

## HIGHLIGHTS

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#### **EDITOR'S NOTE**

The Editor focuses on the necessity of teamwork within the CWSA and its departments.

The Minister praises the staff of CWSA for always answering the call of duty.

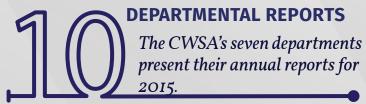


#### **CHAIRMAN'S MESSAGE**

The Chairman highlights the importance of employee welfare to the wellbeing of the CWSA.

## GENERAL MANAGER'S MESSAGE

The General Manager laudes the CWSA's departments for continuous growth and success.



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#### THE YEAR IN PICTURES

A look back at the year through photographs.

Cover Page Photo by Vaughn Lewis



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### Editor's Note



"The important thing to recognize is that it takes a team, and the team ought to get credit for the wins and the losses. Successes have many fathers, failures have none."

-Philip Caldwell

**EDITOR** 

eams have an important place in our professional and personal lives, from student group assignments, to task forces, neighbourhood groups, social clubs, nonprofit groups and of course the workplace.

"...CWSA fulfilled its mission in the provision of top quality service both internally and externally."

It's one thing to join a team, but quite another to perform as a team member. A team generates positive synergy through coordinated effort. The individual efforts result in a level of performance that is greater than the sum of the individual parts. Each department in an organisation has different roles and responsibilities but there are times when these departments must work together in creating and executing a project or task. Those departments must work together as a team to meet the company's goals and objectives, despite having very different functions within the company.

The effectiveness of a team is influenced by both internal

and external circumstances. Therefore making it inherently necessary for team members to understand their individual responsibilities to the team's success, while also understanding how the duties of their team help the company to move forward.

over the years, is that the accomplisment of certain tasks required team effort from outside of its core. The successful execution of water week certainly exemplifies true team work within the Authority. From members of various departments assisting in the schools visits where talks on a wide range of issues can occur, to the collaborative and bold move to host secondary school students where careers are showcased and discussed, or the visits that are facilitated at our landfills and water catchment sites. All of these efforts are team centred, with extensive planning and preparation. Members of the

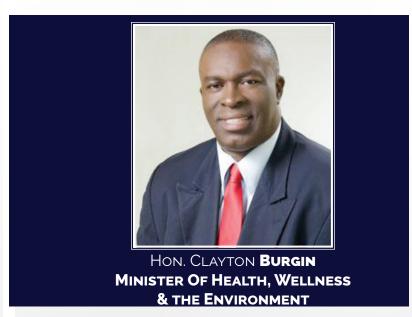
team that function during water week do so knowing that the mandate of the Authority can only be accomplished when we work together.

Having a team approach to accomplishing tasks is not the only way that tasks can be completed but its inclusiveness lends itself to richness of

content, sharing and adoption of various ideas, feelings of accomplishment individually and collectively, it brings persons closer as communicating to fulfil goals enables a type of sharing that exposes personalities and encourages closeness. Though I am personally challenged to use the word failure when goals are not immediately achieved, it is correct to emphasize that it is always easier to own the successes and disassociate oneself from failure.

In this issue we bring into perspective the various angles of teamwork that were executed in ensuring that the CWSA fulfilled its mission in the provision of top quality service both internally and externally.

## MINISTER'S MESSAGE



nce again, I have the honour of bringing greetings to the Board, management and staff of the Central Water & Sewerage Authority (CWSA)on their publication of the 2015 Annual Report. Although this is a statutory requirement, my hope is that the readers will appreciate not only the excellent quality and content but also the tremendous amount of work that has gone into its production and all of it in-house.

I also take great pride as Minister with responsibility for water and the environment in acknowledging the hardworking men and women of the CWSA, not only for their contribution to the overall numbers and performance of the Authority, but also

for repeatedly coming through for the Government and people of this country during times of disaster and under stressful conditions.

Clearly this outstanding performance could not have been possible without leadership and resources. Leadership and vision at the Government level come from ensuring that rates remain affordable and also that the objectives for increasing coverage for both water and garbage collection are achieved.

Leadership at the Board level comes from policy formulation and ensuring that good governance practices are set and maintained. Leadership at the management level involves ensuring that adequate resources are in place and that policy is implemented in ways that achieve all the business and governmental objectives. To their credit, the management of the CWSA has once again demonstrated why they are the leading water utility in the region, with the lowest rates and highest coverage.

The challenge for the CWSA in the future will undoubtedly be meeting the increased demand for solid waste and water supply services as the Country prepares for increased economic activity and investment that will no doubt arise with the coming on stream of the Argyle International Airport. The record of the CWSA over the years however gives us much optimism.

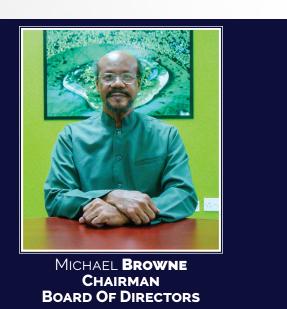


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### CHAIRMAN'S MESSAGE



#### **EMPLOYEE-WELFARE = CWSA WELLBEING**

he signing of the new Memorandum of Agreement (2015-2017) between the CWSA (represented by the Board) and the CTAWU (representing employees) during the year under review,

serves to highlight the Board's responsibility to staff. The preamble of the agreement makes clear that "The spirit, purpose and scope of this agreement are to provide a procedure for the avoidance and settlement of disputes, and to maintain and further the good relationship between the Central Water and Sewerage Authority represented by the Union".

"This Agreement is intended to promote economical and efficient operation of the works of the employer, avoid industrial disturbances, achieve the highest level of employee performance. To those ends, it provides the rates of pay, hours and conditions of employment of all staff".

Our Board recognizes the right of CWSA employees to organize themselves and to bargain

collectively in their own interest. It is a right earned through the struggles of Vincentian workers during the last century when trade unions became legal in St. Vincent and the Grenadines. Our employees are a central part of the CWSA establishment; they however must preserve their fundamental right to collective activity.

The agreement, by way of its substantive articles, ensures that the welfare of staff retains a centrality of position in the life of the CWSA. The implicit understanding is that the welfare of employees contributes significantly to the wellbeing of CWSA. No surprise then that staff turnover is very low, given the high priority placed on employees' concerns.

Over the period of the last two agreements (2012-2014) and (2015-2017), the Board committed to very modest annual salary-increases as well as a year-end bonus for outstanding achievers. Importantly, employee

> benefits as outlined in the agreement, and improve based on the changing realities of the Authority, and on the evolving norms the current (2015-2017) agreement contains elements/ articles that did not



Signing the Union Agreement

appear in the previous (2012-2014) one, or improves on pre-existing ones.

The agreement spans a wide gamut of issues----and these increase with time. "Leave" includes vacation, sickness, maternity, paternity, special, education, compassion, and no-pay. Safety remains paramount as

attested to in the provision of appropriate wear, equipment Authority's work. Under the Education Award Scheme, and facilities. The medical plan covers "major medical, dental, vision, and preventative care". Effective January 01, 2012, provision was made for "a special retirement support benefit to be granted to employees who were employed

"Employee involvement is

not constrained by a job-

description. A committee-

structure allows for employee

participation in important

facets of the Authority's work."

prior to 1992" when there was no pension-plan in place.

**CWSA** understands that an employee is part of a family, and the agreement reflects this social reality. Under the medical plan,

for example, "an employee shall be entitled to enlist his/ her family with full premium (s) paid by the employer". Retirees will continue to enjoy benefits under this plan. The Education Award Scheme guarantees that children of permanent employees shall be "eligible for financial assistance to attend a Secondary School with continuation up to Community College".

Employee involvement is not constrained by a job-description. A committee-structure allows for employee participation in important facets of the

a 3-person committee for administering the scholarship programme and to monitor student's performance, includes one monthly paid employee and a daily paid one. The 4-member Health and Safety Committee includes two

representatives from the Union.

The quarterly all-staff meetings, led by the General Manager, are indicative of the CWSA's commitment to employee involvement in the organization's affairs, and can be considered a prototype for businesses in St. Vincent and the Grenadines. No effort is spared at mobilizing staff, and those employees who

are duty-bound to remain at their posts have the benefit of telephonic contact with the meeting. This exemplary practice highlights the inclusive perspective of the Board and management.

The signing of a new collective agreement in 2015 is therefore not a mere formality or ritual. It represents a real opportunity to comprehensively review the operation of the CWSA, always keeping employees at the centre. Our Board remains cognizant of the fact that EMPLOYEE WELFARE = CWSA WELLBEING!



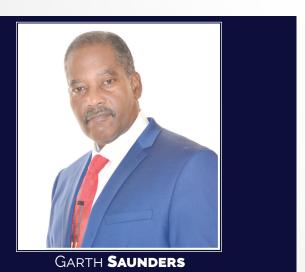


Employees utilize every opportunity to have discussions about what affects their wellbeing and it is encouraged, especiialy at quarterly staff meetings

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## GENERAL MANAGER'S MESSAGE



midst rising costs of inputs, expanded services and activities and large scale investments in property, plant and equipment, the CWSA continues to show marked improvements in financial and operational performances. This was achieved primarily by close financial management and containment of production and maintenance and general and administrative expenses to the same levels as the previous year. Additionally, trade receivables position improved slightly over prior year with the only area of concern being the Grenadines Solid waste accounts. There was also a significant reduction in indebtedness due long term loans.

**GENERAL MANAGER** 

Financial performance alone however does not tell the entire story of success of the CWSA. Many of the other strategic priorities were also addressed resulting in wide-ranging achievements and improvements in almost every department coupled with a simultaneous focus on both the internal and external customers.

The winternet based electron a long way in enhancing the curby providing historical and cu

Internally, staff working conditions
continued to be a priority with the completion of
the construction of a new office complex for the
Solid Waste technical staff at Arnos Vale. The coming into
effect of the new collective agreement between the CWSA

and the CTAWU also saw continued improvements in staff benefits. Staff training in 2015 reached unprecedented levels and in diverse areas ranging from post-graduate achievements by engineering staff to on the job exercises by the most junior employees. These are all detailed elsewhere in this report.

There has also been a significant development in the PR & Marketing Department which was first established some nine years ago. The department has now expanded its range of in-house competencies to include event planning and co-ordination, information management, including social media management and the in-house production and publishing of our Annual Report which is a statutory requirement.

The internal audit function, which was also first introduced only seven years ago, continues to provide vital checks and balances to both the Board and management as we seek to fine tune policies and procedures, with the objective of improving both governance and compliance in all areas of operations and not just the accounting and financial aspects.

Another significant development in 2015 was the introduction by our Information Technology department of a new internet based electronic bill view which has gone a long way in enhancing the customer service experience by providing historical and current billing information

to our customers, reducing the need to call or visit our offices. This was but one of several customer service enhancement initiatives that also included the newly extended hours

of operations at our cash office and also at our emergency and call centers.







Some of the CWSA's achievements in 2015 L-R (Electronic Bill View, Customer Enquiries Upgrade and Construction of the SWMU's New Base)

The Customer service department is also now fully equipped to record manage, resolve and report on customer complaints in ways that hitherto were never done and which allows for analysis and early corrective action to be taken.

In this edition, the engineering and solid waste departments have been granted a significantly higher profile with their respective reports which is indicative of the many activities and accomplishments that need to be highlighted. Of particular interest is that over the past seven years, the CWSA has proudly and successfully established a water resources department, a SCADA remote monitoring and management system and a Geographic Information system all geared towards better and more efficient engineering management.

The engineering department has also since 2006 moved to increasing the island wide water storage from

3.8 million gallons to 6.4 million gallons with the most recent addition in 2015 being the 250,000 gallon storage tank at Rose Hall followed by the commencement of another 500,000 gallon at Belle Isle and scheduled for completion in 2016. The Solid Waste Unit can also boast of significantly improving its operational efficiencies by closer management, improved reporting and investing in fleet and equipment renewal, so vital for establishing the foundation for meeting the future expanded role of the Unit.

In spite of all the success, there remain several areas for improvement and focus in the near future, these include addressing minor periodic water shortages in a few high- elevation pockets, water quality issues in the North Windward area, improving our bill distribution system and addressing human resource challenges including the important issue of succession planning.



The Late Very Reverend Father Patrick Ezekiel McIntosh conducting the Blessing of the newly constructed SWMU Base



A section of employees who attended the Opening Ceremony of the new SWMU Operations Complex.

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for improvement..."

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MONIQUE HULL
FINANCIAL CONTROLLER

## ACCOUNTS & FINANCE REPORT

he CWSA's financial performance for 2015 once again showed an improvement over the

performance for the previous year. The 2015 net surplus position after adjustments for the foreign exchange fluctuations improved by \$760K over F/Y 2014.

There was also small growth in water income from year to year and operational expenses increased only

slightly, income from other sources increased. The overall receivables position showed some improvement despite not being at the desired level. The main areas of concern remain the continuing non-payment by Grenadines solid waste customers where only 8% of billings have been collected since 2007. The CWSA will however work on a better legal mechanism to enforce collection of these charges in 2016.

During 2015 strict attention will be focused on budgetary control, including departmental and project expenses and tighter management of receivables.

#### STATEMENT OF COMPREHENSIVE INCOME (SOCI)

(Extracts from Audited Financial Statements)

2015	2014

#### REVENUE

	\$	\$
Water Income	17,952,014	17,470,612
Sewerage Income	649,236	670,117
Solid Waste Income	7,898,127	7,926,495
Other Water & Sewerage Related Income	1,057,222	569,824
Other income	185,668	108,451
TOTAL REVENUES	27,742,267	26,745,499

#### OPERATIONAL COSTS

	\$	\$
Production & Maintenance Costs	(14,115,709)	(14,271,851)
Selling, General & Administrative Costs	(11,085,726)	(11,074,317)
Unrealized Foreign Exchange Gain (Loss)	960,235	1,370,534
TOTAL OPERATIONAL COSTS	(24,241,200)	(23,975,634)
OPERATING PROFIT	3,501,067	2,769,865
Finance Charges	(428,789)	(457,951)
PROFIT FOR THE YEAR	3,072,278	2,311,914

#### STATEMENT OF FINANCIAL POSITION

(Extracts from Audited Financial Statements)

2015	2014

#### **ASSETS**

	\$	\$
Current Assets	18,487,373	16,513,515
Property, Plant and Equipment	77,851,636	77,538,690
TOTAL ASSETS	96,339,009	94,052,205

LIABILITIES AND GOVERNMENT EQUI	TY	
	\$	\$
Current Liabilities	6,300,511	5,785,531
Borrowings	7,501,927	10,000,997
Employee Benefits	157,287	207,012
Obligations to Customers	78,652	406,637
	7,737,866	10,614,646
Government Equity		
Contributed Capital	40,762,959	39,186,633
Acumulated Other Comprehensive Income	18,977,734	18,977,734
Retained Earnings	22,559,939	19,487,661
	82,300,632	77,652,028
TOTAL LIABILITIES AND GOVERNMENT EQUITY	96,339,009	94,052,205



Accounts Receivables Supervisor, Heleanor Creese poses for the 2014 Calendar "The People Behind the Mission"

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## JOAN RYAN PUBLIC RELATIONS & MARKETING MANAGER

# Public Relations & Marketing Report

he Public Relations and Marketing Department once again, in 2015, successfully fulfilled its role and mandate

as set out in the Authority's business and strategic plans. In addition to providing support to all departments in terms of building employee relations and facilitating communication with our customers and the public, the department once again successfully implemented its four major tasks of producing the CWSA Annual Report and Calendar the planning and implementation of Water Week and the Annual Staff Dinner and Awards ceremony. All of these initiatives were targeted at both internal and external customers.

#### **INTERNAL RELATIONS**

The period under review saw staff being updated via notices on the various notice boards and the telephone intercom, these included the CWSA Sports Club activities. Three staff meetings were hosted by the department, during which addresses were made by the General Manager, updates from the PR department were given and feature presentations by General Employees Cooperative Union on the implementation of Equity Shares and how members will be affected.

#### COMMUNITY OUTREACH

During 2015 the department again printed and distributed flyers encouraging proper solid waste management, white goods collection and management within communities. The general public continues to make requests and report faults to the CWSA through the department via telephone.

The department assisted three community groups as they engaged in the cleanup of the beach front from Aquatic Club to Calliaqua below the Fisheries Complex and the

Richmond Vale Academy in cleaning the Chateaubelair community. Assistance given was in the form of gloves, bags and the placement of skips for collection of garbage.



Members of PRMD & SWMU engaging in a community outreach effort

#### **MEDIA HIGHLIGHTS**

#### **RADIO & TELEVISION**

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Sponsorship of the mid-day news on NBC Radio continued in 2015 where important messages and announcements including planned outages were conveyed to the public. In addition to this, the daily 5-minute tip segment continued on WE-FM supported by a fortnightly half hour live discussion session to educate and inform the general public about issues including customer service, account management, disaster preparedness, water conservation and waste management.

Other radio interviews took place with Xtreme radio and NBC radio with a focus on waste management, water related issues and planned CWSA activities including Water Week. The CWSA also hosted a news conference and several media houses highlighted aspects of that activity which were centered on the effects of the dry season on the CWSA along with projects and other developments within the Authority.



A CWSA sponsored cleanup

#### PRINT MEDIA

The department continued to keep abreast of public opinion and comments relating to the CWSA through the print media. All local newspapers were read and appropriate bulletins lodged as record. An interview on the effects of the dry season on the water supply and conservation measures was conducted and published by the News Newspaper.

#### SOCIAL MEDIA - FACEBOOK

The CWSA Facebook page has become a reliable and necessary means for the dissemination of information to customers that are users of facebook. For 2015, the cover page was updated to include a cover photo of the Diamond Septage Lagoon and the new CWSA Logo. other updates were;

- White goods collection schedules
- Photos of the Green Hill Housing Scheme pipeline extension.
- Water week activities information
- The CWSA water distribution video
- Changes in office closures
- Recap of water week activities in pictures
- United Nations Secretary General's Message for Earth Day April 22nd.
- A Ttribute to former General Manager of the CWSA, Raymond Noel, deceased.
- Drought Alerts Caribbean and also at Dalaway and Montreal Intakes
- The Bequia Landfill reuse of old items

- World Environment day theme and slogan
- World Environment day Tree planting exercise with the Forestry Department and the Lodge Village Government School
- Changes in waste collection schedules
- Weather information from NEMO
- Disaster preparedness tips for water and Solid Waste
- Emergency shelters from NEMO
- Links to the Youtube video recordings of CWSA's Perspectives programme
- 2015 Christmas greetings from the CWSA
- Information on the CWSA Christmas special and the solid waste Christmas and new Years waste collection schedules

#### SCHOOLS PROGRAMME

The CWSA's PR team visited several schools while many were also hosted at both landfills and water catchments. Visits for educational talks were made to Belair Government School, Gomea Government, Stubbs Government, Kingstown Government, New Prospect Primary and the Imani Pre-schools.

Topics discussed included information relevant to preparation for CPEA, others were general water and solid waste issues. Visits by students to the landfill facility at Diamond were made by the students from the Community College and the Diamond Government School. The CWSA was also represented at the SVG Boys Grammar School Graduation Ceremony in honor of presenting the award for most outstanding Humanities student Mr. Chrislon Fraser.



Gabby at Summer Camp

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#### **SUMMER PROGRAMMES**

The CWSA was represented at the Streams of Power Vacation Bible School on July 28th 2015. The sessions' topic was "The Environment, God's Creation" and saw in attendance 300+ children of varying age groups. Littering and its effects were also discussed and a feature done by Gabby the Solid Waste Mascot.

Another session was conducted with 60 children at the Lazarus foundation summer camp at Sion Hill, under the theme "One small show of interest can make a mountain of difference", with the sub topic of "Disadvantages of Littering." The group made a visit later that week to the Diamond Landfill.

A total of 59 children from the Vinsave summer programe were hosted at the CWSA New Montrose Compound, on August 6th 2015. Under the theme "I can create things from my Environment for its care", the children were taught about recycling initiatives currently being undertaken by the SWMU and a presentation was done highlighting litter and how they could help combat the problem.

The CWSA was also represented at the department of Fisheries summer programme which in part dealt with littering of the environment and the negative effects.

#### WATER WEEK

Water Week 2015 again focused on youth engagement through education and awareness. During this week, primary schools in and around Kingstown benefitted from talks from members of staff of the CWSA. These talks were focused on water conservation and environmental preservation. Four secondary schools (Adelphi, Sandy Bay, Georgetown and North Union Secondary) were invited to the CWSA New Montrose Compound where they were exposed to several displays and talks on career options, CWSA's work and general information on the functions of the Authority. Other notable activities for that week included a sterling address by Rev Adolf Davis, Minister of the Methodist Church of SVG on Selfless Service. Additionally, discounts were offered to customers whose water bills were paid up in full and there were radio



Students from the Vinsave Summer Programme



Students from North Union Secondary at the Career Fair



Rev Adolf Davis at the 2015 Water Week Church Service

addresses to commemorate the week of activities and World Water day delivered by Chairman of the CWSA and Minister of Health, Wellness and the Environment respectively.

#### CWSA ANNUAL CALENDAR

Once again the calendars produced for 2015 proved to be a hit with customers. Both individuals and agencies alike made requests for more calendars but within one week all were gone. The theme for the wall calendars was "Water for Life" and featured several uses of water. The tent calendars for this period showcased bio-diversity. In the production of the Authority's calendars, not only do we provide the usual dates, special days and moon cycles but they are also used as an educational tool as we strive to provide information that is not readily available to the public.

#### CWSA DINNER AND AWARDS CEREMONY

The CWSA 2015 staff dinner and awards ceremony can be described as successful and was held under the theme "midsummer's night dream". Approximately 370 persons including staff and their guests along with members of the Board of Directors were entertained while we celebrated individual and collective achievements of the Authority for 2015. Long and distinguished service of our employees was again recognized in the following categories':

#### 15 Years Service

Antus Wright, Arnold Leslie, Charlene Edwards, Debbie Myle, Devon Mars, Gregg Francois, Jamil Alves, Joan Ryan, Kavern Ferril, Kurlene Anderson, Patrina Garraway, Symantha George.



CWSA 2015 Staff Awars & Dinner Collag

#### **20 Years Service** Kentish Williams

#### 25 Years Service

Arthur Barbour, Healenor Creese, Horton Mc Cree, Monique Hull, Rudolph Williams, Valmay Duncan.

#### **30 Years Service**

Eardley Yearwood, Gidroy DaSilva, Jonathan Samuel, Loretta Daniel, Paul Joseph, Peter Alexander, Phillip Dalrymple.

#### DISASTER MANAGEMENT

The CWSA was represented at a consultation to discuss Hazards Management at the National Emergency Management Office on the 22nd July 2015. The consultation sought possible projects to build community resilience to natural disasters with a focus on the areas for Park hill, South Rivers, Colonaire, Georgetown, Spring Village, Cumberland, Chateaubelair and Fitz Hughes.

#### **ADDITIONAL ACHIEVEMENTS**

Over the years, the Public Relations department has undertaken a larger fraction of the design needs and responsibilities of the company, reducing the need for outsourcing. Some of these achievements are:

- Redesign of the CWSA's official logo
- Redesign of CWSA's Letterhead
- In house printing of CWSA Stationery; letterheads and envelopes
- Design of the SWMU's Derelict Vehicle removal
- Branding and design of SWMU's Free White **Goods Initiative**
- Creating a standard design for CWSA Releases and Notices
- Congratulatory messages for print media (Independence, Christmas etc.)
- · Layout and design of the annual reports and calendars

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## YVETTE DANIEL HUMAN RESOURCES MANAGER

## HUMAN RESOURCES REPORT

he development
of our Human
Resource
remains an integral
process of the Central
Water and Sewerage
Authority. The

Authority continues to look closely at its Human Resource requirements and continues to appoint new staff and promote where necessary. Succession planning continues to be an important responsibility of the department and many appointments and confirmations are triggered by the retirement of key individuals some of whom have been with the Authority over twenty-five (25) years.

Training continues to dominate staff matters with one hundred and sixty persons being trained in areas that will enhance the growth and development of the Authority and the individuals. This training was of both long and short term duration and up to the Masters level. As employees benefit directly from training, so too do their children, as yet again the annual educational grants and bursaries were administered. Staff development, encouragement for A+ performance on the job and the creation of a positive environment for work continued to be the focus of the HR department in 2015

#### STAFF MATTERS

At December 31, 2016 our total staff numbered 291. Of this 224 represent the Water and Sewerage Section and 67 from the Solid Waste Management Unit. Once again the situation remained relatively stable as far as staff turnover was concerned.

#### RECRUITMENT

There were ten (10) new recruits appointed on probation: Sheldon DaSouza-Technician Assistant- Water Resources, Paul Feddows, Lance Martin, Kolroy Franklyn- Drivers, AbuZanimah Cyrus- Heavy Equipment Operator, Chesline Ballantyne-Chlorinator Operator, Rennie John-

ment Mason/Carpenter, *Junior Layne* and *Kelroy Walters*an Mechanics, *Ronneth Miller*- Engineering Technician.

#### **CONFIRMATION**

Nine (9) persons were confirmed in their posts upon successful completion of their probationary period.

#### **PROMOTION**

Four (4) persons were promoted during the period:

*Marco Audain* and *Michael Creese* were promoted to the position of Senior Engineer.

*Jaiwani Sayers* was promoted to the post of Senior Mechanic

*Joel Richards* was promoted to the post of Apprentice Pipefitter/Driver.

#### RETIREMENT

We bade farewell in 2015 to the following persons: Dick Brackin, Cassell Ollivierre, Stanley Browne, Juney Myers, Kenroy Ollivierre and Kenrick Whyttle. We wish them a long and happy retirement.

#### TRAINING

One hundred and sixty (160) employees participated in the following training programs locally and overseas during the period under review;

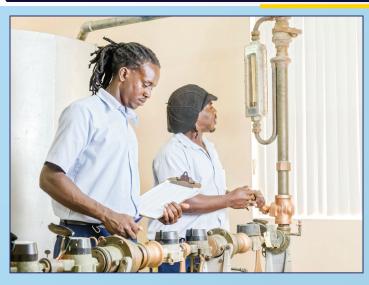
- Coastal Echo hydrology
- Office Attendant training in Professionalism
- GEF Crew Valuation workshop
- CWWA Conference
- Water Resources Management
- GIS, Network and Hydraulic Modelling
- Disaster Management and preparation for the hurricane season
- Performance management

- Climate Outlook Forum
- Regional World Safety conference
- Wellness workshops
- Capacity Building Training on the use of the YSI Proplus handheld meter and Lamotte Smart 3 Colormeter to conduct water quality analyses.
- Laboratory personnel training
- Governance and Sanitation
- Fraud Risk Management and Investigative Interviewing.
- Fundamentals of Customer Service
- Defensive Driving Course
- CISCO Certified Network Associate Routing and switching certification course.
- Women conference
- CAWASA Operators conference
- Integrated Water Resources Management as a tool for adaptation to Climate Change Water Distribution
- International Financial Reporting Standards-2
- Executive Geographic Information System
- "Designing and Implementing Successful Water Supply and Sanitation Utility Reform
- Pipe fitting
- ABECAS Inventory and the General Ledger Modules
- Hydrogeology, with emphasis on groundwater resources and issues related to Hydrogeology and sea water intrusion, as well as physical and chemical parameters, frequency, standards and field procedures
- OSHA General/Construction Industry training
- Reliability Centered Maintenance
- Design and maintenance of semi-aerobic landfill site
- Sanitary surveys
- Sustainable Solid Waste Management
- Geographical indications

#### Successful Completion Of Courses

*Mr. Bernard Maloney* successfully completed the Masters of Water Resources Management at the University of South Australia in Adelaide, Australia. He graduated at the top of his class with a GPA of 6.83 on a scale of 1 to 7.

Mr. Marco Audain, successfully completed the Master of





Science in Civil with Environmental Engineering Degree at the University of the West Indies, St. Augustine campus.

*Ms. Zascha Robertson* successfully completed the General Technicians Certificate course at the Caribbean Institute for Meteorology and Hydrology in Barbados.

Mr. Raffique FitzPatrick successfully completed the Certificate Programme in Geographic and Land Information Systems at the University of the West Indies St. Augustine campus.

*Mr. Jaiwani Sayers*, Mechanic successfully completed the Career Diploma in Diesel Mechanics/Heavy Truck Maintenance through the Penn Foster Career School.

University of the West Indies Open Campus Supervisory Management Certificates were awarded to;

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- Geniene Browne
- Jose' Forde
- Alf Phillips
- Horton McCree
- Ronneil Davis
- Kernel Alexander
- Arnold Horne
- Jaiwani Sayers
- · Bradley Jackson
- Mikhail Akers

- Paula Mills
- Candace Matthias
- · Pamela Daniel
- Heleanor Creese
- Suzette Bradshaw
- Susette May
- Kavern Ferril
- Nadia Small
- Clarence Caine
- Samuel Warrick
- Alie Ferril

University of the West Indies Open Campus Managing Projects for Success certificate:

*Elvin Roberts* – Operations Supervisor

Jonathan Francis - Engineer

Kalique Lewis- Operations Supervisor

#### WORLD DAY FOR HEALTH AND SAFETY AT WORK

The Human Resources Department partnered with the Ministry of Health Wellness and the Environment to observe World Day for Health and Safety at Work through an exhibition that highlighted the safety gear utilized by our staff as outlined in our health and safety policy.

### **CHROPRACTOR SERVICE**

Chiropractors who were visiting from the United States of America were invited to conduct a Chiropractic clinic at the CWSA. Employees from all departments made use of their services.

#### **EDUCATION GRANTS**

During the period five (5) students who are children of employees were granted educational grants:

- · Gariel Matthias
- Jonisha Forde
- Tiffanie Chapman
- Mirac Creese
- De'Ontrelle Roberts

#### **BURSARIES**

Five (5) students received one time bursaries

- D'Mitri Power
- Faynesha Peters
- Skeshorna Hamilton
- Maxian Browne
- Deondre Sutton

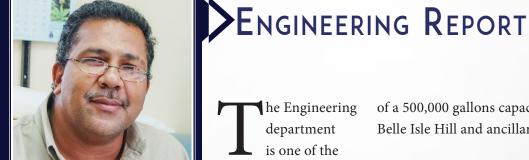


2015 CWSA Scholarship & Bursary Recipients

The end of a year is a good time to look back, reflecting on achievements, and to look forward, to see what will be required.

We at CWSA can confidently look forward to the years ahead with hope and and continued resilience. We know that there are problems ahead but we also know that we have the right resources to meet those challenges.

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BRIAN DA SILVA **ENGINEERING MANAGER** 

he Engineering department is one of the

larger departments within the Central Water and Sewerage Authority. Its areas

of focus include major capital projects, operations and maintenance of the water supply system, water resource management, geographic information systems management, laboratory for testing requirements and sewerage management. The performance of this department continues to be commendable.

#### **CAPITAL PROJECTS**

New construction projects in 2015 took the form of laying down main lines and the commencement of the Belle Isle Hill Storage Tank. The projects included the following:

- Hermitage Water Supply Improvement Project
- Kingstown Mains Replacement
- Gunn Hill to Fort Charlotte Line Replacement
- Water Supply to the Argyle International Airport
- Green Hill Housing Water Supply Project

#### HERMITAGE WATER SUPPLY IMPROVEMENT PROJECT-PHASE II

The main purpose of this project is to provide a more reliable water supply to the North Leeward district. The second phase of this project consists of the construction



of a 500,000 gallons capacity reinforced concrete tank at Belle Isle Hill and ancillary works.

The construction began in April 2015 and is estimated to take 14 months to complete. It will impact the communities from Walliabou to Peter's Hope. The cost of this phase of the project is estimated at \$ 1.2 million. At the end of the year 2015, the work was about 78 % complete and some \$ 755,000 was expended.

#### KINGSTOWN MAINS REPLACEMENT

This project aims at replacing the last sections of 3" and 4" cast iron pipes in Kingstown with 4" ductile iron pipes and smaller distribution lines. The entire project is expected to cost \$400,000 and is being phased over three years. During this second year about 45 feet of 4" pipes and related civil works were installed. In addition 1,220 feet of HDPE pipes were installed along Middle Street between Higginson and Queens Streets. Up to December 2015, the project was approximately 60% complete and the expenditure is \$218,000.

#### GUNN HILL TO FORT CHARLOTTE LINE REPLACEMENT

This project aims at replacing the first 2,000 feet section of 4" galvanized iron pipes with 6" and 4" ductile iron pipes. This project was restarted during the year and a total of 1,760 feet of 4" pipes and related civil works were installed. This was 460 feet more than was originally planned but was deemed necessary given the poor location

of the existing pipeline in the area. The entire project was completed at a cost of \$152,000.

#### WATER SUPPLY TO THE ARGYLE INTERNATIONAL AIRPORT

The CWSA was contracted to install the water supply lines to four facilities at the Argyle International Airport. These are the terminal building, the control tower, the

CWSA ANNUAL REPORT - 2015

CWSA Annual Report - 2015.indd 18-19 2/24/2017 3:14:48 PM fire station and the cargo facilities. During the year approximately 1,965 feet of 4" ductile iron pipes were installed on a second phase at the terminal building along with pipeline to the fire station. As of December 2015, the project is about 52% complete and \$269,000 expended.

## WATER SUPPLY TO THE UPPER GREEN HILL HOUSING DEVELOPMENT

The project entailed the installation of 1,580 feet of 4" ductile iron pipes and 2,600 feet of smaller galvanized iron pipes to supply the latest phase of the Green Hill Housing Development. The cost of this project was \$90,000 and was jointly funded by the CWSA and the HLDC.

#### GEOGRAPHIC INFORMATION SYSTEM UNIT

Subsequent to the establishment of the Geographic Information System (G.I.S) Unit in 2014, work continued on the formulation of the CWSA's spatial and geographic data infrastructure in 2015. The prime focus of the unit was the mapping of the CWSA's transmission mains and the corresponding network structures and fittings which are important features within the distribution systems.

The team responsible for this task comprises of the supervisor Mr. Rodway Power, along with G.I.S. Technicians: Raffique Fitz-Patrick, Xavier Little and Shantel Quammie. Jonathan Francis was engineer at the helm of the unit until September 2015 when Engineer Bernard Maloney assumed this responsibility.

Other changes to the unit included the designation of a vehicle and a driver which provided impetus in its

**Network Structures** 

Treatment Plant

Enclosed Storage Facility

Structure Type

Lateral

operations.

KINGSTOWN WATER DISTRIBUTION NETWORK

In the final quarter of 2015, the mapping and data gathering of the transmission mains were substantially complete at 98%. This allowed for the commencement of phase two on the 22nd of September 2015 which encompasses the mapping of the smaller distribution lines. Kingstown, district one, was chosen as the pilot in this phase by virtue of its importance and complexity.

At the end of 2015, the mapping and data gathering of the Kingstown district was 45% complete, including the upgrades completed in the Kingstown Line Replacement Project. The process of data gathering, verification and modifications continues.

## NATIONAL WATER RESOURCES MANAGEMENT UNIT

The year 2015 marked the seventh year of operation of the National Water Resources Management Unit. During this period, the unit continued the arduous tasks of operating a monitoring network which comprises 26 rain gauges, 10 water level sensors, five climate stations, and 25 groundwater sampling points throughout St. Vincent and the Grenadines. There were also stream gauging, raw water sampling and water production metering done on the mainland.

A wide range of parameters were recorded within

the monitoring network including rainfall, evaporation, relative humidity, solar radiation, barometric pressure,

wind speed, maximum and minimum temperature, soil temperature, water level, conductivity, pH, water density and oxygen content.

The following were the hydrogical highlights for 2015;

- The average annual rainfall recorded in 2015 was 2063 mm on mainland St. Vincent while an average of 589 mm was recorded in the Grenadines.
- The Cumberland watershed received the most rainfall with an average of 3006 mm in 2015.
- The average discharge or flow measurements range from 0.045 cubic meters per second at the Layou Station to 0.876 cubic meters per second at South Rivers.
- The conductivity for all of the groundwater samples taken on mainland St. Vincent was within range of the World Health Organisation (WHO) Standards Of Drinking Water Palatability.

#### LABORATORY REPORT

The Laboratory conducted some 3,400 tests each for turbidity, pH and chlorine residuals giving a total of 10,200

tests. Tests covered all distribution systems that feed potable water to consumers and were conducted to assess water quality and take remedial action where necessary to improve water quality supplied.

Bacteriological tests were conducted mainly for total coliforms on potable water where chlorine residual was 0.1 ppm and below. Less than 1% of instances were found where there was less than the required chlorine residual and in these cases, faecal coliform analyses were done as a counter check. Some 115 bacteriological analyses were conducted for the year inclusive of raw water bacteriological analysis.

#### **RAW WATER TESTING**

The laboratory continued raw water testing in collaboration with the Water Resources Unit.

#### FILTER MONITORING

The filters at Dalaway, Jennings and Perseverance continued to be monitored to measure efficiency of filter and assist in determining when cleaning was necessary.

#### FAECAL WATE TREATMENT PLANT

Monitoring of the Diamond Faecal Waste Treatment Plant continued with the collection and analysis of four (4) samples. Tests conducted were faecal coliform, total coliform, iron, phosphate and nitrate.

#### INSPECTION OF SOURCES AND TREATMENT PLANTS

During the year sanitary inspections of some sources, treatment plants and storage tanks were conducted and recommendations for cleaning were made where necessary. The Laboratory continued to supervise cleaning

and disinfection of most storage tanks and treatment facilities.

The close relationship that exists between the laboratory staff and the treatment plant operators continued through communicating, evaluating, assisting and working on solutions to rectify problems encountered.



Laboratory Technician Jonathan Abraham, now retired, conducting tests in the lab

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MELISSA MCKENZIE INFORMATION TECHNOLOGY MANAGER

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## INFORMATION TECHNOLOGY REPORT

he past year
has been a
challenging,
yet very rewarding and
successful one for the
Information Technology
(IT) Department. There

were general improvements in all areas of information and communication technology (ICT) operations as assistance and support continued to be provided to 8 departments and 11 office sites including the Grenadines. While the IT department made many behind-the-scenes changes during the year we were more recognized for our only major project, the electronic billing (eBill) Service, which was implemented during 2015.

Other achievements included the design, planning and implementation of the network infrastructure for the newly constructed Arnos Vale building which houses the Solid Waste Management Unit.

#### E-BILL SERVICE

With the rapid growth and demands of the organization, the department embarked on and implemented CWSA's new electronic billing (e-Bill) service. The e-Bill platform allows customers to view monthly invoices and account history for up to one year. It is our aim that with this implementation, we will strive to reduce printing, processing, postage, delivery & traveling, and equipment costs associated with hard copy paper billing which will result in the overall operational and production cost savings for the organization.

The project was embraced with much excitement but also brought new challenges and opportunities as the department was faced with bringing a new service online. This required inevitable change and organizational development. The project has so far been successful and well received by the public and customers. Customers wishing to adopt our 'going green' paperless campaign can do so by visiting and registering on the CWSA's website <a href="https://www.cwsasvg.com">www.cwsasvg.com</a>.





#### ROUTINE OPERATIONS AND MAINTENANCE

Also during the year, the IT department continued with the following routine operations:

- Provided local area network and desktop support for all system users
- Enhanced and updated software including the CWSA accounting and billing software
- Replaced and upgraded IT equipment
- Revised and updated ICT policies, practices and disaster recovery plan
- Reviewed and improved backup policies and procedures
- Continued the extension and upgrade of the network infrastructure
- Performed equipment diagnostics and maintenance
- Managed and maintained security operations components including biometric security systems
- Provided support for the expansion and installation of security camera systems
- · Reviewed and upgraded CWSA domain hosting and

email platform

• Developed, redesigned and maintenance of the CWSA website

#### SECURITY & RISK MANAGEMENT

During 2015, the department continued with the task of reviewing ICT practices including a review of firewall policies for the network and servers to prevent and mitigate security issues. Also, there was the procurement of new equipment to enhance the backup processes.

In the upcoming year, our priorities include increasing awareness and support of eBilling and implementing strategies to increase effectiveness in the areas of online services as we strive to satisfy both user and customer satisfaction and to ensure that our organization continues to be a leader in the area of information technology.

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n 2015, the Customer Services
Department continued its
endeavours to improve the quality
of services offered in addition to
strengthening the department to meet
the increasing needs of its customers.

## SEWERAGE AND WATER BILLS AMALGAMATION

In January 2015 an initiative was taken to merge the sewerage and water

accounts. Prior to this, these customers received two separate bills for water and sewerage. The objectives of the amalgamation were to improve efficiency by enabling customers to receive and pay one bill; while reducing the Central Water and Sewerage Authority's processing costs.

#### SPECIALS OFFERED

The CWSA continued to show appreciation to its customers and during the 2015 Water Week activities, customers who zeroed their accounts enjoyed a 10% discount. Consequently, one thousand five hundred and sixty-three (1563) customers benefitted from this activity.

Another customer special was offered during the Christmas season under the same terms and conditions. Nine thousand three hundred and sixty-one (9361) customers benefitted from each of these initiatives.



PHILLIP **DALRYMPLE CUSTOMER CARE MANAGER** 

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disconnected consumers where some measure of amnesty was offered for persons disconnected for long periods, all in the interest of promoting healthy and sanitary living conditions among the population. One hundred and ninety persons benefitted from this gesture.

There was also a special outreach to

#### COMPLAINTS MANAGEMENT

The Customer Service Call Centre received, managed and resolved 8,520 complaints in 2015. The Department averaged 95% problem/complaints resolution within 36 hours and to the general satisfaction of our customers. The system of receiving and logging complaints allows for next day follow-up which helps in ensuring that our 48-hour deadline is almost always met.

#### BILL DISTRIBUTION

The distribution of commercial bills to our customers continued to be achieved within a week of printing. The Customer Service Department however continues to be challenged in getting bills to customers who do not have post-boxes. The department however expects that with the proper marketing of its electronic bill service, the need for a paper bill form will be significantly reduced.



#### METER READING

The Meter Reading Section was strengthened by new controls that ensured meter readings were prompt and facilitated timely delivery of bills. A system was implemented to have the supervisor monitor the meter readers on a daily basis in order to maintain accuracy and reliability.

#### STAFF TRAINING

Various staff members received training in areas of supervision and time management, pipefitting, health and wellness, and customer services.

#### **GENERAL**

The Customer Services Department worked collectively during the year with the Engineering Department in generating and managing data to aid in providing our customers with the highest quality service possible.

During the reporting period, water disruptions were kept to a minimum and in most cases inconveniences to the public were minimised by the deployment of the water tender.

#### METERED WATER SALES

Overall metered water sales showed a slight increase compared with the previous year. As is customary, sixty-five percent of customers continued to pay their bills promptly on a monthly basis.

#### SHIP SALES

The sale of water to ships, primarily cruise ships continued to show a cyclical trend consistent with the start and end of the cruise season. The total gallons of water sold to ships are represented in the table below for the period Jan – Dec 2015 and further presented in the graph below.

	Quantity (Gallons)
January	401,690
February	428,460
March	242,580
April	80,350
May	143,800
June	95,620
July	113,940
August	89,380
September	105,610
October	114,010
November	170,310
December	488,530



#### THE GRENADINES ENVIRONMENTAL FEES

Residents of the Grenadine Islands of Bequia, Canouan and Union Island are provided with a biweekly waste collection service. Regrettably, only 8% of the Grenadines residents pay the monthly environmental fee resulting in a significant increase in the overall receivables.

The CWSA/SWMU will however increase its efforts in 2016 to improve the compliance rate for paying for what is an essential service in the Grenadines.

CWSA's Water Tender

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## SOLID WASTE MANAGEMENT REPORT

ST. SHEET ON THE GRENADINES

SOLID WASTE MANAGEMENT UNIT



**SOLID WASTE MANAGER** 

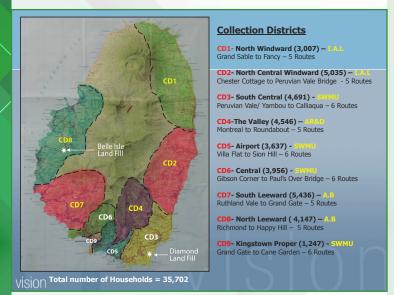
n 2015 the SWMU continued its thrust to provide a high quality solid waste collection and disposal service. A key success index for the year was the consolidation of the SWMU's management information system (MIS) -- a process started in earnest in 2013. This involved the transformation of regularly collected operations data into formats that allow for the easy monitoring of activities and strategic decision-making, all geared towards improving accountability and efficiency. Much of the content of this report is a reflection of the information generated by the SWMU's Management Information System.

#### WASTE COLLECTIONS HIGHLIGHTS

The Solid Waste Management Unit (SWMU) is charged with the responsibility of collecting and transporting garbage to approved waste disposal facilities on St. Vincent and the Grenadines. This is accomplished through forging effective public and private sector partnerships. On Bequia, Canouan and Union Island, private contractors

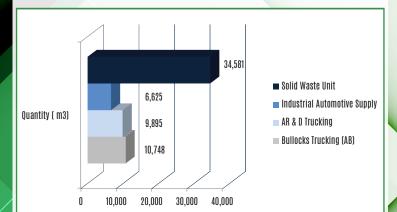
are engaged by the SWMU to perform waste collection services. On St. Vincent however, the island is divided into nine (9) districts, five of which are managed using three private contractors. The SWMU collects waste in the remaining four districts. The day to day collection of municipal waste by the various collectors is guided by a daily route schedule.

#### **COLLECTIONS STATISTICS ON ST.VINCENT**



Route Map

Waste Collector	Collector Code	DISTRICT	Percentage
Bullocks Trucking	AB	CD8 & CD7	17
AR & D Trucking	AR&D	CD4	16
Industrial Autmotive Supply	IAS	CD1 & CD2	11
Solid Waste Unit	SWMU	CD3, 5, 6 & 9	56
	TOTAL		100



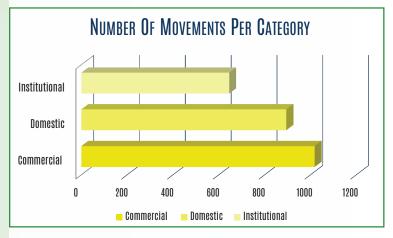
#### WHITE GOODS COLLECTION

The SWMU continued its twice yearly free island-wide white good collection service on mainland St. Vincent in 2015. The dates the service was performed and the volume of waste collected are as follows:

DATES	VOLUME (M <sup>3</sup> )
February 23 <sup>rd</sup> - 28 <sup>th</sup> 2015	742
September 22 <sup>nd</sup> - 27 <sup>th</sup> 2015	634
Total	1,376

#### SKIP SERVICE

The total recorded number of skip (large metal bin) movements for the year was 2,560 yielding 11,647 m3 of waste. The number of skip movements are categorized either commercial (paid service), domestic (community skips) or Institutional (government institutions). The total number of movements per category are presented below:



#### ARNOS VALE COMPLEX

The CWSA completed the new modernized staff complex at Arnos Vale in November

2015 to



New Arnos Vale Complex

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house members of the waste collection team. The total cost of the project was EC\$580,000 and the accommodations include a kitchen, a locker room, bathroom facilities, storage and offices for the supervisory staff. The main access road was also improved and a security fence installed. The design of the complex considered the concept of energy efficiency by employing a layout and window sizing that promotes the use of natural light during the day and the installation of LED bulbs for lighting at nights.

#### FLEET UPGRADE

The SWMU received two new collection units in 2015 as part of its ongoing fleet upgrade and replacement programme - one Isuzu MCBT-10 skip truck fitted with a Cayvol bin lift with a lifting capacity of 6000 kg (6 tonnes) and one Isuzu 6 m3 waste compactor.



Isuzu MCBT-10 Skip Truck



Isuzu 6 m³ Waste Compactor

#### WASTE DISPOSAL HIGHLIGHTS

#### WASTE VOLUME STATISTICS

The SWMU continues to operate five waste disposal sites throughout the state, two on St. Vincent located in Diamond and Belle Isle, and three in the Grenadines on the Islands of Bequia, Canouan and Union Island. Comparisons of the total volume of waste received and the number of trucks delivering garbage to these sites in 2015 are presented below.

DISPOSAL SITE	Location	TOTAL VOLUME OF WASTE (M³)
Diamond Landfill	St. Vincent	124, 120
Belle Isle Landfill	St. Vincent	16, 223
Raintree Landfill	Bequia	6, 470
Taffia Landfill	Canouan	17, 853
Clifton Landfill	Union Island	1, 972



Raintree Landfill - Bequia



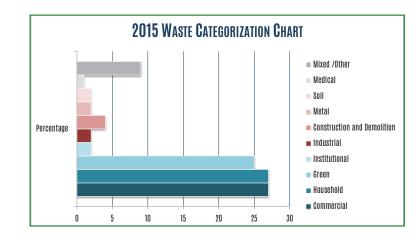
Taffia Landfill - Canouan



Clifton Landfill - Union Island

#### 2015 WASTE CATEGORIZATION

A comparison of the different waste types received at the disposal sites throughout the state for 2015 is presented



#### 2015 RESOURCE RECOVERY INITIATIVES

The SWMU continues to produce charcoal, compost and wood chips in an effort to reduce the need for landfill space and to recover some of the cost for the operations (though minimal). The SWMU also assists in monitoring the export of scrap metal from the state by private individuals and businesses. The amounts of waste byproducts produced and scrap metal exported in 2015 are as follows:

Product	Unit	Quantity
Charcoal	sacks	182
Compost	sacks	629
Woodchips	sacks	438
Scrap Metal	tonnes	453

#### TRANSPORT AND MAINTENANCE

The CWSA's transport and maintenance department is responsible for the upkeep and repair of the CWSA's vehicular fleet and small equipment used in the execution of if its water, sewerage and solid waste services. This subdepartment has as staff total of ten (10) officers inclusive of seven mechanics, one welder, one secretary and a senior mechanic.

As of December 2015 the size of the CWSA's vehicular

fleet was fifty-seven (57) and the department responded to a total of six hundred and sixty (660) mechanical failures (this number includes small equipment failures). Seventy -nine (79 %) of the failures reported were resolved within an acceptable timeframe based on the nature of the failure, while approximately 9 % were delayed owing to the necessary spares not being readily available locally. In such cases some additional downtime was experienced owing to the fact that spares had to be procured either regionally or internationally.

The department also manages a vehicle service schedule where vehicles are serviced every ninety days (or every 500 hours for landfill heavy equipment) to ensure optimum performance and worker and public safety. The service data shows that there is an average service schedule compliance percentage of ninety -three percent (93%) for 2015, meaning that 93% of the vehicles and heavy equipment that were scheduled for service in a particular month were completed within that month. Those that were not completed within that month, often owing to work demands on the equipment, were usually done during the first week of the following month.

Vehicular accidents are also monitored and investigated by this department and for 2015 there was a total of twenty-four (24) recorded accidents. The CWSA in an effort to reduce vehicular accidents required a number of its drivers in 2015 to participate in a defensive driving course facilitated by JARIC - an OSHA certified regional Occupational Health and Safety company.



Chief Mechanic Jaiwani Sayers and Driver Earl Spence

## THE YEAR IN PICTURES











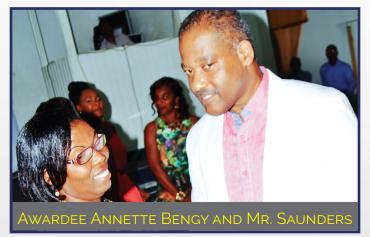


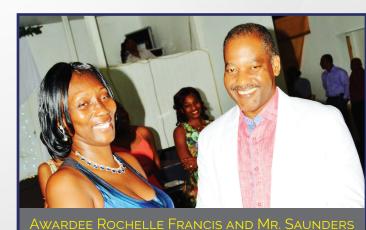


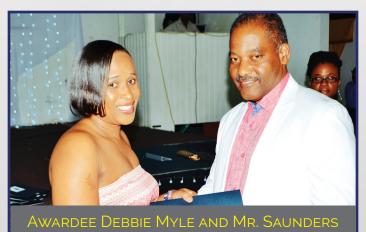


















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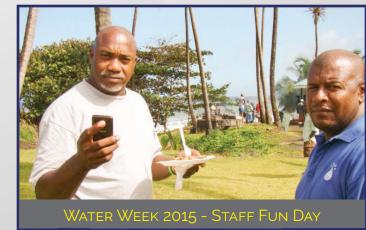
















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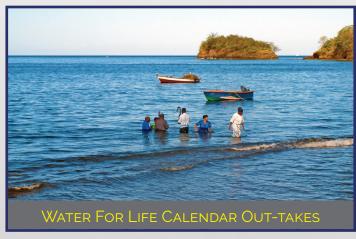




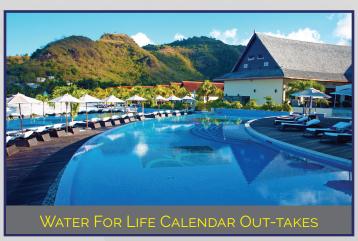


















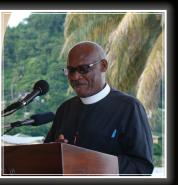




IN REMEMBRANCE

The Very Reverend Patrick Ezekiel McIntosh

Sunrise: March 22nd 1947



Sunset: January 5th 2016

The Board, Management & Staff of C.W.S.A. would like to express its sincerest condolences to the family of The Very Reverend Patrick Ezekiel McIntosh. We are honoured and blessed to have experienced his influence and kindness. He was a blessing to those who knew him and would continue to be a blessing in memory.



### Our Mission Statement

To consistently provide all consumers with the highest quality water supply, sewerage and solid waste management services in an efficient and affordable manner.



LAYOUT & DESIGN:
Ms. Rae-Anne Mc Dowall

PRODUCTION TEAM:
Ms. Rae-Anne Mc Dowall
Ms. Joan Ryan
Mr. Garth Saunders
Mrs. Symantha George