

water world

A QUARTERLY PUBLICATION OF THE WATER AND SEWERAGE AUTHORITY



Sustaining the Flow



The Water and Sewerage Authority of Trinidad and Tobago remains focused on its mandate to provide a safe and reliable potable water supply to the people of Trinidad and Tobago as part of a wider commitment to our nation's socio-economic development.

Check out our website www.wasa.gov.tt



***"Water Security for Every Sector.
Deliver it. Sustain it."***

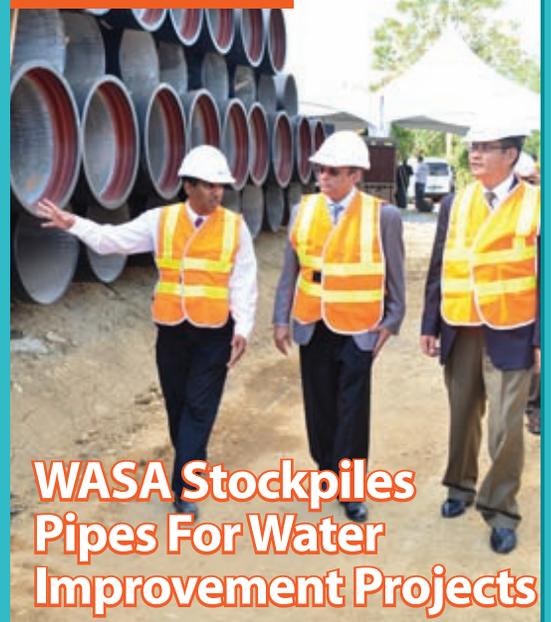
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Cover Photo: Navet Reservoir

Feature p:04



**WASA Stockpiles
Pipes For Water
Improvement Projects**

EDITOR'S NOTE

There is much to tell about WASA's greater service to customers

The magnitude of the transformational work being carried out at WASA to bring greater service to our customers has led to the introduction of this quarterly magazine, which we call, Waterworld. The appearance of this first edition of the publication is one example of the truism: "if it did not previously exist, it would have to be created."



As outlined and detailed in this issue, some of the ongoing work at WASA involves extensive mains replacement, construction of booster stations and continuation of the almighty task of laying down wastewater treatment systems to enhance public health.

The main objective of this Waterworld magazine is to keep our stakeholders informed about the plans, programmes and successes of the utility. The magazine will do so as part of the expanded era of customer care and information sharing. This is coinciding nicely with all of the communications systems that are already in place to listen to our customers, to respond to their very legitimate requests for improved services and to change the relationship into one of customer and supplier

respect.

It is a new relationship that is being forged which we fully expect will serve the needs of both sides.

The Waterworld magazine also seeks to make our customers sharply aware of their responsibilities to contribute to the development of the utility into a modern organisation, one that will be more responsive to the needs of its customers.

As will be observed by the reader, the change and transformation ethic are being driven by the WASA Board of Commissioners through the Ag. Chief Executive Officer, Gerard Yorke; and well supported by the executive management team, the rank and file of employees of WASA as well as their union representatives.

This new impetus to self-sufficiency is led by the line Minister, Senator the Honourable, Ganga Singh, Minister of the Environment and Water Resources, who also serves to ensure we deliver on Government's mandate of water security for every sector.

We welcome our readers views and comments which can be sent to waterworld@wasa.gov.tt.

Until our next edition, enjoy your reading!



Ellen Lewis
Head Corporate Communications



A QUARTERLY PUBLICATION OF THE WATER AND SEWERAGE AUTHORITY

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APRIL – JUNE 2013

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New Board Appointed at WASA



From left: Senator the Honourable Ganga Singh, Minister of the Environment and Water Resources, Mr. Wazeer Aleem, Mr. Kern Saney - Deputy Chairman, Ms. Renata La Verne Jones, Mr. Stanley St. Omer, Ms. Ashvini Aditi Supersad, Mrs. Jillian Bartlett-Alleyne, Mr. Hewlett Waldron, Vidiah Ramkhelawan - Permanent Secretary (Ag.), Ministry of the Environment and Water Resources and Mr. Indar Maharaj - Chairman

A

new Board of Commissioners was appointed on April 12th 2013 to continue the development work of the Water and Sewerage Authority. On the Board are three new Commissioners, Stanley St. Omer, Renata La Verne Jones and Ashvini Aditi Supersad. They have joined six other Commissioners retained from the previous Board of Commissioners of WASA.

Chairman Indar Maharaj has been given the opportunity to once again lead the organisation into meeting the primary objective of the Authority, which is to provide quality service to its customers.

Mr. Maharaj will have with him from the previous Board, the experienced Kern Saney, Wazeer Aleem, Gillian Bartlett-Alleyne and Hewlett Waldron.

Minister of the Environment and Water Resources, Senator the Honourable Ganga Singh, welcomed the new board members. Already, the WASA Commissioners have begun the mission of taking the organisation forward.

WASA STOCKPILES PIPES FOR WATER IMPROVEMENT PROJECTS



Minister of the Environment and Water Resources, Senator the Honourable Ganga Singh, during his address at the ceremony, to commemorate WASA's receipt of its largest purchase of pipes. Seated at the head table are (L-R): Head Corporate Communications, Ellen Lewis; Ambassador to the People's Republic of China, His Excellency Yang Youming; acting CEO, Gerard Yorke; and DGM Project Appraisal, Daren Gazez.

In January 2013, WASA began the process of stockpiling over 38,468 lengths of pipeline for use in its programme of water improvement projects that includes among others, the replacement and dualling of the Caroni South Transmission Main from the Caroni Water Treatment Plant to the San Fernando Booster Station, and completion of the Hollis Trunk Main Replacement from Valencia to the Eastern Main Road, Laventille.



Minister Ganga Singh (centre) and His Excellency Yang Youming, among others, are taken on a tour of the stockpile of pipelines by DGM Project Appraisal, Daren Gazez.

The first two shipments amounting to 13,732 lengths of pipes were delivered in January and February 2013 and was supplied by manufacturers, Xinxing Ductile Iron Pipes Company Limited of China, representing the largest pipeline purchase in WASA's history.

The total order when delivered will equal some 231 kilometers of Ductile Iron pipes ranging in sizes from 200mm to 1100mm at an overall cost of TT\$260Mn. On March 1st 2013, the Authority hosted a ceremony at its Open Air Stores, Factory Road, Chaguana, to commemorate the receipt of the initial shipments which has a span of 82 kilometers in length.

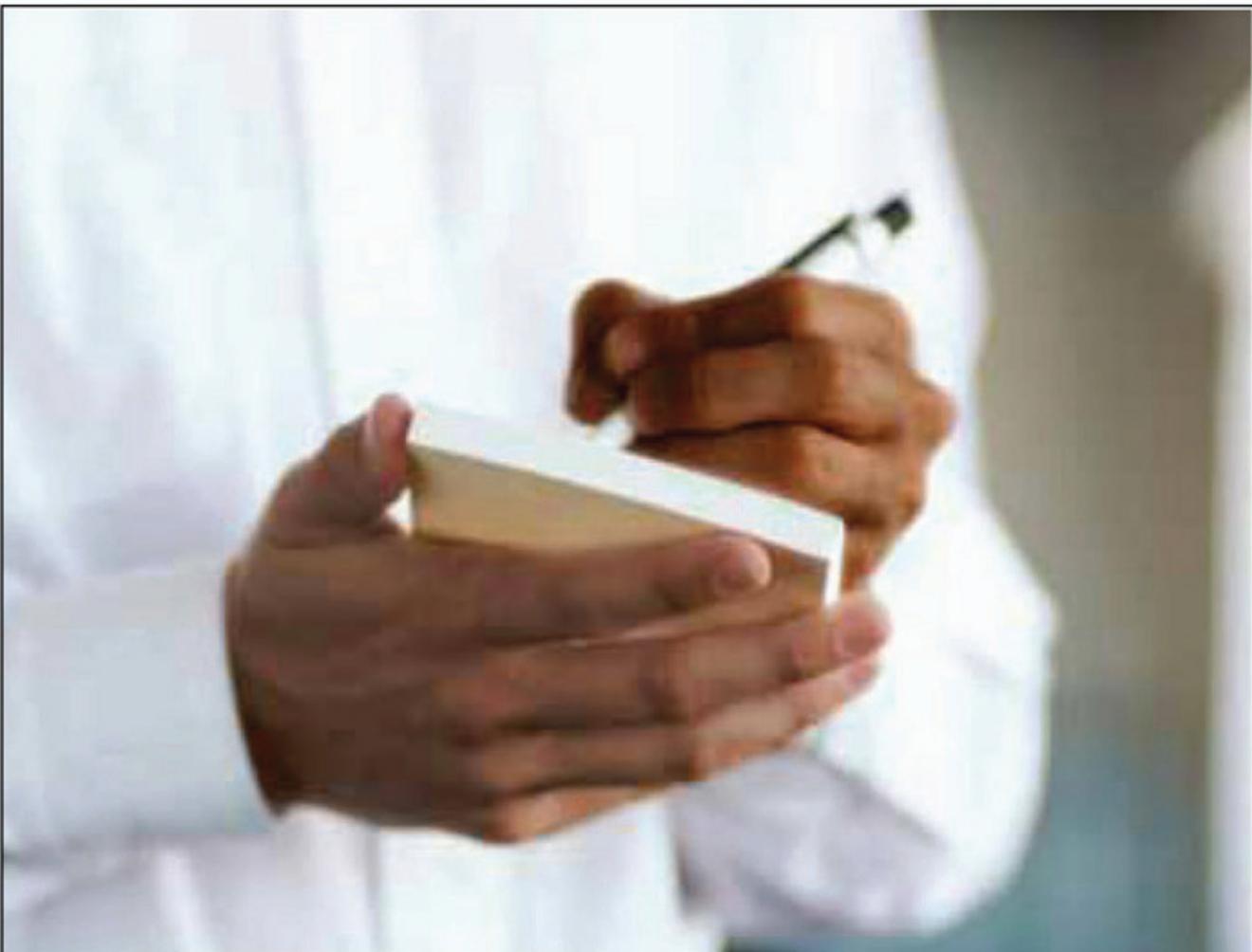
During his feature address, Minister of the Environment and Water Resources, Senator the Honourable Ganga Singh, stated that in addition to the order of pipes from Xinxing, an additional 73 kilometers of PVC pipelines were also ordered from local manufacturer Century Elson, bringing the total length of the purchase to 304 kilometers. To illustrate the magnitude of the purchase, Minister Singh stated that if the pipes were laid down end

to end, it would stretch from the Southern Main Road, Curepe to Icacos and back.

He explained that the installation of the pipes would go a long way in addressing the levels of leakage that currently exists along the Authority's transmission and distribution systems.

Outgoing Ambassador to the People's Republic of China, His Excellency Yang Youming, was high in praise for continued levels of economic and cultural links between China and Trinidad and Tobago and expressed confidence that these ties would continue to redound to the benefit of both countries.

Acting Chief Executive Officer, Gerard Yorke, lauded the efforts of all members of staff who were involved in procuring the pipelines, which were purchased via an e-auction event held at the Trinidad and Tobago Bureau of Standards on 22nd March, 2012. Mr. Yorke noted that since 2006, WASA has been at the forefront of the e-auction process, which has netted total savings in the procurement of goods and services to the Authority totaling TT\$273M.



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“Water is the engine of economic growth and human and social development. WASA is the agency with the responsibility to fuel that growth and development”



Progress towards 24/7 to Customers

By the time parang is in its best voice at the end of this year (2013), 50 percent of customers will be receiving a 24-hour supply of water seven days per week. “That amounts to a dramatic increase when compared to the 18 percent of customers who received a 24/7 supply a mere three years ago,” says Ag. Chief Executive Officer of the Water and Sewerage Authority (WASA), Gerard Yorke.

“And the projection is to increase that figure to 60 percent by December 2015, and at the end of 2016, the population of Trinidad and Tobago will have a 24/7 assured 70 percent supply of potable water to their homes and business places.”

But to be able to successfully carry out projects to improve the service to customers requires a programme of replacement and modernization of the pipeline infrastructure, construction of water treatment plants, service reservoirs and booster stations.

The projects to be executed are designed to meet the needs for increased, high quality water and wastewater services throughout Trinidad and Tobago.

Among the programme of works already underway is the replacement of forty-four (44) kilometers of trunk lines along the Priority Bus Route from Laventille to the Hollis Reservoir in Valencia.

This follows the successful replacement of the 28 kilometer Navet Trunk Main from the TCO Booster Station, Tabaquite to San Fernando, which improved the supply to an estimated 300,000 residents of South Trinidad.

Another major project on the horizon is the dualing of the Caroni South Trunk Main from Caroni to the San Fernando Booster Station.

Improvement works in Tobago are very much part of the process, with the recently installed pipeline project from Signal Hill to Bacolet, improving the supply to customers in those areas from a 24/2 supply to a full 24/7 supply.



Robert Winston Dillon of Signal Hill, Tobago waters his garden.

By the end of this year, **60%**
of our customers here in Tobago will
be receiving a 24/7 water supply

Residents of Arnos Vale have also been moved to a 24/7 supply from a 24/4 supply, as well as customers in communities from Buccoo to Courland, who are now enjoying a similarly frequent supply. So too are the hotels and other business operations in the Buccoo to Courland area.

“By the end of this year, 80 percent of our customers here in Tobago will be receiving a 24/7 water supply,” says Head, Tobago Affairs, Raffie David. But the manager admits that there are challenges with getting the water required into Charlotteville and surrounding areas.

“But we have solutions,” says CEO Yorke. “We have plans to construct a service reservoir to provide customers with a better supply.”

In fact Aqua Store, of Florida, USA has been contracted to fabricate and install 10 service reservoirs, with storage capacities ranging from 50,000 and 100,000 gallons; that will be constructed in water-stressed communities in various parts of Trinidad and Tobago.

Another means being employed by WASA to bring potable supplies to developing communities is through projects funded under the National Social Development Programme (NSDP). Essentially, the programme, first funded by the Ministry of Public Utilities and at present by the Ministry of Social Development, finances water supply improvement projects in rural and developing communities.

A salient feature of the NSDP is that it engages private NSDP contractors to undertake pipeline construction projects. “How we help the contractors is that we give them materials. We also ensure that where possible, the NSDP contractors hire local labour from these communities to do the pipe-laying and we monitor the works,” says Ag. CEO, Yorke. But he makes the point that in instances when NSDP contractors are not available, WASA takes on the job.

WASA is also collaborating with PUB-CPG Consultants of Singapore to provide technical support and services for the development of the Beetham Wastewater Treatment Plant Reuse Project. This project aims to utilize the final effluent released from the Beetham Plant for use by Industries located at the Point Lisas Industrial Estate. To this effect WASA has signed a Memorandum of Understanding with the National Gas Company for the construction of a pipeline between the Beetham Plant and Point Lisas.

“This will facilitate the transfer of 10 million gallons of treated water per day for reuse as high-grade industrial water at Point Lisas Industrial Estate,” says Ag. CEO Yorke.

“At present the 19mgd of water used at the Point Lisas Estate comes from the Desalination Plant; it means therefore that this water, will now become available for domestic consumption,” says Mr. Yorke.

In the north-west in the Upper Covigne area, a community that has long gone without a regular pipe-borne water supply, was recently rectified to the point where residents are now receiving an almost 24/7 supply.

Supply issues affecting areas in South-West Trinidad are also being addressed with the construction of a Desalination Plant by the Seven Seas International Company of Florida, USA at the Petrotrin Marine Terminal Facility Compound, Point Fortin with a total daily production capacity of 4.6 million gallons of water per day.

“That would ease a lot of problems for people in La Brea and Point Fortin, who have been complaining for years. The project will also be able to supply the industrial estate, at Labidco” says the Ag. CEO.



Coming soon the construction of two major wastewater treatment plants in Malabar & San Fernando

As could be expected a major challenge to meeting the demand for an improved water supply and expanded wastewater systems is funding of the projects.

That challenge is exacerbated by the fact that the last increase in rates allowed to WASA by the Regulated Industries Commission (RIC) for residential use goes back 20 years to 1993.

And this is notwithstanding the fact that “we have made a business case for an increase to the RIC. The reality is that it has cost over \$5 billion for the developments outlined. Moreover, WASA is just one agency that is standing in line for capital financing by the Government,” observed Mr. Yorke.

As our customers would know, the Authority has not been standing still waiting on the Government, lending agencies, and on rate increases from the RIC.

A rigorous collections programme has been in progress over the last year; this has allowed the Authority to increase its revenue earned from rates by approximately \$100 million to \$836 million for the 2011-2012 year.

“The equation is a simple one: the provision of quality water and wastewater services requires customers to pay their bills on time and so too does it depend on the RIC to grant well-earned tariff increases to the Authority,” says Mr. Yorke.

Historically, not enough attention was paid to the expansion and integration of the wastewater sector in Trinidad and Tobago; this has led to many of the fastest developing areas of the country being woefully short on wastewater collection, treatment and disposal capacity. This will soon change with the construction of major wastewater treatment plants in Malabar (Arima) and San Fernando.

This follows the granting of the largest loan to a country in the Western Hemisphere from the Inter-American development Bank in January 2013.

The enhanced performance over the last three years has been derived from direction at the ministerial and Board level as well as the dedication and hard work of WASA’s Management and staff.

Skills and the disposition of employees and those contracted by the Authority have been enhanced by on-going training programmes. Organizational restructuring with a focus on the decentralization of services closer to the customer to reach high-performance levels is currently underway.

“The National Water and Sewerage Corporation of Uganda, which is currently involved in the development of a Performance Improvement Plan for WASA, was in a very similar state to us 20 years ago. They had high numbers of staff; their receivables were very high; their collections were poor; they looked like WASA of a few years ago,” says Ag. CEO Yorke.

But now the Ugandan water utility is making profits on an annual basis “and this is where WASA is planning to be with a highly trained and motivated staff,” says Mr. Yorke.

The Ag. CEO notes that “water is the engine of economic growth and human and social development. WASA is the agency with the responsibility to fuel that growth and development, we are taking that responsibility very seriously.”

And while he is conscious that the Authority is a little way off from being the ideal organisation Mr. Yorke knows “we are getting there and are committed to meeting the need for a high-quality and consistent 24/7 supply of potable water and the development of the waste water infrastructure.”



Squatting

and the threat to the country's water supply

Above: WASA's Hollis Trunk Main along the Priority Bus Route Champ Fleurs constructed over by Carib Brewery.

Many people consider squatting an easy solution to their need for housing, and in many cases give very little thought to exactly where they set up house. It often seems that any piece of empty land will do. The trouble is that although the land may be empty or seem so to people, who are in search for a place to live, it is often not free just for the taking, or there are good reasons why it is not smart to build there.

In a recent survey conducted to identify squatters, structures and properties on or in close proximity to its mains and on its lands, the Water and Sewerage Authority (WASA) found out that hundreds of people have set up house on, or dangerously close to its water mains, pipelines and other infrastructure. What these squatters and encroachers do not realize, is that these mains carry water under very high pressure and if the pipelines break for any reason, "an enormous disaster" can result.

And that's not all. There is also the problem of contamination of the water supply where water is collected from rivers and other watercourses, and the need to simply get access to these facilities to carry out repairs.





NIHERST, Churchill Roosevelt Highway, Maloney

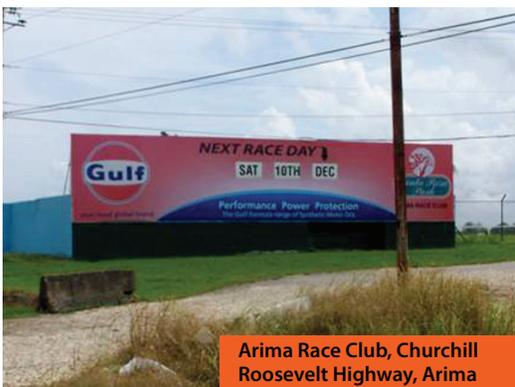
In one case, animal dung was found on the banks of a river and this is cause for concern because animal faeces often contain a single cell parasite known as Cryptosporidium, which can cause gastro-intestinal illness if it gets into the water system and is consumed by humans.

So mainly for the safety of the squatters and the protection of the public water supply, WASA has begun trying to convince illegal occupiers of its lands and pipeline infrastructure that they need to relocate. And it's not just people looking for a place to live; the survey found that commercial buildings, churches, temples, schools, even a police station and other government offices have been built on or too close to many of its mains and other infrastructure.

Too close is within about fifteen (15) feet on either side of a trunk main or pipeline, although in many cases the offending structures have actually been erected on top of the main or pipeline.

In preparation for the exercise of persuading squatters and others that they need to re-locate, the Authority has installed thousands of warning signs on its properties hoping to discourage others from squatting or building in dangerous places, and in an effort to save their lives and property in the event of disaster.

WASA fully recognizes that getting squatters and others to re-locate will not be an easy job, especially in cases where relationships have formed and communities have sprung up over the years. So to ensure that the change is



Arima Race Club, Churchill Roosevelt Highway, Arima



Food Basket Supermarket, Churchill Roosevelt Highway, Arima

handled as humanely and with as much compassion as possible, a very large task force has been assembled to identify the squatters, the offending structures and properties which have been built.

So far a total of 726 squatters or properties have been found which need to be re-located - 224 squatters have been found either on or too close to the Caroni 54-inch South Trunk Main; 56 along the North Oropouche 42-inch Trunk Main; 411 along the Hollis 24-inch Trunk Main; 22 on lands at the Caroni Water Treatment Plant, and 33 on watershed lands at Fondes Amandes, St. Ann's.

A few of the facts make clear the urgency of the whole exercise. For instance, the Caroni South Trunk Main, which runs from the Caroni Arena Water Treatment Plant to the San Fernando Booster Station, carries 43 million gallons of treated water per day at a pressure of 36.58 pounds per square inch (PSI). WASA has determined that if this main were to rupture for any reason especially with the stated quantity of flow and pressure, when coupled with some of the poor quality structures directly over and close to the main this could create an enormous disaster.

The same could be said about the 42-inch North Oropouche Main which carries 20 million gallons of treated water per day.

Then there is the 24-inch Hollis Trunk Main where 411 properties, including a T&TEC power station, have been built either on the main or too close to it.

All illegal occupiers have been formally notified of the situation and WASA has been holding discussions with the parliamentary and local government representatives of the affected communities, as well as the Land Settlement Agency and the Office of the Commissioner of State Lands, with a view towards finding a solution.

This solution will aim to ensure public safety and the protection of the country's water resources.



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Illegal connections deprive paying customers of water

Every illegal connection to WASA's water supply robs paying customers of thousands of gallons of water every day. Moreover, residents who tap into WASA's water mains through one fraudulent means or the other, place extra financial burdens on the Water and Sewerage Authority to realise the objective of having all its customers enjoy, in the not-too distant future, a 24-hour water supply seven days every week.

"The reality is that Illegal connections impact the Water and Sewerage Authority in various ways, such as reducing the water supply to legitimate paying customers, along with a loss of revenue from unaccounted for water, which costs a lot of money to treat from its raw state," says Doodnath Bhola, Director Corporate Services.

"It is an illegal act to connect to WASA's water supply without going through the procedure of applying to the Authority and going through the fairly simple process of filling out an application form," reiterates Mr. Bhola.



Doodnath Bhola, Director Corporate Services

payments totalling

\$2.3M

were received from

1,503

disconnected accounts. This would include both payments on arrears, as well as payments on the reversal of disconnection charges

Following the procedure set out by the Authority for a legal connection to be obtained means the customer will then be able to make quarterly payments for his/her water supply. "We should all be aware of the fact that the treatment of water from its raw stage, is costly and therefore we should all be ready to make our contribution to that cost," states the Director of Corporate Services.

WASA has so far identified 5,845 disconnected properties which need to be investigated for possible illegal connections. 3,195 of those properties have been inspected, and of that number 788 were found to have been illegally reconnected to WASA's water system.

Persons with illegal connections who have failed to regularise their status, will be disconnected and legal action will be initiated against them.

The penalty for an illegal connection amounts to a mere \$75.00 fine which means that the charge is not particularly prohibitive and in itself unlikely to dissuade persons as a penalty. But while WASA will disconnect illegal connections from its system, Mr. Bhola says the Authority is not particularly interested in long, expensive court actions: "What we are attempting to do is to encourage persons to take on the responsibility of applying for and receiving the approval of WASA to connect to our system. In this way they will make much needed contributions to the development and sustainability of a 21st century water system."

Directly as a result of the awareness drive started in January of this year, payments totalling \$2.3Mn were received for 1,503 disconnected accounts. This include both payments on arrears, as well as payments on the reversal of disconnection charges.

"This is a very encouraging shift in attitudes of the hundreds of persons who were previously illegally connected to WASA's system," notes Mr. Bhola.

He observed "we interpret it as an indication that customers are understanding the importance of becoming legally connected to be able to assist the Authority to fulfil its responsibilities, and in the process customers will be protecting their own supply of water."



5,845
properties
investigated for
possible illegal
connections

A photograph of an elderly man with grey hair, wearing a white polo shirt with dark stripes on the sleeves and grey trousers. He is kneeling in a garden, holding a large green plastic watering can and pouring water onto several green leafy plants. The background shows a simple outdoor structure with a white cloth hanging from it.

NSDP - *A Social Heal*

the National Community to ensure that all citizens have access to a reliable and sustainable supply of pipe-borne water and electricity. These services will be delivered with empathy and respect within a system of transparency and accountability”

WASA's responsibility under the NSDP is to improve the potable water supply service to the population throughout Trinidad and Tobago, in particular bringing relief where the level of service is less than 48 hours per week, and to areas that are without a water supply.

The Programme includes projects with the following focus areas:-

- **Installation of Pipelines**
- **Installation of Booster Pumps**
- **Drilling of Wells**
- **Installation of Communal Water Tanks**
- **Installation of Strategic Water Storage Tanks**
- **Truck borne supplies to areas adversely affected by dry season conditions**
- **Development of new and small contractors to be utilized in the programme**

In recognition of the need to improve and accelerate the delivery of utility and other community services within our country, the Government established the National Social Development Programme (NSDP) in 2001 under the Ministry of Public Utilities (MPU). Although the administration of the programme now lies with the Ministry of the People and Social Development, the Programme's Mission Statement is still valid today: “NSDP will reach out to all sectors of

Within recent years, the programme has focused primarily on pipelaying activities to address the overwhelming demand for water in unserved and underserved areas. Priority was given to undertake pipeline projects in rural communities with emphasis placed on first time customers and customers with long-standing water service connections.

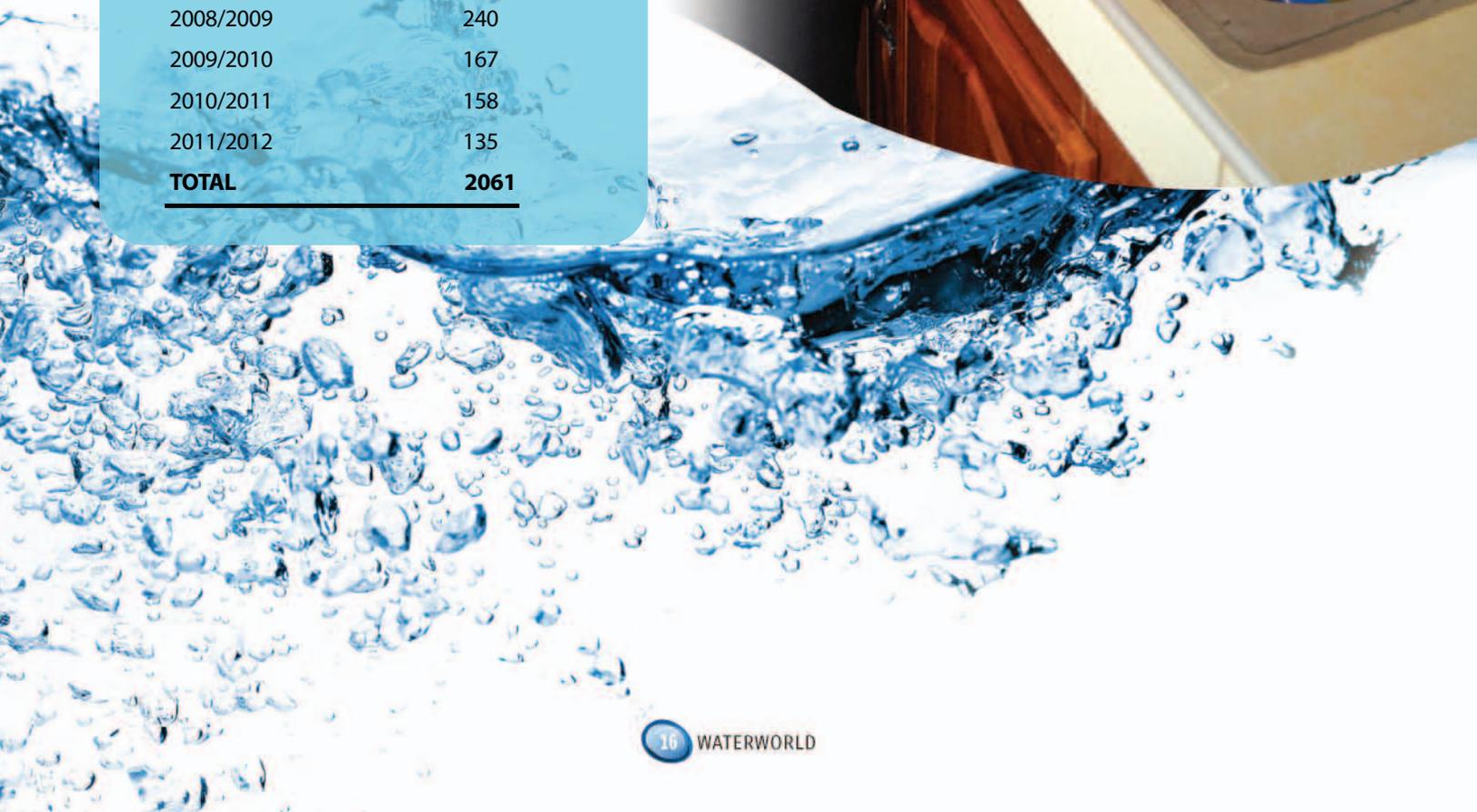
Since inception, the NSDP has delivered the following.

- Executed and completed a total of 2,061 projects including approximately 1,600 pipelaying projects
- Installed 871.9 kilometers of pipes
- Drilled 26 new wells
- Constructed and Rehabilitated 10 booster stations
- Approximately 200,470 citizens have benefitted from an improved water supply
- Other socio-economic benefits associated with employment and training, development of small contractors

The annual expenditure and achievements of the NSDP Programme is summarized in the table below.



Year	No. of Projects Approved
2001/2002	132
2002/2003	120
2003/2004	150
2004/2005	385
2005/2006	295
2006/2007	171
2007/2008	108
2008/2009	240
2009/2010	167
2010/2011	158
2011/2012	135
TOTAL	2061





CREATING A HIGH PERFORMANCE ORGANISATION THE TRANSFORMATION AGENDA

The Water and Sewerage Authority has developed the following four strategic pillars to achieve its mandate of Water Security for Every Sector:

1. Human Capital Development
2. Customer Care
3. Cost Optimization and
4. Revenue Enhancement

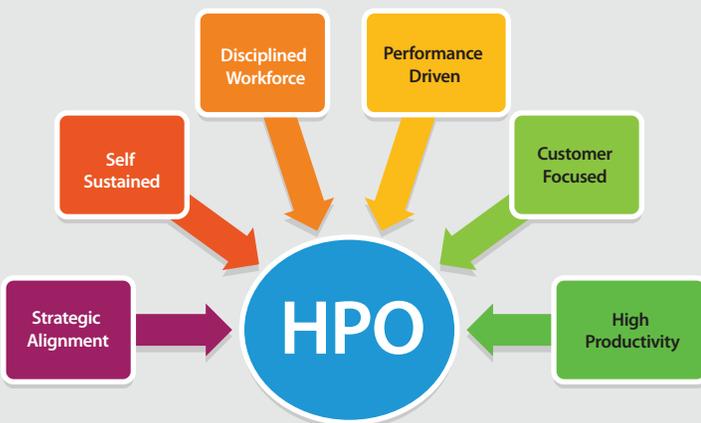
According to Ken Mahabir, Director Human Resources, the division is a key strategic partner in the delivery of this mandate through the creation of a High Performance Organisation (HPO). That is an organisation that is strategically aligned, self sustained, disciplined, performance driven and customer focused.

Several strategies are being utilized in this process of creating and sustaining a HPO inclusive of:

1. Employee Optimization – Attracting and Retaining the Best Talent
2. Championing an HPO – Creating an Enabling Environment
3. Talent Management – Building a Capable and Empowered Workforce
4. Social Dialogue – Maintaining Industrial Peace
5. Results Oriented – Establishing a Culture of Performance



Ken Mahabir, Director Human Resources



Mr. Mahabir noted that whilst the Human Resources Division is the driving force behind this transformation agenda, it has worked collaboratively with the Authority's Leadership Team and Executive Management, towards the implementation of two key strategies:

- A Voluntary Early Separation Programme (VESP) and
- Organisational Restructuring.

Voluntary Early Separation Programme (VESP)

VESP is an internationally proven and acceptable method to facilitate early separation. This strategy is utilized worldwide by organizations and agencies that are undergoing transformation (restructuring, reorganization of functions and downsizing). It provides a financial platform for employees to redirect their talent and expertise to achieve their full potential in areas that are of value to them. This strategy was implemented in July 2012 to reduce the Authority's workforce was to facilitate the attainment of the regional staff to connections benchmark.

The option of VESP will minimize the impact of associated risks in the execution of rightsizing strategies affording WASA the opportunity to achieve its optimal workforce with minimal disruption.

The Authority has partnered with the IDB and the Ministry of Finance to acquire partial funding for the programme and has developed an attractive package through bilateral discussions with the Unions. It has also communicated with other Governmental Agencies (BIR, Comptroller of Accounts, Auditor General, FCB Trust Co.) to facilitate timely and accurate disbursement of terminal benefits to VESP applicants.

A VESP Secretariat was established to provide information to employees regarding the VESP programme and their financial packages. A voluntary separation transition training programme was implemented to allow a seamless transition for VESP applicants through the provision of sponsored training, career counseling & planning and entrepreneurial guidance for persons who are desirous of starting their own business.

Organisational Restructuring

The Authority has undertaken a restructuring exercise to complement the VESP initiative. The Human Resources Division is utilizing a collaborative approach to guide this agenda. The restructuring initiative will result in:

- 1. Bringing the decision-making process closer to the consumer for improved response time through the creation of a flatter and decentralized organisation.**
- 2. Manpower related cost reduction and improved operational efficiencies through the enlargement of job functions, business process re-engineering and ensuring the clarity of role definition and accountabilities.**
- 3. Identification and implementation of alternative work arrangements to provide and support the achievement of the Authority's mandate.**

All Stakeholders have demonstrated a high level of commitment and participation in the VESP and Organisational Restructuring inclusive of the VESP applicants who have taken advantage of the Training and Development opportunities to realize their full potential as they embark upon their new life journey. The customer has begun to experience the positive impact of these initiatives as the Authority transforms into a High Performance Organisation. The positive feedback has reenergized the Authority's stakeholders to focus on the transformation ensuring they remain committed to the process.



Approaching Financial Viability and Total Customer Service

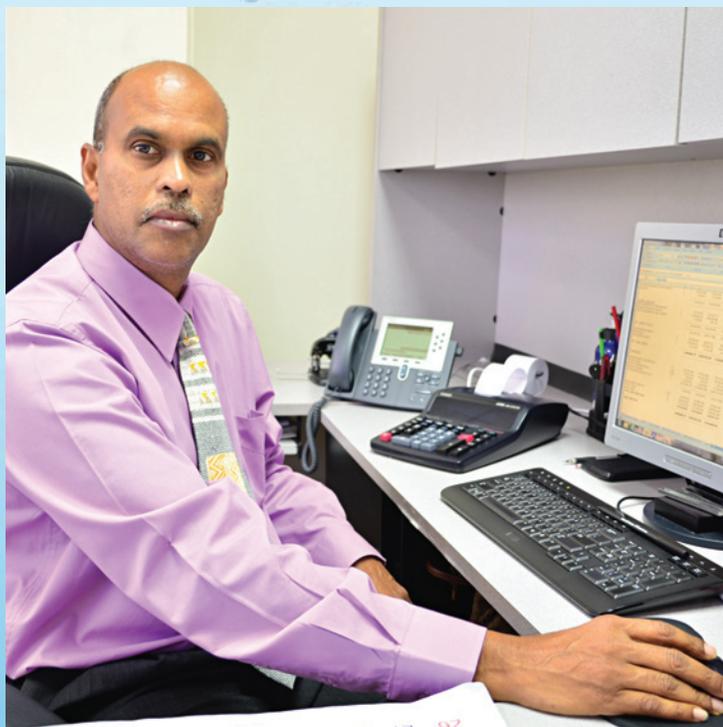
In another time, the management of the Water and Sewerage Authority could not conceive of this vital utility achieving financial viability, at least not in the then foreseeable future.

Today, it is possible for the management, having done the background planning and managing, to confidently know that some time into the near future, WASA would be able to meet its operational expenses, and make payments on its debts at the same time that growth and expansion are achieved.

As always, expansion of the capabilities of WASA makes the Authority better positioned to meet its major responsibility: to serve our customers with a high quality and reliable supply of water.

But how is the financial viability of WASA defined? "It starts with the ability of the Authority to generate sufficient income to meet operating expenses; honour debt commitments; and, where applicable, allow for growth in the organisation while maintaining service levels," says Gerard Mathura, Head Payments, Treasury, Financial and Capital Reporting.

One of the major hurdles facing the Authority's achievement of financial viability is the fact that WASA continues to bill customers on a tariff structure implemented in 1992. Not only is this tariff outdated, but the Authority also continues to bill customers on an Annual Taxable Value (ATV) system rather than a volumetric one; this is the concern expressed by the financial



Gerard Mathura, Head Payments, Treasury, Financial and Capital Reporting

management team. Put differently, the system needs to be changed to have customers pay for the quantity of water used.

Notwithstanding that particular limitation, WASA's management has worked diligently through the financial year to enhance the revenues available to it.

As the Authority approaches the end of its 3rd quarter of fiscal year 2013, revenue collection has increased and at the same time, WASA has been more cost efficient in utilizing its resources. These two aspects of financial management have improved the Authority's financial outlook.

Mr. Mathura identifies a few major strategies to increase the collection of rates:

- Completion of the Customer Surveying Investigation Project, which is aimed at cleaning up the customer database and ensuring all water consumed is billed and accounted for
- Expansion of the Authority's business avenues to generate revenue enhancement
- Approval of a new tariff structure which was submitted to the RIC in December, 2007
- Implementation of an online bill payment system to encourage easier payments by customers

- Review and possible restructuring of the Authority's Capital Structure
- Adoption of a Rent-to-Own Policy regarding Property Rental with estimated savings of \$5. million per annum
- Reduction in the Authority's Overdraft rate from 11.25% in 2008 to 1.95% in 2013

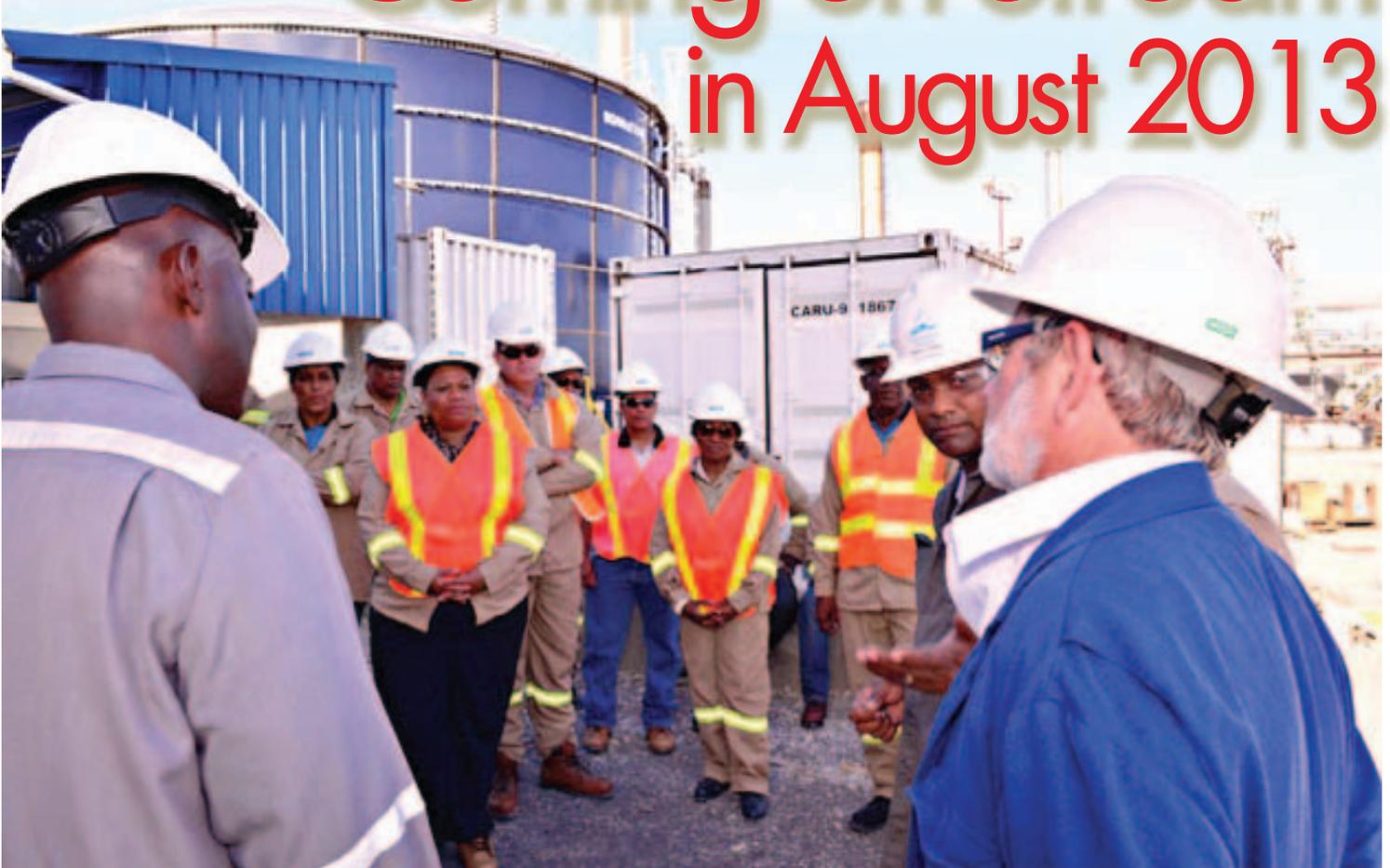
"As a result of some of these measures already implemented, the Authority has recorded a significant increase in its current ratio from 0.54 in 2008 to 1.03 in 2011. In real terms the increase in the ratio has given the Authority the ability to meet its short term obligations," says the Head Payments, Treasury, Financial and Capital Reporting.

"With the continued implementation of the above and new strategies, in accordance with the financial policies governing the Authority, WASA can look forward to achieving financial viability within the foreseeable future," is the assured statement of Mr. Mathura.

Financial viability is no longer an objective that is far off into the future. The Board of Commissioners, Senior Executives, and Management Team are all pursuing this objective with great determination, a scientific approach, concern for staff and a commitment to meet the needs of customers.



New Desal Plant Coming on Stream in August 2013



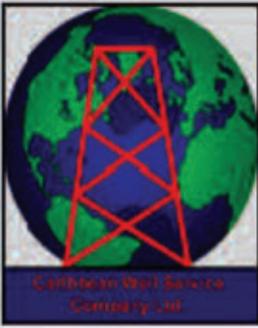
Water and Sewerage Authority (WASA) is set to deliver on another major water improvement project in August 2013, when the new Point Fortin Desalination Plant comes fully on stream. When operating at peak the plant will pump 4.6 million gallons of water per day (mgd) into the utility's transmission and distribution system.

An estimated 31,000 domestic and industrial customers will benefit from the new plant in such areas as Point Fortin; Techier Village; Lot 10, Parrylands; Guapo; Vance River; Sobo Village; La Brea and the La Brea Industrial Estate as well as other large users such as Petrotrin and Atlantic LNG. Customers in these areas who in some instances are presently receiving a one and two day weekly supply will move either to a five day or full 24/7 supply.

Construction of the Point Fortin Desalination Plant started in May 2012 with the aim of addressing the supply shortfall issues, and the limited raw water sources within the Borough, as well as other communities in the South-West region. When

Members of WASA's Management Team tour construction of the new Point Fortin Desal Plant in May 2013.

“The meteorological drought of 2010 was a major turning point for the Authority in its efforts to address the ongoing water supply issues plaguing the South West region”



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Acting CEO, Gerard Yorke (centre), listens as Snr. Manager – Engineering and Design, David Nero, provides details on construction work at the new Point Fortin Desal Plant.

PVC main from New Village to Dunlop Roundabout, and installation of pressure-reducing valves strategically throughout the distribution system.

the Point Fortin Desalination Plant is fully onstream, the water that would have been transmitted to the impacted communities from the Caroni Water Treatment Plant will be diverted to other demand areas.

The country's newest desalination plant, which was constructed by Seven Seas Water, under a Build-Own-Operate arrangement, is located on the compound of Petrotrin's Marine Terminal Facility, Point Fortin.

The country's first desalination plant at Point Lisas, which is owned and operated by Desalcott, began operation in 2002 with a production of 24mgd.

The meteorological drought of 2010 was a major turning point for the Authority in its efforts to address the ongoing water supply issues plaguing the South-West region. This difficult situation caused the Authority to look more closely at finding a localized source for the region; this search led eventually to the identification of the Point Fortin Desalination Plant as the most viable option.

To accommodate the completion of the plant, a number of other water supply improvement works were required, those being the construction of the Cap-de-Ville Booster Station; installation of 5.9km of 300mm DI main from Cap-de-Ville Main Road to Dunlop Roundabout along South Central; installation of 3km of 150mm

The Point Fortin area is at present served by three sources, Chatham, Techier and Point Fortin Water Treatment Plants, and most of the areas served by these plants receive a scheduled water supply. The new Point Fortin Desal Plant, when fully operational and coupled with the other transmission/ distribution infrastructural development works, will bring about a significant improvement in the level of service to customers from Point Fortin to Erin. The benefits will range from a minimum 24/5 to maximum 24/7 water supply.

“the plant will pump 4.6 million gallons of water per day (mgd) into the Authority's transmission and distribution systems.”

WASA is moving apace with its programme of infrastructural development works designed to alleviate the water supply shortfall to various areas within Trinidad and Tobago. To this end, the Authority has already delivered on projects such as the Navet Trunk Main Replacement in 2011, which brought about an improved supply to over 300,000 persons

between Rio Claro and San Fernando; Courland to Buccoo Mains Replacement, which was completed in 2012 with some 20,000 beneficiaries.

Currently ongoing is the Hollis Trunk Main Replacement project, which runs from Port of Spain to Valencia, while plans are being completed for commencement of the Caroni South Trunk Main Dualing Project. These two undertakings when completed will deliver a further improved water supply to hundreds of thousands of customers throughout north, central and south Trinidad, advancing the Authority well along the way to delivering on Government's mandate of water security for every sector.

Ugandans Pilot Dramatic Improvements at WASA



The Water and Sewerage Authority's (WASA) transformation into an efficient, high performance, customer-focused utility is being driven with assistance from Uganda's National Water and Sewerage Corporation (NWSC) under the terms of a Memorandum of Understanding signed between the parties in 2011 which focuses on the development of a Performance Improvement Plan (PIP) for WASA.

In 2012 technocrats from NWSC worked with an organisation wide cross-functional team from WASA on developing the PIP which would drive the transformation of the utility along four areas : human capital development; customer care; revenue enhancement and cost optimisation.

The team returned in June 2013 for the purpose of conducting a mid-term performance review.

Waterworld's Editor sat down for an interview with, Johnson Amayo, Chief Manager, Planning and Capital Development Division and George E. Okol, Chief Manager Commercial and Customer Care Services, NWSC, at the end of their latest visit.

WATERWORLD:

Gentlemen, people hearing that the Water and Sewerage Authority has signed a Memorandum of Understanding with a company from Uganda, an African country, to improve its performance will be taken aback and probably ask themselves what can an African company teach us about improved service delivery; and this comes against the background that we in this part of the world hear mainly negative things about organisational and institutional capacity in African countries.

JOHNSON AMAYO: I understand the question because when people hear about Africa, they think about forests, their perception is that nothing is moving there but you will be amazed if you come over and you see the many developments which are taking place! So there are lots of things we are doing right (in Africa) and there are also many things we are not doing right. And so under the Memorandum of Understanding, which is supposed to be a one way business, there are many benefits for Trinidad and Tobago and for Uganda. We are benefitting from it substantially because Trinidad and Tobago is also supporting Uganda in the development of its oil sector. We have also discovered oil and many of our students come and study here and T&T is also supporting the Petroleum Institute of Uganda. So there is a lot that we can learn from you, for example, in the area of public education. We have learnt that public education is a strong area here – there are areas (in which) we can learn. So there are going to be these little things in a mutual relationship – it is not going to be just where one person is going to learn from the other.

“One of the key successes I see is that the programme developed with WASA’s management has been embraced by members of staff and the executive leadership of the organisation”



L - R: George Okol, Johnson Amayo and Ag. CEO, Gerard Yorke at the two day workshop to assess WASA’s progress under the PIP.

WATERWORLD:

Tell us about the National Water and Sewerage Corporation of Uganda?

JOHNSON AMAYO: The Corporation is owned 100% by the Government of Uganda. We are responsible for water and sewerage services in the urban centres. It was formed out of the need to corporatise water utilities in Uganda. Before that water supplies were run by the village town council. We have grown over the years and we are now responsible for 24 towns. We are soon taking over 500 towns. In 1998 our performance was very, very, bad. The Government of Uganda wanted to privatise the company, water losses were very high, people couldn’t get water and we were operating in a negative position. We also had a very bad staff who would come to work very late, and their performance was very poor. And the government thought the best thing to do was to privatise the institution in keeping with the trend of the times.

And so the services of a French multi-national water company were engaged but there was not much that could be achieved and because of the fear of privatisation and divestment, the workers felt it was necessary to start doing a level of work and that’s when most of the reforms in the National Water and Sewerage Corporation came about.

We have worked in sub-Saharan Africa, in Yemen and India and we have people who come from as far away as Bangladesh to come and learn our secret. And that’s how the engagement between us and Trinidad and Tobago came about. The two CEO’s met at an international conference and the C.E.O of WASA heard about us and it peaked his interest because he felt that there was something good happening at our company. So we have had visits from executives at WASA to Uganda to see our story for themselves and we subsequently signed a Memorandum of Understanding.

WATERWORLD:

What level of success has been achieved by WASA to transform the organisation?

JOHNSON AMAYO: Basically, our support has been in the area of management. We believe that most of the challenges of utilities are not only in infrastructure, but also in the management of infrastructure. It has worked in Tanzania, in Zambia, in Nigeria, in Ethiopia and right now we are in Tanzania in the energy sector.

It’s all about performance management, because we believe if you cannot measure, you cannot manage and if you don’t have a very good framework for implementing organisational change and the commercialization of the utility, – then you cannot move.

WATERWORLD:**So what have been your findings on this assessment visit to WASA?**

GEORGE OKOL: When the CEO's met at that international conference, the WASA management felt that the entity's service reliability and the handling of customer complaints were very low; collection of debt was very poor; general customer care was very poor. As a result it was clear that your WASA could not generate the funds to sustain the organisation. And I think that was exactly the situation we were in in Uganda. So our story motivated WASA that, "You've been there - Can we share experiences."

And when we come, we do not come to do this assessment ourselves, we are facilitators, it's the people who know what the problems are, so they are the ones who can tell their story. And then we use our experience to see how we can turn these problems into workable solutions. So these things must be talked about openly and that's what happened here. And then as a result of that we came up with a framework that addressed four pillars for WASA.

The pillars are human resource development – how can we improve the human resource to be able to serve the customer better? What are the challenges the human resource has? WASA's management then identified the challenges and defined what it wanted done. The other pillar is about cost optimisation that is to avoid waste in costs and so be able to optimise profit. The WASA management had to find the means to best ensure that expense is managed.

Then you had the pillar of revenue generation and the pillar of customer service. Any organisation dependent on public funding must create an orientation toward the customer because it is the customer who brings in the money required for survival.

One of the key successes I see is that the programme developed with WASA's management has been embraced by members of staff and the executive leadership of the organisation. Management provided leadership in this area. We also realised some improvement in general complaint handling; even revenue collections improved and so too has the management of staff improved.

We also have issues to do with data and an action plan has been devised to clean data so the performance plan is built on more realistic management data. We also have issues with the key performance indicators. We need to really see that this is drilled down a little more. But we are happy that they are moving in the right direction and they are now embracing the issue of decentralization.

Most of the operations are centralised here (at WASA headquarters in St Joseph). So you know the issues of bureaucracy and how long it takes to reach a customer far in the South and in the North and that in itself affects the ability to respond.

WATERWORLD:**What other recommendations are you making for the period ahead?**

JOHNSON AMAYO: The major challenge still remains that a large part of the population still does not have access to pipe-borne water. Some homes and communities get water five days a week and not 24 hours. So there is still the need for the government to continue investing in the infrastructure, but on the other hand the already existing infrastructure and the infrastructure yet to be put in place needs to be managed properly. So these are the areas where we are going to broaden our focus as we assist the company to improve its management.

And there is the need for the company to reform itself into a more commercially-run institution so that they are able to operate the water business in a more commercially-run and customer-focused manner.

WATERWORLD:**What is going to be the next step for WASA after the end of your assessment?**

GEORGE OKOL: The Performance Improvement Plan which we have recently completed here is a one year programme. As I say, change is a continuous process. We have been able to look at the challenges and we have transformed those challenges into areas of focus. So in the next three months up to the end of September, we are going to focus on those areas.



Aligning Our Strategies toward Operational Viability



Ramchand Ramcharan
Director Programmes and Change Management

Water and Sewerage Authority (WASA) is poised to become one of the premier public utility service providers in the western hemisphere. Over the past couple years, the Authority has embarked on major initiatives; focusing on improved and sustainable water and wastewater services for all sectors, cost optimization, human capital development and revenue enhancement aimed at bringing about improvement in the organisation's performance.

This pursuit to satisfy our vision includes the extensive use of the private sector as well as collaborations and partnerships with world class water utilities and donor funding agencies.

The Authority engaged the services of Aquagest of Spain to assess and advise on reengineering of our business processes, the National Water and Sewerage Corporation of Uganda for benchmarking studies and developing a Performance Improvement Plan and the Public Utilities Board (PUB) of Singapore and its partners for the feasibility of reuse of Beetham Wastewater effluent for industrial purposes. PUB was also engaged to review the Caroni Water Treatment Plant processes to modernise its operations and to undertake a study to optimise the water resource in the Caroni River Basin.

The Authority through the Government, secured a US\$276Mn loan, from the Inter American Development Bank for Wastewater development and have a commitment for another US\$200Mn as part of a multiphase loan for continued expansion in that sector.

Funds to the tune of TT\$900Mn from the issue of Bonds and another TT\$500Mn from Government via Infrastructure Development Fund – Public Sector Investment Programme and National Social Development Programme funding have been committed for infrastructure works, including rehabilitation of booster stations, storage reservoirs, water and wastewater treatment plants and construction of new pipelines, both in Trinidad and Tobago.

The customer service levels have improved based on development works. Over 87% of customers connected to the network, previously without a water supply are now receiving a minimum two day supply per week. Our mandate is to deliver and sustain a 24/7 service to all our customers.

In the thrust, to expand water services by extending the pipeline network, the Authority completed several new installations and some of the major development works undertaken include:

- **Replacement of the Navet Trunk Main, which improved service and reliability of supply for an estimated 300,000 consumers**
- **Installation of Claxton Bay to Springland transmission pipeline and Booster Station at Tulip Avenue which improved service and reliability of supply for 16,786 consumers.**
- **Installation of transmission pipeline along the SS Erin Road from Siparia to Penal which improved service and reliability of supply for 4,700 consumers**
- **Installation of transmission pipeline from Courland to Buccoo which improved service and reliability of supply for 1,100 consumers**
- **Installation of transmission pipeline from Cunapo to Biche which improved service and reliability of supply for 2,500 consumers**
- **The Point Lisas Industrial Estate commercial users have benefited from improved service with the installation of 5Km of trunk main**
- **Expansion works to improve the distribution system was completed on the San Fernando and Tabaquite Booster Stations from which more than 12,000 consumers have experienced improved service**
- **Start of construction of the Point Fortin Desalination Plant with a production capacity of 4.6 mgd. When the plant comes fully**

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Expanding Our Wastewater System

San Fernando West Sewer Rehabilitation Project: Skinner Park.



WASA and the Government of Trinidad and Tobago are securing hundreds of millions of dollars in long-term loans to expand and modernise wastewater systems, to protect the health of the population, and to guard against degradation of the natural environment.

The situation with wastewater treatment is that while 98% of the population of Trinidad and Tobago has been receiving an improved supply of quality drinking water over the last decade, the United Nations Children's Fund (UNICEF) points out that only 30% of Trinidad and Tobago's population is serviced by centralized wastewater facilities, with the remaining 70% being serviced by on-lot systems mainly (septic tanks and pit latrines).

And this is notwithstanding the fact that 92% of the population uses improved sanitation facilities such as flush toilets. Despite these improvements, the wastewater and water services face institutional, operational, maintenance and financial challenges.

Here is the overall situation. Since the introduction of a centralised wastewater system at Independence in 1962, the wastewater collection and treatment infrastructure has expanded to approximately 560 km of pipeline and 243 wastewater facilities in both Trinidad and Tobago.

Conscious of the gap which exists between the existing wastewater facilities and what is needed, WASA and the Government of the Republic of Trinidad and Tobago have therefore approached the Inter-American Development Bank (IDB), and presented the Wastewater Development Strategies 2012 – 2022.

“The objective of WASA and the Government is to pursue the improvement and expansion of the existing wastewater management services and facilities for the 70% of the population whose wastewater does not now filter into modern wastewater disposal and treatment systems,” says Denise Lee Sing-Pereira – Head Wastewater Projects.

Additionally, WASA and the Government are interested in working with the IDB to implement the institutional and operational reforms within the Authority to strengthen and improve the efficiency and cost-effectiveness of its services.

At home here in T&T, WASA is also working with the

The objective of WASA and the Government is to pursue the improvement and expansion of the existing wastewater management services and facilities for the 70% of the population whose wastewater does not now flow into modern wastewater treatment systems.”

Denise Lee Sing-Pereira – Head Wastewater Projects.



Regulated Industries Commission (RIC) to increase water tariff levels in the coming years so as to allow WASA to cover its operational costs.

WASA is the governing body for all water and wastewater services in the country. At present, approximately 400,000 persons are serviced by centralized wastewater systems operated by WASA and other agencies.

Twenty percent of the population is serviced by WASA's centralized wastewater system, operating 36 wastewater treatment plants and 32 lift stations.

Over the last 30 years as the population grew and new privately-owned housing developments were built without an adequate parallel expansion of the central wastewater systems, succeeding governments interested in having the need for housing met by private developers, required residential and industrial land developers to build and operate their own sewers and packaged wastewater treatment plants. This would provide WASA with time to expand its central wastewater systems, allowing these new housing schemes to connect at a later date to the central wastewater system.

However, the centralized wastewater schemes were not constructed. The developers did not have the authority to collect fees to pay for operation and maintenance (O&M) costs. As a result, in most cases once the developments were completed, O&M ceased and the plants became orphaned, giving rise to low service levels and poor quality effluent being discharged into the environment, says Ms. Lee Sing-Pereira.

“To begin transformation of the wastewater system, over the last five years, the Government secured two Loans from the IDB totalling approximately US\$300 million - US\$50 million and US\$250 million.”



IDB Water and Sanitation Specialist, Evan Cayetano, shake hands with Minister of the Environment and Water Resources, Senator the Honourable Ganga Singh, while WASA's Ag. CEO Gerard Yorke and Minister of Planning and Sustainable Development, Senator Dr. the Honourable Bhoendradatt Tewarie, look on.

Faced with an untenable situation of serious environmental impact due to inadequately treated wastewater flowing into the environment, approximately nine years ago, WASA started an initial takeover of 24 wastewater treatment plants and 11 lift stations. These facilities were previously owned by the Housing Development Corporation (HDC).

On the downside, the adoption of these additional plants has proven to be unprofitable due to the high O&M cost and the low wastewater tariffs. It is estimated that nearly all of the privately-owned wastewater treatment plants are mal-functioning or have been abandoned. To begin transformation of the wastewater system, the Government secured a US\$546.5 million multi-phase loan from the IDB for the Modernisation and Rehabilitation of the Wastewater Infrastructure.

The first tranche of US\$246.5 million will be used to undertake works on the new Malabar and San Fernando Wastewater Treatment Plants.

“When constructed, the plants will have the capacity to treat the wastewater generated from within the full catchments, improving WASA’s efficiency with the decommissioning of all smaller treatment plants,” says Head Wastewater Projects.

The remaining US\$300 million of the IDB loan package will be

released on a phased basis toward completion of the **Wastewater Rehabilitation Programme**. Part of the proceeds will be applied to payments for goods, works, related services and consulting services to be procured under this programme. Another key component is the interconnection of sewerage networks so that all wastewater generated within the relevant catchments will be conveyed to centralized wastewater treatment plants in Maloney, Malabar and San Fernando.

This will be the largest wastewater infrastructure project undertaken by WASA and the wastewater infrastructure improvement works in the San Fernando, Malabar and Maloney wastewater catchments are expected to increase wastewater coverage in Trinidad and Tobago by **18%**.

“The general objective of this operation is to continue to contribute to Government’s effort to improve the environmental conditions of T&T by decreasing the uncontrolled discharge of untreated wastewater into the environment,” says Denise Lee Sing-Pereira.

The message is that the Government of Trinidad and Tobago and WASA are moving swiftly to protect the health of the population and ensure that the high quality natural environment bequeathed to the nation is maintained and enhanced.



Driving for a Safer Trinidad and Tobago

Water and Sewerage Authority has embarked on a nationwide Drive Safely Billboard Campaign aimed at heightening awareness among employees and road users in general about the importance of responsible driving.

The campaign was developed in response to the increasing incidence of road accidents involving WASA employees as well as alarming national statistics on accidents involving young male drivers; and is designed to stimulate emotion among young males and heads of households through familial ties.

The Authority has taken up the mantle of promoting the importance of road safety on a national level and will continue

to undertake programmes geared towards ensuring the safety of its employees and motorists in general as part of a corporate social responsibility outreach initiative.

WASA is proud to be the first entity in Trinidad and Tobago, whether private or public, to undertake such a programme that is geared towards highlighting the importance of safe driving practices on the nation's roads.

Over the period 2011 to 2012 there were 537 accidents involving vehicles owned by WASA, of which two accidents resulted in the vehicles being written off and a third resulted in the death of an employee.

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An Arrive Alive statistical report on road fatalities by age group for Trinidad and Tobago from 2005 – 2010, published in May, 2012 showed that young males between the ages of 15 – 34 were the highest group involved in road fatalities.

Since 2009 the Authority adopted a best practice approach to road use in accordance with the National Safety Council (NSC) of the United States of America, seeking to educate and empower employees on operating vehicles safely. The NSC's research has shown that three factors are critical to defensive driving namely the driver, the vehicle and the driving environment including hazards relevant to road, weather, light and traffic mix.

High impact locations on WASA's compound where Drive Safety Billboards have been installed nationally are:

**Diego Martin Area Office
Transport Division, St. Joseph
Head Office Grounds, St. Joseph
Tacarigua
Eastern Regional Complex, Arouca
Caroni Water Treatment Plant
Chaguanas
San Fernando Bye Pass
King's Wharf
Beetham Pumping Station
Richmond WTP
Crooks River, Scarborough CSC
Lowlands Regional Complex**

Aligning Our Strategies toward Operational Viability

Continued from page 27

- on stream in August 2013, service to consumers in Point Fortin will move to 24/7 from 24/2; and areas as far as Penal and environs will also have improved service
- The communities of Mundo Nuevo, Talparo, Tamana Matura, Clarke Road and Point Fortin now have an increased water supply with the completion of four Portable Water Treatment Plants and Storage Tanks, each of 0.5mgd capacity
- Works to upgrade and refurbish the aged water production infrastructure at North Oropouche, Hollis, Caroni, Courland, Hillsborough, Freeport, Navet, Valsayn and El Socorro are ongoing
- Work has commenced on the replacement of the leaking Hollis Trunk Main, which stretches from Valencia in the east to Laventille in the west

The Authority has been examining its business operations and consequently took certain strategic positions relative to its financial viability, commercial operations and growing new business. This plan of action include increasing tariff/revenue, reducing operating expenses, collecting receivables, reorganising business, leveraging new business opportunities and implementing good human resource practices. The Authority has taken the initiative to explore further mechanisms to fund major infrastructure development other than direct government funding. Major infrastructure works planned as part the strategic initiatives include:

- Wastewater treatment and collection system in South West Tobago
- The integration of existing wastewater facilities with newly constructed facilities to expand the wastewater coverage
- Two hundred and fifteen properties to be connected to Scarborough Wastewater Treatment Plant
- Water reuse, namely, treatment of wastewater effluent at Beetham Wastewater Treatment Plants (10mgd) to meet industrial needs using BOOT arrangement
- The construction of a South Regional complex using BOOT arrangement
- The development of water sources in the North of Trinidad and transmission to populated areas in South
- The implementation of universal metering with automatic metering infrastructure to support water demand management and pay for actual use
- The construction of a national transmission grid with built-in redundancies to provide security of supply.

The Authority continues to make strides towards achieving its vision to be the best performing water utility in the Western Hemisphere through its collaborations with leaders in the Water Sector, in developing competencies of existing human resource, adopting new methods of work aimed at improving efficiency and delivering an improved level of service to customers and exploring new water sources to meet demand.

WASA contractors being held to **Higher Standards**



Wendell Diaz, Head Procurement and Logistics



Pipeline and road restoration contractors from South Trinidad at a meeting with WASA's management in May to discuss work standards.

Everyone in every village, town and indeed the cities, has a complaint and can cite an example of a road that has not been adequately restored after WASA has laid or repaired underground pipelines. We acknowledge the criticism the Authority has received over many years and share the blame with our contractors. But we are also lifting our contractors and our in-house crews to higher performance standards.

In this regard, performance improvement sessions were held over the period 21st May to 4th June with road restoration and pipeline installation contractors in the north and south of Trinidad and in Tobago.

Our projects management now have to monitor and continuously inspect the work of road restoration and maintenance contractors. We are telling them of the legal and operational obligations to produce quality works that “are consistent with standards and specifications. This would also mitigate against all risks that may expose the Authority to litigation from any party,” states Wendell Diaz, Head Procurement and Logistics.

Contractors are also being made aware of their contractual obligations “to follow all legitimate instructions given by the Authority’s appointed representatives.”

Being outfitted with the necessary Personal Protective Equipment (PPE), and to preserve the corporate image of the Authority, workers on the job, contracted or in-house, must conduct themselves in a manner that does not bring the Authority into disrepute, insists WASA’s management.

“In an effort to be ethical in all business dealings, the Authority continuously appraises the contractor’s performance over the life of the contract and takes appropriate action in the face of breaches of the contract,” states Mr. Diaz.

Contractors have been made aware anew in these times when citizens/consumers are demanding that officials report with integrity and transparency that they have a responsibility to submit properly prepared invoices in a timely manner, and to return all un-used materials to the Authority’s Stores at the end of projects.

Once all work/claims have been certified and verified, the Authority will keep to its responsibility to process all payment claims in a timely manner and to arrange for the timely releases of contractor’s securities. But if contractors do not meet the terms and conditions of their agreements, then the Authority will terminate as it deems fit, the contract and award to another contractor.

Additionally, the performance security may also be forfeited in part or in whole to cover costs. If the security proves to be inadequate then legal action can be pursued to recover the shortfall. The contractor may be suspended for a period of time.

The Authority may also opt to de-register the contractor after the conduct of an investigation as provided by WASA’s Tender Rules. The Authority has also embarked on a “Name and Shame” strategy whereby contractors responsible for shoddy and/or poor quality work are publicly identified.

The word to our customers who may think themselves victims of the Authority’s less than acceptable road work is that we are holding contractors and our employees to the highest of standards.

“Quality workmanship should be innovative for the benefit of the customer”



Benchmarking for High Standards of Work



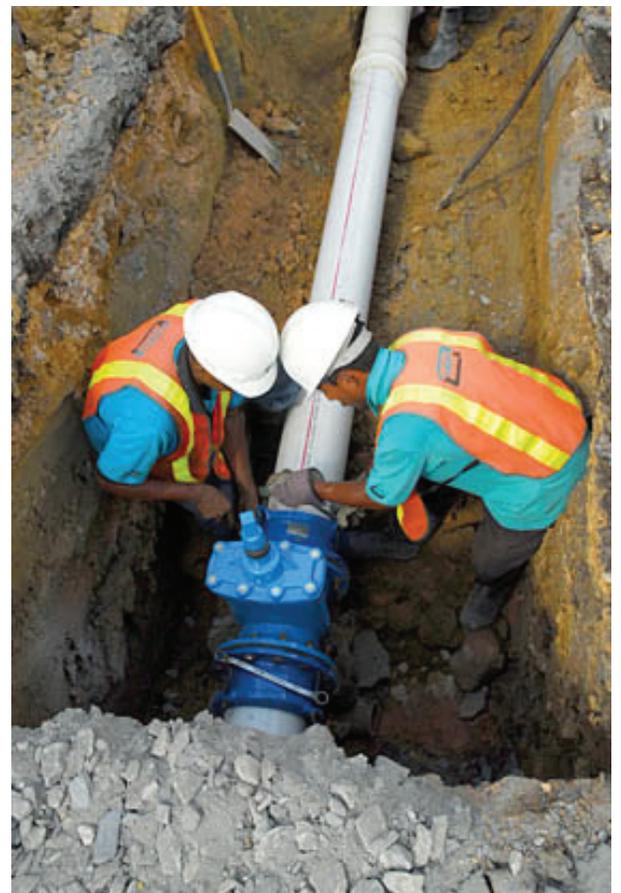
Raffie David, Head Tobago Affairs



A cross-section of pipeline and road restoration contractors from Tobago attending a meeting with WASA's management in June to discuss work standards.

Benchmarking is the process of comparing one's business processes and performance metrics to the best in the industry or to best practices in other industries. The objective is to understand and evaluate the current position of the business or organization in relation to 'best practice' and to identify areas and means of performance improvement.

It should be noted that there is no single process that has been adopted for benchmarking. Robert Camp, one of the earliest writers on the subject developed a 12-stage





Pipeline and road restoration contractors from Tobago listen attentively as WASA's management team outlines the required standards for their work.

“modern business practices have gone the route of benchmarking the processes adopted by contractors”

approach to successful benchmarking that includes: selecting the subject; defining the process; identifying the data sources; collecting data and selecting partners; determining the gap; establishing process differences; targeting future performances; communicating; adjusting goals; implementing, reviewing and recalibrating.

According to Raffie David, Head Tobago Affairs, this is the criteria that the Authority is using to award contracts as it pursues the modernization of its infrastructure in order to deliver improved water and wastewater services to customers. In this manner the Authority is getting value for the hundreds of millions of dollars awarded every year in contracts.

In keeping with the best corporate practices, WASA has been selecting the best contractors for projects based on the processes used by the contractors to do the job and on competitive pricing.



Social Media and the Customer Experience



Social media is no longer just about making and maintaining friends online, it has also evolved in the business world as a means of winning customers, connecting with customers and getting instant feedback in order to improve the customers' experience.

In April 2013 WASA established its Facebook page, while earlier in October 2012 its Twitter account was established both aligned to a strategy aimed at improving the level of customer care delivered by the Authority. These two media have provided

an instant way to connect with customers and it's also a way to get instant feedback. This is critical in a customer driven business such as the delivery of water and wastewater services.

The Authority's entry into the social media arena is aimed at bringing the organization closer to its customers by providing timely service updates and other pertinent information, as well as creating another channel for direct interaction with customers on various issues.

In less than three (3) short months WASA's Facebook page has become one of the fastest growing pages locally, attracting over 18,000 'likes' thus far. This is significant since those 'likes' translate into a possible reach of up to 1.6 million 'friends' of fans, while there is an actual average daily page reach of some 57,500 persons as at July 17th. Currently the Authority also has over 491 persons following its Twitter account.

According to global customer experience management website SDL.com, through social media, companies can observe customers' behavior rather than just collect information on their behavior. This means that customers' online posts and conversations often reflects what they feel, have done or intend to do. This is a key area of WASA's social media experience, since the feedback provided by customers has helped the organization to assess its service, as well as its image and make the necessary interventions to address both. The interface with customers using social media has in essence provided the Authority with sound feedback regarding its services, which the company actively uses to improve its service and level of customer care delivery.

Social media has not just revolutionised the way that family and friends can communicate and stay in touch with each other but also the way that customers and businesses interact. Persons linked to WASA's facebook page and Twitter account receive regular postings on issues such as service interruptions, water supply schedules, business and job opportunities, environmental preservation and water conservation, to name a few; while every effort is made to address customer issues that are raised by our 'fans' on Facebook and followers on Twitter.

Feel free to follow WASA on Twitter @wasatnt or like our WASA Trinidad & Tobago page on Facebook.





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WASA'S National Secondary School's Quiz Competition ... *a winner*



An integral part of WASA's public education outreach programme is the staging of the annual WASA National Secondary Schools' Quiz Competition. The competition serves as a means of educating the nation's young people and the wider community about issues impacting the provision of water and wastewater services; and to develop a better informed and more responsible consumer in the future.



A student completes the computerized, online examination, during the qualification round of the 2013 National Secondary Schools Quiz Competition, held at WASA's Public Education Centre.

In just three years, the WASA quiz, which targets Form 3 and 4 students of both public and private secondary schools, has become a leader in the organisation, production and broadcast of such educational programmes in the Caribbean region.

Secondary school students have been targeted as socio-cultural change agents since behaviours learned and practiced at a young age are likely to be carried over to adulthood. Additionally, young people are also excellent change agents in their homes where they can influence the habits of adults within their households.

The success of the WASA quiz has drawn the attention of other organisations that are seeking to use it as a model for the development of similar initiatives.



Minister of State in the Ministry of the Environment and Water Resources, the Honourable Ramona Ramdial and member of WASA's Board of Commissioners, Hewlett Waldron, present the first place prize in WASA's 2013 'In the know with H2O: Adopt A River Quiz Competition' to winners - Presentation College Chaguanas; L-R: Marc Bhopalsingh, Mikel Rajkumar, Reece Bajnathsingh and Joshua Manickchand.

The third edition of the competition concluded on 8th May, 2013 under the theme "In The Know with H2O; Adopt-a-River". In direct relation to Millenium Development Goal #7, the competition focused on issues related to water resources and environmental sustainability, as it addressed topics such as:

- **Ecosystem dynamics and the status of ecosystems in Trinidad and Tobago**
- **Watershed assessments and quality**
- **Integrated Water Resources Management and**
- **WASA's Adopt-A -River Programme**

The competition also served as a launching pad for WASA's Adopt-A-River (AAR) programme, which has been endorsed by the Ministry of the Environment and Water Resources. The AAR initiative aims to build awareness concerning local watershed issues and to facilitate the participation of public and private sector entities in sustainable and holistic projects that would improve the status of rivers and watersheds in Trinidad and Tobago.

After three years of WASA's Secondary Schools' Quiz Competition, a wide cross-section of the country's secondary school students as well as the wider population would have been exposed to information that would help to develop more environmentally conscious citizens, which will benefit the long term sustainability of our water resources and natural environment.



Team mates from Naparima College collaborate before responding to a question during the preliminary round of the 2013 National Secondary Schools Quiz Competition, held at WASA's Public Education Centre.

It's not just all about work --- employees have **FUN** too

Members of team Navet, 2013 Water Games champions, express their jubilation after collecting the winner's trophy from Minister of the Environment and Water Resources, Senator the Honourable Ganga Singh.



The Authority's hard-working employees in their thousands have not only developed expertise in the undertaking of various specialized fields in the water sector, but have also forged close, lasting bonds with friends and families of co-workers through their interactions with one another at various social, cultural and sporting endeavours as members of the WASA family. That same spirit of camaraderie displayed amongst employees when carrying out daily functions is evidenced at the variety of activities that take place year round.

One such event is WASA's Water Games. The Games have been staged for the past two (2) years at the scenic Arena Reservoir, San Raphael, replacing the traditional sporting events that were primarily staged on our expansive grounds at Head Office, St Joseph.



WASA FC – 2012 National Super League Champions.



Chairman of the Board of Commissioners, Indar Maharaj, presents an award for exemplary service to Assistant Manager Customer Care – South, Merle Bachoo, at the "Celebration of Our Success" Employee Awards Ceremony.

At this year's event on June 9th, over 2,000 employees from different divisions, with their families, turned out for a day of friendly water-based activities; among the events: water tug-o-war, kayak racing, water brigade and a land based aerobic burn-out.

Resilience and commitment WASA-style was on display for all to see.

WASA's Football Club (WASA FC) has consistently showcased the talents of its senior team, the reigning champions of the BMobile National Super League Competition. WASA FC also has teams competing in the Eastern Football Association competition as well as an Under-13 Junior Team; that will ensure a continuing stream of football teams into the future.

Emancipation Queen and Cultural Show held annually to commemorate the country's Emancipation Day Celebrations is another forum at which our employees display their gifts and talents.

WASA's Cricket Team emerged as winners of the 2012 Industrial League Windball Cricket Competition. Divali Celebrations held annually at Head Office Grounds is another item on the employee calendar, and this year, the celebrations attracted over 600 school children.



WASA 2013 Calypso Monarch – Anthony Bernard Charles (ABC).

In addition to cultural performances, the programme featured an array of exhibits including booths by the Solid Waste Management Company Ltd (SWMCOL), the Environmental Management Authority (EMA) and WASA's Public Education Centre.

Eid-ul-Fitr observance is another fixture on the employee calendar, and this is growing each year. The Annual Kaiso and Ole Mas Competition, now in its 26th year attracts employees and their friends and relatives. This year's competition was won by Anthony Bernard Charles from the Transport Department.

The Third Annual "Water World" Children's Christmas Treat held simultaneously in Trinidad and Tobago on Sunday 9th December 2012 was attended by an estimated 2000 children.

"Celebration of Our Success" the WASA's Employee Reward and Recognition ceremony where employees were celebrated for their role on specific projects in March 2013.

The extra-curricular activities have become wonderful and enjoyable opportunities for staff to bond into the WASA family world of work and play.

Water We Need...

Don't waste it!

tip

Make sure the
taps and faucets
in your home are
not leaking.

By conserving water today,
you help secure your water
supply for tomorrow.



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Deliver it. Sustain it."*