

Issue #17

ENVIROFOCUS

Newsletter of the Environmental Protection Department



45 Years

Journey to Sustainable Development

Barbados **50**
PRIDE & INDUSTRY
1966 - 2016

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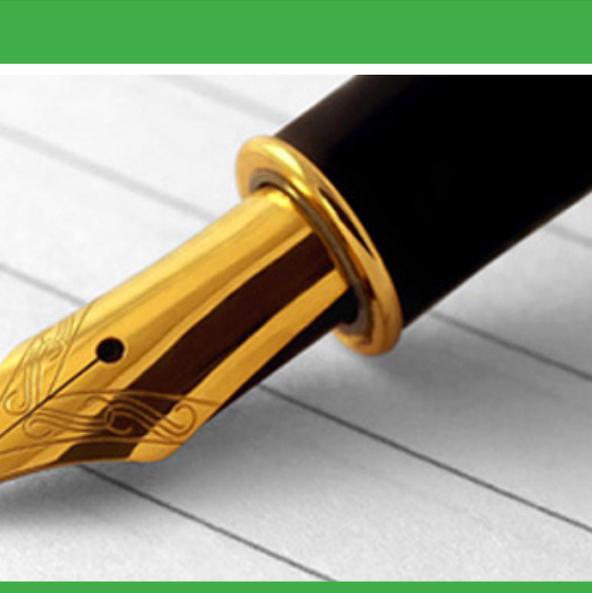
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Director's Message

2016 is a special year as it marks the fiftieth year of Independence for Barbados and forty-five years of service by the Environmental Protection Department (EPD) to the people of Barbados. Given the significance of this golden jubilee year, I believe it is appropriate not only to reflect on the contributions we have made as a Department but also to engage our minds to confront those persistent challenges of the present and those on the horizon which have the potential to affect our quality of life.

These challenges can retard our ability to advance sustainable development goals and adversely impact economic and social gains made in the last fifty years. The most topical of these challenges is climate change but inadequate environmental legislation, inadequate domestic wastewater treatment and excessive consumption are underlying obstacles with corrosive repercussions.

As we analyse these challenges as a Department, I am confident that to overcome them we must embrace the approach of “*thorough assessment to achieve lasting solutions.*” This approach is first and foremost grounded in science. It is results-oriented, with an emphasis on productivity that is built on those historical values that have guided the Department’s success throughout the years.

Beyond 2016, I see an organisation that continues the tradition of **respect** for its customers and their time, is **consistent and equitable** in the processing of matters

which require a decision regardless of the social status of the customer, is **accountable** for its actions, and is **committed** to the preservation of the rule of law. I recognise that these values are all integral to the ideal of sustainable development without which, its attainment is improbable if not impossible.

The fourteenth Dalai Lama in his teachings provides some guidance on the way forward and I quote:

“to remain indifferent to the challenges we face is indefensible. If the goal is noble, whether or not it is realized within our lifetime is largely irrelevant. What we must do therefore is to strive and persevere and never give up.”

This is exactly the path we need to take as we confront our development challenges. For example, take the absence of comprehensive environmental legislation. For thirty-one years we have discussed the development and implementation of an Environmental Management Act to regulate activities that adversely impact ecosystem health. This act would confirm EPD’s position as an environmental regulatory agency and give further authority to adopted environmental standards. I recognise that legislation does not but itself solve environmental pollution problems, it however, outlines the expected behaviours of a society by setting rules which we are expected to comply with. This blueprint for society is the cornerstone towards equity and not just equality, and signals an appreciation for the use of our common and shared resources.

This newsletter highlights the journey of the EPD from its inception as the Public Health Engineering Unit under the Ministry of Health to the present. It does not explicitly speak to the character of the stewards of the Department and their unwavering commitment and dedication to see Barbados progress but these attributes were integral to the progress made. It provides a snap shot of the Department's contributions and highlights some of those individuals who contributed to establishing the Bridgetown and South Coast Sewerage Treatment Plants, and the first national sanitary landfill. These and many other areas of work of the EPD have contributed to the development of Barbados over the years. As we go forward it is our intent that the EPD will continue to be the leading institution on environmental

protection and the independent and authoritative voice on environmental quality and ecosystem health in Barbados.

For my short time as acting Director, I am privileged to work with people who are genuinely interested in the protection of the health of citizens and the protection of our environment. Their passion and commitment to making a positive difference permeates through their care and enthusiasm in finding lasting solutions to environmental challenges. These are certainly cultural attributes that must and shall be maintained. What I can conclude from this experience and my knowledge of all those who have contributed in the past, is that what makes EPD great is its staff.



EPD: ORIGINS

From small beginnings come great things.



The Environmental Protection Department (EPD) grew from the dedicated service of one public servant, Mr. Arthur Archer, who held the post of Public Health Engineer in the Ministry of Health. In 1970, Sir Carlisle Burton, the then Permanent Secretary in the Ministry of Health, advised Mr. Archer that it was not feasible for him to single-handedly perform the required public health engineering responsibilities for the Ministry. Sir Burton encouraged him to prepare a proposal to secure needed assistance for the expansion of his 1-member office to undertake the public health engineering responsibilities of the Ministry at that time. Mr. Archer quickly complied in delivering the proposal, which was approved by the Cabinet resulting in the establishment of the Public Health Engineering Unit (PHEU) in

March, 1971.

After a rigorous recruitment process, the PHEU originally comprised:

- One Public Health Engineer – Mr. Arthur Archer;
- Five Public Health Engineering Assistants – Odley Carter, Tennyson Headley, Wendell Burnett, Anthony Drayton and Sylvan Catwell;
- One Clerk Typist; and
- One alternate, Mr. Malcolm Weekes, who filled in if one of the engineering assistants was unavailable or on vacation.

Their main duties involved building development control, water quality monitoring and occupational safety and health.

Building Development

The PHEU prepared engineering/architectural drawings for the extension/renovation of projects in the Ministry of Health and monitored those projects throughout their implementation. Additionally, the PHEU:

- processed land development drawings in consultation with the Town and Country Planning Development Office and enforced the provisions of the Health Services (Building) Regulation, 1969;
- designed grease traps, and oil and water separators; and
- designed, implemented and monitored the septic tank and the island's first filter bed disposal system at Queen's Park.

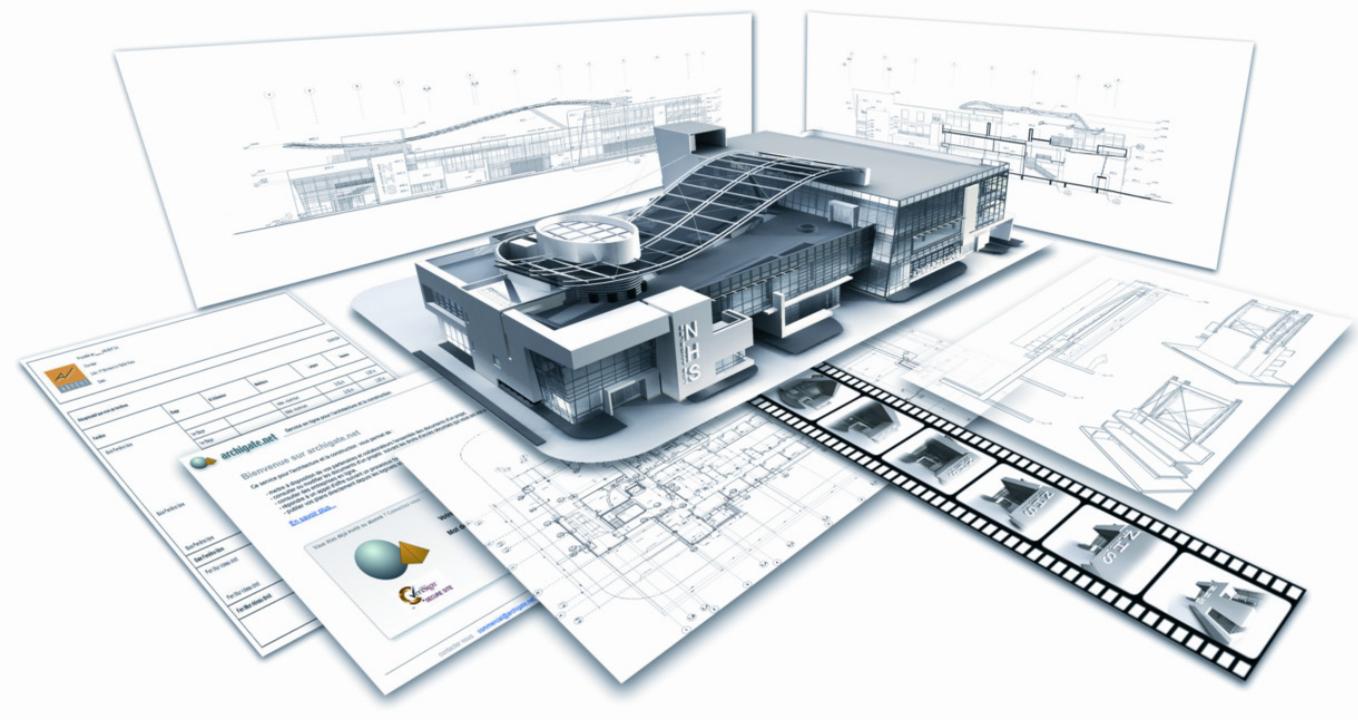
Water Quality Monitoring

Research conducted by the PHEU revealed that unlined landfills significantly impacted groundwater resources. The work of the PHEU led to the design and establishment of Barbados' first sanitary landfill

at Mangrove, St. Thomas with a leachate collection system.

Moreover, during the mid-1970's and early 1980's Barbados saw rapid expansion of the number of hotels and apartments along the South and West Coast to support the growing tourism industry. This physical development brought with it many sewage and other waste disposal problems which led to heavy marine pollution, damage to the island's coral reefs and a loss of marine life including fish populations.

Studies between 1982 and 1984, coordinated by the PHEU and funded by the Inter-American Development Bank and the Government of Barbados, recommended the need for sewerage the South and West Coasts and Bridgetown and its environs. The PHEU performed extensive surveying, bacteriological and chemical monitoring, and analyses of samples of marine water in Christ Church, St. Michael and St. James to acquire data that was used to justify the need for both the Bridgetown and South Coast sewerage projects.



Sewering of Bridgetown and its environs brought about a significant reduction in the indiscriminate dumping of the island's sewage in Cowell Street and Carlisle Bay and a reduction in the contamination of the marine environment. These changes led to improvement in sanitation, reduction in incidence of gastrointestinal diseases and an increase in the living standards in the heavily populated urban areas and the capital of Barbados.

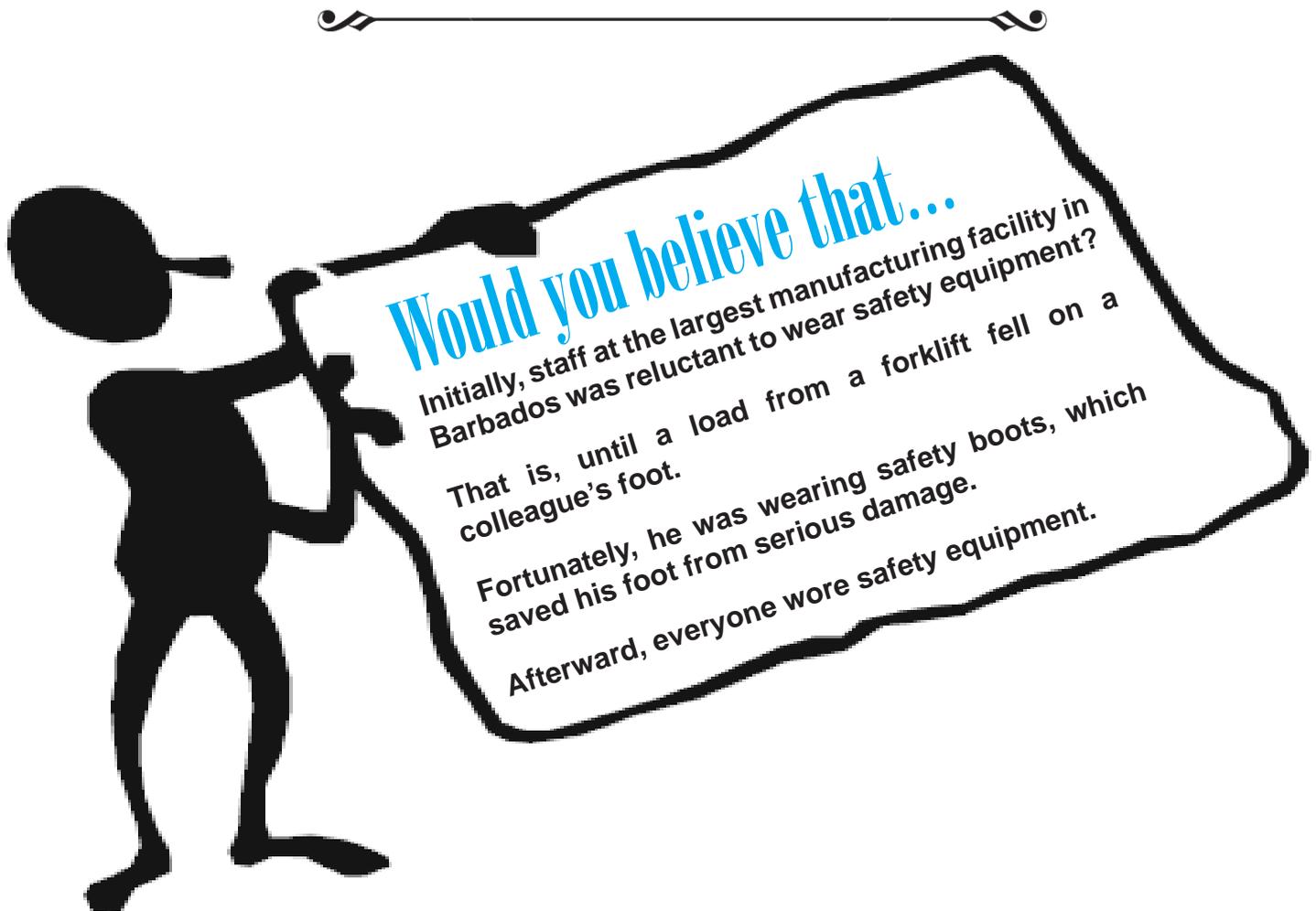
Occupational Safety and Health (OSH)

The Public Health Engineering Unit was responsible for performing OSH monitoring and inspections of industrial establishments primarily in the urban and suburban areas until 1985. A notable contribution made in this area was the Unit's role in establishing the

first functioning safety committee at the largest factory in Barbados at that time.

Over time, the vision, mandate and focus changed significantly, and concomitantly, the staff and responsibilities of the Unit increased. The Unit underwent several name changes and evolved from the Public Health Engineering Unit to its present form as the Environmental Protection Department.

From its very humble beginning the EPD can today boast of striving to become the lead regulatory and enforcement agency for environmental management in Barbados, enabling future generations to inherit a healthy and sustainable environment for an improved quality of life.





The Air and Noise Pollution Control Section is well known for its investigation of the numerous complaints that are lodged with the department pertaining to activities like spray-painting and bodywork. However, this section has done much more! Given the fact that the majority of complaints are received from specific sectors such as the construction industry and vehicle maintenance facilities, Environmental Best Management Practices booklets were developed to encourage persons in those industries to operate in a manner that would reduce their impact on the environment and on persons living or working nearby. The section has also conducted Ambient Air Quality Passive Sampling Projects at various areas around the island, namely Bridgetown, Oistins, Speightstown, Holetown, Gun Hill and Farley Hill to gauge the baseline levels of specific criteria pollutants.

With respect to noise pollution, various studies were conducted to measure the ambient sound levels around the island in the St. Lawrence Gap Noise Study, Bridgetown Noise Monitoring Survey and the Crop Over Noise Assessment. The issue of noise is a significant one and as such, the acceptance of the Noise Abatement and Discussions Concept Paper by Cabinet in 2007 has been instrumental in assisting with the regulation of this issue.

In times past, we conducted investigations into indoor air quality. However, since the passage of the Safety and Health at Work Act CAP. 356 our role is more advisory in nature. Consequently, we developed the 'Property Managers Guidebook for Managing Indoor Air Quality'. The section has also served on the Barbados National Standards Institution's Indoor Air Quality Technical Standard Committee which developed the 'Standard for Acceptable Indoor Air Quality'.

ASPECTS OF OUR WORK

The Marine Pollution Control Section of the EPD was started in 2000 with the aim of focusing on protecting the marine environment. Prior to the formation of the marine pollution section, the Marine Pollution Control Act CAP. 392A was created along with the List of Prohibited Concentrations. This Act was designed as an “act to prevent, reduce and control pollution of the marine environment from whatever source”. The list of prohibited concentrations contains standards by which the Act can be enforced.

More recently, the Department with the assistance of other governmental and non-governmental bodies updated the National Oil Spill Contingency Plan (NOSCP). The NOSCP was approved by Cabinet in January of 2013 and establishes organisational and decision-making structures for dealing with oil spills and the procedures for acquiring any necessary resources. The plan allows the authorities to provide an effective response in the event of or the threat of an oil pollution incident. Within this structure, the EPD is the lead agency for the NOSCP and is responsible for keeping the NOSCP updated.





FUNDING PROJECTS

We do not merely strive to protect the environment, we seek to create a Barbados where the environment does not need protecting, especially from chemicals.

Unfortunately, the efforts of the Environmental Protection Department (EPD) are often frustrated due to limited human, technical and, especially, financial resources. Technical resources refer to the skills and know how needed to perform a task or function. To overcome the issues of limited technical and financial resources, the Department takes advantage of assistance available under multi-lateral environmental agreements (MEAs).

MEAs are legally binding agreements among three or more states relating to the environment. Barbados has signed on to a number of these agreements; notably, the Stockholm Convention on Persistent Organic Pollutants and the Basel Convention on the Transboundary Movements of Hazardous Wastes and Their Disposal. The island is also actively involved in the implementation of the Strategic Approach to International Chemicals Management (SAICM).

Chemicals directly or indirectly affect our lives and are essential to the production of food, the provision of healthcare and the maintenance of our lifestyle. However, these chemicals which play an integral role in our lives have the potential to negatively impact our health and the environment if they are not properly managed. Over the last seven years, the EPD undertook projects that provided funding and technical assistance

for:

- identifying shortcomings in the existing processes pertaining to the management of chemicals and proposed actions to address those issues;
- producing concrete action plans to achieve implementation of the Globally Harmonized System of Classification and Labelling of Chemicals in Barbados; and
- enhancing the ability of a local laboratory to test for persistent organic pollutants or POPs, which are a group of chemicals that can potentially harm human health and the environment.

These projects not only helped to improved how chemicals are managed but also contributed in excess of \$ 200,000 United States Dollars to the economy of Barbados during the period 2008 to 2015.

The Department will continue to identify and access available funding under the MEAs to support its efforts to create a Barbados where the environment does not need protecting, especially from chemicals.

However, there is still a role that you can play. Carefully read the labels and supporting information of the chemicals, so that you know how to use, handle and dispose of them; therefore protecting your health and the environment. Additionally, if you are unsure of how to dispose of chemicals, contact the EPD for assistance.

STALWARTS



The Environmental Protection Department has made a considerable contribution to the development of Barbados over the past 45 years. Its contribution is in no small part the result of the dedicated service of its staff, and the leadership of those who have taken the helm. Therefore, we take a moment to:

1.

Highlight those members of staff who have given over 25 years of service. These are:

- Kenneth Barrow
- Angelina Boxill
- Sylvan Catwell
- Andrew Deane
- Muriel Forde
- Stephen Forde
- Jeffrey Headley
- Michael Small

2.

Thank all members of staff, past and present, for their avid service and hard work.

3.

Recognize the persons who have led the Department from what it was to what it is today.

graphic courtesy of freepik.com

HEADS OF DEPARTMENT



From left to right:

- Mr. Arthur Archer, 1971-1979
- Mr. James Zikusoka, Acted as Senior Environment Engineering in the absence of Mr. Arthur Archer
- Mr. Peter Foye, 1979 -1982
- Mr. Wilton Conliffe, 1982 - 1987
- Mr. Tennyson Headley, 1987 – 1990
- Dr. Hugh Sealy, 1993 (11 months)
- Mr. Jeffrey Headley, 1989 – 2013
- Mr. Anthony Headley, 2013 - Present

EnviroQuotes

Unless someone
like you cares a
whole awful lot,
nothing is going
to get better.
it's not.

— dr. seuss



INTERNSHIP PROGRAMME 2016

Each year the Environmental Protection Department strives to provide meaningful work experience for young people who have an interest in environmental monitoring and control. This is achieved through the Department's annual internship programme, which caters to:

- final year students in the Environmental Science Programme at the Barbados Community College; and

- students from secondary and other tertiary institutions.

This year the Department was pleased to host Ms. Tracey Brathwaite and Mr. Jerod Thompson-Springer.

The interns were exposed to the various functions of the Department, undertook projects and accompanied the officers on their daily duties. From all reports, they enjoyed the experience.





Tracey Brathwaite

When I first arrived at the Environmental Protection Department (EPD), I was anxious and nervous. When the interview started, my nerves subsided, as Ms. Senhouse and Mr. Pile were friendly and approachable. On the first day, I was very excited to see how the EPD tried to maintain the beautiful environment of such a small country, as Barbados.

During my time here, I learnt various skills and received a wealth of knowledge, as everyone gave advice, when we spent time in their department. Additionally, when my fellow intern and I were taken on field trips with the other employees of various sections, we travelled around Barbados. We observed the procedures for sampling coastal waters and groundwater, with Marine Pollution Control and Water Quality. Fun fact to note, we became Cave Explorers! Thanks to the officers in Marine Pollution Control and Water Quality sections, we climbed down to Coles cave on an investigation.

Also my fellow intern and I had the opportunity to use and observe various equipment. For example, in Air and Noise Pollution Control, we assisted in testing the noise levels, temperature and windspeed at an investigation site. While accompanying, the Building Development Control section, they provided information on how to read building plans, and also, the building and safety regulations, business owners need to adhere to.

I would definitely say, I had an interesting and heartwarming experience, at the EPD. The staff was welcoming and helpful. I will really miss seeing their kind faces. But as this journey comes to an end, the wisdom imparted on me, I will take along, as I continue to grow.



Jerod Thompson-Springer

Has it been nine weeks already? The experience that I gained from this department was really a life changer for me. I have always wanted to work in the environmental sector and finally being able to work in an organisation such as the Environmental Protection Department (EPD) was “goal accomplished”.

On arrival to the department my experience was filled with warm and friendly faces; I mean everyone was very kind, in welcoming my colleague and I into the department. Moving from section to section allowed for a great deal of networking as it allowed me to engage with persons of various backgrounds ranging from S.T.E.M to business. I learned a lot from the staff at EPD as they shared their knowledge of the environment, policy and even life, as they also shared their experiences and gave excellent advice along the way which I plan to utilise as I progress in the world.

In relation to work done in the various sections, I was given a variety of tasks along with my colleague such as creating a report for the Marine Litter Program for Marine Pollution Control section and researching chemical disposal methods for the Solid Waste and Hazardous Materials section, which allowed me to strengthen my knowledge about environmental monitoring and protection.

The site visits done with Air and Noise and Building Development Control sections were very eye opening with respect to the regulations that companies should comply with to be sustainable. Best of all were the sampling expeditions with the Water Quality and Marine Pollution Control sections. Taking water samples inland and around the coast, being out in the field was the vision I had of the EPD and it did not disappoint. So in conclusion I am glad for the opportunity that was given to me through this internship.



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