

Excerpt from Ecological Valuation of the Wetlands at Success Beach, Montego Bay

Submitted to:

*Rose Hall Developments Ltd.
Montego Bay
St. James*

Prepared by:

*Environmental Solutions Ltd.
20 West Kings House Road
Kingston 10*

August 2002

A small fresh/brackish water swamp occurs adjacent to Success Beach in a depression behind the shore between the Seacastles Complex and the Wyndham Rose Hall Hotel just north of the main road into Rose Hall, Montego Bay. Approximately 25% of the original area of this wetland was cut and filled in, during the construction of the Wyndham property between 1972-1973. The present area has been estimated at approximately 10 acres (4 ha), which is mostly vegetated by mangrove trees. A small area of sedge marsh lies on the eastern side of the swamp.

Rose Hall Developments Ltd. has requested a valuation of the wetland area in light of a proposed change of land use, particularly in respect of coastal development, which would necessitate the re-siting of the existing sewage ponds and filling of the wetland.

The main objective was to determine the ecological value of the wetlands in the context of determining the merit of retaining the wetlands, as opposed to filling in for resort development. This required an assessment of the feasibility of relocating the existing sewage treatment facility, filling in the wetland area and creating land for coastal development. This assessment required an ecological valuation of the wetlands and suitability of the existing siting of the sewage ponds.

The wetland occurs in a topographic depression behind the shoreline separated from the sea by an abandoned coastal road and seawall. The white mangrove (*Laguncularia racemosa*), a species commonly found at the margins of brackish waters, dominated (100%) the interior of the wetland as well as the fringes (80%). Two other species commonly found in coastal wetland the black mangrove (*Avicennia germinans*) and Buttonwood (*Conocarpus erectus*) were also observed but in very few numbers along the northern fringes of the wetland. There were no Red mangroves (*Rhizophora mangle*) observed at this site.

The wetland is sustained primarily by surface runoff from the catchment area south of the wetland. Diversion of surface runoff from the wetland would ultimately result in the wetland drying-out. The low permeability soil in the wetland enhances the water retention capacity of the wetland. There are no obvious perennial inflows to the wetland. Groundwater may however be helping to sustain the wetland. From a hydrological perspective, removing the wetland would not significantly impact the hydrological regime in this area.

The sewage treatment facility adjacent to the wetland discharges only occasionally into the wetlands in the event of malfunction of the system. Treated effluent from the sewage treatment plant is used primarily for irrigation of the Rose Hall Golf Course and is diverted into the wetlands when rainfall precludes this need.
