

## 7.0 Madam Carty Watershed

This section summarizes baseline information specifically for the Madam Carty Watershed and includes a description of the unique watershed features, a summary of existing water quality conditions, descriptions of potential restoration sites investigated during field assessments, and neighborhood descriptions. Table 7.1 summarizes basic watershed features.

Appendix A contains a basemap of the Madam Carty watershed depicting locations of water quality impairments, roads, hydrology, topography, and potential restoration sites.

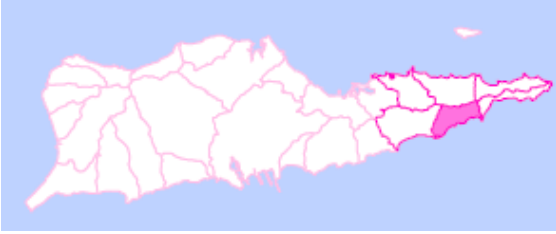
### 7.1 General Description

The Madam Carty watershed is in the south-central portion of the East End watersheds, and is undeveloped, with the exception of the recent single family home construction at Grass Point (Figure 7.1). Most of the watershed consists of steep hillsides, drained by three main guts across South Shore Rd. (Rt. 60) to Robin and Rod Bays. There are a number of unpaved, access roads connecting the South Shore Rd. and the beach. Given the undeveloped condition of the watershed, further study of the hydrogeomorphic and biological conditions of the guts in this area may prove useful in establishing reference reaches for steep, ephemeral guts on St. Croix. Mt. Fancy pond (also called Robin Bay Pond) is located in the western portion of the watershed, just south of South Shore Rd., which is the only public road in the watershed.

#### Land Use

The western portion of the watershed has been upzoned to high density use to accommodate the proposed Robin Bay Resort, which is a large resort development consisting of hotels, condos, a golf course, and other features (Figure 7.2). Additional single lot construction activities are planned for the Pt. Elizabeth residential development on Grass Point.

**Table 7.1.** Watershed Summary

	
<b>Drainage area<sup>1</sup></b>	1043 acres; 1.6 sq miles
<b>Length of guts<sup>2</sup></b>	1.9 miles mapped
<b>Road length<sup>2</sup></b>	2.6 paved miles; 1.5 unpaved miles
<b># Road culverts<sup>2</sup></b>	1 mapped culvert
<b>Impervious Cover<sup>3</sup></b>	14.6 acres; 1%
<b>Dominant land use %<sup>4</sup></b>	Undeveloped: 99.5% LDR: 0.5%
<b>Area within 100-yr floodplain<sup>5</sup></b>	280 acres; 27% of watershed
<b># Small ponds<sup>4</sup></b>	4 (not including Mt. Fancy pond)
<b># Mapped wells<sup>6</sup></b>	0
<b>Watershed erosion potential<sup>7</sup></b>	Vulnerability: High Road-based: Low Mean Relative: High
<b>2010 WQ Impairments<sup>8</sup></b>	None
<sup>1</sup> IRF/UVI/USGS 2001 watershed boundaries <sup>2</sup> HW revised/or created, 2011 <sup>3</sup> NOAA CSC, CCAP data, 2005 <sup>4</sup> UVI-CDC data 2003 (land use) and 2001 (ponds) <sup>5</sup> DPNR, dated 2005 <sup>6</sup> Received from DPNR Feb, 2011 <sup>7</sup> WRI/NOAA, 2005 <sup>8</sup> DPNR, 2010 Integrated Waters Report	



**Figure 7.1.** Looking out from Grass Point towards Robin Bay (left) and Mt. Fancy pond.



**Figure 7.2.** Reviewing development plans for the Robin Bay Resort.

### *Water Quality*

There are two water quality assessment units associated with this watershed, and neither is listed in the 2010 Integrated Waters Report (DPNR, 2010) as impaired (Table 7.2).

**Table 7.2.** Water Quality Impairments (from DPNR, 2010)

Assessment Unit ID/Name	Monitoring Station Name	Impairment	Source of Impairment	TMDL (Priority)
VI-STC-49 / Madam Carty Backreef	STC-13B Robin Bay	(N/A)	(N/A)	(N/A)
VI-STC-50 / Madam Carty, offshore	None	(N/A)	(N/A)	(N/A)

Madam Carty was identified as a reference watershed during UVI’s recent wetlands inventory, and it may be useful to more fully evaluate the ecology and geomorphology of guts in this watershed to establish baseline and reference conditions in this particular microclimate/topographical setting.

## 7.2 Potential Watershed Restoration/Project Sites

No specific restoration sites were identified in this watershed, however, routine maintenance of numerous dirt access roads to beach along South Shore Rd. may be necessary to prevent sedimentation in the nearshore area.

In addition, stormwater management for the proposed Robin Bay Resort should maximize treatment and recharge and serve as a model for innovative practices for the island. While the current plans indicate a range of practices offering promise (e.g., residential rain gardens, wet basins for irrigation, etc.), the plans will need to be more fully developed in order to ensure proper installation and protection of Mt. Fancy pond and nearshore marine environments. In addition, HW recommends that applicant fully evaluate a range of site design strategies to minimize earth disturbance, disconnect impervious cover and incorporate low impact development (LID) strategies into the project. Long-term maintenance of this system will be critical.

## 7.3 Neighborhood Summaries

No specific neighborhoods currently exist in this watershed, though the Pt. Elizabeth community on Grass Point is anticipated. Septic standards and ESC requirements for new single lot development of the Elizabeth Point community should be enforced, particularly given the extremely shallow and stony nature of the soils of Grass Point and proximity to the Bay (Figure 7.3).



**Figure 7.3.** Residential construction (left) and ESC practices (right) on Grass Point associated with the Pt. Elizabeth development.

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