

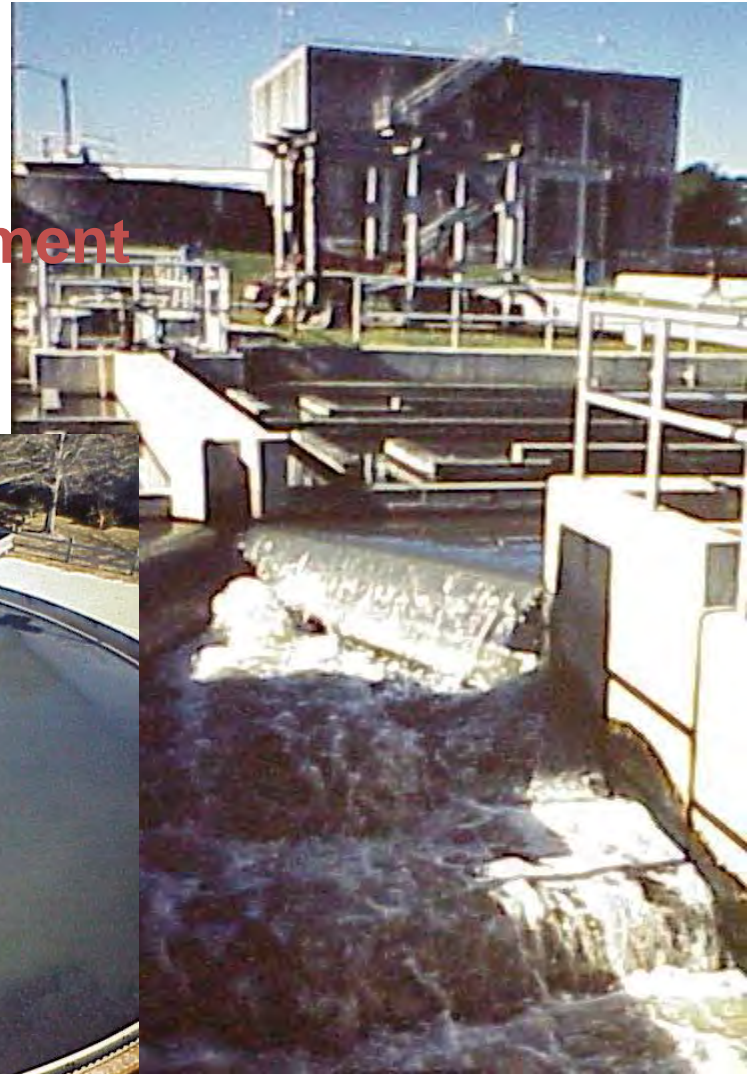




Our Natural Resource

Old

**The Wilson Bay
Wastewater Treatment
Plant**
In Operation



New

The New Land Application Plant





The Problems in the Bay and New River

- Altered hydrology & insufficient Flow
- Soft, anaerobic mud
- No dissolved oxygen in the water column-
0 mg/L
- *No benthic community*

Help From Aeration Units



Thru the use of a baffle it delivers oxygen to the bottom of the bay.



Puts out 200 gallons per second



Placement of Instream Aeration Units



- Mimic original water hydrology

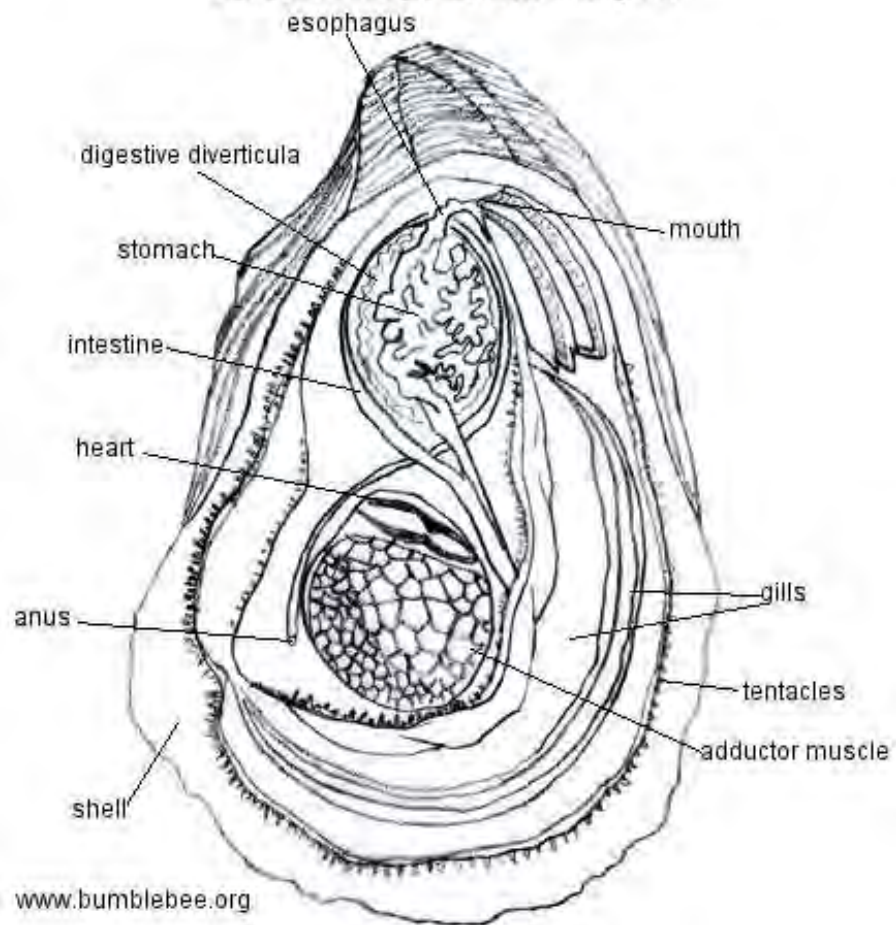
Wetlands Restoration



SAV's- Submerged Aquatic Vegetation



***Crassostrea virginica*, American oyster**



CHUB links deployed last 15 years into
Wilson Bay



Winter 2013-2.7 tons of granite rock.
Spring and summer 2013- 107,562
pounds of recycled shell



**Sturgeon
City**

Camp Johnson
(Part of Camp Lejeune)

Wilson Bay



Retrieving 4.1 million oysters in Spat bags and CHUBs and Moving to New Oyster Reef 2014







New Recruitment onto Oyster Reef

Monitoring of the reefs shows recruitment and settlement of clams, mussels, barnacles and various other species.



New River “Oyster Highway”- Phase I





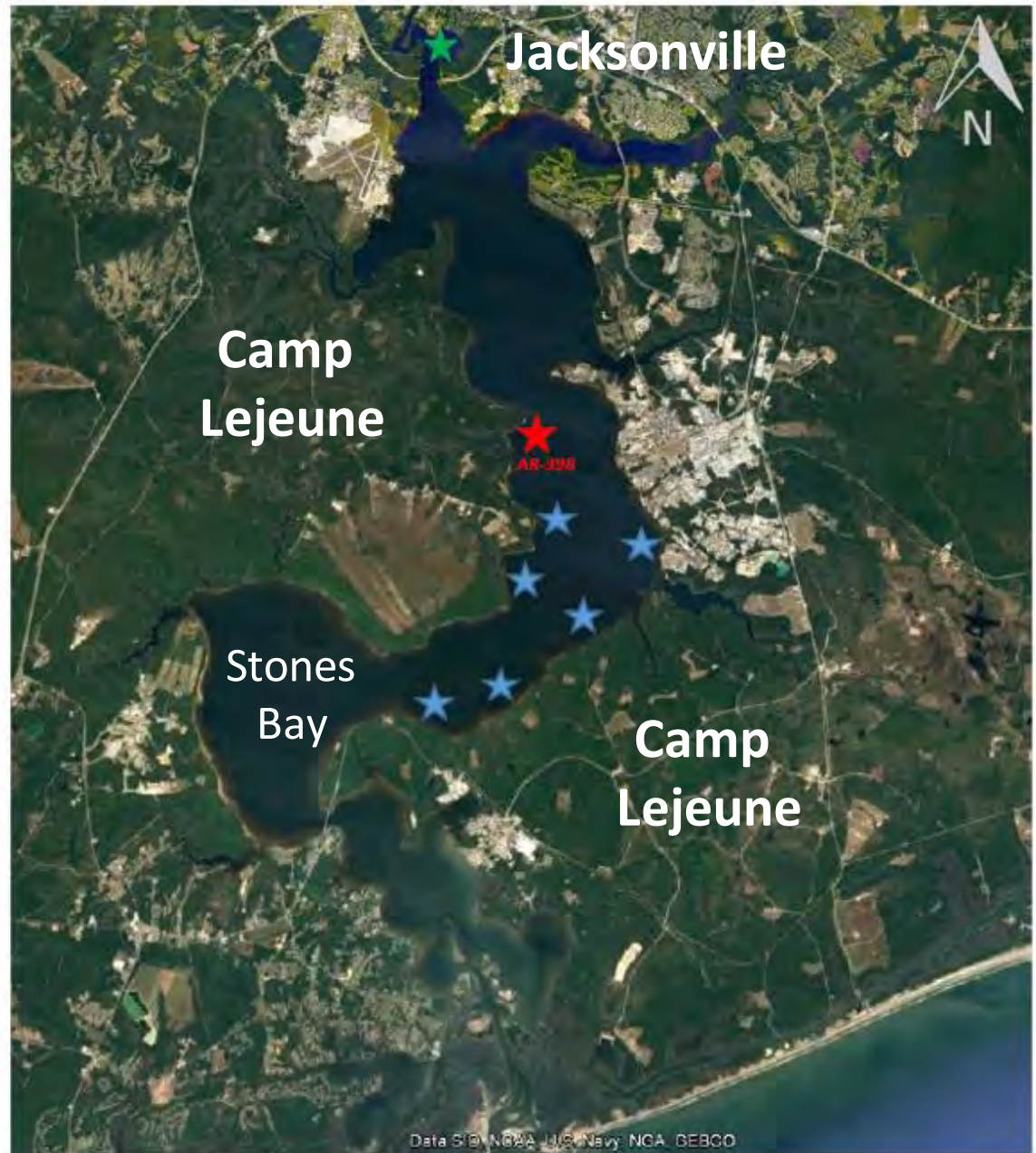
Proposed Stepping
Stone Reefs



AR 398



Wilson Bay
Reefs



Reef Balls and or ReefMakers



Oyster Paddys



Proposed Budget	Phase I
630 Mini Balls @ 100 each	\$ 63,000
Deployment of mini balls	\$ 100,000
1500 Oyster Paddy Stacks 6 New Reefs	\$ 180,000
100 Oyster Panels for AR 398	\$ 20,000
150 Paddy Stacks for Wilson Bay	\$ 30,000
Monitoring pre and post – 3 years total to determine Phase II	\$ 165,000
Total budget Request Phase I	\$558,000

Partners	Funders
Dr. Neils Lindquist UNC – Oysters	NC General Assembly - \$100,000
Dr. Joel Fodrie UNC – Fish and monitoring	NCWHF North Carolina Wildlife Habitat Foundation \$ 200,000
Dr. Susan Cohen Camp Lejeune- Base access and man power	CCA Coastal Conservation Association \$ 50,000
City of Jacksonville Staff Time	Individuals \$10,000
	City of Jacksonville Staff time and expertise

Flooding in Brynn Marr Area



319H Grant Program

Map of Recommended Drainage Improvements - Brynn Marr Area



Legend

- Minor Watersheds
- BMP Locations
- BMP No Longer Feasible
- Ditches to Redesign
- Pipes to Redesign
- Existing Pipes
- Existing Ditches

Disclaimer: This Map is intended to use for planning purposes only. City of Jacksonville or its individual departments are not liable for any data inaccuracies. Once again this map should not be used for any legal boundary determinations and data displayed on this map is collected from various different sources.

1 inch = 450 feet



Sea Grant – SETS and Denitrification



NC Division of Water Infrastructure- State Revolving Loan





0 50 100



1 inch = 100 feet



Wardola-Thompson School Creek Restoration Project Alternative 1 Figure 5.1.2.1

