

enviro focus

The Newsletter of the Environmental Protection Department

Issue 5: September, 2009

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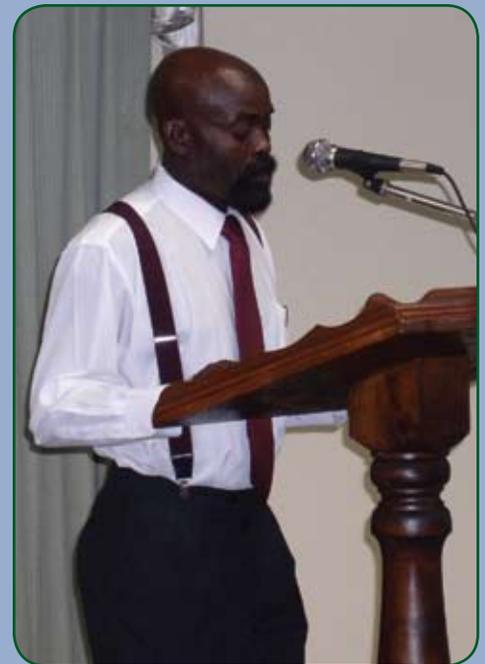
From the Director

The Environmental Protection Department is pleased to present the fifth issue of our EnviroFocus newsletter series. This issue highlights, among other things:

- the experiences of participants in the 2009 summer internship programme; and
- one of the Department's strategies for staying abreast of environmental issues.

Our Department has been hosting an annual internship programme for the past five years. Over this period, beneficiaries to the programme have been primarily from the Barbados Community College's Environmental Science Programme. However, this year one student from Harrison College also participated in the programme. The programme seeks to increase awareness about the functions and roles of the Department; afford school leavers the opportunity to apply the concepts they have learned during their studies and provide relevant work experience.

Since the publication of our last newsletter, a number of training programmes were undertaken by our staff with the goal of strengthening our ability to monitor, control and regulate environmental issues.



These programmes improved the Department's ability to ensure that:

- wastewater is treated and disposed in a manner that will not adversely impact on groundwater or the marine environment;
- habitable commercial spaces are adequately ventilated; and
- environmental noise is adequately controlled.

The Department encourages you to continue providing us with your feedback on the work of the Department.

Remember to utilize environmentally friendly practices as we strive to keep the environs of Barbados healthy and clean.

Gearing Up for Noise Enforcement

Community or environmental noise in Barbados has become a growing concern in recent years. "Ordinary" neighbourhood sounds such as periodic barking of dogs, wind blowing in the trees, and intermittent traffic have been replaced by less tolerable sounds such as:

- Constant barking of dogs;
- Hums and vibrations of electrical and mechanical equipment such as air conditioning units and electrical generators;
- The pounding of bass from sound systems at nightclubs, bars and private residences;
- Loud karaoke sessions which continue until the early morning hours; and
- Noise and vibrations generated by construction activities.

Although initially persons might consider these noises to be nuisances, noise can also affect a person behaviourally, physiologically and physically. Effects may include stress, mood swings, impairment of learning, and fatigue. The most serious irreversible impact of exposure to loud noise is hearing loss.

In order to be better prepared to deal with the issue of noise pollution and the investigation of complaints, ten persons from the Environmental Protection Department attended a three-day workshop in Community Noise Enforcement. The instructor for



the training was Mr. Eric Zwerling, Director of Rutgers University Noise Technical Assistance Center in New Jersey.

Some of the areas covered during the training included the basic principles of sound, effects of sound and sound measurement. There were a number of practical aspects to the course, which allowed participants to hone

their skills in the correct operation of sound level meters, data collection and analysis.

In addition, the workshop provided an opportunity for the participants to review a Draft Model Noise Ordinance, to determine if this model could be applicable to Barbados, and therefore included for consideration during the preparation of the environmental noise legislation for the island.

The Environmental Protection Department wishes to thank the Rutgers University Noise Technical Assistance Center, especially Mr. Eric Zwerling for facilitating the training. The workshop provided the opportunity for the EPD to improve its knowledge and technical skills in the area of environmental noise regulation. This training has made the Department better prepared to address these issues when the noise legislation for the country is finalized.

Internship Programme 2009

The Environmental Protection Department hosted three students during its annual student internship programme, which ran for nine weeks during the summer months. In hosting this internship, the Department hopes to provide a meaningful experience for young persons who have an interest in environmental monitoring and control.

This year the Department was pleased to host Safiya Clarke-Mendes, Cindy Thomas and Jaleesa Birch. Safiya Clarke-Mendes was a sixth-form student of the Harrison College who had expressed an interest in furthering her studies in an environmental related field. Cindy Thomas and Jaleesa Birch had successfully completed the Associate Degree in Environmental Science at the Barbados Community College and came to the Department with the hope of practically applying some of the principles they had learned. The interns were exposed to various functions of the Department, and they accompanied the officers on their daily duties. From all reports, they enjoyed the experience!



Safiya Clarke-Mendes

"It was a wonderful experience."

Working at the Environmental Protection Department, we interns were kept busy with very interesting projects and field trips. With the projects we were able to make a contribution to the Department and to also obtain greater research and organisational skills with the fantastic guidance of our supervisors. We were taken on several field trips, the first of which was a hike through the Whim Gully with the Department's adopted school and led by the vivacious 'Hiking Victor'.

We were also allowed to venture out with the different sections. Officers of the Building Development Section took us to

residential construction sites and taught us about the workings of septic tanks. We were also taken out by the Marine Pollution Section to observe water treatment plants and participated in water sampling with the Water Quality Section. The water sampling was both fun and fascinating as we were allowed to observe and take part in the process.

While working at the Environmental Protection Department, I was given the opportunity to learn so much more about my prospective career. It was a wonderful experience.

Continued on next page

Whimsical In Name But Not In Nature

On the 18th July, staff and teachers from the Garrison Secondary School, hosted by staff from the Environmental Protection Department (EPD) headed to the north of the island to see first hand one of our local treasures; the Whim Gully.

The Whim Gully can be more aptly described as a nature trail by many standards as it abounds in flora and fauna which are only usually observed in our gully systems. Gullies and gully systems form over many thousands of years, due to the action of underground and surface water flow. This action of water on the limestone produces caves and channels. Over time these channels widen and the caves collapse to form gullies.

The tour of a section of the Whim gully was conducted by Mr. Victor Cooke of **Eco Adventures Barbados** who provided the students with a plethora of facts relating to gullies. Some of these interesting stories related to some very poisonous plants, some medicinal plants and to the uses of gullies in days of old. Not many of the students could imagine using the humid rocky gully terrain as a 'short cut' or more amazingly as the setting for local folklore.

Unfortunately some historical practices were less than admirable and were environmentally unsound, including the dumping of items into the gullies as a means of quick garbage disposal. The channelling of waste from pig farming was also a common practice then and

continues today in some areas, indeed for many people 'out of sight is out of mind'.

Over 40 tonnes of garbage was collected from our island's gully ways, beaches and recreational areas on Saturday September 19, 2009; so the problem of dumping is still with us. The students of the Garrison School learnt first hand that these gullies are important and need to be protected, they are places of natural beauty and who knows what medicinal or other economic treasures they may contain.

The last part of the tour with the students ended at the fort in Ashton Hall, St. Peter, this fort provided a well deserved rest and a timely history lesson for the group. Lessons in military strategy explained the positioning of the fort on a hill by the coast and a carved conch shell was an example of the tools used by the Amerindians who lived here long ago. It was then on to lunch at the Speightstown esplanade. A fun and educational time was had by all who participated.



Learning about the Amerindians and the Fort



In The Whim Gully



Exiting the Whim Gully

All Barbadians are encouraged to visit a gully and see nature at work, we are also reminded to: 'Take nothing but photographs, leave nothing but footprints and kill nothing but time'

Wastewater Treatment



Dr. Nilza Smith engaging participants at the workshop

Our groundwater and marine environment are key components, which make Barbados the “Gem of the Caribbean”. These resources need to be protected and one of the ways to do this is to effectively treat wastewater before it is discharged into the environment. The use of wastewater treatment plants to treat wastewater prior to disposal protects groundwater and the marine environment from high concentrations of pollutants.

The Department is responsible for regulating wastewater treatment plants. This is achieved through vetting applications for wastewater treatment plants and assessing the effluent from wastewater treatment for compliance with

applicable standards. Wastewater treatment plants are required for developments such as large tourism projects and housing developments, which generate more 3,400 gallons of wastewater.

Twenty-one officers of the Department completed a training course on the theory and methods of wastewater treatment during the period July 28 – 31, 2009. The course was conducted by Dr. Nilza Justiz-Smith, Associate Professor University of Technology Jamaica.

The training course was designed to improve the competency of officers in assessing applications for wastewater treatment plants and determining compliance

with prevailing environmental regulation.

In addition to the theoretical component of the course, there were field visits to three wastewater treatment plants where officers applied the concepts they had learned while inspecting the treatment plants.

One of the most notable outcomes of the training course was the establishment of linkages with the University of Technology Jamaica. The course instructor Dr. Justiz-Smith expressed a willingness to work with the Department in the future on other training courses.

Better Design for Better IAQ

Indoor air quality (IAQ) is a regular talking point nowadays as more and more office workers complain about the state of their workplaces. As a result, 'sick building syndrome' has become synonymous with work stoppages and industrial action around the island in recent times. The plethora of symptoms attributed to poor IAQ includes headaches, difficulty breathing, upper respiratory tract irritation, dry skin and dry eyes.

A number of factors can influence indoor air quality. One such factor is poor building design. IAQ issues related to poor building design are difficult to correct once the buildings have been erected and should therefore be addressed in the design stages. As the old adage goes, 'prevention is better than cure'. To this end, officers of the Environmental Protection Department attended a

five-day course facilitated by Dr. Noel Brown of the University of Technology (UTECH) in Jamaica, to further equip them with the tools to ensure that ventilation systems being reviewed by the EPD are properly designed.

Topics covered during the course included ventilation for IAQ, air-cleaning devices; principles of ventilation; basic principles of refrigeration and global impact of the use of ozone depleting substance used in air conditioning systems.

The sessions allowed an in-depth review of the functions and operations of ventilations systems. Participants left with a greater resolve to ensure that all plans with mechanically ventilated systems contribute to a healthy and productive indoor environment.

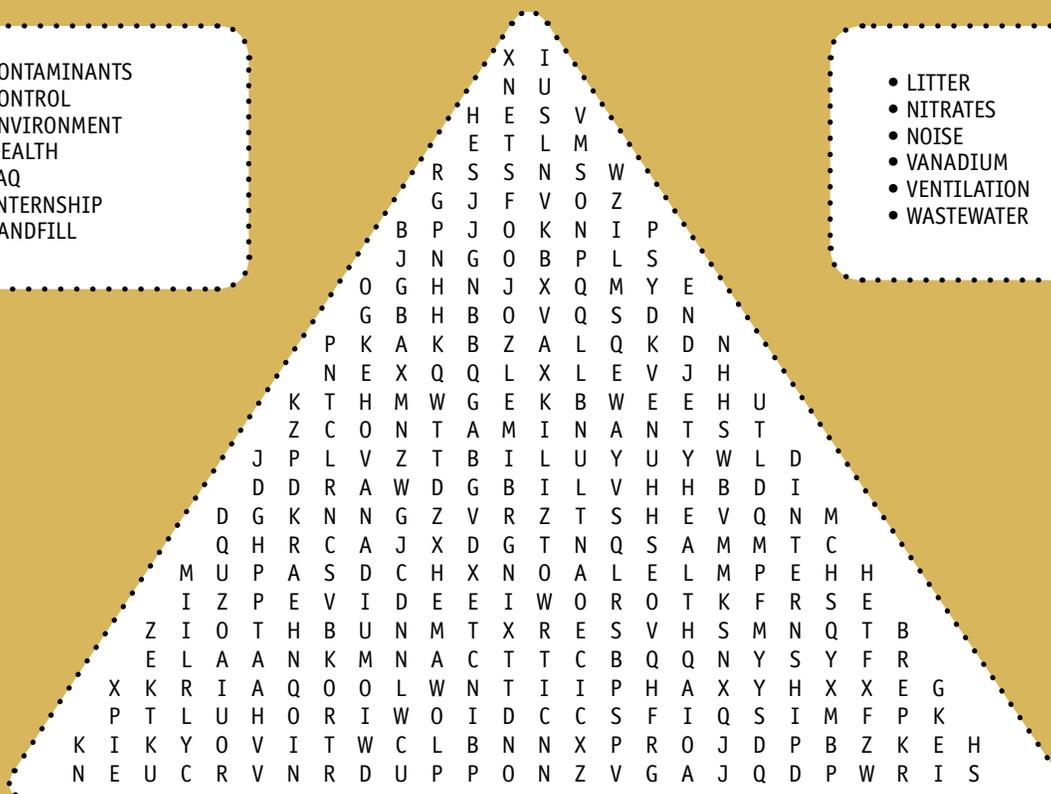


Participants engrossed in the workshop

Word Search

- CONTAMINANTS
- CONTROL
- ENVIRONMENT
- HEALTH
- IAQ
- INTERNSHIP
- LANDFILL

- LITTER
- NITRATES
- NOISE
- VANADIUM
- VENTILATION
- WASTEWATER



Instructions: Try to find the words listed below in the triangle above

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