



H₂Ooperator

CARIBBEAN

Volume 2 • Issue 2

Annual News Letter of the Water Industry Operators of the Caribbean

June 2015



Message from the President

Here's to the 4th Caribbean Water Operators Conference



Fellow Directors, Colleagues and well wishers I greet you as president of CAWASA and thank you for the wonderful works that our region's water and sewerage utilities are doing in providing water and sewerage services to the people of our islands.

Indeed this is a noble task that very often goes unnoticed. As the environment in which we operate gets even more challenging the task ahead gets increasingly difficult, but we are confident that as leaders in the water and waste water sectors, we have what it takes to get the job done.

We are proud of the continued efforts of our very own organization, CAWASA, which stands ready to assist in capacity building in our utilities through training at all levels and forging alliances through networking and collaboration with our sister organizations around the world. The most recent signing of an MOU among GWOPA, the Pacific Water and Waste Water Association, CAWASA and CWWA is testimony of the efforts being made in this regard.

I believe the time is here when as utility directors, managers, and leaders across the region faced with similar challenges in many of our territories must come together to help solve our regions problems and ensure that overall we remain a water secure region providing reliable and efficient services to our people now and into the future.

I encourage us all to embrace the opportunities that we have to collaborate in non-traditional ways that can add value to our utilities and countries and show our stewardship as good custodians of a God given resource that is so very important to life. It is my wish that as we go forward we will further embrace each other and the lessons that we can learn as a result of this unity.

Again thank you for your continued cooperation as we strive for a water secure region.

BERNARD ETTINOFFE
President

It is my pleasure to present the second issue of the CAWASA H2O Water Operators Magazine, which coincides with the hosting of our 4th Conference of Water Operators in St. George's, Grenada. This conference is firmly established as the major biennial event in the water sector's Calendar. The magazine is a source of information about the conference and captures the challenges, diverse skills, views and lessons of the operators in our 13 member utilities.

The magazine also forms part of our mandate to share and promote information and knowledge among our members in particular and the public in general. The exchange of experiences including challenges and successes, what works and what doesn't, will contribute to the adoption of best practice and general improvement in quality of service delivered by our utilities. Additionally, it offers another medium to facilitate the communication of the true value of water among our various stakeholders.

It is well recognized by our utilities, that the delivery of efficient, reliable and high quality water and sanitation services requires a well-trained and well-qualified workforce. The conference forms part of CAWASA's technical training programme and affords an opportunity for networking among the operators, as well as the cross-fertilization of ideas and lessons learned from the ABC certification programme.

Sponsorship of the Conference and the H2O Water Operators' Magazine is an important feature for success. On behalf of the Board of Directors and member utilities, we thank the many sponsors who have contributed to the successful hosting of the conference and publishing the magazine.

I would like to thank all the contributors of articles and photographs which appeared in this issue, and particularly to thank Mrs. Suzanne Joseph, programme officer, for her commitment and dedicated support in delivering these two products.

IGNATIUS JEAN
Executive Director

Meet the CAWASA Exco



President:
Bernard Ettinoffe



Vice President:
Christopher Husbands



Secretary:
Ivan Rodrigues



Treasurer:
Vincent Hippolyte



ISRATECH WATERWORKS

Superior
Tertiary Treatment Solutions

Promaglass

nature
undisturbed

Tel: (246) 438-4217
Fax: (246) 438-7603
Email: siroffice@caribsurf.com

 S.I.R Water
Management Ltd.
Bloomsbury, St. Thomas

Shervon Ifill:

**Changing the environment:
one stride at a time**



Shervon Ifill is a young entrepreneur, an educator, public health consultant and an environmental steward. She is an honors graduate of Andrews University Bachelors of Science degree in Biology and Chemistry, a graduate from St George's University Master of Public Health degree, Epidemiology emphasis.

As part of the IG Training & Consultancy team, Shervon was able to help develop a research proposal that gathered critical information on the gaps within training opportunities among Caribbean wastewater operators. We are confident that the new information gathered would propel our Caribbean neighbours to address any inadequacies in wastewater operators training and other proximal issues so as to alleviate some of our environmental dilemmas.

It is no wonder that based on her diverse academic accomplishment and passion towards seeking a healthier environment, that Shervon has been offered a 2015/2016 Commonwealth Scholarship to pursue postgraduate studies in Water and Waste Engineering at Loughborough University. As a leader in her own regard, Shervon is enthusiastic to use her knowledge of integrated water resources management, wastewater reuse and sustainable water management among other content areas, to serve her country and the wider Caribbean region in safe guarding the environment for the generations to come. She is full of potential and with the continued support of IGTC and the networking community of CAWASA, success is guaranteed, one stride at a time.

Timothy Augustus



Current Position : Operations Manager, EnMasco Ltd, Trinidad
 Experience : 13 Years
 Qualifications : Level II Wastewater Treatment
 Diploma in Environmental Management

Irwin Gill



I.G. Training and Consulting Ltd (IGTC) specializes in providing capacity building training and operational consulting to national and regional water and wastewater authorities. The goal of the company is to assist authorities in providing safe, potable drinking water and environmentally sound wastewater treatment and disposal. Services provided by the company include:

1. Operation training
2. Management training
3. Operational consulting
4. Operator Certification Exam Preparation courses and Continuing Education Units (CEU) accredited workshops

The company has been providing operator Certification Exam Preparation training as well as CEU accredited courses.

Daniel E Cummings M P

Water & Waste Water Management Consultant



Mr Daniel E Cummings' Educational background includes: BSc. (Hons.) Civil Engineering UWI 1977-80; Cert. in Water Resources Mgt. Yaroslav Cerni, Yugoslavia June-Sept. 1983; MSc. Civil Engineering & Environmental; Science, (OU) Oklahoma 1985-86 and MBA (UWI) Barbados 1992-94.

His Work experience includes: CWSA St. Vincent February 1982- March 1987, Water Engineer; CWSA St. Vincent April 1987- June 2004, General Manager; Water Management Consultant to the Government of Anguilla and the Anguilla Water Dept. 2007-2009. Over- saw the establishment of the Anguilla Water Corporation; Served as an Opposition Senator from 2005 to 2010 and Elected a Member of Parliament 2010.

His Affiliation includes: Past Director of the Caribbean Water and Sewage Association (CAWASA) (formerly Caribbean Basin Water Management Programme CBWMP); Past President and Trustee of Caribbean Water & Waste Water Association and Past President Rotary Club of St. Vincent.

His Awards includes: Distinguished Service Gold Award from CWWA and Distinguished Gold Award (UN FAO).

Juan Lambert



Current Position:
Supervisor Production
and Quality

Company:
National Water and
Sewerage Authority
Grenada

Date of employment:
16 may 1994

Mr. Lambert was employed as a Plant Operator for sixteen years (16) attached to the Mt. Horne Water Treatment

Plant and then at the Annandale Water Treatment Plant for one year.

He is a certified level 111 plant operator and works as a Supervisor of Production and Quality since December 2012, a position which he presently holds. He is responsible for the day to day operations and maintenance of all the Water Treatment facilities on the island.

Mr Lambert is one of the first employee to be promoted as a result of achieving his ABC certification in Water Treatment

Jefferson Durand



Company: Dominica
Water & Sewerage
Authority,

He was featured in the 2013 Magazine. However he has gained Level IV in Water Treatment, and Level II in Wastewater Treatment in 2014.

His position: Water
Operator - WA1
System

The countries of the OECS have a heightened vulnerability to many of the economic and environmental pressures that are emerging globally. This vulnerability, coupled with fragile natural and cultural assets and inherent social challenges present a special urgency to the sustainable development goals of the region. One of the most significant on-going challenges to countries in the OECS is climate change.

The impact on small islands has been explored by many scientists and in general it is forecasted that sea level rise will lead to greater coastal flooding and damage to shorelines and infrastructure from storm surge, erosion and threats to livelihoods. The region is already experiencing the effects with warmer seas, changes in weather patterns, which affect watersheds and water resources, and the invasion of non-native species is already creating serious problems on islands (IPCC, 2007).

Unfortunately, the impacts of climate change are further compounded by degradation of natural resources that are particularly associated with, among other things, poorly-planned development, land use and management; population growth; pollution; over-exploitation resources; and the introduction of invasive species, among others. Therefore maintaining stable economies and providing for economic development will constitute the most critical concern for the island states of the OECS.

The OECS Secretariat is currently implementing the RRACC Project— a five year development initiative that is focused on building climate change adaptation and resilience in the six independent Member States of the OECS. The project has set the following interventions as priorities:

- I. Improving the regulatory framework in support of national adaptation strategies;
- II. Providing direct support for climate adaptation measures in coastal and freshwater management in each of six OECS Independent States;
- III. Building institutional capacity and addressing information gaps; and
- IV. Raising awareness on climate change adaptation and resilience



Issues that concern the project

1. Degradation of fragile ecosystems
2. Poor land development and management
3. Population growth
4. Pollution
5. Over-exploitation of living resources

The RRACC Project was launched in July 2011 and is funded by:



HIGHLIGHTS OF THE OPERATORS COMPETITION IN ANTIGUA & BARBUDA—2013



Caribbean Water Operators to gather and confer in Grenada

Engineers, water and waste-water operators, water and waste laboratory analysts, stakeholders and other water and waste-water industry professionals from utilities across the Caribbean will gather in Grenada in June for the Fourth Annual Caribbean Water Operators Conference.

The conference will be held at the Radisson Hotel on June 25 and 26, to discuss matters relating to the professional and organizational responsibilities of water operators across the region. The theme for the two-day conference is: Improving Operators Efficiency: Adapting to Climate Change.

The 2015 Water Operators Conference is jointly sponsored by the host utility -- the National Water and Sewerage Authority (NAWASA) of Grenada and the Saint Lucia-based Caribbean Water and Wastewater Association (CAWASA).

The opening session of the conference will be addressed by Grenada's Public Utilities Minister, as well as representatives of the sponsoring agencies, while the feature address will be by Mr Daniel Cummings, a former Director of CAWASA and a former General Manager of the Central Water and Sewage Authority of St. Vincent and the Grenadines.

The conference will aim to update the knowledge and skills of water and wastewater operators through interaction with fellow operators and professional, as well as to provide them the opportunity to access, view and share the latest ideas in technical equipment, technology, products and services with suppliers.

Meanwhile, during the conference the OECS/RRACC Project will put up an exhibition on Climate Change. Other exhibitors will be: IsraTech from Jamaica, VAG-Germany, CARPHA, GWP-C; UNEP-CReW, among others. (The public and school children in particular are invited to the exhibition).

Mr Ray Olson, President of the Association of Boards of Certification (ABC) of the USA, will also attend. ABC is an international organization of environmental certification boards working to advance water quality and integrity. CAWASA is a member of ABC and its quarterly certification examinations, which are crucial to water operators across the region, are professionally certified by the ABC, which is the premiere certification board of its kind in the USA.

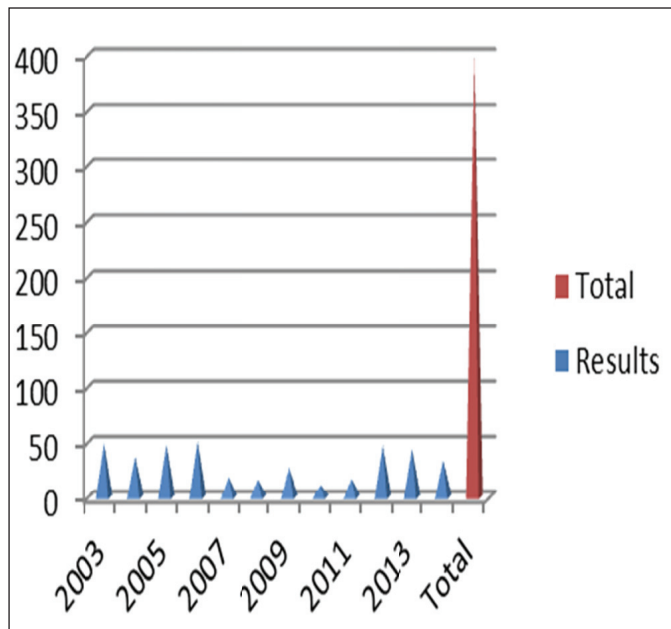
The conference will also provide Caribbean operators with the opportunity to share their experiences in preparation for the Operators Certification Examinations, as well as to showcase their presentation skills through professional presentations and competitive activities.

The Grenada meeting will allow the participants to showcase their technical skills through the Operators Competition and to identify emerging trends in the water and wastewater industry.

Among other issues to be considered by the delegates are: Networking, Employee Development, Advocacy, Research, Utility Development and Operator Certification

CAWASA/ABC Operator Certification Examinations Results 2003-2014

Year	Pass
2003	49
2004	37
2005	48
2006	51
2007	18
2008	16
2009	27
2010	11
2011	17
2012	47
2013	44
2014	34
Total	399



Benefits of being a Water Operator

Who should be certified?

Operators, Analysts of water and wastewater utilities, hotels, breweries, other water related groups and independent candidates who meet the education and operating experience requirements.

Steps to become a Certified Operator

1. Apply to CAWASA or your National Coordinator
2. Register for Tutorials
3. Submit application
4. Pay Exam fees
5. Take the Exam

Examination Role of the Operator/Analyst

Pre-examination Role

- Take an interest in your professional development and in the certification programme;
- Participate in training and other scheduled activities in preparation for the examination;
- Obtain all text books and study material recommended for examination preparation;
- Utilize all training facilities made available by the Utility/organization in support of examination preparation;
- Register and sit the examination in accordance with instructions provided by the CAWASA and the National Coordinator

Post-examination Role

- Register for remedial training if unsuccessful in the examinations;
- Continue professional development after receiving certification;
- Participate in professional development activities for 2.4 Continuing Education Units (CEUs) over the two years;
- Submit a completed renewal application form along with the renewal fee and relevant documentation no later than six (6) months before the expiry date of the certificate.

Why Certification?

- To Perform your job Better!
- Advance your Career!

Employee Benefits:

- Career Advancement opportunities
- Higher Wage earning opportunities
- Competitive advantage of non-certified Operators
- Recognition as a professional Operator

Employer Benefits:

- Cadre of certified professionals
- Motivate employees to expand knowledge/skills
- Increase competence level of employees
- Ensure continuing education for employees
- Enhance capacity to deliver services
- Ensure ongoing continuing education for employees

Become a Certified or Licensed Operator/Analyst

**Take your Operator/
Analyst Certification Examinations
at Levels I, II, III or IV!**

**Perform your Job Better!
Advance your Career!**

**Examinations Dates:
February, June & November**

COURSES	
Water Distribution	Water Laboratory
Water Treatment	Wastewater Laboratory
Wastewater Treatment	Very Small Water System
Collection	Small Wastewater System

**Contact the Secretariat for more information
E-mail: cawasa@candw.lc; sjoseph@cawasa.org**

A TRIBUTE TO RAYMOND NOEL

Grenadians and the Eastern Caribbean will on Monday 18th May 2015 bid a final farewell to a giant of the water and sewerage sector, Raymond Arnold Noel, a Grenadian by birth, passed away quietly at his home in Grenada late last week at the age of 88. Mr. Noel served the Government and people of St. Vincent and the Grenadines and in particular, the CWSA with distinction during a watershed period in the history of the Institution.

A USA trained water resource and sanitary engineer and a member of the Institute of Public Health Engineers, Mr. Noel came to St. Vincent through the Pan American Health Organization (PAHO) in December 1983 at the request of the Board of Directors, to serve as Manager/Water Engineer consultant at a critical time when the Water Authority (CWSA) was introducing the first phase of its important metering project.

For the ensuing period 1983 to 1986, Raymond Noel working alongside Robert France, straddled two Boards of Directors and teamed up with Hobbs Huggins and then with Monty Maule in contributing immensely to the significant turnaround in the fortunes of the CWSA.

Apart from his primary responsibility of implementing the first time metering project for SVG. Mr. Noel was



Raymond Noel
General Manager CWSA 1983-1986

also asked to restructure the engineering division within the CWSA. Because of the respect he commanded, his people skills and his no-nonsense style of management; he was able to achieve a restructured and forward looking engineering division by May of 1984. It is important to note that the core of that

structure still exists today within the CWSA.

Some other notable achievements at the CWSA during his tenure were the successful Union negotiations, in the midst of industrial action by employees in early 1984, the production of computerized bills in March 1984, followed by the appointment of the first Public Relations Officer, Lemuel Otley in July 1984. He also prepared the way for a young Daniel Cummings to succeed him as manager, including securing graduate level training for him in the USA, just as he himself had done almost twenty five years earlier.

Mr. Noel also worked as Water Engineer/Manager at the Grenada Water Authority and at the CARICOM Secretariat in Guyana. In recognition for his service to the water and sanitation sectors, he was the recipient of the Caribbean Water and Wastewater Association Gold Award in 1997, an organization which he co-founded in the early 1990's. He was also awarded the MBE in Grenada in January 2012 for his outstanding public service.

The Board, management and Staff of the CWSA, on behalf of the Government and people of St. Vincent and the Grenadines, extend sincere condolences to the relatives of this outstanding Caribbean son. May he rest in eternal peace.

Montserrat Water Workers and Utility Managers remember 'Bill Warner'

Neville Warner, born 24th November 1966, started working on 8th August 1986 – at age 20. He died on 4th April 2015 in the position of Water Distribution Foreman. The following tribute to him was delivered at his funeral on April 24th was delivered by Mr Emile Duberry, former Water Manager of the Montserrat Utilities Limited and former Director of CAWASA. He is now a member of the Board of Directors of the Montserrat Utilities Ltd.

I worked with Warner for a significant portion of his time with the Montserrat Water Authority and now Montserrat Utilities Limited. I left the utility in July 2014 but returned in October 2014 as a member of the Board of Directors. On behalf of the Board of the Montserrat Utilities Limited, the former staff of the Montserrat Water Authority and the current staff of Montserrat Utilities Limited, I wish to extend to the family of Neville "Bill" Warner our heartfelt condolences on the passing of your beloved husband, father, son, family member and friend.

In giving tribute to Mr. Warner, many of his colleagues describe him as a good leader, a motivator, a true friend. Those who were not close to him often thought there was an air of detachment about him but those in his inner circle knew that under the stern demeanour lay the most sardonic sense of humour that was often unexpected and never failed to bring cheer to those exposed to his particular sense of humour.

Neville (Bill) Warner began his employment with Montserrat Water Authority on August 8th 1986 at the tender age of 20, having just graduated from the Montserrat Technical College. He was appointed to the position of Assistant Pump Operator/Welder.

Over the years, he has held a number of positions including Assistant Plumber, Assistant Mechanic, and most recently, Foreman, Water Distribution. Prior to the volcanic crisis, he supported the Distribution Foreman for the Northern part of the island. A position that he would, in short order, make his substantive role.

Bill was pro-active and very receptive



Neville Warner: Born 24th November 1966 and departed 4th April 2015

to continued learning. He participated in many training courses, many that he proposed and others that were required for his progression and promotion to include Welding, Customer Relations and Water and Sewage Plant Operation and Maintenance.

He was also successful at completing up to Level 3, Water Distribution Operator Certification Programme; a standardized Water Certification programme overseen by the American Water Association and managed by the Caribbean Basin Water Management Programme in St. Lucia. With this certification he would have been able to take up a senior position with any water utility in the Caribbean or USA.

Montserrat Water Authority merged with Montserrat Electricity Services Limited to become Montserrat Utilities Limited in 2008 and Bill continued as Water Distribution Foreman in the new organisation.

The Water Distribution team describes him as a supervisor who on a daily basis urged them on in their work and was always willing and ready to offer encour-

agement and motivation when they were not feeling prepared to work.

His motivation style was different for each member of his team and they would cheerfully say that his unique sense of humour always got him the desired result – the team working willingly to achieve its goals.

While Bill was part of the technical team, the administrative staff were also the recipients of his talent for practical jokes and bland humour. Over the last few weeks stories of his interactions with staff have proved to be the support and impetus for helping us get back on our feet.

Regrettably, we may not have told Bill all that we are saying today. We often times focus so fixedly on the things that require improvement that we overlook the wholesome qualities that are commendable. Such qualities made him a motivator, an inspiration and a wonderful friend to many of his colleagues.

His sudden passing should be a lesson to us (individually and collectively) to preserve the good memories and highlight the merits of those around us, family, friends and acquaintances, and lovingly embrace and support them through the difficult times that are part of each of our lives.

Bill, to say we will miss you would be an understatement. We wish that you could hear us when we say, your boots will be difficult to fill. You were a unique individual and moving forward without you is a task we do not look forward to but we take comfort in the words of Romans 14:7-9 "For none of us lives to himself, and none of us dies to himself. For if we live, we live to the Lord, and if we die, we die to the Lord. So then, whether we live or whether we die, we are the Lord's. For to this end Christ died and lived again, that he might be Lord both of the dead and of the living."

To Bill's wife, sons, father, sisters, brothers and all other members of his extended family, and his friends, please know that we today celebrate the life of your loved one and in the words of the Hebrew Proverb "Say not in grief he is no more, but live in thankfulness that he was".

Successful Operators and Analysts

2013 and 2014 Examinations

Congratulations!

Country	Operator	Certificate Course	Certification Level
Antigua & Barbuda	Quincy Jones	Water Treatment	I & II
	Livingstone Samuel	Water Treatment	II
	Jason Browne	Water Treatment	III
	Athil Thomas	Water Treatment	II
	Mike France	Water Treatment	I
	Terry Benjamin	Water Treatment	II & III
	Oral Evanson	Water Distribution	I
	Olson Dowe	Water Laboratory	I
	Kashif Kelly	Water Laboratory	I
	Timica Richards	Water Laboratory	I
	Bari Stevens	Water Laboratory	I
Cayman Islands	Dawn Faud	Wastewater Collection	I
	Robert Tatum	Water Treatment	I
Dominica	Jefferson Durand	Water Treatment	IV
	Jefferson Durand	Wastewater Treatment	I & II
	Berlvin Gardier	Water Distribution	I
Grenada	Cassia Alexander	Water Treatment	I
	Carl Bennett	Water Treatment	I & II
	Akino Cadore	Water Treatment	I
	Alpha M Donald	Water Treatment	I
	Allen Gilbert	Water Treatment	I
	Learie Gittens	Water Treatment	I & II
	Nealon Lessey	Water Treatment	I & II
	Christopher Reuben	Water Treatment	I
	David Gabriel	Water Laboratory	III
	Karol McQueen	Water Treatment	I
	Junior Morain	Water Treatment	I & II
	Lenroy Charles	Water Treatment	II
	Jerry Sylvester	Water Treatment	I
	Jeromey Augustine	Water Treatment	I
St Lucia	Joseph Charles	Water Distribution	I
	Ian Dave Alexander	Water Distribution	I
	Gilroy James	Water Treatment	II
	Silas Missole	Water Treatment	II
	Chantal Gaston	Water Laboratory	II
		Chernoye St Croix	Water Distribution

Country	Operator	Certificate Course	Certification Level
	Shawn Jules	Water Distribution	II
	Mervin Justin	Water Distribution	II & III
	Caniean St Rose	Water Distribution	II
	Denver Duplessis	Water Distribution	I
	Amanda Williams	Water Distribution	I
	Alvin Lewis	Wastewater Collection	I
St Vincent & the Grenadines	Bradly Jackson	Water Distribution	II
Trinidad & Tobago	Akeel Phillip	Wastewater Treatment	II
	Winston Holder	Wastewater Treatment	II & III
	Kurt Cordiner	Wastewater Treatment	I
	Onika Edwards	Water Treatment	I
	Ian Gill	Water Treatment	I
	Vanita Boodhai	Water Treatment	I
	Anthony Albino	Wastewater Treatment	I
	Natasha Nancoo	Wastewater Treatment	I
	Rapoodman Ramgoolie	Wastewater Treatment	I
	Mikel Singh	Wastewater Treatment	I
	Akil Kwesi Myers	Wastewater Treatment	I
	Eshwar R Deonarine	Water Treatment	I
	Daniel Boyce	Wastewater Treatment	II
	Shivanand Deonarine	Wastewater Treatment	I
	Selwyn Forbes	Wastewater Treatment	I
	Dale Mitchell	Water Treatment	I



CAWASA Fourth Caribbean Water Operators Conference

June 25-26, 2015—Radisson Hotel, Grenada



THEOBALD'S CONSULTING















Caribbean
Public Health
Agency



Global Water
Partnership
Caribbean



gef
SIBS
UNEP



CROW

Cari-WOP completed first Diagnostic Mission in Haiti

In accordance with the decision of the Cari-WOP Steering Committee, October 7, 2014, a diagnostic mission to Haiti took place February 2 to 4, 2015.

The delegation comprised, Mr. Ignatius Jean, Executive Secretary of CariWOP/Executive Director of Caribbean Water and Sewerage Association (CAWASA); Mr. Cyprian Gibson, representative of Bahamas Water and Sewerage Corporation/Caribbean Water and Wastewater Association (CWWA)/Cari-WOP; Mr. Aly Anthony, representative of the Water and Sewerage Corporation (WASCO), Saint Lucia; Dr. Jose Luis Martin Bordes, representative of the Global Water Operators' Partnerships Alliance (GWOPA)/UN-Habitat, Spain; Ms. Sandrine Capelle-Manuel, representative of UN-Habitat Haiti; Dr. Adrianus Vlugman, PAHO/WHO-Barbados; Mr. Julio Urruela-Roquero, PAHO/WHO- Haiti.

The purpose of the visit was first, to signal to DINEPA the intention of the Cari-WOP to honour its commitment, given at the Steering Committee Meeting in the Bahamas. Secondly, to get a first-hand perspective of the water and sanitation sector in some key provinces in order to provide a sound basis for further development of the WOP programme in Haiti.

During this mission, a proposal for the strengthening of four CTEs (Centre Technique d'Exploitation - Technical Operations Centres) - Jeremiah, Gonaives, Hinche and Cap Haitien, was studied, along with working sessions that developed a plan of action and the terms of reference for this collaboration. Apart from the meetings with the donor agencies, working sessions with the CTE, proposals of the agencies by Carrefour and CTE of Petit Goave were also considered.

The Mission met with key officials and agencies including Mr. Benito Dumay, Director General of DINEPA; Ms. Carmen Rodriguez Arce, the Representative of Agencia Espanola de Cooperacion Internacional para Desarrollo -AECID (i.e. Spanish Agency for International Cooperation for Development); Ms. Corinne Cathala, the IDB's Infrastructure Specialist, Water and Sanitation Division, (who was in Haiti during the period of the Mission); and Eng. Mr Revel Mom-



CAWASA Executive Director Ignatius Jean (centre), Program Officer Suzanne Joseph (right) and other members of the CAWASA delegation with the CEO of Haiti's DINEPA.

premier - Special Advisor to the Minister for Public Works, Transport and Communications, Government of Haiti.

The delegation toured the laboratory and inventory facilities at the CTE RMPP (Centre Technique d'Exploitation de La Region Metropolitaine de Port-au-Prince). The team also visited a major catchment of the Centrale Autonome Metropolitaine D'eau Potable (CAMEP) i.e. the Diquini Tunnel. This underground stream is located in the mountains west of the central metropolitan area of Port-au-Prince. The facility was commissioned in March, 1940 by President of Haiti, Mr. Stenio Vincent.

The Draft Work Plan includes the following priorities for technical cooperation:

- Monitoring of pumping stations and electromechanical equipment;
- Commercial Management/Call Center Management;
- Increase water production;
- Geographic Information System (GIS);
- Water Quality (Turbidity);
- Detection and Leak Repair (Rehabilitation);
- Development of a Water Safety Plan (WSP).

WOPS in HAITI

Representatives from the Cari-WOP secretariat, operators from the Bahamas and Saint Lucia, the WHO and GWOPA took part in a diagnostic mission to Haiti February 2-4.

The purpose of the visit was to follow up on the commitment made during the Cari-Wop Steering Committee Meeting to investigate the feasibility of a WOP with the Haitian operator DINEPA. The mission was also an opportunity to get a first-hand perspective of the water and sanitation sector in some key provinces to serve as a basis for the development of the WOP programme in Haiti.

During this mission, proposal for the strengthening of four Technical Operations Centres were made and initial work on developing a plan of action and the terms of reference for this collaboration were launched. Meetings with donor agencies and work-



CAWASA Executive Director Ignatius Jean (third from right) joined delegates in Barcelona.

ing sessions were also conducted. A draft work plan and next steps for this WOP are being developed by all parties.

Boosting inter-regional cooperation and capacity building

MoU signed between CWWA, CAWASA, PWWA, GWOPA/UN-Habitat, at 7th World Water Forum in Korea

Participants from the Caribbean and around the world earlier this year celebrated the signature of the Memorandum of understanding (MoU) between CWWA, CAWASA, PWWA and GWOPA/UN-Habitat at the 7th World Water Forum in Korea.

Special thanks were however offered to all participants from the Caribbean delegations by Jose Luis Martin Bordes, Programme Officer, GWOPA/UN-Habitat.

In communications to CAWASA, he said "The MoU will foster inter-regional cooperation to develop the capacities of water and sanitation operators in these two regions."

He also offered "special thanks to my former colleague Taeko Yokota, who left GWOPA very recently, but who was instrumental in organizing this Inter-regional Session and proposing the signature of this MoU".

Special thanks were also offered to CAWASA President Bernard Ettinoffe and CWWA President Jason Johnson "for their presence in and contribution to our Session in the 7th World Water Forum in Korea."



President of CAWASA Mr Bernard Ettinoffe (2nd from right with red tie) and President of CWWA Jason Johnson (next to him with pink tie) along with other top executives of CAWASA, PWWA and GWOPA/UN-Habitat at the 7th World Water Forum in Korea

Do You Know The Real Cost Of Carrying Inventory?

By
Dennis Lord
AKA
“Inventory
Guru!”



A while back a client asked me just how much it was costing him to carry inventory. I get this question all the time, and my answer is always the same: a company’s inventory carrying cost is, on average, 25% of its annual on-hand inventory investment.

My client – a seasoned inventory control manager – seemed disappointed to hear that holding inventory in the warehouse and the factory wasn’t free. But he’s not alone. Inventory carrying cost is a powerful measure of how well a company manages its inventory, yet not everyone understands the financial and operational implications it has for planning inventory levels and replenishment.

What Is Inventory Carrying Cost?

Any company holding inventory has to bear inventory carrying costs. They represent a large chunk of a company’s total logistics systems costs. Inventory carrying costs are expressed as a percentage of the average dollar value of inventory over a fixed period – usually a year. As a rule of thumb, inventory carrying cost is 25% of a company’s average inventory investment, but when you tally up all the relevant carrying costs, it can run as high as 40% or more.

Capital vs. Non-Capital Carrying Costs

A company carrying an inventory has both capital and

non-capital costs. The actual investment in your inventory itself is regarded as a capital cost, but there’s also the non-capital cost of carrying the inventory.

Determining your capital costs is as straightforward as checking your financial reports. Estimating your non-capital costs takes more work. They’re not readily apparent from your accounting records, as most bookkeeping systems don’t capture all the information you need to calculate them. You’ll need to take a close look at your operations.

Non-capital costs are considered by most managers to be a cost of doing business, and they’re content to use ball-park estimates or traditional industry benchmarks. Yet few companies know what their true carrying costs really are.

Capital Costs For Inventory Investment

Your inventory ties up money that could be used elsewhere, so it’s no wonder that capital costs are the biggest factor in determining your carrying costs.

Capital costs can include the interest on the money you invested in your inventory. There’s also opportunity cost, which is the return you could reasonably expect if you invested in something other than inventory.

Any company serious about knowing their carrying costs will use the weighted average cost of capital (WACC) to calculate the inventory capital charge. This is the opportunity cost for the company’s average risk investment.

Non-Capital Costs For Inventory Investment

These costs may vary according to the company, its product, and location, but they typically include risk costs, storage space costs, and service costs. Risk costs generally include obsolescence, damages, and pilferage. They are the largest component of non-capital costs.

Storage space costs include warehouse or factory space, workers, and material handling equipment. These are variable costs, and they rise as inventory increases. It takes careful analysis to determine how much of these costs are actually driven by inventory levels.

Service costs include expenses such as insuring your inventory, or even taxes. They're calculated as a percentage of the average annual inventory value.

As I already mentioned, total inventory carrying costs are usually estimated at 25%. Here's how they add up:

Capital cost	15%
Non-capital costs	
Risks costs	6%
Storage space costs	2%
Service costs	2%.

Applying Carrying Costs

From a financial point of view, understanding and managing inventory carrying cost will have an impact on your company's operating income. It will also help you balance your operating expense with inventory levels.

In operations, when your purchasing and inventory control staff replenish an item, they ask themselves two basic questions: how much should we order, and when? These aren't trivial matters. Order more frequently, and your order cost increases while carrying costs decrease; less frequently, and you trade off lower order costs with a larger average inventory.

The most efficient way to figure out "how much" is to use the economic order quantity model. This model minimizes the total variable costs required to order and hold inventory. Inventory ordering cost, also known as purchasing cost or set-up cost, includes the clerical work required to prepare, release, monitor, and receive orders. In manufacturing, inventory ordering cost includes production scheduling time, machine set-up time, and inspection.

Why All The Fuss?

Knowing your inventory carrying costs is a vital part of management information. Without that knowledge, you

can't properly optimize your inventory management system, which means you can't make informed decisions about establishing the right inventory levels. And as we all know, that leads to poor customer service, bad investments, and lower profits.

When you use an inventory carrying cost that's higher than the true cost, the result is lower inventories. That means stock-outs, loss of customer goodwill, and higher ordering costs. On the other hand, using a carrying cost that's too low leads to larger inventories, higher total carrying costs, and lower profit margins.

Any inventory manager will tell you that you need to balance inventory investment, cost, and customer service when managing inventory. Yet too many small and mid-size companies make little effort to properly calculate and apply their inventory carrying costs when planning inventory levels. The results are inevitable: too much inventory, poor delivery service, and shrinking profit margins.

Not long ago, I chatted with my inventory manager client. I was pleased to hear that he had a better handle on inventory carrying cost and the impact it has on finance and operations.

Like anyone else, he's under a lot of pressure to minimize costs and improve service. Now that he understands the value of knowing and using his inventory carrying costs, he's seen the light. Through better inventory management, he's maximizing his company's profits by planning his inventory more effectively.

Dennis Lord is an International Speaker and Business Consultant.

To learn more about his services visit: www.lean-inventory.com 416-477-2467 dennis@imsconsulting.com

For a list of upcoming workshops please visit: www.imsconsulting.ca/events

Water Cooperation: What's it all about?

The fulfillment of basic human needs, our environment, socio-economic development and poverty reduction are all heavily dependent on water.

Good management of water is especially challenging due to some of its unique characteristics: it is unevenly distributed in time and space, the hydrological cycle is highly complex and perturbations have multiple effects.

Rapid urbanization, pollution and climate change threaten the resource while de-

mands for water are increasing in order to satisfy the needs of a growing world population, now at over seven billion people, for food production, energy, industrial and domestic uses.

Water is a shared resource and its management needs to take into account a wide variety of conflicting interests. This provides opportunities for cooperation among users.

In designating 2013 as the UN International Year of Water Cooperation, the Unit-

ed Nations General Assembly (UNGA) recognizes that cooperation is essential to strike a balance between the different needs and priorities and share this precious resource equitably, using water as an instrument of peace.

Promoting water cooperation implies an interdisciplinary approach bringing in cultural, educational and scientific factors, as well as religious, ethical, social, political, legal, institutional and economic dimensions.

The Fourth Caribbean Water Operators Conference -- What it's all about!

About CAWASA

The Caribbean Water and Sewerage Association Inc., is a regional association of thirteen (13) water and sewerage utilities in the Caribbean. CAWASA was registered in St Lucia in May 2010 as the successor to the Caribbean Basin Water Management Programme Inc (CBWMP Inc).

CAWASA Services

Our products and services are many and varied, including a range of operator-focussed activities. These include, but not limited to:

- Networking (Sector – Collaboration – Publication – Conferences – Internships)
- Employee Development (Training – Workshops – Attachments – Internships)
- Advocacy (Policies – Legislations – Regulations)
- Research (Studies – Surveys – Projects – Benchmarking)
- Utility Development (Inspection – Classification – Management Support – Disaster Management)
- Operator Certification (Examinations; Remedial Training; Continuing Education; Certificate Renewal)

The Conference

The 2015 Water Operators Conference will be held in Grenada from June 25-26, 2015 in collaboration with host Utility, the National Water and Sewerage Authority (NAWASA).

The Conference aim to:

- Update the knowledge and skills of water and wastewater operators through interaction with fellow operators
- Provide the opportunity to access, view and share the latest ideas in technical equipment, technology, products and services with suppliers
- Provide operators with the opportunity to share their experiences in preparing for seating the Operators Certification Examinations
- Provide the operators an opportunity to showcase their presentation skills through Professional presentations and competitive activities
- Provide the operators an opportunity to showcase their technical skills through the Operators Competition

Who will attend

This event will bring together engineers, water / wastewater operators; water/wastewater laboratory analysts, stakeholders and other water industry personnel. Operators may earn up to 12 hours continuing education units (CEUs) for the two days for certificate renewal purposes.



Preliminary Programme

Day one

TIME	ACTIVITY
8:00 am – 10:00 am	OPENING CEREMONY
	Registration
	Welcome Address: Terrance Forrester, Chairman, <i>NAWASA, Grenada</i>
	Conference Overview: Ignatius Jean, <i>Executive Director, CAWASA</i>
	Remarks : Bernard Ettinoffe, <i>President, CAWASA</i>
	Guest Speaker: <i>Eng. Daniel Cummings</i>
	Remarks : Minister of Communications, Works, Physical Development, Public Utilities, ICT & Community Development - Grenada
	Vote of Thanks: Christopher Husbands, General Manager, <i>NAWASA, Grenada</i>
10:00 am – 10:15 am	NETWORKING BREAK
10:15 am – 11:30	SESSION 1: SYSTEM PLANNING AND MANAGEMENT
	Importance of Water Conservation and Reducing Unaccounted for Water – Adrian Theobalds, <i>Theobalds Engineering</i>
	Energy Efficiency in the Water Sector - <i>CARILEC</i>
	Wastewater Operations & Maintenance - <i>Alphonsus Daniel</i>
	GIZ CATS Initiatives in the Water Sector – <i>Shermaine Clauzel</i>
11:30 am – 12:30 pm	SESSION 2: HEALTH AND SAFETY
	Chlorine Safety Handling – David Benny
	Water Safety Planning – <i>Shermaine Clauzel, CARPHA</i>
12:30 – 1:30 pm	LUNCH
1:30 pm – 2:30 pm	SESSION 3: DISASTER AND EMERGENCY MANAGEMENT
	Water Operator Challenges in the Aftermath of a Disaster – <i>WASCO/StLucia</i>
	Emergency Response Planning: <i>NAWASA/Grenada</i>
	Chlorination and Disinfection - <i>David Benny</i>
2:30 pm – 2:45 pm	NETWORKING BREAK
2:45 pm – 5:00 pm	SESSION 4 – OPERATOR CERTIFICATION & LICENSING
	Professional Operator: A New Opportunity for Caribbean Operators – <i>Ray Olson, President, Association of Boards of Certification (ABC)</i>
	Coping with Examination Challenges – <i>Juan Lambert</i>
	Water Utility Operator Training - <i>Irwin Gill</i>
	Operator Experience - <i>Jefferson Durand</i>
6:00 pm – 8:00 pm	COCKTAIL RECEPTION

Preliminary Programme - Continued

Day two

Time	Activity
8:30 am – 10:30 am	SESSION 5: CAPACITY BUILDING & DEVELOPMENT
	The Caribbean Water Operators Platform (CariWOP) : <i>CariWOP Representative</i>
	Climate Adaptation for Wastewater Operators : <i>Irwin Gill & Shervon Ifill</i>
	New Training Opportunities for Water and Wastewater Management in the Caribbean : <i>Christopher Corbin – UNEP-CReW</i>
	Water & Sanitation Sector Financing in the Caribbean - <i>The Role of the Caribbean Development Bank: Karl Pivott - Caribbean Development Bank</i>
10:30 am – 10:45 am	NETWORKING BREAK
10:45am – 1:30 pm	SESSION 6: BUSINESS SESSION
	WTP – Filtration Solutions : <i>IsraTech</i>
	Are we going with the flow - The realities of Climate Change and the need for Integrated Water Resources Management : <i>Lester Arnold – OECS/RRACC</i>
	IWRM – Climate Change Adaptation: <i>Terrence Smith - GWP-C</i>
	VAG 140 years valves for the Water Distribution : <i>Sebastian Bojarski – VAG-Germany</i>
1:30 pm – 2:30 pm	LUNCH
2:30 pm – 5:00 pm	SESSION 7: OPERATORS COMPETITION
	<ul style="list-style-type: none"> ▪ Category 1: Pipe Laying and Joining ▪ Category 2: Service Connection ▪ Category 3: Installation of Valves
5:00 pm – 6:00 pm	Prize-Giving Ceremony & Refreshments
<p><u>Change of Topics, Substitution of Speakers and Cancellation of Presentations</u></p> <p><i>With reference to the Programme, there may be changes with regard to the Topics, Speakers and Presenters. These changes may be made at short notice prior to the Event. CAWASA reserves the right to make changes to the Programme and Speakers or to cancel an activity when deemed necessary. Should this happen, CAWASA's liability is limited to the refund of the Registration fee only.</i></p>	

WASCO/GIZ/CONSOLQUA and CAWASA collaborated towards Water Loss Reduction and Energy Efficiency in Saint Lucia



Participants charted and assessed the problems of water loss throughout the Caribbean during the two workshops in Saint Lucia.



Lively exchanges of shared regional experiences pervaded throughout the discussions at both workshops.

The Caribbean Water and Sewerage Association (CAWASA) last month coordinated another in the series of training workshops facilitated by the CONSOLAQUA group of Hamburg, Germany for WASCO. This one was held April 22 – April 24, 2015.

The Strategic Alliance for Water Loss Reduction (STA), with the support of the GIZ (German International Development Agency), was on its fourth mission to Saint Lucia to conduct training in Network and Hydraulic for WASCO.

This part of a GIZ technical cooperation programme with WASCO looked at “Utility Support of Saint Lucia’s Water and Sewerage Company Inc. (WASCO) – Water Loss Reduction and Energy Efficiency”.

WASCO invited its regional partner utilities, through the Caribbean Water and Sewerage Association (CAWASA), to participate in the training workshop.

Technical staff of the Barbados Water Authority (BWA) and the Central Water & Sewerage Authority of St. Vincent & the Grenadines participated in the workshop, as well as the Sir Arthur Lewis Community College (SALCC).

The participation of teaching staff of the SALCC is and was very important to the programme, as it is envisaged that SALCC should be integral to the development of a regional training centre for water loss reduction.

The previous workshop held in March 2015 on ‘Energy Efficiency’ was attended by technicians from the Dominica Water and Sewerage Corporation (DOWASCO), the Nevis Water Department and the Belize Water Services (BWS).

The March 24 to April 3 saw the participants conduct training in Energy Audits and Leak Detection for WASCO, which had also invited its regional partner utilities, through CAWASA, to participate, including the SALCC.



WASCO

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH



How to Apply for Water Operator Certification

Here are the Requirements:

Class	Course	Education	Experience
Class I	Water Distribution; Water Treatment; Wastewater Treatment; Collection; Water Laboratory; Wastewater Laboratory	5 years of secondary school education with O'level passes in English and Mathematics or CXC or equivalent	One year of acceptable operating experience of A Class I or higher utility
Class II	(Refer to above courses)	5 years of secondary education with O' level passes in English and Mathematics or CXC or equivalent	Three years of acceptable operating experience of a Class I or higher utility
Class III	(Refer to above courses)	5 years of secondary school education with O' level passes in English and Mathematics 900 contact hours, or 90 CEUs, or 90 quarter credits, or 60 semester credits of post high school education in the environment control field, engineering or related science	Four years of acceptable operating experience of a Class II or higher utility including two years of direct responsible charge.
Class IV	(Refer to above courses)	5 years of secondary school education with O' level passes in English and Mathematics or CXC; 1,800 contact hours, or 180 CEUs, or 80 quarter credits or 120 semester credits of post high school education in the environmental control field, engineering or related science;	Four years of acceptable operating experience of a Class III or higher utility, including two years of direct responsibility charge
Class I	Very Small Water System (VSWS); Small Wastewater System (SWS)	5 years of secondary school education with 'O' level passes in English and Mathematics or CXC, or Six contact hours of Very Small Water System/Small Wastewater System education	Six months of acceptable operating experience of a Very Small Water System/Small Wastewater System or higher utility

Renewal of Certificates

Class	Course	Education	Experience
Class I-IV	Water Distribution; Water Treatment; Wastewater Treatment; Collection; Water Laboratory; Wastewater Laboratory	Certificates must be renewed every two years. Application for Renewal and fee must be submitted 60 days before the expiry date of the certificate.	Completed 24 contact hours of continuing education or 2.4 CEUs approved by CAWASA during the 2 year term of the certificate
Class I	VSWS and SWS	Certificates must be renewed every two years. Application for Renewal and fee must be submitted 60 days before the expiry date of the certificate.	Six contact hours of continuing education unites (CEUs) approved by CAWASA during the 2 year term of certificate

Classification of Plants

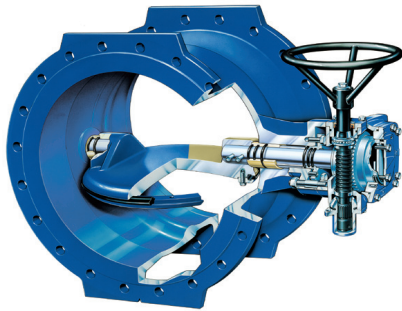
One of the two components of the Certification Programme. The Certification of Operators/analysts and the classification of water utilities. Water and wastewater treatment facility classification is based on a point system developed by the Association of Boards of Certification (ABC) for use by certifying authorities such as CAWASA. CAWASA will classify the facilities according to the size, population served, using the following point rating system: Class I = 30 points or less; Class II = 31 - 55 points; Class III = 56 - 75 points; Class IV = 76 points or greater

Reciprocity

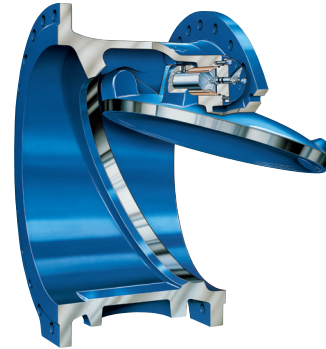
Certificates issued by any certification programme, which, as determined by the CAWASA Certification Board, satisfy the provisions of the certification policy promulgated hereunder shall be accorded reciprocal treatment and shall be recognised as valid and sufficient within the purview of the certification policy.

To apply for CAWASA/ABC Certification: E-mail: sjoseph@kawasa.org to request an application form Or fax/mail request to: Caribbean Water & Sewerage Association Inc (CAWASA), Unit # 15, Orange Park Commercial Centre, Bois d'orange, Gros Islet, Saint Lucia, (P O Box RB2293, Rodney Bay, Gros Islet, Saint Lucia), Tel: 758 458 0601; Fax: 758 458 0191, E-mail: cawasa@candw.lc; sjoseph@kawasa.org, Website: www.kawasa.org

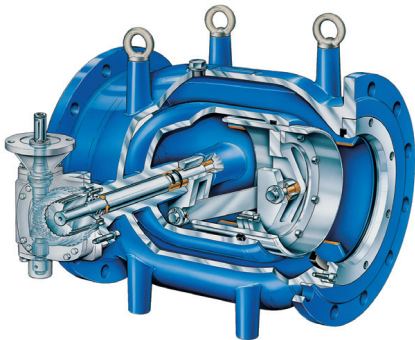
Our favourites



The VAG EKN® Butterfly Valve. Half a century of experience made it good and then even better.



The VAG SKR Slanted Seat Tilting Disk Check Valve has incredibly fast closing times and prevents pressure surges.



The VAG RIKO® Plunger Valve accurately and reliably controls the pressure and volume of massive amounts of water.



The VAG DUOJET® Air Valve is indispensable for the regulation of pressure in supply pipelines.

control . shut off . ventilate . distribute

Your VAG representative will gladly demonstrate how our four bestsellers work and of course help you find the right dimension for your application. And, if you're interested,

even explain how other satisfied customers use our valves. Ask your representative or visit our website at

Water-as-a-Service™ (WAAS™)

Seven Seas Water provides WAAS™ for municipal, industrial and commercial clients. We design, build, own and operate dedicated water supply facilities with no upfront capital required by our clients.



Meeting critical water demands.

Utilizing state-of-the-art desalination technologies, we guarantee meeting your critical water demands by providing the quality and quantity of water your business requires. Quick deploy units and land based facilities are operated by experienced water professionals 24/7/365.

Reduced Operating Risk No Maintenance Obligations Improved Performance Guaranteed Water Supply

Seven Seas Water
14400 Carlson Circle
Tampa, FL 33626
813.855.8636
www.sevenseaswater.com
info@7seaswater.com



Our Caribbean Operating Locations:

Bahamas Curacao Sint Maarten Trinidad Turks & Caicos Islands USVI