Catfish Creek Stream Assessment

Study Area

Catfish Creek is located in the Little Sarasota Bay Watershed in Sarasota County as shown in Figure 31. Catfish Creek outfalls into North Creek prior to the mouth in Little Sarasota Bay. The Catfish Creek watershed is dominated by residential (44.69%), natural land/open water (18.85%) and golf courses (14.41%). The watershed of Catfish Creek has an LDI value of 29.21. Catfish Creek's banks have little development and are naturally sloping with a vegetative border.

Figure 31 Overview of the Catfish Creek Study Area

Vegetation Survey

The Catfish Creek vegetation assessment encompassed 7 vegetation regions from the mouth in North Creek to the bridge on U.S. Highway 41. In these regions, 57 species of vegetation were identified. Regions 1 through 3 were dominated by mangroves (*Rhizophora mangle, Laguncularia racemosa* and *Avicennia geminans*) with few other salt tolerant species present. The most upstream mangrove was *Laguncularia racemosa* in Region 4. The first occurrence of Leather Fern (*Acrostichum danaeifolium*) was in Region 1, becoming dominant in Region 4. Above Region 4 the vegetation communities are populated by many species indicative of dominating freshwater influence.

Figure 32. Overview of Catfish Creek Vegetation Assessment Regions

Figure 33 shows the vegetation transition zone of Catfish Creek indicating the most upstream White Mangrove as well as the most downstream *Spartina*. Based on the vegetation assessment data for Catfish Creek, Regions 1 and 2 would comprise the highest salinity and tidal influence zone, Regions 3 and 4 would comprise the "mixing" zone and Regions 5 through 7 would comprise the freshwater dominant zone. The vegetation assessment species lists are shown in Table 9.

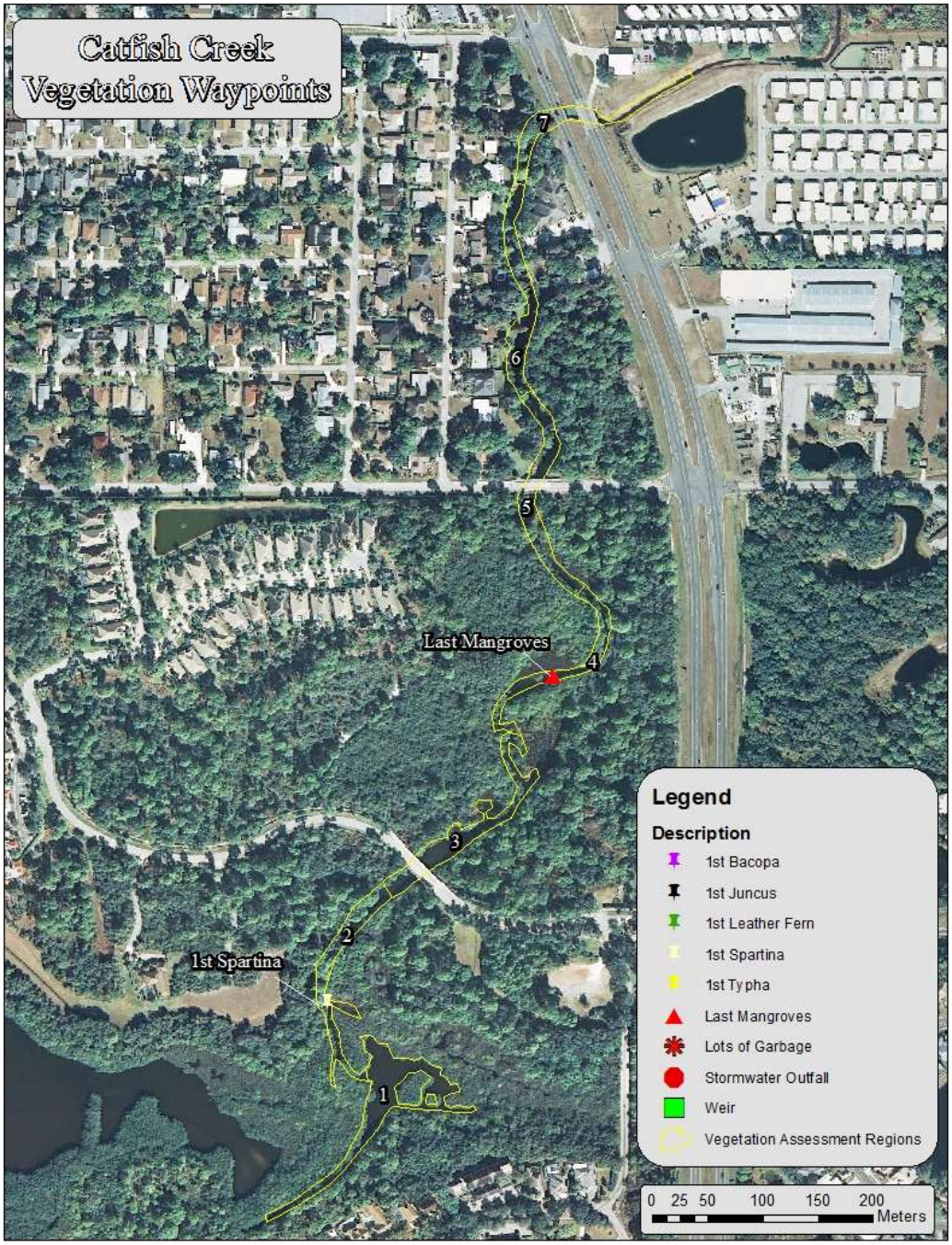

Figure 33. Catfish Creek Vegetation Waypoints

Table 7. Catfish Creek Vegetation Assessment List

Plant Species	Common Name	Sample Region							Regions Found
		1	2	3	4	5	6	7	
Acrostichum danaeifolium	Leather Fern	1	1	1	1	1	1	1	**7**
Pinus elliottii	Slash Pine	1	1	1	1	1	1	1	**7**
Schinus terebinthifolius	Brazilian Pepper	1	1	1	1	1	1	1	**7**
Vitis rotundifolia	Muscadine Grape	**1**	1	*1*	1	**1**	1	*1*	**7**
Alternanthera philoxeroides	Alligator Weed		1	1	1	1	1	1	**6**
Quercus laurifolia	Laurel oak	1		1	1	1	1	1	**6**
Conocarpus erecta	Buttonwood	1	1	1	1	1			**5**
Myrica cerifera	Wax Myrtle	1	1	1		1		1	**5**
Myriophyllum aquaticum	Parrot Feather			1	1	1	1	1	**5**
Urochloa mutica	Para Grass			1	1	1	1	1	**5**
Colocasia esculenta	Wild Taro, Dasheen, Coco Yam				1	1	1	1	**4**
Laguncularia racemosa	White Mangrove	1	1	1	1				**4**
Panicum repens	Torpedo Grass			1		1	1	1	**4**
Azolla caroliniana	Carolina Mosquito Fern			1			1	1	**3**
Bacopa monnieri	Common Bacopa, Herb-Of-Grace		1	1		1			**3**
Juniperus virginiana	Red Cedar	1	1	1					**3**
Lemna minor	Duckweed					1	1	1	**3**
Sabal palmetto	Sabal Palm	1				1		1	**3**
Salvinia minima	Water Spangles, Water Fern					1	1	1	**3**
Serenoa repens	Saw palmetto		1	1		1			**3**
Sphagneticola trilobata	Creeping Oxeye					1	1	1	**3**
Avicennia germinans	Black Mangrove	1	1						**2**
Baccharis glomeruliflora	Groundsel Tree			1		1			**2**
Baccharis halimifolia	Eastern False Willow, Saltbush				1	1			**2**
Cephalanthus occidentalis	Common Buttonbush						1	1	**2**
Colocasia gigantea	Giant Elephant Ear						1	1	**2**
Iva frutescens	Marsh Elder				1	1			**2**
Ludwigia peruviana	Peruvian Primrosewillow					1	1		**2**
Panicum maximum	Guneagrass					1		1	**2**
Pluchea rosea	Rosy Camphorweed			1		1			**2**
Quercus geminata	Sand Live Oak			1	1				**2**
Rhizophora mangle	Red Mangrove	1	1						**2**
Ruellia simplex	Britton's Wild Petunia						1	1	**2**
Scirpus californicus	California Bulrush						1	1	**2**
Syzgium cumini	Java Plum						1	1	**2**
Typha spp.	Cattails			1		1			**2**
Boehmeria cylindrica	Bog Hemp, False Nettle							1	**1**
Coccoloba uvifera	Seagrape						1		**1**
Commelina diffusa	Dayflower						1		**1**
Cyperus odoratus	Fragrant Flatsedge					1			**1**
Dioscorea bulbifera	Air Potato							1	**1**
Erythrina herbacea	Coral Bean				1				**1**
Hydrilla verticillata	Hydrilla, water thyme							1	**1**
Hydrocotyl umbellata	Manyflower Marshpennywort, Water Pennywort					1			**1**
Hymenachne amplexicaulis	West Indian Marsh Grass						1		**1**
Ludwigia octovalvis	Mexican Primrosewillow, Long-stalked Ludwigia						1		**1**
Ludwigia repens	Creeping Primrosewillow, Red Ludwigia							1	**1**
Melaleuca quinquenervia	Punk Tree, Melaleuca			1					**1**
Musa spp.	Banana Tree						1		**1**
Polygonum hydropiperoides	Swamp Smartweed							1	**1**
Quercus virginiana	Virginia Live Oak						1		**1**
Sagittaria lancifolia	Bulltongue Arrowhead, Duck Potato							1	**1**
Spartina alterniflora	Salt Marsh Grass		1						**1**
Syngonium podophyllum	Nephitis, American Evergreen							1	**1**
Taxodium distichum	Bald Cypress						1		**1**
Thelypteris denata	Shield Fern			1					**1**
Ximenia americana	Tallow Wood, Hog Plum			1					**1**

Habitat Assessment

Collected sonar data were processed through Dr. Depth software to analyze the strength of the return signal from the bottom to get an estimate of the relative bottom hardness for Catfish Creek. Figure 34 shows the bottom hardness raster for Catfish Creek. This map is meant to help identify locations of harder and softer bottoms for benthic invertebrate sampling, fish sampling and benthic chlorophyll sampling.

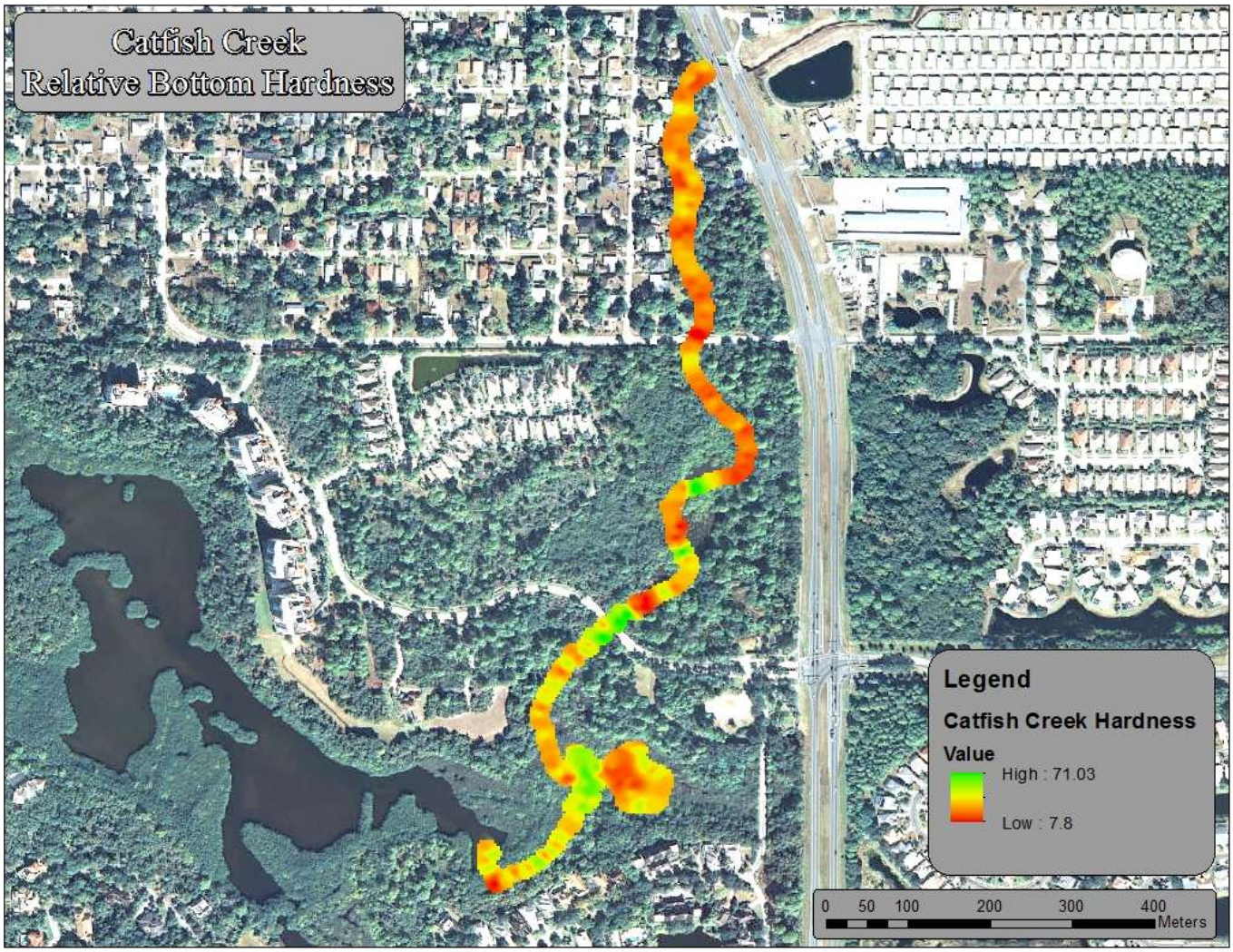

Figure 34. Catfish Creek Relative Bottom Hardness Map

Bathymetry Mapping

In the study area, Catfish Creek had a mean depth of 1.86 feet and a maximum depth of 4.84 feet. A total of 4.20 acres of creek was mapped during the assessment. At the time of assessment, Catfish Creek contained an estimated 1,498,125 gallons of water in the study area. The water level elevation of Catfish Creek was 9.65 at Sarasota ARMS CAT-1 station at the time of the assessment Figure 35 details the bathymetric mapping for Catfish Creek showing the three depth strata.

Figure 35. Catfish Creek Bathymetric Stratum Map