

Clower Creek Stream Assessment

Study Area

Clower Creek was assessed on August 29, 2014. Clower Creek is in a highly urbanized watershed with residential (53%), commercial (10%) and industrial (8.15%) land use. This creek is located in Sarasota County south of downtown Sarasota. The upstream portion of Clower Creek has been straightened between the weirs and Vamo Road. The watershed for Clower Creek has an LDI value of 30.08 from the urbanization in the surrounding areas. Clower Creek flows into Little Sarasota Bay.



Figure 21. Overview of the Clower Creek Study Area

Vegetation Survey

The Clower Creek vegetation assessment encompassed 3 vegetation regions from the mouth in Little Sarasota Bay as shown in Figure 22. In these regions, 16 species of vegetation were identified. Regions 1 and 2 were dominated by mangroves with few other salt tolerant species present. The first occurrence of Leather Fern (*Acrostichum danaeifolium*) was in Region 3. Above Region 3 the vegetation communities are dominated by Brazilian Pepper (*Schinus terebinthifolius*), Leather Fern (*Acrostichum danaeifolium*) and White Mangrove (*Laguncularia racemosa*).



Figure 22. Overview of Clower Creek Vegetation Assessment Regions

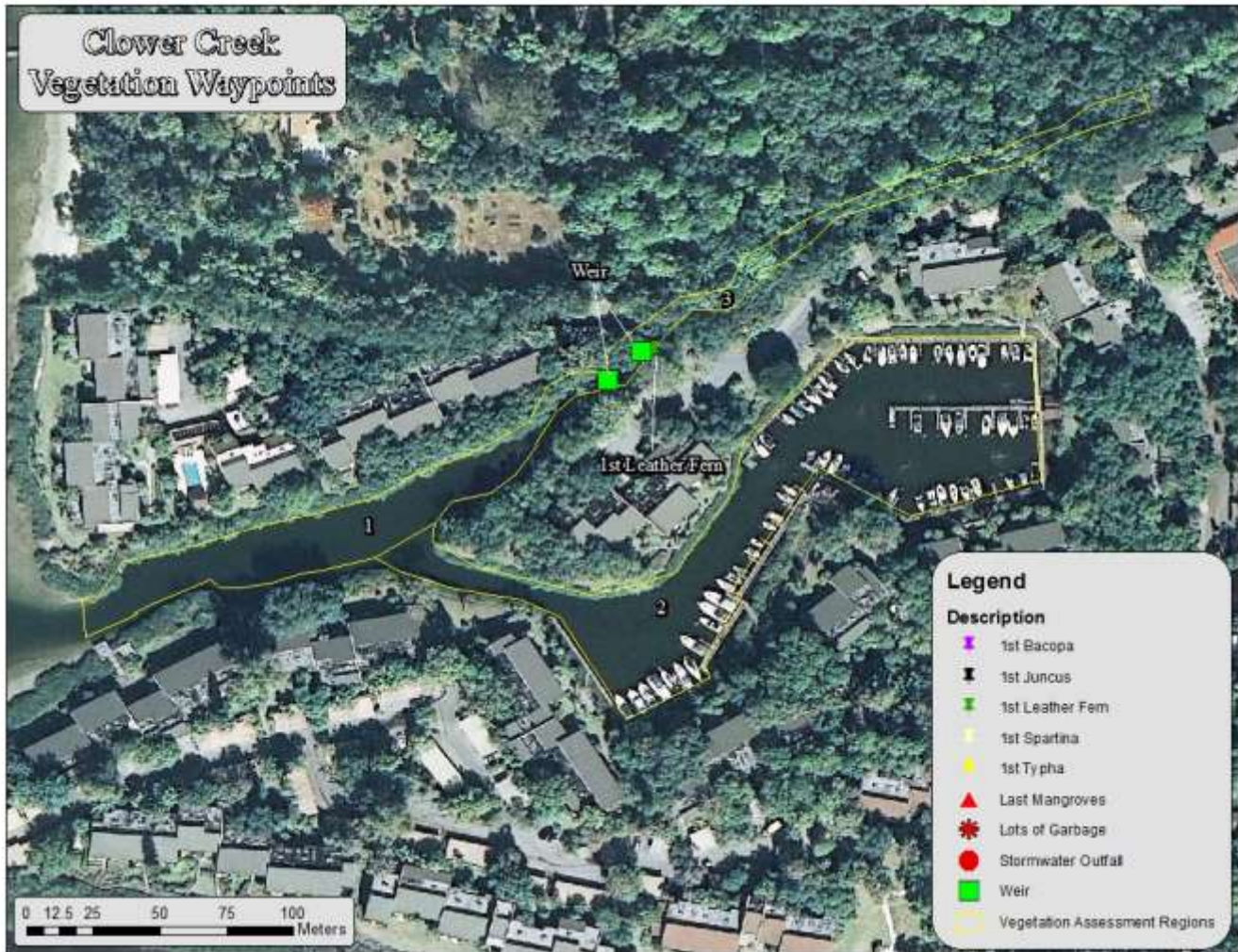


Figure 23. Clower Creek Vegetation Waypoints

Figure 23 shows the vegetation transition zone of Clower Creek indicating the most downstream Leather Fern. Based on the vegetation assessment data for Clower Creek, regions 1 and 2 would comprise the highest salinity and tidal influence zone, region 3 would comprise the “mixing” zone. The two weirs at the end of region 1 and the beginning of region 3 have large effects on the salinity regime of Clower Creek. Upstream from the bridge in Region 3, Clower Creek becomes congested with Brazilian Pepper (*Schinus terebinthifolius*) and mangroves blocking the channel in many places. Due to this blockage only limited vegetation assessment was possible. The vegetation assessment species list is shown in Table 5.

Table 5. Clower Creek Vegetation Assessment List

Plant Species	Common Name	Sample Region			Regions Found
		1	2	3	
<i>Avicennia germinans</i>	Black Mangrove	1	1	1	3
<i>Bidens alba</i>	White Beggar Ticks	1	1	1	3
<i>Iva frutescens</i>	Marsh Elder	1	1	1	3
<i>Laguncularia racemosa</i>	White Mangrove	1	1	1	3
<i>Quercus geminata</i>	Sand Live Oak	1	1	1	3
<i>Rhizophora mangle</i>	Red Mangrove	1	1	1	3
<i>Schinus terebinthifolius</i>	Brazilian Pepper	1	1	1	3
<i>Quercus virginiana</i>	Virginia Live Oak		1	1	2
<i>Vitis rotundifolia</i>	Muscadine Grape	1		1	2
<i>Acrostichum danaeifolium</i>	Leather Fern			1	1
<i>Blutaparon vermiculare</i>	Silverhead, Saltweed			1	1
<i>Myrica cerifera</i>	Wax Myrtle	1			1
<i>Parthenocissus quinquefolia</i>	Woodbine	1			1
<i>Quercus laurifolia</i>	Laurel oak			1	1
<i>Sabal palmetto</i>	Sabal Palm	1			1
<i>Sphagneticola (Wedelia) trilobata</i>	Creeping Oxeye			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 Clower Creek. Figure 24 shows the bottom hardness raster for Clower Creek. This map is meant to help identify locations of harder and softer bottoms for benthic invertebrate sampling, fish sampling and benthic chlorophyll sampling.

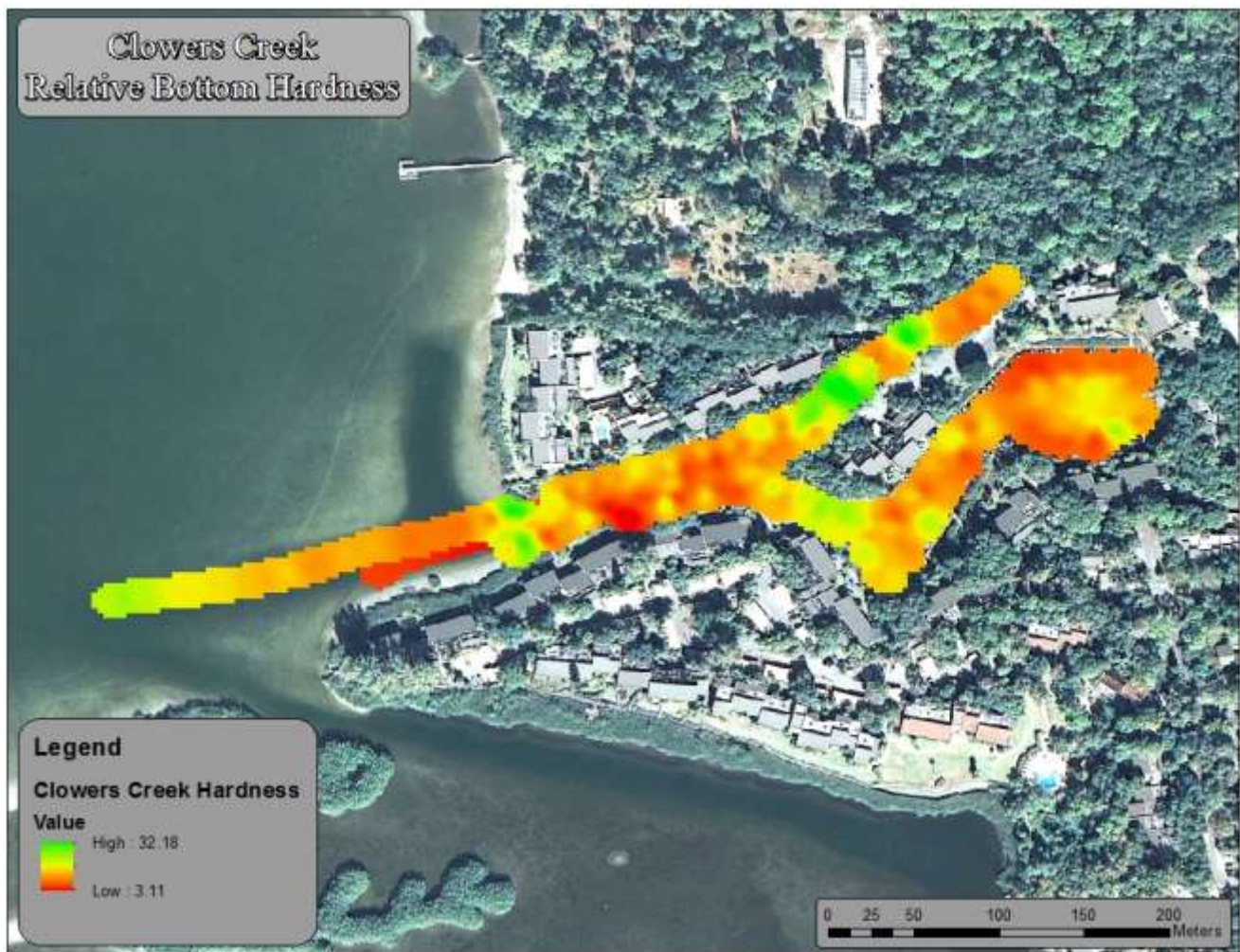


Figure 24. Clower Creek Relative Bottom Hardness Map

Bathymetry Mapping

In the study area, Clower Creek had a mean depth of 3.15 feet and a maximum depth of 6.74 feet. A total of 3.47 acres of creek was mapped during the assessment. At the time of assessment, Clower Creek contained an estimated 3,280,563 gallons of water in the study area. The water level elevation at the time of the assessment was 4.24 feet at Sarasota ARMS CLO-1 station. Figure 27 details the bathymetric mapping for Clower Creek showing the three depth strata.



Figure 25. Clower Creek Bathymetric Stratum Map