

Hurricane Impacts to Alternative Oyster Aquaculture Operations in Texas

- The Texas Cultivated Oyster Mariculture Program began accepting applications in fall 2020
 - Hurricanes have not yet impacted the small number of active operations
 - TPWD is continuing to refine various aspects of the program (including processes, procedures, and guidance documents) and 'lessons learned' from other Gulf States is critical to those developments
- Current protocols in Texas
 - Every applicant is required to submit a Hurricane/Tropical Storm Plan, assessed on a case-by-case basis
 - Private insurance is not required
 - 20% of fees collected under the COM program set aside for cleanup of abandoned equipment/debris



Applicant Name: _____

COM Operating Plan

Question 10 – Please provide details of your Hurricane/Tropical Storm Plan. Plan should include management details for the protection of all equipment and oysters within your permitted area beginning 72-hours before projected landfall. Plan should include what specific factors will be considered when deciding to execute the plan (e.g. what triggers will be used for sinking the cages? Hurricane Category, Cone of Impact, Etc.)

Texas Parks and Wildlife Department

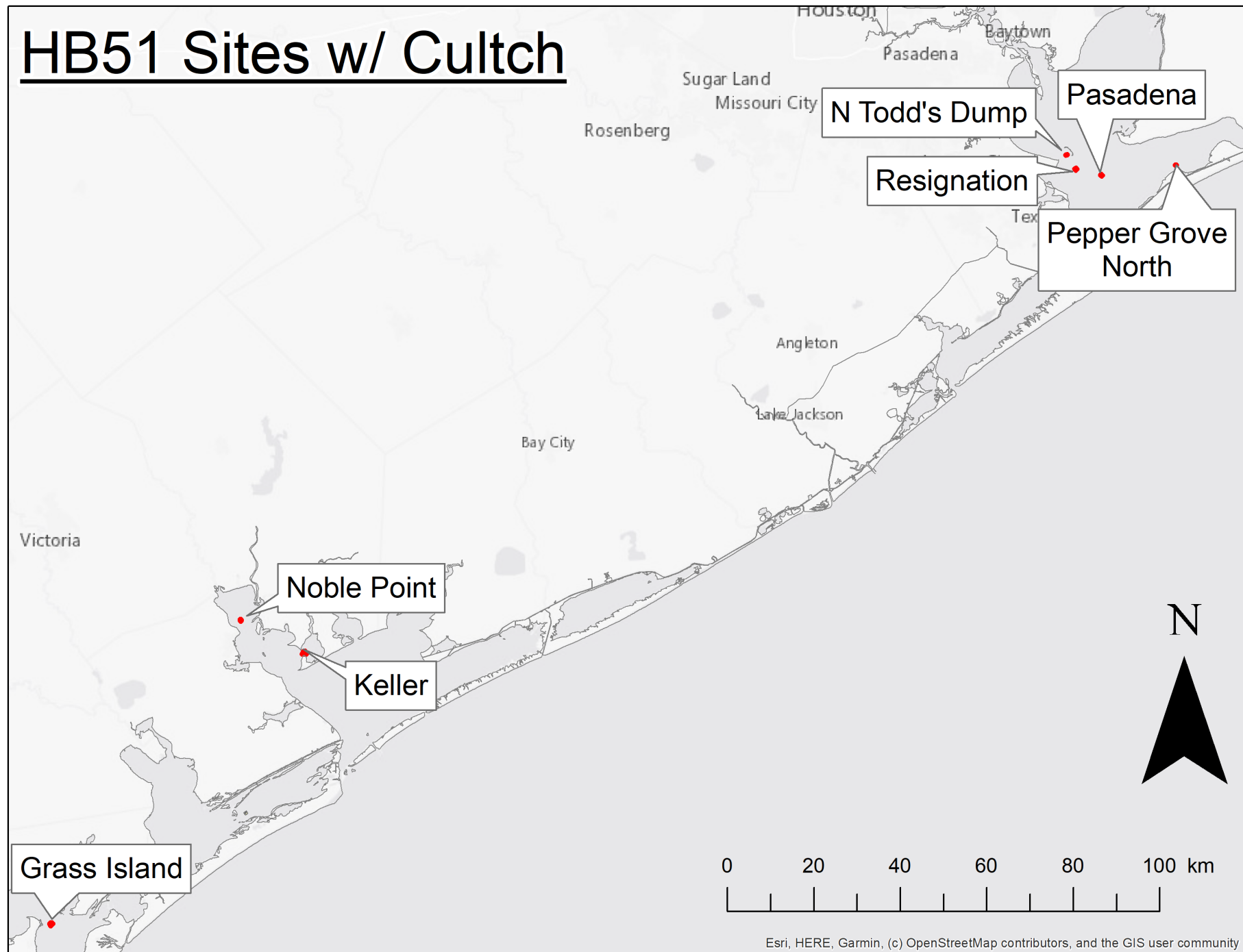
Oyster Shell Recovery Program

- HB51 (2017) includes a requirement for dealers to:
 - Return 30% by volume of the total quantity of oysters harvested the previous license yearOR
 - Pay a fee to the department to return an equivalent amount of cultch to public reefs
- Currently the fee is \$1.32 per sack (no increase)

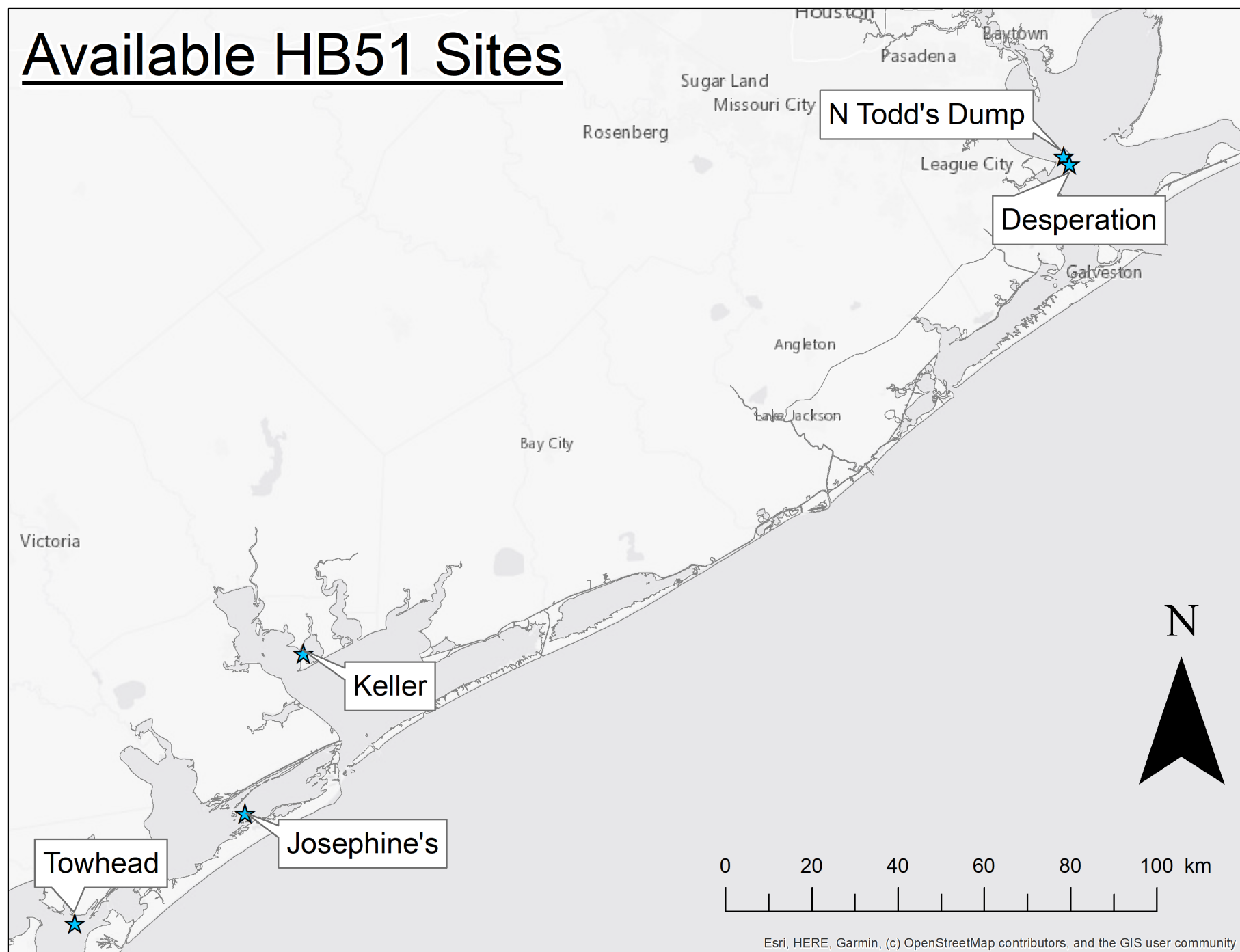
Texas Parks and Wildlife Department Oyster Shell Recovery Program

LY (Sep-Aug)	Sacks Harvested	Cultch Due (cu yds)	Fee in lieu of cultch	Final Disposition		% accounted for	Total paid if cultch and fee added	
				Cultch (cu yds)	Fee (\$)		cultch	fee
2018	564,787	9,805.30	\$745,518	6,590.60	\$248,448	100.5		
2019	754,565	13,100.00	\$996,025	9,705.30	\$228,047	97.0		
2020	878,503	15,251.70	\$1,159,624	3,220.00	\$298,329	46.8		
2021	861,939	14,964.12	\$1,137,759	16,150.20	\$200,438	125.5		
2022	323,867	5,622.65	\$427,504	0	\$92,681	21.7		
Total	3,383,661	58,743.78	\$4,466,431	35,666.10	\$1,067,943	84.6	49,712.0	\$3,779,725
Balance (as of 2/10/2022)		9,031.8	\$686,706	60.7%	23.9%			

HB51 Sites w/ Cultch



Available HB51 Sites





it's
habitat
FORMING
EAT • RECYCLE • REPEAT



"Sink Your Shucks" Oyster Recycling Program

- Founded by Texas A&M Corpus Christi Harte Research Institute in 2009
 - Dr. Jennifer Pollack and Gail Sutton
- Shells are reclaimed twice a week from partner restaurants, wholesale markets, and festivals around Corpus Christi
- Shells are transferred to a staging area for a 6-month quarantine period
- Shells are then
 - (1) Bagged for living shoreline projects
 - (2) Used for oyster reef restoration in deeper waters
- Since 2009
 - Have collected over 2 million pounds of oyster shell
 - Restored more than 30 acres of oyster reef in the Coastal Bend of Texas
 - Relies on university students and over 2,000 volunteers

Galveston Bay Foundation partners with local restaurants to collect shucked oyster shells after patrons enjoy a tasty meal. The empty oyster shells are sun-bleached for a minimum of six months to rid them of bacteria. The shells are then returned to Galveston Bay to provide new homes for baby oysters.



Learn which restaurants recycle their oyster shells at galvbay.org/oysters and eat your way to a healthier Bay!

Galveston Bay Foundation Oyster Shell Recycling Program

- Founded by the Galveston Bay Foundation in 2011
- Shells are reclaimed from partner restaurants in the Galveston and Houston area
- Shells are transferred to staging areas for a 6-month quarantine period
- Shells are then used for
 - (1) Reef creation and enhancement projects
 - (2) Living shoreline projects
 - (3) Volunteer oyster gardening
- Since 2011
 - Has recycled 1,140 tons of shell
 - Relies on large network of volunteers

Contact: Haille Leija

<https://galvbay.org/work/habitat-restoration/>

Texas Parks and Wildlife Department Oyster Management Plan

TEXAS OYSTER
FISHERY MANAGEMENT PLAN

by

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FISHERY MANAGEMENT PLAN SERIES
Number 1
1988

Texas Parks and Wildlife Department
Coastal Fisheries Branch
4200 Smith School Road
Austin, Texas 78744

- Texas Oyster Fishery Management Plan published in 1988
- Began updating the FMP in recent years
 - Delayed due to on-going modifications to oyster management

Texas Parks and Wildlife Department

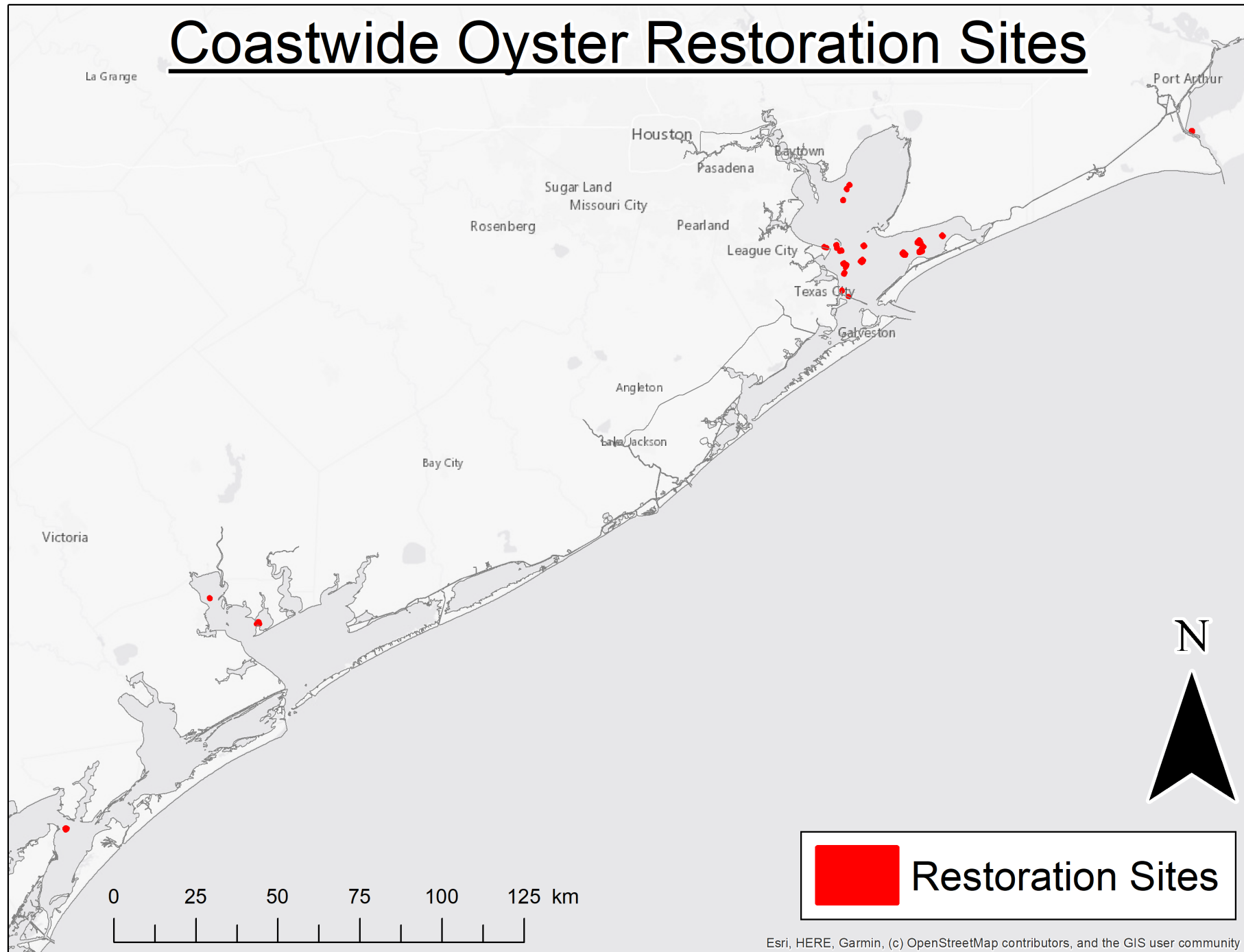
Oyster Management Plan

- 2011 – Shellfish recovery tag required (\$0.20)
 - Reduced sack limit from 90 to 50
 - Reduced legal oystering hours
- 2014 – Closures based on percent undersized
- 2015 – Closures based on ‘Traffic Light’ approach
- 2016 – Reduced sack limit from 50 to 40
 - No harvest on Sundays
- 2017 – No harvest on Saturdays
 - Reduced sack limit from 40 to 30
 - Reduced undersized tolerance to 5%
 - Closed several environmentally sensitive bays
 - Closed all areas within 300 ft of shoreline
 - Shell recovery program
 - Additional license requirements
- 2017 (cont) – Enhanced penalties
 - License buybacks
 - Authority to implement VMS
- 2020 – Cultivated Oyster Mariculture program
- Present – Proposing to close additional environmentally sensitive bays
 - Evaluating the use patent tongs for monitoring
 - Evaluating the use of acoustic surveys to inform management and closures

Texas Parks and Wildlife Department Oyster Restoration Plan

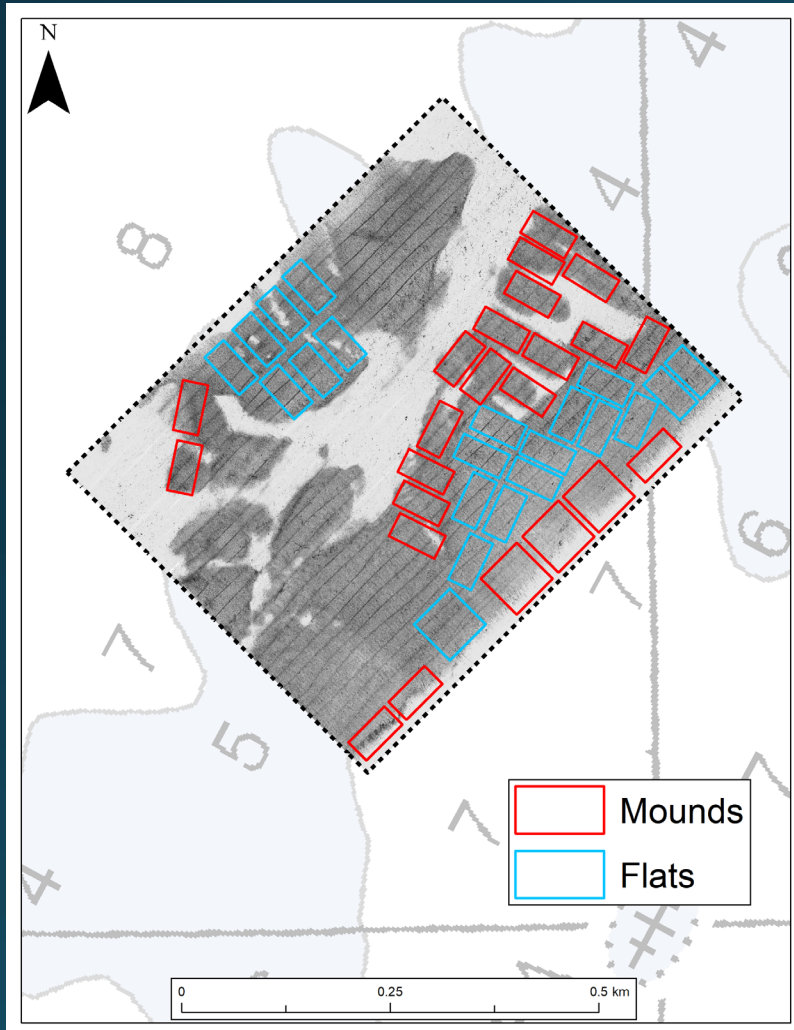
- Currently developing oyster restoration plan document
- Restored over 550 acres of oyster reef over the last decade
- Working with other restoration partners

Coastwide Oyster Restoration Sites



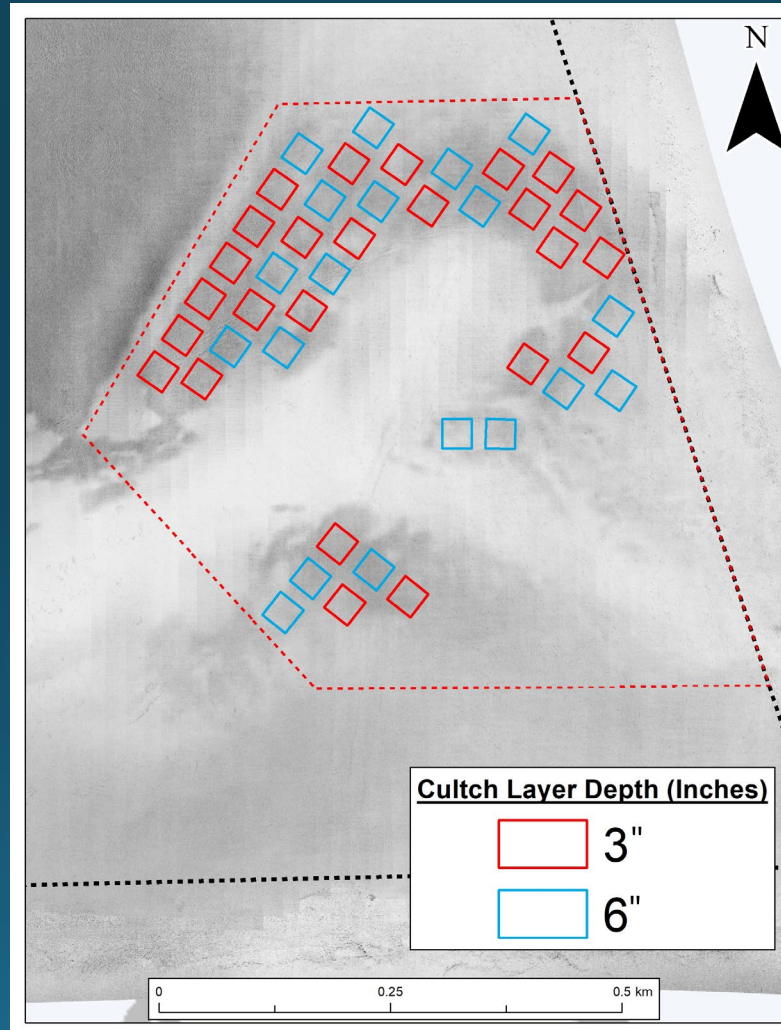
Grass Island

Mounds vs Flats



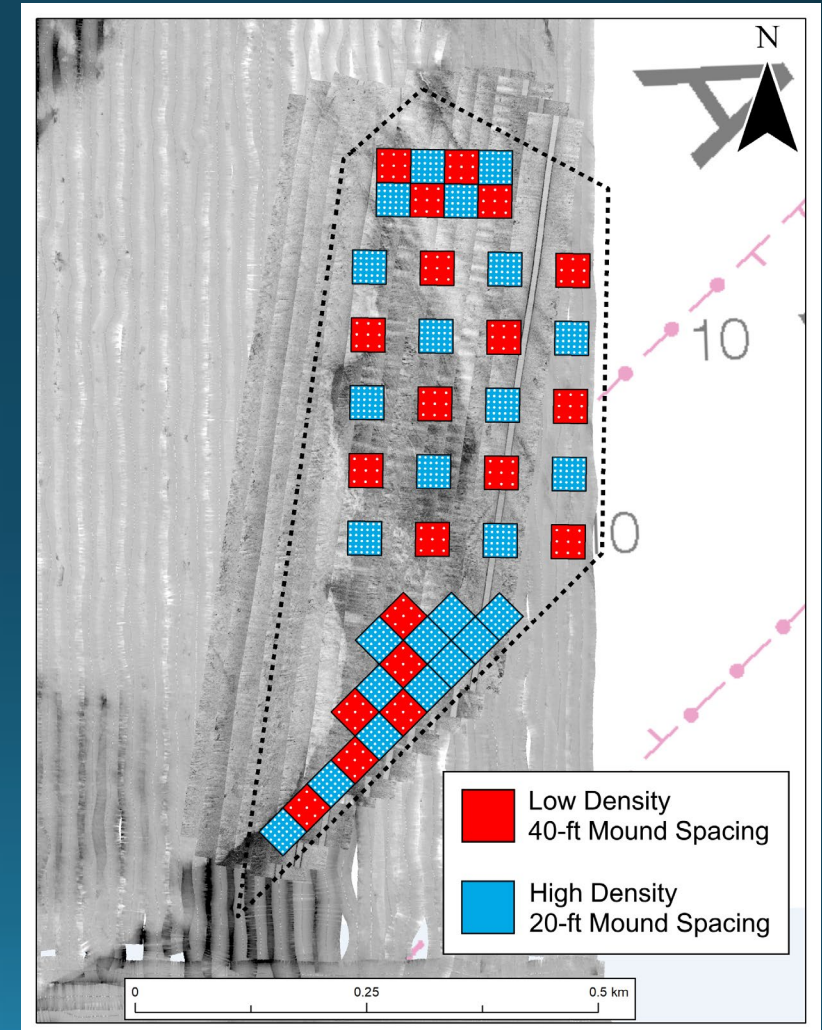
Keller Reef

Alt. Cultch Depths



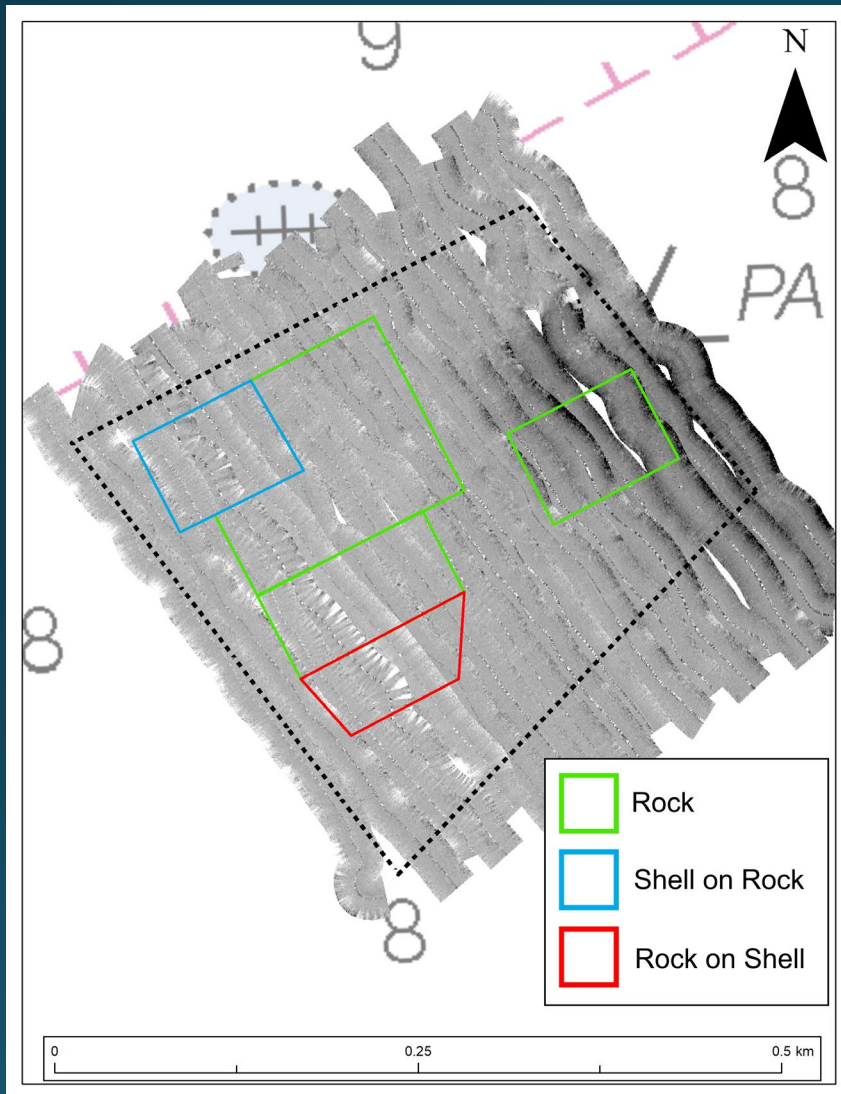
Dollar Reef

Mound Spacing



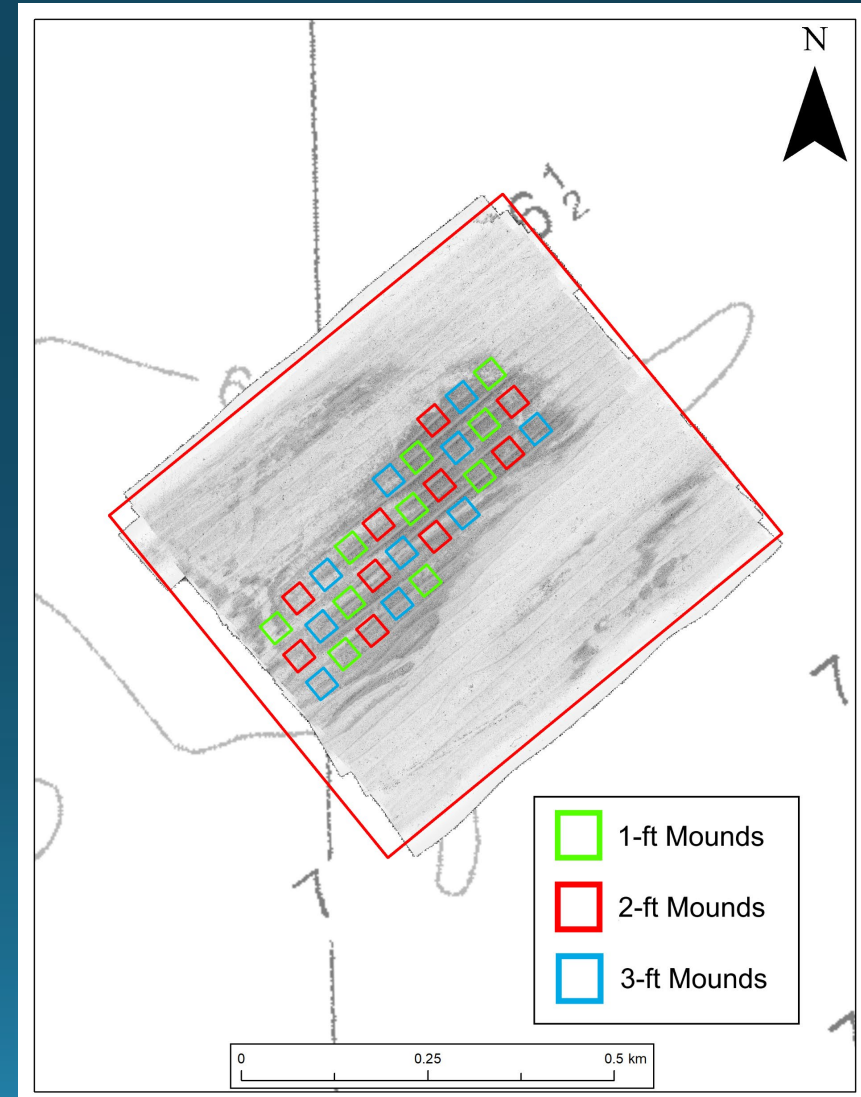
Resignation Reef

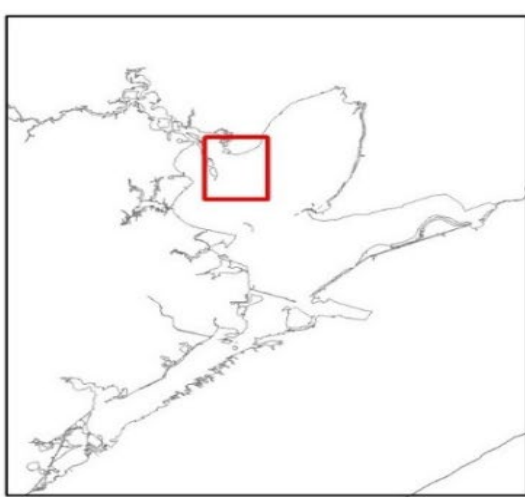
Alt. Cultch Materials



Josephine's Reef

Mound Height

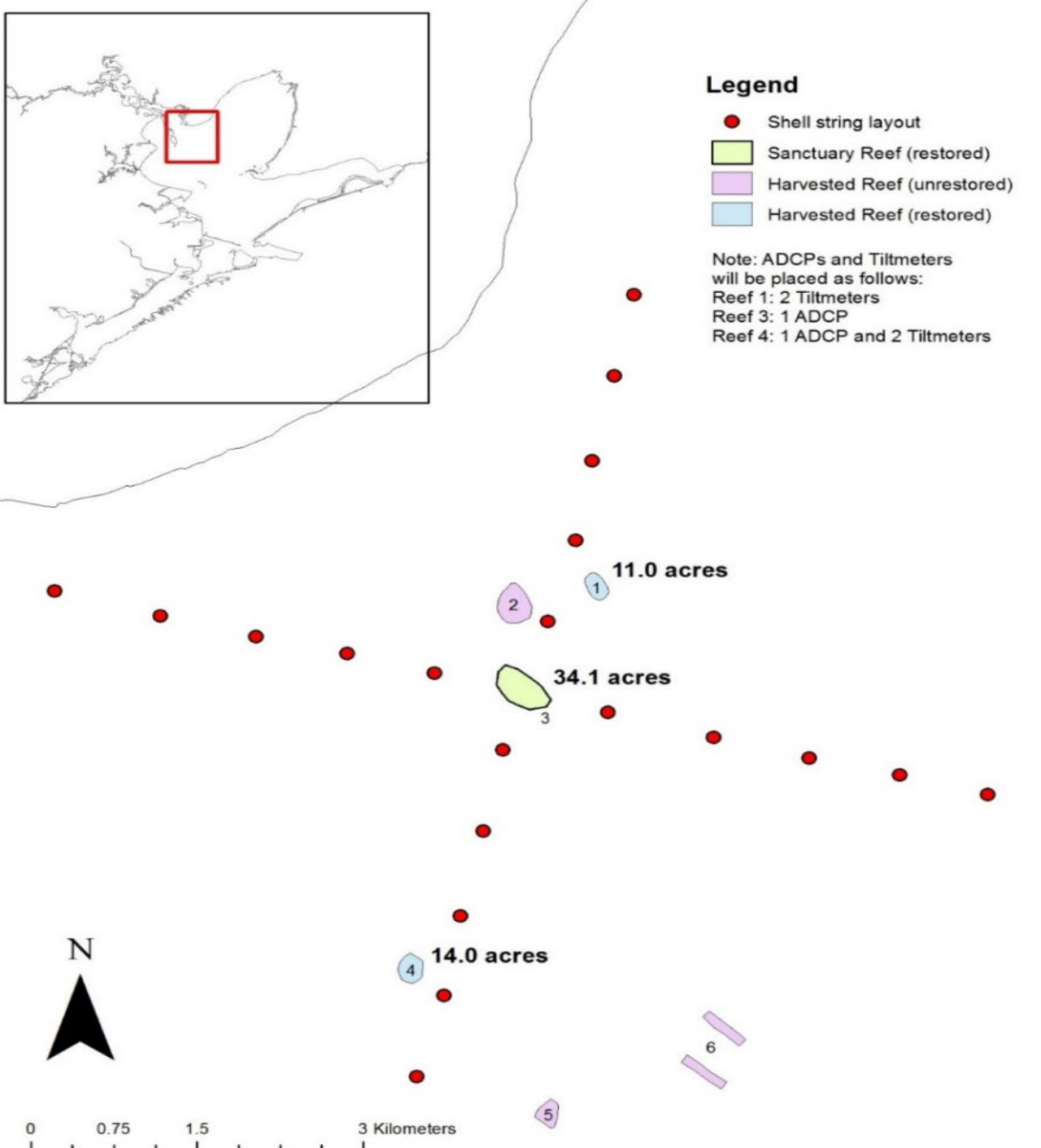




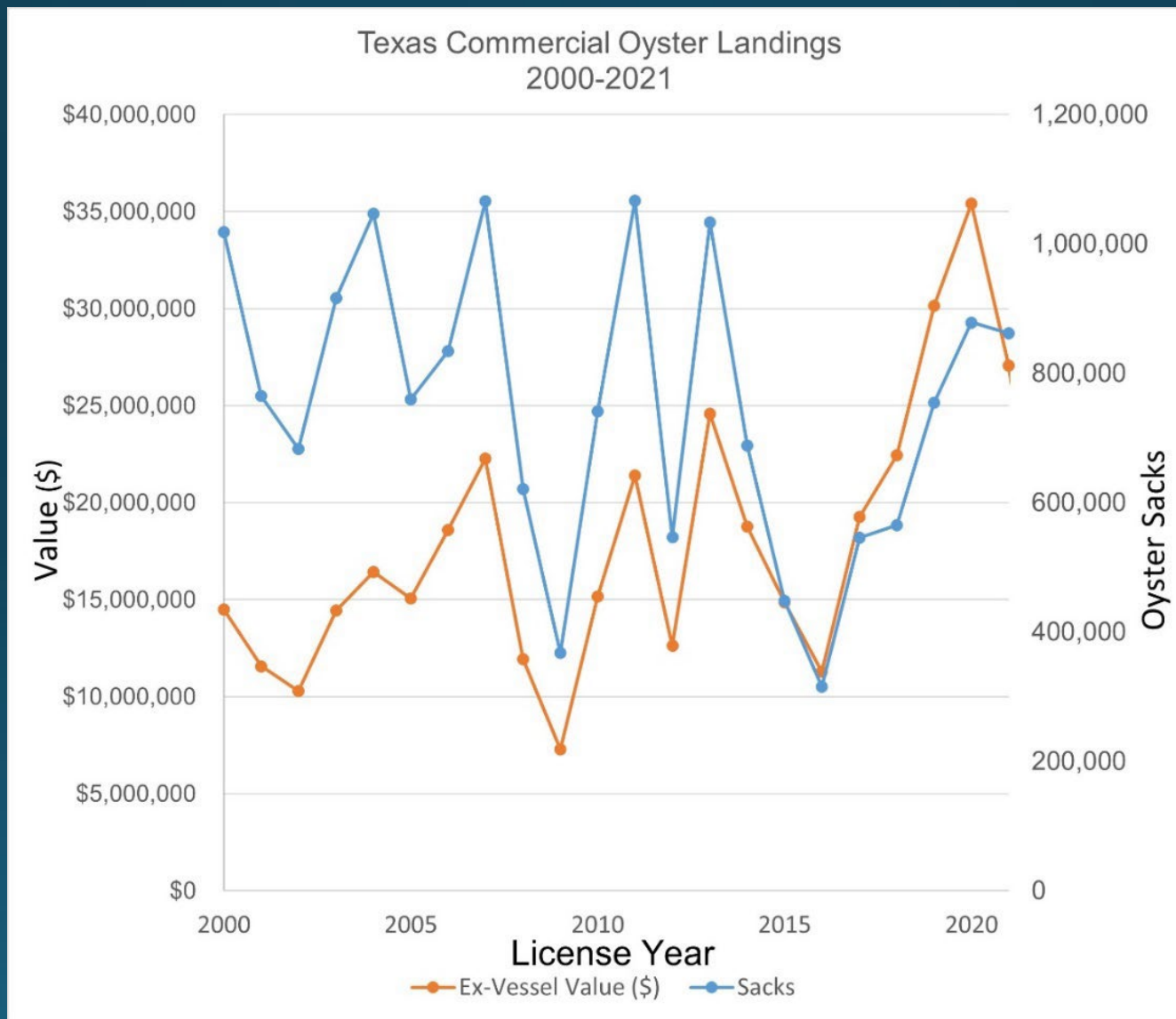
Legend

- Shell string layout
- Sanctuary Reef (restored)
- Harvested Reef (unrestored)
- Harvested Reef (restored)

Note: ADCPs and Tiltmeters will be placed as follows:
Reef 1: 2 Tiltmeters
Reef 3: 1 ADCP
Reef 4: 1 ADCP and 2 Tiltmeters

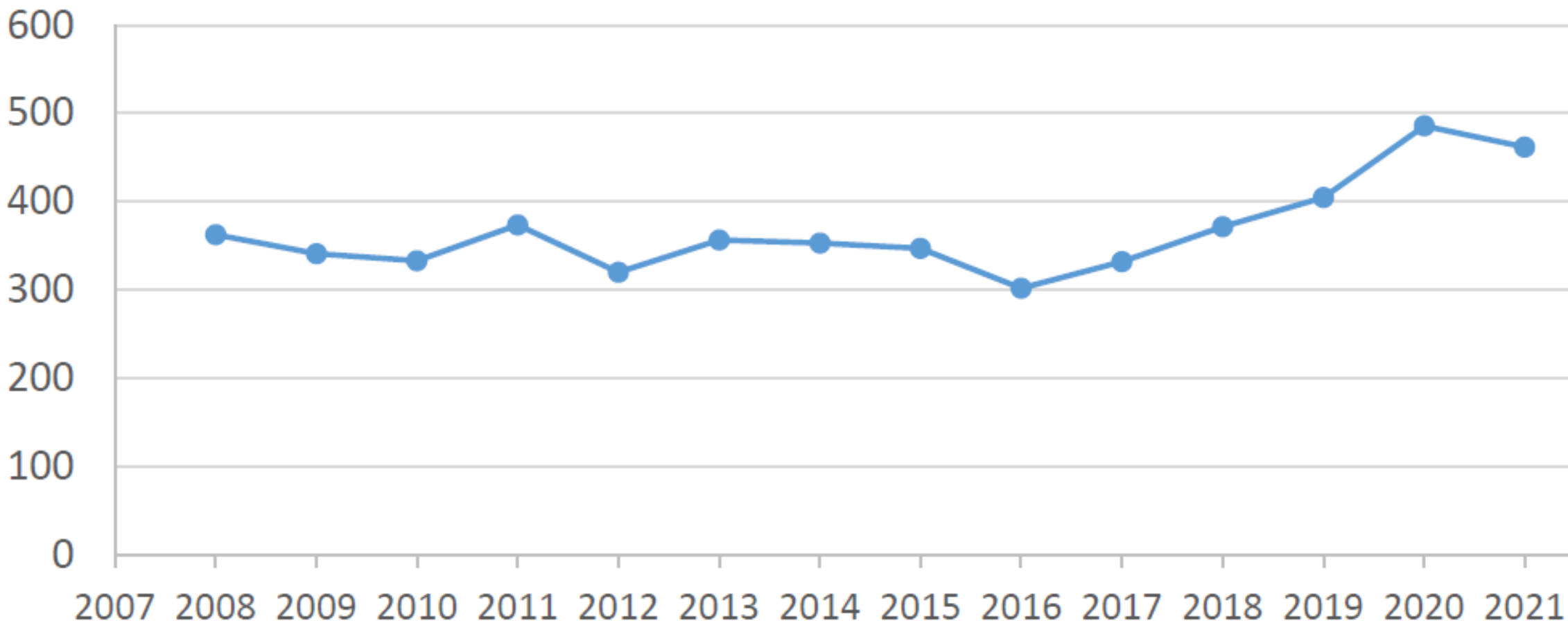


On-Bottom Commercial Oyster Landings Public and Private Reefs

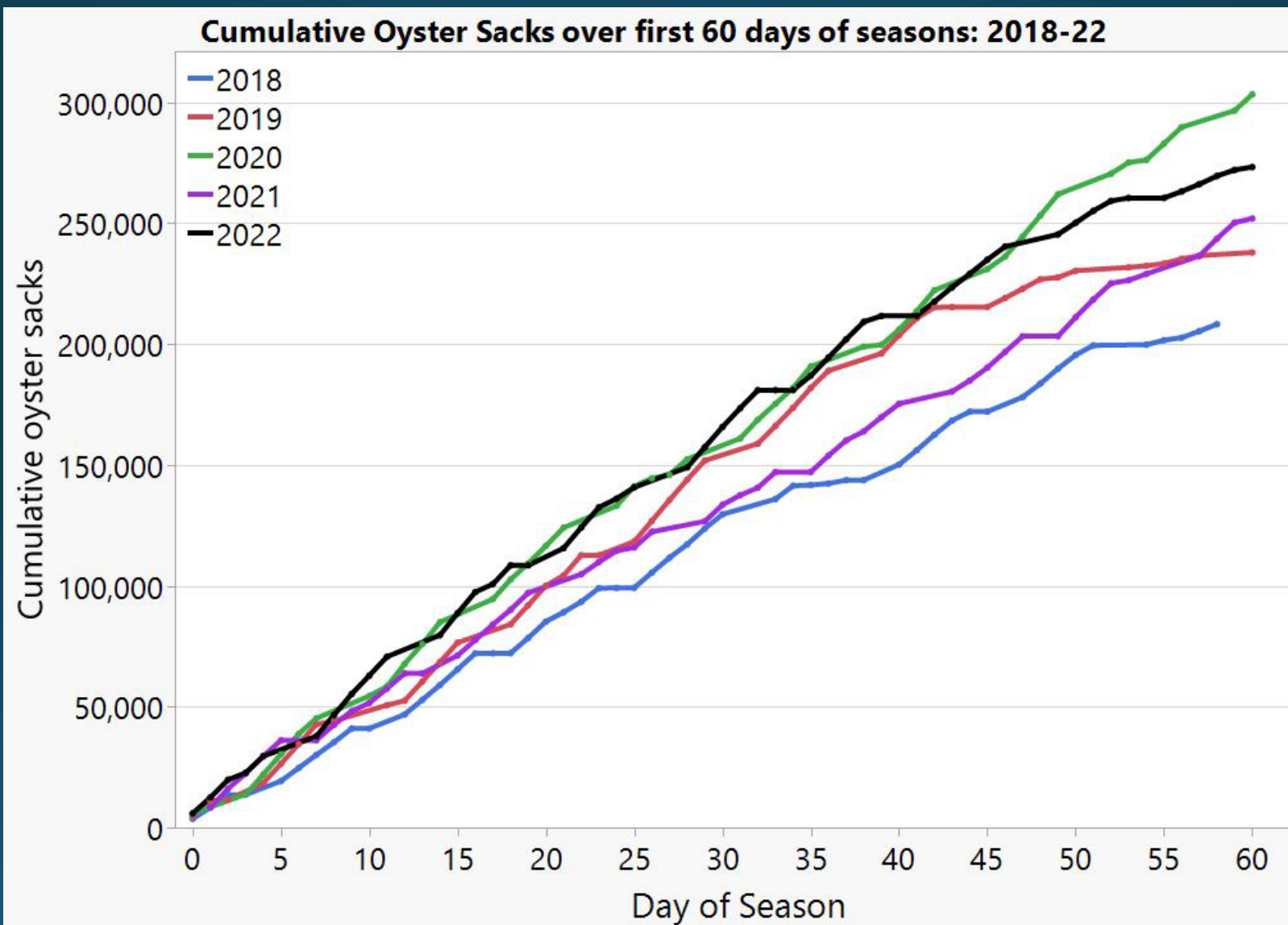


On-Bottom Commercial Oyster Landings Public and Private Reefs

Active Commercial Oyster Vessels



On-Bottom Commercial Oyster Landings Public and Private Reefs



Off-Bottom Cultivate Oyster Mariculture Updates

- Rules adopted and applications accepted in 2020
- Current COM operations:
 - 2 fully permitted sites
 - 8 acres in Copano Bay
 - 9.74 acres in East Galveston Bay
 - 1 conditionally permitted site
 - 5 acres Tres Palacios Bay
 - 12 additional applicants being considered
- First harvests expected in April

Off-Bottom Cultivate Oyster Mariculture Updates

- Working with Texas Sea Grant to provide public trainings and develop an online permitting flowchart
- Continued development of program and online permitting portal
- Continued coordination with other state and federal agencies regarding permits (e.g. NWP 48 General Conditions)
- Refined biosecurity protocols
- Development of hatchery permitting and oversight processes
- Coordinating with the Texas General Land Office to host a Spatial Planning Tool on AGO

Miscellaneous Oyster Management Updates

- Evaluating the use of patent tongs for routine oyster monitoring program in lieu of/in combination with existing dredge sampling
- Evaluating the use of sidescan sonar and bathymetric surveys to monitor reef health and inform management
- Proposed permanent closures of Ayres, Mesquite, and Carlos Bays
- Finished processing acoustic survey data for Tres Palacios and Lavaca Bays. Beginning to scan Aransas Bay next month
- Continued mapping habitats coastwide using aerial imagery