Resilient SRQ – Round 2 Grant Application

Whitaker Bayou Dredging Project *(Revised August 13, 2025)*

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1 | Applicant

Sarasota County & City of Sarasota

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2 | Primary Contact

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3 | Project Title & Location

Whitaker Bayou Dredging Project
Entire tidal reach of Whitaker Bayou from Sarasota Bay to ≈ 47th Street (≈ 3.6 miles).

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4 | Project Description & Need

Hydrographic surveys (2024) show **≈ 118,000 CY** of sediment shoaling, leaving the bayou unable to convey even a 2-year storm. The resulting backwater floods **≈ 210 residences** and closes US-301/Myrtle St for up to 8 hours during moderate events. Targeted dredging to original design grades will:

- Restore 100-year (1 % ACE) conveyance LOS.
- Eliminate first-floor flooding for all 210 at-risk homes.
- Remove **≈ 46 t/y Total Suspended Solids (TSS)** and **≈ 5 t/y Total Nitrogen (TN)** now mobilized during storm surges.

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5 | Scope of Work & Cost (2025 dollars)

Task	Quantity / Unit	Unit Cost	Sub-Total
Bathymetry, geotech, design & permitting	1 LS	—	$ 1,150,000
Hydraulic dredging & in-bay dewatering	≈ 118,000 CY	$ 140/CY	$ 16,520,000
Upland disposal / beneficial reuse (≈ 7 mi haul)	≈ 118,000 CY	$ 14/CY	$ 1,650,000
Sediment testing, compliance, monitoring & 5 % contingency	1 LS	—	$ 680,000
Total Estimated Project Cost			**$ 20,000,000**

(Prices include 10 % mobilization and 15 % construction contingency embedded in unit rates.)

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6 | Funding Strategy

Source	Amount	% of Total	Notes
FY 2026 Section 219 Environmental Infrastructure	$ 9,999,000	49.9 %	USACE: design review & construction oversight – City Secured through Federal appropriations.
Resilient SRQ – Round 2 (CDBG-DR)	**$ 10,001,000**	50.1 %	Completes dredging, disposal & compliance
Total Project Cost	**$ 20,000,000**	100 %	No local cash match (City/County in-kind)

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7 | Expected Outcomes & Benefits

Performance Metric	Pre-Project	Post-Project Target
Conveyance LOS	< 2-year storm	**100-year storm**
Residences with first-floor flooding (100-yr)	≈ 210	**0**
Critical road closures per major storm	5 – 8 hrs	**0 hrs**
Annual pollutant removal	—	**≈ 46 t TSS & 5 t TN**
LMI population served	51 %	51 % (LMA objective met)

Broader Benefits

- Protects ≈ $ 350 M in assessed value along US-41 and the working waterfront.
- Supports Sarasota Bay TMDL goals by eliminating nutrient-laden resuspension.
- Channel capacity incorporates **1.5 ft projected sea-level-rise** through 2075.
- All dredged material disposed at County-permitted upland site with full environmental compliance.

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8 | Cost Reasonableness & Market Validation

- **$ 140/CY** dredge rate sits mid-range of 2025 west-coast Florida bids ($120–$180/CY).
- **$ 14/CY** disposal aligns with 7-mile trucking & tipping averages.
- 9 % soft-costs are typical for federally reviewed environmental-infrastructure work.

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9 | Schedule (Key Milestones)

Milestone	Target Date
Final design & permit submittal	**Summer 2026**
USACE & FDEP approvals	**Late 2026**
Advertise & award contract	**Summer 2027**
Mobilization & dredging start	**Late 2027**
Substantial completion	**Summer 2028**
Final monitoring & close-out	**Late 2028**

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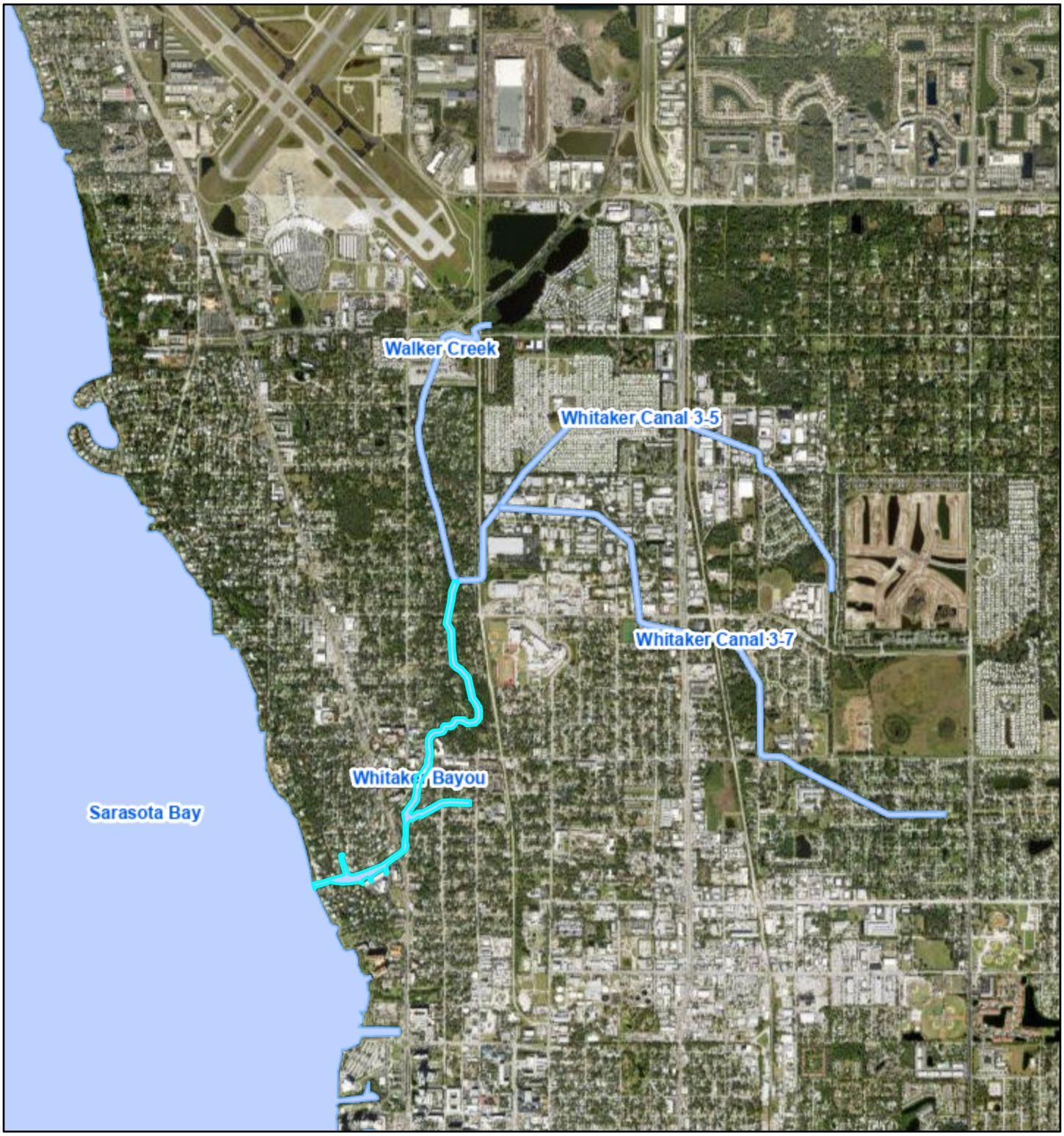
10 | Request

The City of Sarasota and Sarasota County respectfully request **$ 10,001,000** in Resilient SRQ – Round 2 (CDBG-DR) funds, paired with **$ 9,999,000** in Section 219 Environmental Infrastructure dollars, to fully deliver the $20 M Whitaker Bayou Dredging & Resiliency Project—removing 118 k CY of sediment, safeguarding 210 homes, extracting 5 tons of nitrogen annually, and restoring 100-year flood protection for Sarasota's northern neighborhoods.

Whitaker Bayou



1:36,112

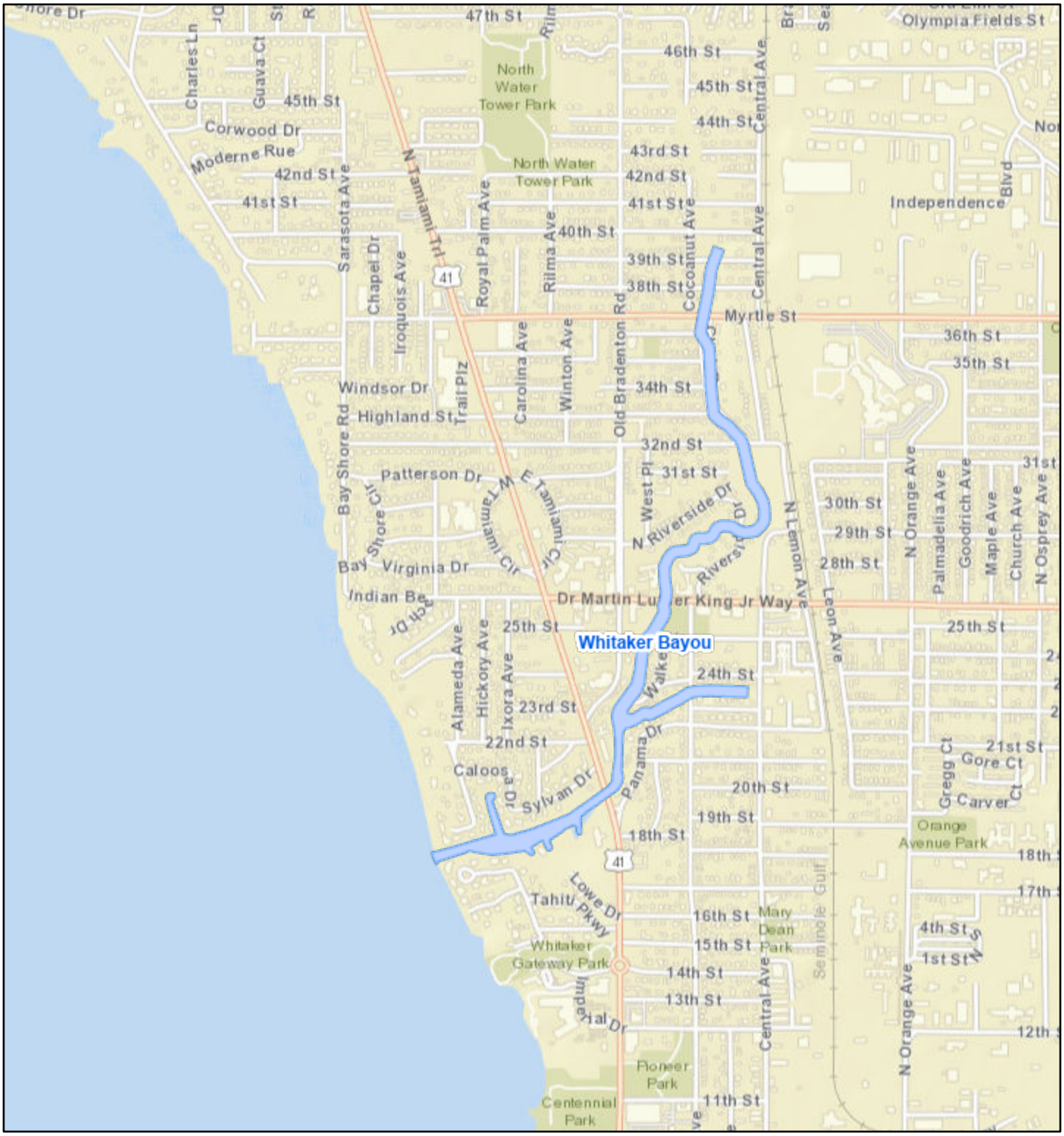
N

0 0.28 0.55 1.1 mi

0 0.42 0.85 1.7 km

State of Florida, Maxar

Whitaker Bayou



University of South Florida, County of Manatee, Sarasota County GIS, Esri, HERE, Garmin, INCREMENT P, NGA, USGS

Whitaker Bayou Stream Assessment

Study Area

Whitaker Bayou is located in northern Sarasota County where it flows into Sarasota Bay. It was assessed on August 11, 2014. Whitaker Bayou's watershed is highly urbanized, having a drainage basin LDI value of 30.51 and is comprised predominantly of residential (37.26%) and industrial (18.96%) land uses. Whitaker Bayou in the upper creek portions of Regions 9 through 11 has been straightened and is characterized by steep banks. Regions 6 through 8 have increased natural sinuosity. Region 6 and below are characterized by an increase in bank alterations and seawalls before Whitaker Bayou reaches Sarasota Bay.

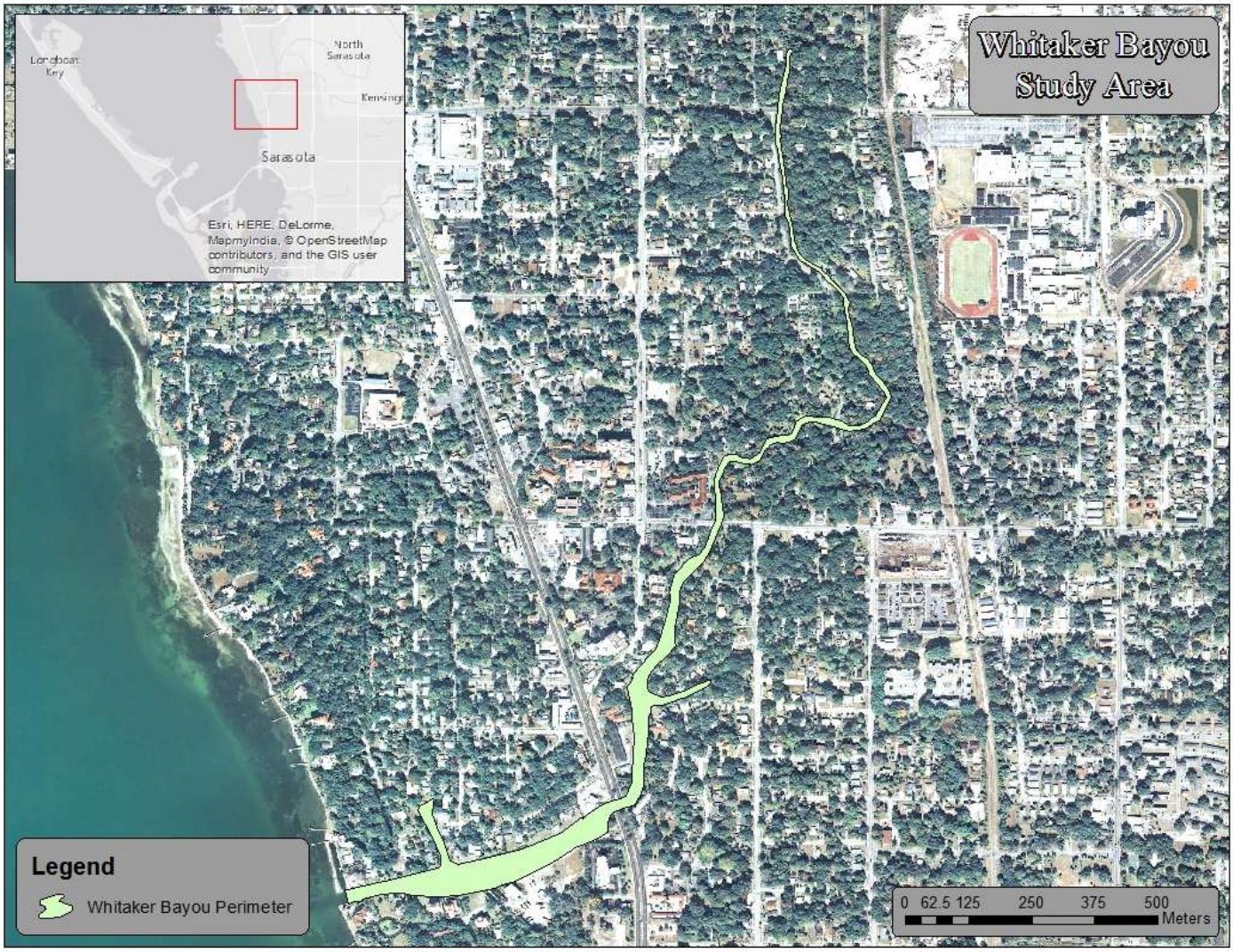


Figure 6. Whitaker Bayou Study Area

Vegetation Survey

The Whitaker Bayou vegetation assessment encompassed 11 vegetation regions from the mouth in Sarasota Bay to upstream from Myrtle St. as shown in Figure 7. In these regions, 52 species of vegetation were identified. Region 1 had no vegetation present below the seawall. Region 2 through Region 6 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 7. The first occurrence of Leather Fern (*Acrostichum danaeifolium*) was in Region 6. Saltmarsh Cordgrass (*Spartina alterniflora*) was first observed in Region 4. Above Region 7 the vegetation communities are populated by many species indicative of dominating freshwater influence.

Figure 7. Overview of Whitaker Bayou Vegetation Assessment Regions

Figure 8 shows the vegetation transition zone of Whitaker Bayou indicating the most upstream Mangroves as well as the most downstream Leather Fern and *Spartina*. Based on the vegetation assessment data for Whitaker Bayou, Regions 1 through 5 would comprise the highest salinity and tidal influence zone, Region 6 and Region 7 would comprise the "mixing" zone and Regions 8 through 11 would comprise the freshwater dominant zone. Stormwater outfalls are numerous (23) in the study area of Whitaker Bayou. The vegetation assessment species list is shown in Table 2.

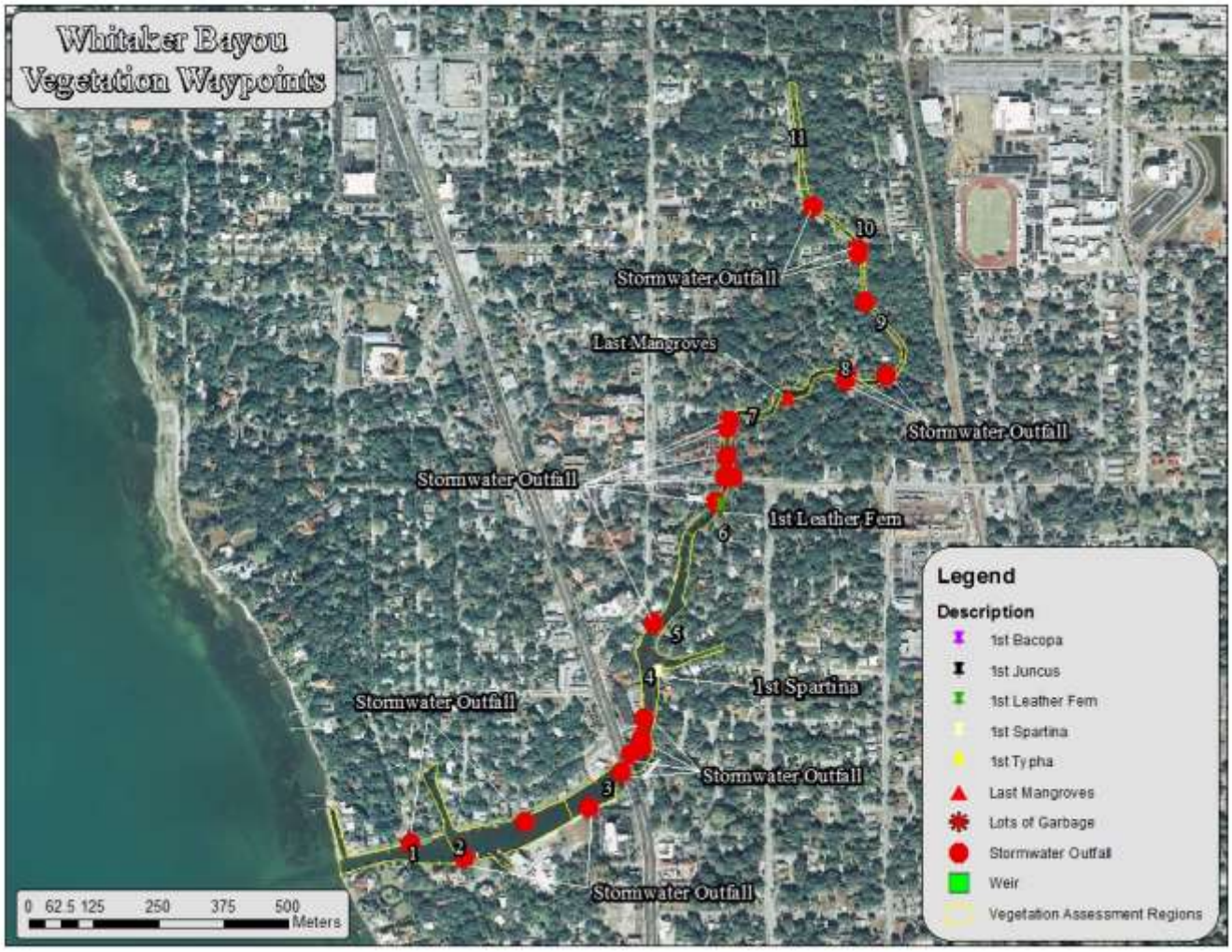


Figure 8. Whitaker Bayou Vegetation Waypoints

Table 2. Whitaker Bayou Vegetation Assessment List

Plant Species	Common Name	Sample Region											Regions Found
		1	2	3	4	5	6	7	8	9	10	11	
Schinus terebinthifolius	Brazilian Pepper		1	1	1	1	1	1	1	1	1	1	10
Quercus geminata	Sand Live Oak				1	1	1	1	1	1	1	1	8
Acrostichum danaeifolium	Leather Fern						1	1	1	1	1	1	6
Dioscorea bulbifera	Air Potato				1			1	1	1	1	1	6
Laguncularia racemosa	White Mangrove		1	1	1	1	1	1					6
Leucaena leucocephala	White leadtree						1	1	1	1	1	1	6
Sabal palmetto	Sabal Palm		1	1	1		1		1			1	6
Sphagneticola trilobata	Creeping Oxeye				1		1	1	1	1	1		6
Panicum maximum	Guneagrass						1	1		1	1	1	5
Ruellia simplex	Britton's Wild Petunia							1	1	1	1	1	5
Syngonium podophyllum	Nephitis, American Evergreen							1	1	1	1	1	5
Avicennia germinans	Black Mangrove		1	1	1		1						4
Bidens alba	White Beggar Ticks						1	1		1		1	4
Colocasia esculenta	Wild Taro, Dasheen, Coco Yam								1	1	1	1	4
Rhizophora mangle	Red Mangrove		1	1	1		1						4
Blutaparon vermiculare	Silverhead, Saltweed		1	1	1								3
Campsis radicans	Trupetcreeper									1	1	1	3
Carya aquatica	Water Hickory									1	1	1	3
Eustachys glauca	Saltmarsh Finger Grass			1	1			1					3
Koelreuteria elegans	Golden Rain Tree			1	1		1						3
Panicum repens	Torpedo Grass				1		1	1					3
Sansevieria hyacinthoides	Bowstring Hemp							1	1	1			3
Tilia americana	Basswood								1	1	1		3
Urochloa mutica	Para Grass							1	1	1			3
Bauhinia variegata	Orchid Tree									1	1		2
Coccoloba uvifera	Seagrape		1			1							2
Echinochloa walteri	Coast Cockspur Grass (hairy)										1	1	2
Erythrina herbacea	Coralbean								1	1			2
Ficus aurea	Strangler Fig						1	1					2
Hydrilla verticillata	Hydrilla, water thyme									1		1	2
Juniperus virginiana	Red Cedar					1			1				2
Nephrolepsis spp.	Sword Fern								1	1			2
Parthenocissus quinquefolia	Woodbine				1		1						2
Thelypteris palustris	Marsh Fern								1	1			2
Vitis rotundifolia	Muscadine Grape									1		1	2
Albizia julibrissin	Silk tree Mimosa							1					1
Alternanthera philoxeroides	Alligator Weed							1					1
Boehmeria cylindrica	Bog Hemp, False Nettle										1		1
Casuarina equisetifolia	Australian Pine							1					1
Cinnamomum camphora	Camphor-tree									1			1
Conocarpus erecta	Buttonwood		1										1
Cupaniopsis anacardioides	Carrotwood							1					1
Cyperus involucratus	Umbrella flat sedge										1		1
Distichlis spicata	Salt Grass		1										1
Hydrocotyl umbellata	Manyflower Marshpennywort, Water Pennywort										1		1
Itea virginica	Virginia Willow								1				1
Phyla nodiflora	Frog-fruit, Carpetweed, Turkey Tangle Fogfruit							1					1
Prunus carolineana	Cherry Laurel									1			1
Quercus laurifolia	Laurel oak					1							1
Ricinus communis	Castor Bean								1				1
Sambucus canadensis	Elderberry								1				1
Spartina alterniflora	Salt Marsh Grass				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 Whitaker Bayou. Figure 9 shows the bottom hardness raster for Whitaker Bayou. This map is meant to help identify locations of harder and softer bottoms for benthic invertebrate sampling, fish sampling and benthic chlorophyll sampling. In this raster dataset, the higher the hardness value, the harder the bottom substrate.

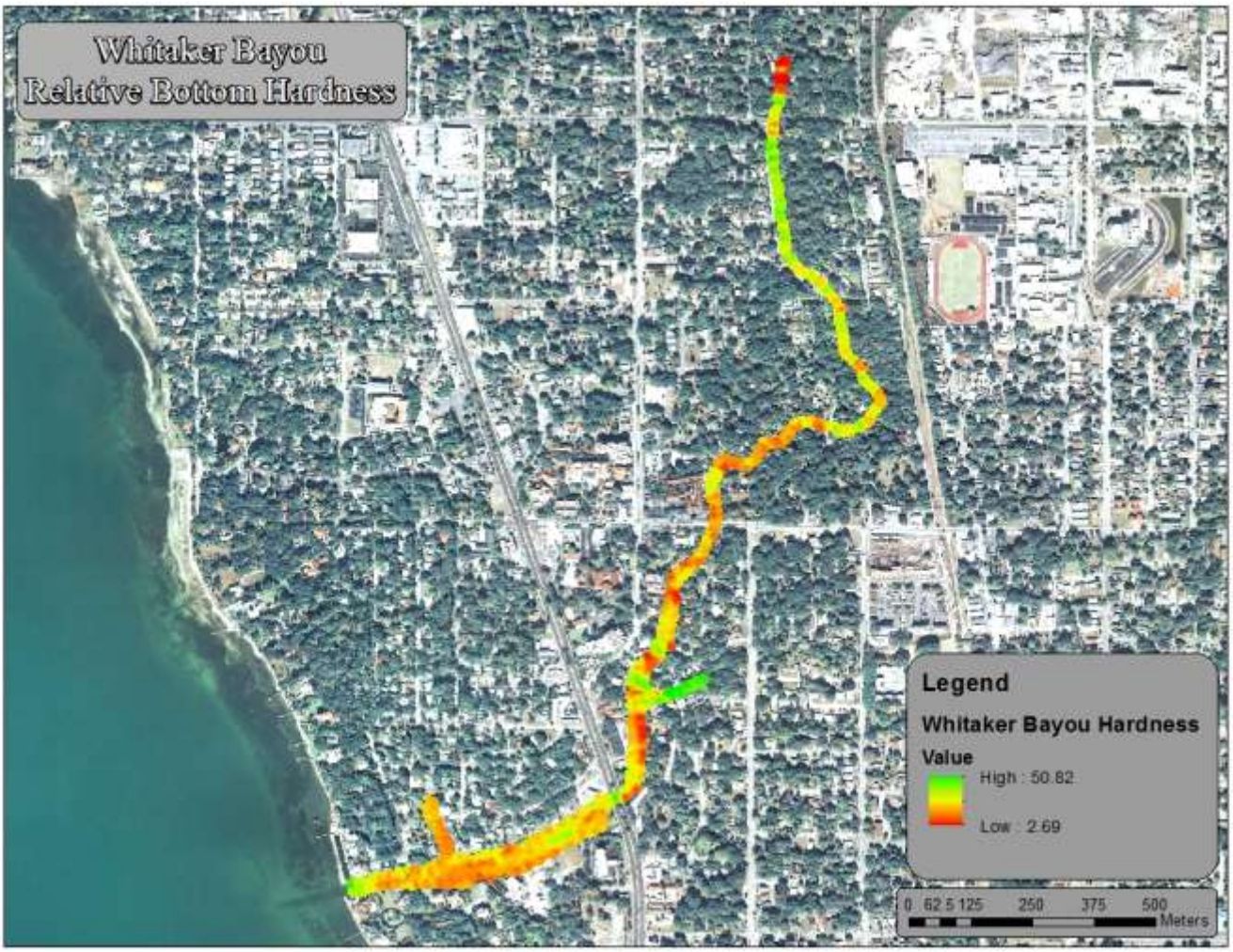
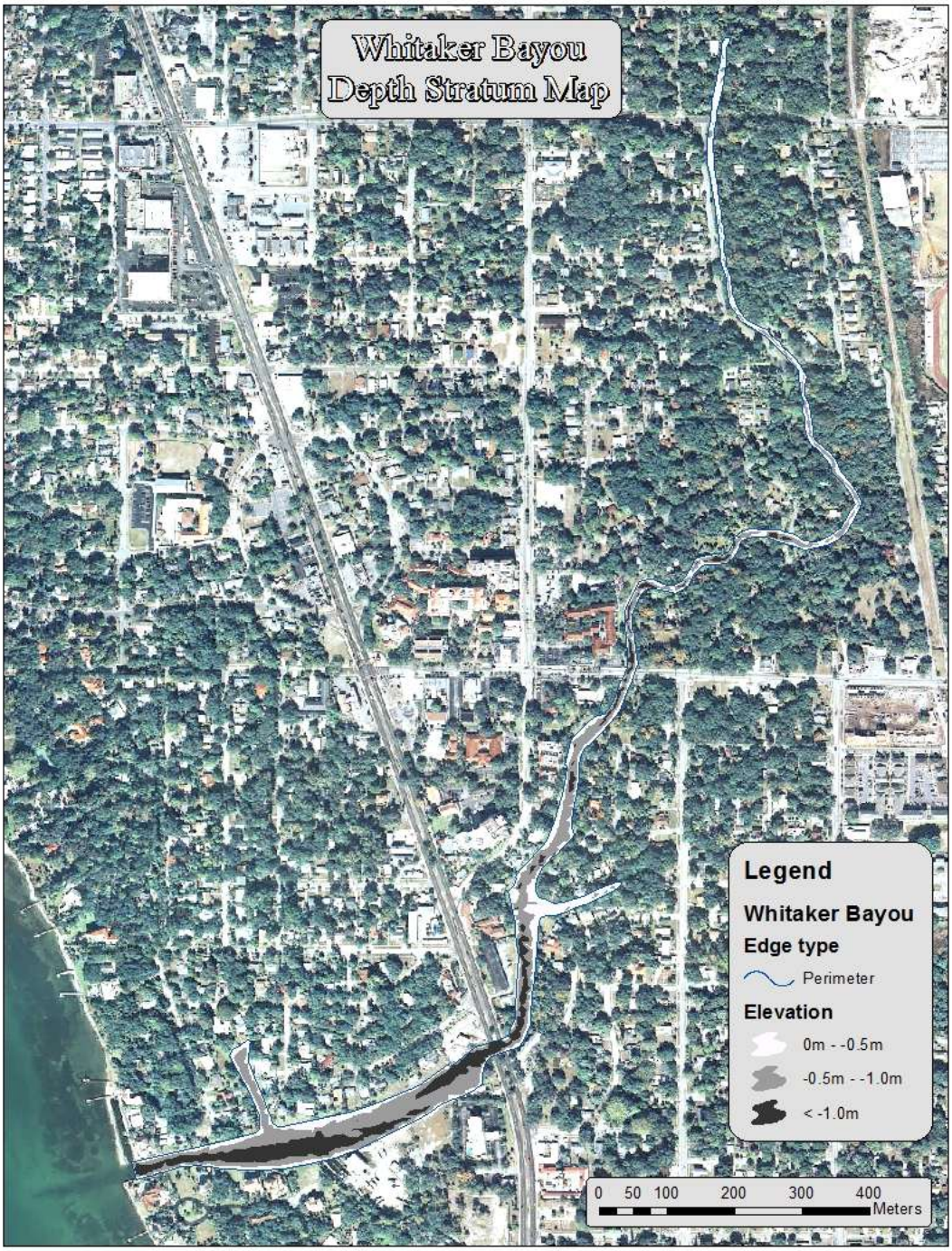


Figure 9. Whitaker Bayou Relative Bottom Hardness Map

Bathymetry Mapping

In the study area, Whitaker Bayou had a mean depth of 2.57 feet and a maximum depth of 8.03 feet. A total of 12.90 acres of creek was mapped during the assessment. At the time of assessment, Whitaker Bayou contained an estimated 9,200,464 gallons of water in the study area. At the time of the assessment, the water level elevation was 1.78 feet at USGS 2299861. Figure 10 details the bathymetric mapping for Whitaker Bayou showing the three depth strata.

Figure 10 Whitaker Bayou Bathymetric Stratum Map



Sarasota County

HUD Block-Grant Planning App

Enter a Census Tract number into the search. From the Search Results drop panel, selet the Tract and Block number combination as input to the Income Summary tool. The tool will then summarize the LOM Income percentages for the selected and adjacent blocks.

0 Feet

2020 Census Block Group 9

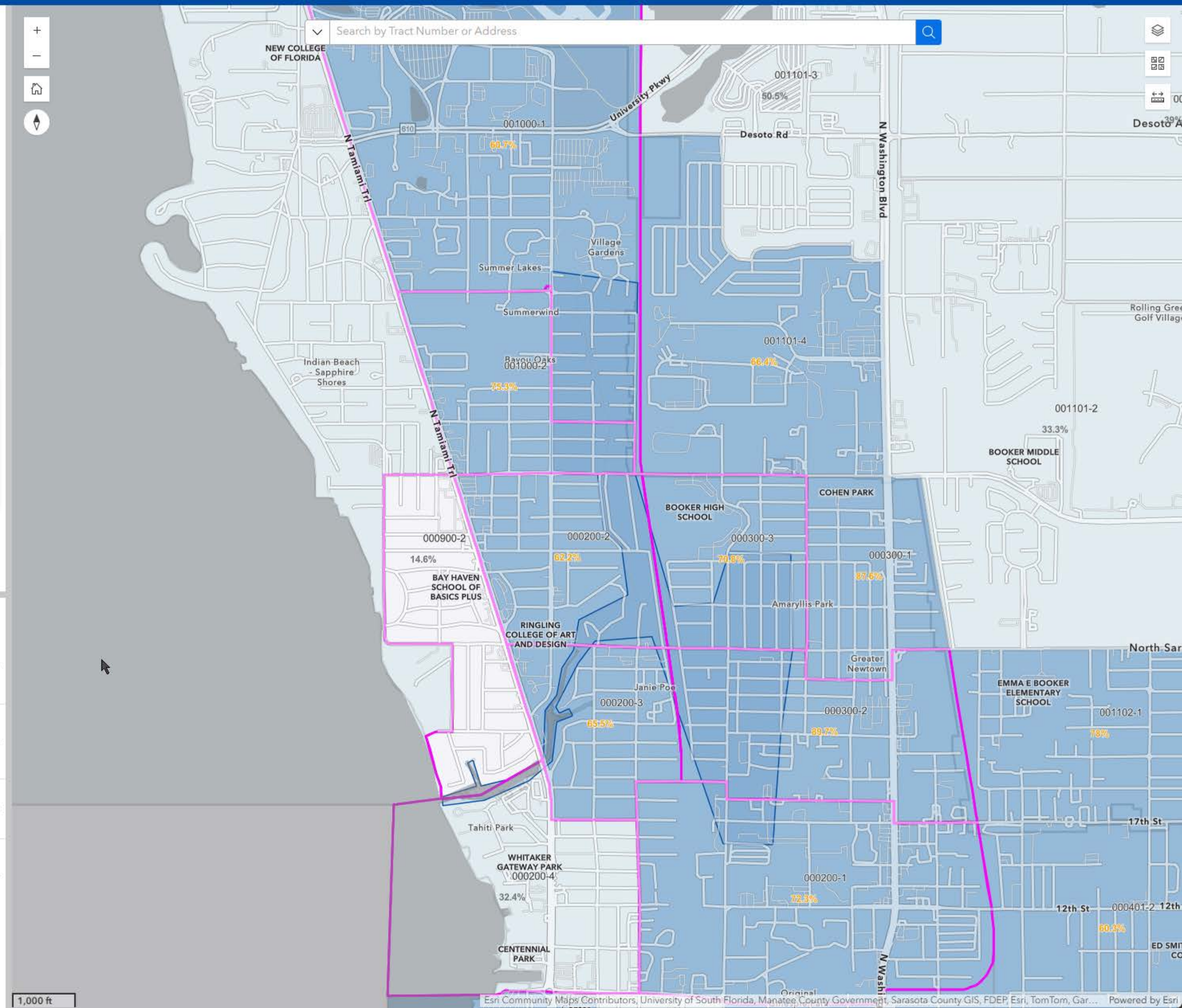
LMI %
64.64

2015 Census Block Group 9

LMI %
65.82

Layers

- County Infrastructure Layers
- Census Block Group Layers
- ACS Variable Layers
- County Boundary Layers



Legend

Roadway Deficiencies

LOS Deficiency

- Not Determined
- Yes

Structure Deficiencies

LOSDeficientDetermination

- Not Determined
- Yes

CommunityFloodZone