

## BOGUE WASTE STABILISATION PONDS

### ABOUT THE PONDS

- The Bogue Waste Stabilisation Ponds were commissioned into service in January 2000.
- There are nine (9) ponds covering 100 acres.
- The ponds are designed to treat 10 million gallons per day
- The facility **collects** and **treats** waste from all areas previously served by the old Bevin Avenue Sewage Treatment Plant, as well as a number of new areas sewered under the Montego Bay Sewerage Project. These areas include Montego Bay Town Centre, Catherine Hall, West Green, Rosemount, Mount Salem, Cornwall Gardens, Montego Freeport, Paradise Acres, Bogue Village, Bogue Industrial Estate, Cornwall Court, Fairview Shopping Complex, Westgate and Catherine Mount.

### HOW THE WASTE STABILISATION PONDS OPERATE

#### 1. Collection:

**Domestic waste water** (which includes both grey water from showers, baths, washing machines, dishwashers and sinks other than the kitchen sink and black water from toilets and kitchen sinks.) is collected by pipes called *laterals*.

These **laterals** join the waste water facilities on the private premises with those facilities constructed underneath the public roadway. The pipes along the roadways are called mains or trunk sewers and allow the waste water to flow to the treatment facility, either by gravity or with the help of pumping stations.

#### 2. Treatment:

Treatment occurs in four phases as follows:

- (a). **Pre-Treatment** – all floating materials are removed with the use of a bar screen and a grit chamber.
- (b). **Primary Treatment** - physical treatment to remove general organic matter. This process involves fluctuation, coagulation and sedimentation.
- (c). **Secondary Treatment** - this involves the breaking down of complex organic matter into simple compound via micro-organism. During this stage most of the germs to be found in

waste water is killed or removed.

(d). **Tertiary Treatment/ Disposal** – Nutrients such as nitrates and phosphates are removed with the use of plant-like organisms or the effluent is passed through mangroves. The treated water is then released into the Barnett River.

### **IMPORTANCE OF THE PONDS TO THE COMMUNITY**

- Helps to protect our environment
  - It reduces the pollutants of the environment for both underground and surface water.
- Helps to protect public health
  - It helps to reduce the occurrence of water-borne illnesses resulting from exposure to raw sewage such as cholera, typhoid, diarrhea, and eye and skin infection.
- Provides effective treatment
  - It prevents eutrophication which is the depletion of oxygen from water bodies.

### **ADVANTAGES OF THE PONDS**

Advantages of the Bogue Waste Stabilisation Ponds in comparison to other types of sewerage systems:

- High treatment quality
- Low operating and maintenance costs
- Ability to cope with heavy storm flows
- Reliable, natural treatment – no system breakdowns
- No electricity cost required for treatment process
- Decomposed and stable organic matter called sludge can be used for agricultural purposes due to its rich nutrient level.

### **DISADVANTAGES OF THE PONDS**

- Takes up large landmass
- Labour Intensive