial statements are presented in the Jamaican dollars, which is the functional and presentation currency.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued):

Summary of accounting policies (Continued)

(a) Foreign currency translation (Continued)

(ii) Transaction and balances (Continued)

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of transactions. Foreign exchange gains and losses resulting from the settlement of such transaction and from the translation at the year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of changes in net assets available for benefits. At the year end date, monetary assets and liabilities denominated in foreign currency are translated using the closing mid-point rate of exchange. Unrealised foreign exchange differences on unsettled foreign currency monetary assets and liabilities are recognized in the statement of changes in net assets available for benefits.

(b) Investment securities

Investment securities are measured at fair value by reference to quoted market prices when available. If quoted market prices are not available, then fair values are estimated on the basis of pricing models or other recognised valuation techniques.

(c) Receivables

Receivables are carried at cost which approximates the fair value of those assets.

(d) Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Authority and the revenue can be reliably measured. The following specific recognition criteria must also be met before revenue is recognised.

Subventions

Subventions are recognised when control of the asset has been attained and recorded in the year to which they relate.

Interest income

Interest income is recognised on a time proportion basis using the effective interest method and includes interest income from debt securities.

(e) Expenses

All expenses are recognised in the statement of changes in net assets available for benefits on the accrual basis. Accrued expenses are recognised initially at fair value and subsequently stated at amortised cost using the effective interest method.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued):

Summary of accounting policies (Continued)

(f) Financial investments

(i) Classification

The Authority classifies its investment in debt and equity securities. These financial assets are classified as available-for-sale investment securities. The Authority's policy is for the managers to evaluate the information about these financial assets on a fair value basis together with other related information.

(ii) Recognition/derecognition

Purchases and sales of investments are recognised on the trade date, the date on which the Authority commits to purchase or sell the investment. Investments are derecognised when the rights to receive cash flows from the investments have expired and the Authority has transferred substantially all risks and rewards of ownership.

(iii) Measurement

Financial investments are initially recognised at fair value. Transaction costs are expensed in the statement of changes in net assets available for benefits. Subsequent to initial recognition, all financial investments are measured at fair value based on quoted bid prices or amounts derived from cash flow invested. Unrealised gains and losses are recognised in the statement of changes in net assets available for benefits.

(iv) Fair value estimation

The fair value of the financial instruments traded in active markets (such as equity securities) is based on quoted market prices at the year end date. The quoted market prices used for financial assets held by the Authority is current bid price.

(g) Cash and cash equivalents

Cash and cash equivalents include cash in hand, demand deposits, other short-term highly liquid investments with original maturities of three months or less.

(h) Use of estimates and judgements

The preparation of financial statements in accordance with International Financial Reporting Standards requires the Board of Directors to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. These estimates are based on historical experience and the Board of Directors' best knowledge of current events and actions and are reviewed on an ongoing basis. Actual results could differ from those estimates.

(i) Pension Scheme costs

The Authority participates in a defined benefit contribution pension scheme, the assets of which are held separately from those of the Authority, however, the net value of the fund and the actuarially determined employer contribution costs are reflected in the books of the Authority.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

2. Significant Accounting Policies (Continued)

Summary of accounting policies (Continued)

(j) Property, plant and equipment:

- (i) Items of property, plant and equipment, excepting building are stated at cost, less accumulated depreciation and impairment losses. The directors however, revalued the building during the current year and indicated that the current book value represents the replacement value.
- (ii) Depreciation is calculated on the straight-line basis at annual rates to write down the assets to their estimated residual values over their expected useful lives. The depreciation rates are as follows:

Computer hardware	25%
Computer software	25%
Technical and scientific equipment	20%
Buildings	2.50%
Furniture and fixtures	10%
Motor vehicles	20%
Capital projects	2.50%

Land is not depreciated and is stated at cost. Depreciation rates, estimated residual values and expected useful lives are re-assessed at each financial year end.

3. Cash and Cash Equivalents

	2018 \$	2017 \$
Bank of Nova Scotia - Current Account	22,976,722	11,537,340
Bank of Nova Scotia - Savings Accounts:		
Motor Vehicle Repair Loan	6,604,625	6,086,906
Computer Loan Account	1,407,872	1,083,050
TCC Account	-	4,580
Petty cash	11,525	11,525
	<u>31,000,744</u>	<u>18,723,401</u>

4. Investment

Investment comprises the following:

	2018 \$	2017 \$
Managed funds	4,637,286	4,422,951
	<u>4,637,286</u>	<u>4,422,951</u>



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

5. Accounts Receivable

	2018 \$	2017 \$
Motor vehicle repair loans	1,992,288	2,227,776
Computer loans	268,509	420,627
Staff loans	547,150	444,447
Interest receivable	32,232	12,935
Withholding tax recoverable	835,955	835,088
Deposit on fixed asset	805,136	-
Other contribution-G.C.T.	-	2,084,778
Other receivables	286,386	526,736
	<u>4,767,656</u>	<u>6,552,387</u>

6.1 Retirement Benefits Pension Scheme

The Authority participates in a defined benefit pension plan which is open to all permanent employees and administered by Sagicor Life Jamaica Limited.

	2018 \$'000	2017 \$'000
Assets/(liabilities) recognized in the Balance Sheet - Retirement Benefit Asset- Pension plan	246,038	127,556
Amounts recognized in the profit or loss in the statement of comprehensive income	(509)	(3,226)
Amounts recognized in other comprehensive income	<u>(111,023)</u>	<u>(34,270)</u>

Pension plan benefits

The plan is funded by employees' contributions at 5% of salary with the option to contribute an additional 5% and employer contribution as recommended by the independent actuaries. Pension at normal retirement age is based on 2% of final year's salary. The defined benefit asset recognized in the Balance Sheet was determined as follows:

	2018 \$'000	2017 \$'000
Fair value of plan assets	384,017	325,193
Present value of funded obligations	<u>(137,979)</u>	<u>(85,631)</u>
	246,038	239,562
Effect of asset ceiling	-	(112,006)
	<u>246,038</u>	<u>127,556</u>



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

6.1 Retirement Benefits Pension Scheme (Continued)

Pension plan benefits (continued)

The movement in the fair value of plan assets during the year was as follows:

	2018	2017
	\$' 000	\$' 000
At beginning of year	325,193	282,977
Employer's contributions	6,950	6,925
Members' contributions	4,120	3,710
Interest on plan assets	31,079	24,585
Benefits paid	(4,592)	(17,730)
Settlement	(4,496)	-
Administration fees	(1,321)	(1,173)
Remeasurement of the plan assets	27,084	25,899
At end of year	<u>384,017</u>	<u>325,193</u>

The movement in the present value of the defined benefit obligation during the year was as follows:

	2017	2016
	\$' 000	\$' 000
At beginning of year	85,631	87,151
Current service cost	4,381	3,357
Interest cost	8,046	6,719
Member's contributions	4,120	3,710
Settlement	(4,496)	-
Past service cost	6,181	-
Actuarial gains on obligations:		
Due to experience	1,435	(414)
Due to financial assumptions	37,273	2,012
Benefits paid	(4,592)	(17,730)
At end of year	<u>137,979</u>	<u>85,631</u>

The amounts recognized in profit or in the statement of comprehensive income are as follows:

	2018	2017
	\$' 000	\$' 000
Current service cost	4,381	3,357
Interest cost on present value obligations	8,046	6,719
Income on plan assets	(31,079)	(24,585)
Past service cost	6,181	-
Interest on effect of asset ceiling	10,641	10,140
Administration fees	1,321	1,174
Total included in staff costs (Note 17)	<u>(509)</u>	<u>(3,197)</u>



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

6.1 Retirement Benefits Pension Scheme (Continued)

Pension plan benefits (continued)

The credit of \$509,000 (2017: \$3,226,595) was included in administrative expense in the profit or loss in the statement of comprehensive income. The amounts recognized as other comprehensive income are as follows:

	2018	2017
	\$' 000	\$' 000
Remeasurement of the defined benefit liability	38,708	2,425
Change in effect on ceiling assets	(122,646)	(10,798)
Remeasurement of the plan assets	(27,085)	(25,900)
Total included in other comprehensive income	<u>(111,023)</u>	<u>(34,273)</u>

The assets of the fund were invested in Sagicor Pooled Investments Funds as follows:

	Fair value of asset	% age of Total	Fair value of asset	% age of Total
	2018	2018	2017	2017
	\$M	%	\$M	%
Quoted equities	120.07	31.27	95.59	29.39
Mortgage and real estate	106.82	27.82	77.45	23.82
Fixed income	27.28	7.10	9.29	2.86
Foreign currency	59.28	15.44	80.40	24.72
Money market	70.57	18.37	62.46	19.21
	<u>384.02</u>	<u>100.00</u>	<u>325.19</u>	<u>100.00</u>

The expected return on plan assets was determined by considering the expected returns available on the assets underlying the current investment policy. Expected yields on fixed interest investments are based on gross redemption yields as at the reporting date. Expected returns on equity and property investments reflect long-term real rates of return experienced in the respective markets.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

6.1 Retirement Benefits Pension Scheme (Continued)

Pension plan benefits (continued)

The three year trend for the surplus/ (deficit) in the plan, as well as actuarial (gains)/losses is as follows:

	2018	2017	2016	2015
	\$'000	\$'000	\$'000	\$'000
Present value of obligation	137,979	85,631	87,151	86,727
Fair value of plan assets	(384,018)	(325,193)	(282,977)	(244,441)
	<u>(246,039)</u>	<u>(239,562)</u>	<u>(195,826)</u>	<u>(157,714)</u>
Experience adjustments -				
Defined benefit obligation	1,435	414	(2,886)	(3,871)
Fair value of plan assets	27,085	25,899	20,750	3,910

Sensitivity analysis on Present Value of Obligations

	2018	2017
	\$'000	\$'000
Increase in discount rate - + 1 %	24,355	13,001
Decrease in discount rate - - 1%	(32,214)	(17,570)

Sensitivity analysis on Required Salary Increase

	2018	2017
	\$'000	\$'000
Increase in discount rate - + 1 %	(17,414)	(10,650)
Decrease in discount rate - - 1%	14,685	8,842

7. Related Party Transactions

	2018	2017
	\$'000	\$'000
(a) Transactions with related parties -		
Directors' fees	<u>954</u>	<u>906</u>
(b) Key management compensation		
Short-term employee benefit-		
Management remuneration	12,263	12,790
Other	436	436
	<u>12,699</u>	<u>13,226</u>
Pension	1,377	1,026
	<u>14,076</u>	<u>14,252</u>



8. Intangible Assets

	Opening Cost	Addition	Closing Cost	Opening Accumulated Depreciation	Amortisation the year	Closing Accumulated Depreciation
	\$	\$	\$	\$	\$	\$
At cost :						
Computer Software	21,611,024	13,440,423	35,051,447	14,398,186	4,386,114	18,784,300
	21,611,024	13,440,423	35,051,447	14,398,186	4,386,114	18,784,300

	Opening Net Book Value	Closing Net Book Value
	\$	\$
Computer Software	7,212,838	16,267,147
	7,212,838	16,267,147

NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018



8b. Property, Plant and Equipment

	Land & Buildings		Furniture & Fixtures		Computer Hardware		Stations		Technical & Scientific Equipment		Motor Vehicle		Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
At cost/revaluation :													
April 1, 2017	109,807,637		12,130,559		18,810,550		32,650,690		35,279,405		22,342,026		231,020,867
Additions	-		1,364,258		878,315		141,759		31,000		10,342,112		12,757,444
Disposal	-		-		-		-		(199,582)		(180,258)		(379,840)
Revaluation	10,192,363		-		-		-		-		-		10,192,363
March 31, 2018	120,000,000		13,494,817		19,688,865		32,650,690		35,110,823		32,503,880		253,590,834
Accumulated Depreciation:													
April 1, 2017	25,287,364		9,039,358		18,752,084		1,440,017		13,543,368		12,194,397		80,256,588
Charge for year	2,252,951		690,439		95,627		819,811		3,291,689		6,786,789		13,937,306
Disposal	-		-		-		-		(167,288)		(180,258)		(347,546)
Eliminated on revaluation	(27,540,315)		-		-		-		-		-		(27,540,315)
March 31, 2018	-		9,729,797		18,847,711		2,259,828		16,667,769		18,800,928		66,306,033
Carrying Amount													
Netbook Value 31.03.2018	120,000,000		3,765,020		841,154		30,394,406		18,443,054		13,702,952		187,284,801
Netbook Value 31.03.2017	84,520,273		3,091,201		58,466		31,210,673		21,736,037		10,147,629		150,764,279



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

9. Capital Projects Subvention

	2018 \$	2017 \$
Balance of Subvention Funds at April 1, 2017	1,044,720	1,333,482
Add: Funds Received	-	2,900,000
	<u>1,044,720</u>	<u>4,233,482</u>
Less: Projects Expenditure for year I.D.B Master Plan Project	-	3,188,761
	<u>1,044,720</u>	<u>1,044,720</u>

10. Capital Project Grant

	2018 \$	2017 \$
Balance of beginning of year	2,512,395	2,871,309
Addition	4,906,777	-
Charge	(358,915)	(358,914)
	<u>7,060,257</u>	<u>2,512,395</u>

These represent the value of assets transferred to the authority, which were purchased and used by various projects and also includes capital grant received for the construction of the Hubert Chin Building. This account is being written down by an amount equivalent to the depreciation charged on these assets and is included in other operating income.

11. Other Projects Fund

	2018 \$	2017 \$
UNDP/GOJ Project	-	428,420
MACC	-	694,944
MACC Project - Clarendon	-	(665,513)
	<u>-</u>	<u>457,851</u>

12. Capital Reserve

This represents a valuation of stations built by the Authority and software owned previously excluded from the accounts. Values were obtained from qualified internal valuers.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

13. Revaluation Reserve

The revaluation reserve was as a result of revaluing the office buildings.
The movement on the reserve account was as follows:

	2018 \$	2017 \$
Opening balance	103,213,087	103,213,087
Change during the year	<u>37,732,679</u>	<u>-</u>
Closing balance	<u><u>140,945,766</u></u>	<u><u>103,213,087</u></u>

14. Revaluation of Property

The property was valued by DC Tavares Realty as at 31 March 2018. The valutors arrived at a market value of \$120M and a replacement cost of \$171M.

15. Payables and Accruals

	2018 \$	2017 \$
Projects	4,390,634	3,076,414
Administrative expenses	<u>1,298,692</u>	<u>6,030,036</u>
	<u><u>5,689,326</u></u>	<u><u>9,106,451</u></u>

16. Other Operating Income

	2018 \$	2017 \$
Other Income	5,970	21,410
Well applicant fees	14,136,235	5,276,455
Reimbursements of expenditures	2,917,945	2,357,674
Interest income	234,500	311,789
Gain on disposal on fixed asset	<u>299,666</u>	<u>-</u>
	<u><u>17,594,316</u></u>	<u><u>7,967,893</u></u>

**NOTES TO THE FINANCIAL STATEMENTS****31 MARCH 2018****17. Expense by Nature**

	2018	2017
	\$	\$
Salaries and related costs (note 18)	103,482,839	90,641,442
Staff benefits	12,541,669	9,487,489
Pension- employer's contribution	(509,000)	(3,226,595)
Accommodation and machine rental	2,290,390	1,611,103
Telephone	1,084,955	309,444
Utility expenses	4,457,967	2,767,054
Motor vehicle expenses	4,811,542	3,332,862
Repairs, materials and related expenses	6,201,542	2,421,688
Cleaning & sanitation	138,091	235,143
Construction materials	34,616	59,976
Haulage	85,300	194,980
Security	1,713,670	1,662,426
Postage, stationery and printing	3,374,567	2,367,227
Donations and subscriptions	2,084,778	-
Professional fees	1,700,931	1,643,152
Audit fees	930,000	775,000
Licenses & taxes	228,550	67,152
Foreign travel	297,428	188,535
Travel and subsistence	32,249,010	31,148,775
Bank charges	389,799	220,459
Meals & entertainment	737,804	854,404
Miscellaneous purchases	1,340,840	1,068,620
Accounts closed and funds sent to Accountant General's Department (Note 21)	-	10,023,853
Depreciation and amortization	18,323,420	13,523,061
Loss on disposal	-	-
Insurance - property	2,425,511	1,347,162
Advertising	2,394,854	1,354,052
	<u>202,811,073</u>	<u>174,078,465</u>

18. Staff welfare

	2018	2017
	\$	\$
Salaries, wages and related expenses	100,797,658	84,251,370
Payroll taxes - employer's portion	7,685,181	6,390,072
	<u>108,482,839</u>	<u>90,641,442</u>



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

19. Fair value estimation

Fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Market price is used to determine fair value where an active market exists as it is the best evidence of the fair value of a financial instrument. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. Where no market price is available, the fair values presented have been estimated using present values or other estimation and valuation techniques based on market conditions existing at balance sheet dates.

The values derived from applying these techniques are significantly affected by the underlying assumptions used concerning both the amounts and timing of future cash flows and the discount rates. The following methods and assumptions have been used:

- (1) Investment securities classified as available-for-sale are measured at fair value by reference to quoted market prices when available.
- (2) The fair value of liquid assets and other assets maturing within three months is assumed to approximate their carrying amount. This assumption is applied to liquid assets and the short-term elements of all other financial assets and financial liabilities.
- (3) The fair value of variable rate financial instruments is assumed to approximate their carrying amounts.
- (4) Equity securities for which fair values cannot be measured reliably are recognised at cost less impairment.

The estimated fair values of the following financial instruments do not differ from their carrying values.

	2018		2017	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	\$'000	\$'000	\$'000	\$'000
Investment securities -				
Held to maturity	4,637	4,637	4,423	4,423

None of the instruments held fell within the groups

- Level 1 includes those instruments which are measured based on quoted priced in active markets for identical assets and liabilities. These mainly comprise of equity shares traded on the Jamaica Stock Exchange and are classified as available-for-sale and financial assets at fair value through profit or loss.
- Level 2 includes those instruments which are measured using inputs other than quoted prices that are observable for the instrument, directly or indirectly. The fair value for these instruments is determined by using valuation techniques and maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.
- If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

19. Fair value estimation (continued)

There were no transfers between the levels during the year.

The instruments measured at fair value are classified into their respective levels in the following table:

	2018			
	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000	Total \$'000
<u>Financial instruments at fair value</u>				
Issued by Government of Jamaica	-	4,637,286	-	4,637,286

	2017			
	Level 1 \$'000	Level 2 \$'000	Level 3 \$'000	Total \$'000
<u>Financial instruments at fair value</u>				
Issued by Government of Jamaica	-	4,422,951	-	4,422,951

20. Financial risk management

The Authority's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The Authority's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Authority's financial performance.

The Ministry of Finance are ultimately responsible for the establishment and oversight of the Authority's risk management framework. The Managers provide guidelines for overall risk management and areas, such as foreign exchange risk, interest rate risk and credit risk, and investment of excess liquidity. The Managers manage and monitoring risks, as follows:

(a) Market risk

The Authority does not take exposure to market risk.

(i) Currency risk

Currency risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

The Authority is exposed to currency risk due to fluctuation in the exchange rates on balances that are denominated in currencies other than the Jamaican Dollar.

Management ensures that the net exposure is kept to an acceptable level by monitoring all currency positions and ensuring adherence to predetermined limits.

There were no foreign currency related liabilities at the reporting date.



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

20. Financial risk management (continued)

(a) Market risk (continued)

(i) Interest rate risk

Interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

Floating rate instruments exposes the Authority to cash flow interest risk whereas fixed interest rate instruments expose the Authority to fair value interest risk.

The Authority's exposure to interest rate risk is affected by its holding in cash and bank deposits. In respect of liabilities, the Authority does not enter into transactions involving interest costs and is therefore not affected by interest rate risk on liabilities.

The following table indicates the level of interest rate exposure of the Authority:

	2018 \$	2017 \$
Managed funds	4,637,286	4,422,951
Bank Saving Accounts	<u>8,012,497</u>	<u>7,174,536</u>
Total	<u>12,379,783</u>	<u>11,597,487</u>

Interest rate sensitivity analysis

The sensitivity analysis below has been determined based on the exposure to variable interest rate financial instruments at the end of the reporting period. The exposure is substantially on holdings of US dollar fixed deposits. The analysis is prepared assuming the amount outstanding at the end of the reporting period was outstanding for the whole year. 100 basis point increase or 100 basis point decrease (2017: 100 basis points increase or 100 points decrease) is used when reporting interest rate risk internally and represents management's assessment of the reasonably possible change in interest rates.

The following table indicates sensitivity to a reasonable possible change in interest rate with all other variables held constant. The analysis is prepared assuming the amount of assets outstanding at the end of the reporting period were outstanding for the whole year.

	2018 \$	2017 \$
Effect on profit or loss		
Increase in net profit - increase 100 (2017: 100) basis points	115,975	115,975
Decrease in net profit – decrease 100 (2017: 100) basis points	123,798	123,798



NOTES TO THE FINANCIAL STATEMENTS

31 MARCH 2018

20. Financial risk management (continued)

(a) Market risk (continued)

(iii) Price risk

Price risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market price, other than those arising from currency or interest rate risk, whether those changes are caused by factors specific to the instrument or affecting all similar instruments in the market.

The Authority is not exposed to price risk.

(a) Credit Risk

Credit risk is the risk that a party to a financial instrument will fail to discharge an obligation and cause the other party to incur a financial loss.

Investments are allowed principally in secure liquid instruments and with counterparties that the Managers believe do not offer any significant credit risk. Based on their assessment, the Managers do not expect any counterparties to fail to meet their obligations. The managers manage credit risk by having an investment policy which includes written authority levels and prior approval by the Ministry of Finance of any investment transaction.

At the date of the statement of financial position, there were significant concentrations of credit risk in one financial institution. There are no off-balance-sheet investments and, therefore, the maximum exposure to credit risk is represented by the total carrying amount of financial assets.

(b) Liquidity Risk

Liquidity risk, also referred to as funding risk, is the risk that the authority will encounter difficulty in raising funds to meet commitments associated with financial instruments. Liquidity risk may result from an inability to sell a financial asset quickly at, or close to, its fair value. Prudent liquidity risk management implies maintaining sufficient cash and marketable securities, and the availability of funding through an adequate amount of committed facilities. Due to the nature of the authority, which accumulates and invests funds to pay liabilities which crystallise principally in the short term and in a measured predictable manner, the Managers believe liquidity risk for the Authority is negligible.

21. Account Closed and Funds Transferred to the Accountant General's Department

The Authority, during the 2017, received correspondence from the Accountant General's Department requesting that all dormant accounts be closed and the monies remitted to them. Further consultation with the Accountant General's Department by the Director of Finance revealed that the funds will not be returned to the Authority.

STAFF TRAINING

- ◆ 3 Officers participated in Supervisory Management Training Programme
- ◆ 10 Officers participated in the Flood Hazard Mapping (ONLINE) 2017
- ◆ 1 Officer participated in the GCCA”+ Climate Change Conference
- ◆ 1 Officer participated in the Advanced Approaches in Data Processing and Interpretation Applied to Isotope Hydrology Studies
- ◆ 1 Officer participated in the Preparatory Regional Workshop of Caribbean Countries for the 8th World Water Forum of 2018
- ◆ 1 Officer participated in the Occupational Health & Wellness Seminar
- ◆ 2 Officers participated in the Government Accounting Level 1: Module1
- ◆ 4 Officers participated in the Post Disaster Needs Assessment Training Workshop
- ◆ 38 Officers participated in the Microsoft Office 2010 Excel Training as follows- 20 for Level 1; 15 for Level 2 and 3 for Level 3.
- ◆ 5 Officers participated in Introduction to Geographical Information Systems Training.
- ◆ 3 Officers participated in Technical Training and Support for SDG6 Programme
- ◆ 3 Officers participated in Optimizing Irrigation Water Management Programme
- ◆ 1 Officer participated in Computer Graphics Training.
- ◆ 1 Officer participated in Level 1 INPRI Public Sector Procurement Certification Series
- ◆ 1 Officer participated in the XII Meeting of the International Hydrological Programme for Latin America and the Caribbean (IHP-LAC) National Committees and Focal Point and the Preparatory Workshop on the Regional Process of the Americas (PRA) for the 8th World Water Forum.
- ◆ 1 Officer participated in the Pilot Program Climate Resilience Latin American and the Caribbean (LAC) Knowledge Exchange.
- ◆ 50 Officers participated in a customised Professional Development Training
- ◆ 1 Officer participated in a Preparatory Regional Workshop of Caribbean Countries for the 8th World Water Forum of 2018.



DIRECTORS' COMPENSATION

POSITION OF DIRECTOR BOARD MEMBERS	FEE (\$)	MOTOR VEHICLE UPKEEP/ TRAVELLING OR VALUE OF ASSIGNMENT OF MOTOR VEHICLE (\$)	HONORARIA (\$)	ALL OTHER COMPENSATION INCLUDING NON-CASH BENEFITS AS APPLICABLE (\$)	TOTAL (\$)
Dr. Parris Lyew-Ayee (Chairman)	217,500.00				217,500.00
Prof. Michael Taylor	70,100.00				70,100.00
Mr. Michael Brown	94,800.00	35,720.00			130,520.00
Ms. Nadeen Spence	77,200.00	2,030.00			79,230.00
Ms. Stephanie Abrahams	84,200.00	16,074.00			100,274.00
Mr. George Grant	77,200.00	4,935.00			82,135.00
Ms. Georgia Hamilton	34,000.00	1,579.00			35,579.00
Ms. Novlette Howell	91,400.00	5,923.00			97,320.00

SENIOR EXECUTIVES' COMPENSATION



POSITION OF SENIOR EXECUTIVE	YEAR	SALARY(\$)	GRATUITY OR PERFORMANCE INCENTIVE(\$)	TRAVELLING ALLOWANCE OR VALUE OF ASSIGNMENT OF MOTOR VEHICLE(\$)	PENSION OR OTHER RETIREMENT BENEFITS(\$)	OTHER ALLOWANCES (\$)	NON-CASH BENEFITS (\$)	TOTAL(\$)
Mr. Herbert Thomas Managing Director	2017-2018	6,503,737.00	-	670,812.00	-	-	-	7,174,549.00
Mr. Peter Clarke Deputy Managing Director	2017-2018	4,172,132.00	-	1,341,624.00	-	-	-	5,513,756.00
Ms. Hermine Downer Director Finance & Accounts	2017-2018	3,473,815.00	-	1,341,624.00	-	-	-	4,815,439.00



Water Resources Authority

(An Agency of the Ministry of Economic Growth & Job Creation)



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