



PROGRESS OF OYSTER RESTORATION PROJECT ON CORMORANT KEY/CHARLOTTE HARBOR

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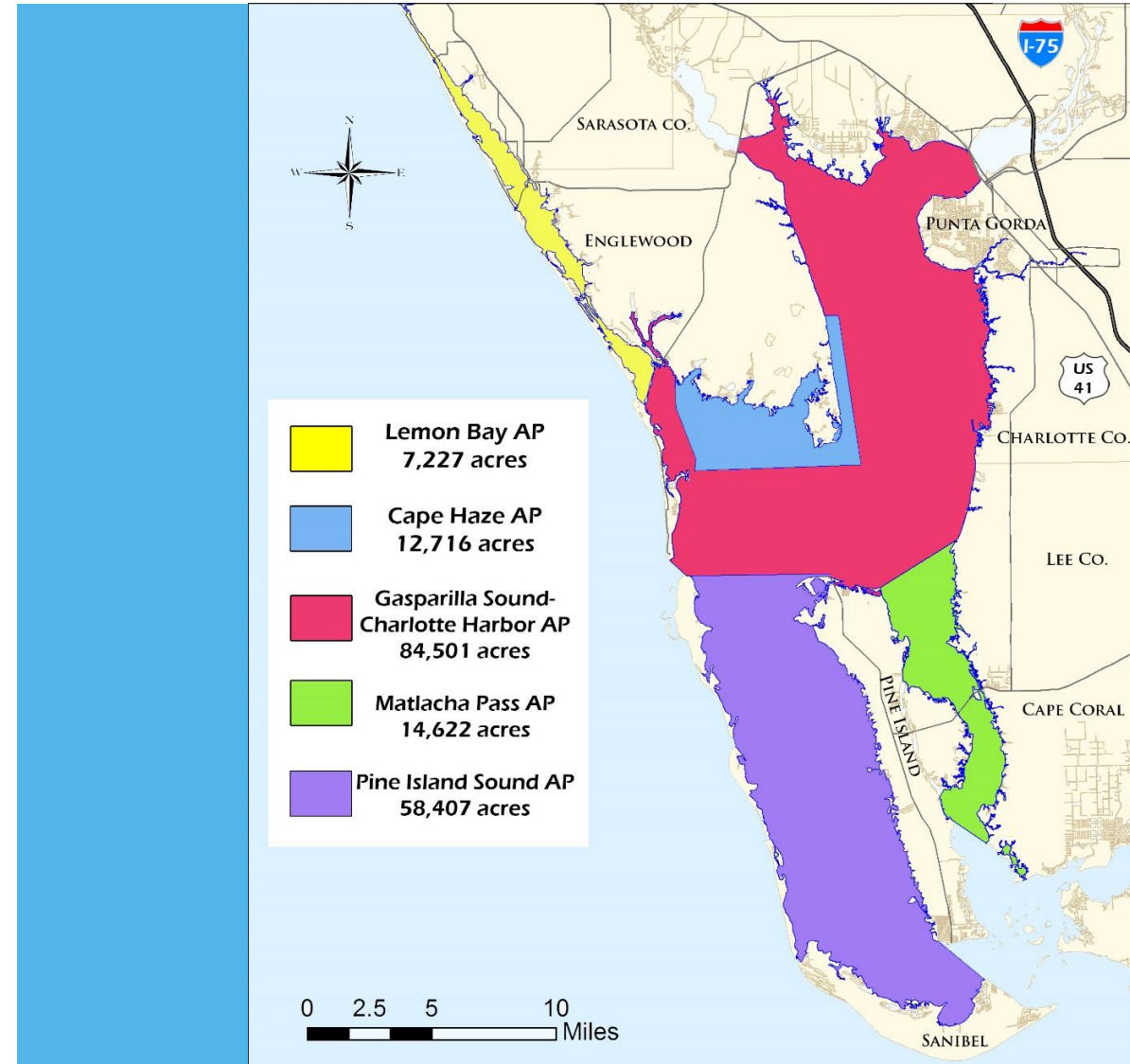


CHARLOTTE HARBOR AQUATIC PRESERVES (CHAP)

Five preserves are managed locally by the CHAP office in Punta Gorda:

- Lemon Bay AP.
- Cape Haze AP.
- Gasparilla Sound – Charlotte Harbor AP.
- Matlacha Pass AP.
- Pine Island Sound AP.

CHAPs office protects more than 180,000 acres of submerged lands.





CHAP MONITORING AND MANAGEMENT





CORMORANT KEY BACKGROUND INFO

- Island and archaeological site in Charlotte Harbor that was severely damaged during Hurricane Charley in 2004.
- Experienced significant loss of mangroves along with severe erosion.
- Area identified as potential suitable location from The Nature Conservancy/Coastal and Heartland National Estuary Partnership oyster restoration suitability plan.
- CHAP partnered with Sanibel-Captiva Conservation Foundation (SCCF) for restoration project utilizing fossilized shell to create an oyster reef.





CORMORANT KEY OVER TIME (PRE-RESTORATION)



2012



2013



2014



2017



2018



2022



RESTORATION PARTNERS

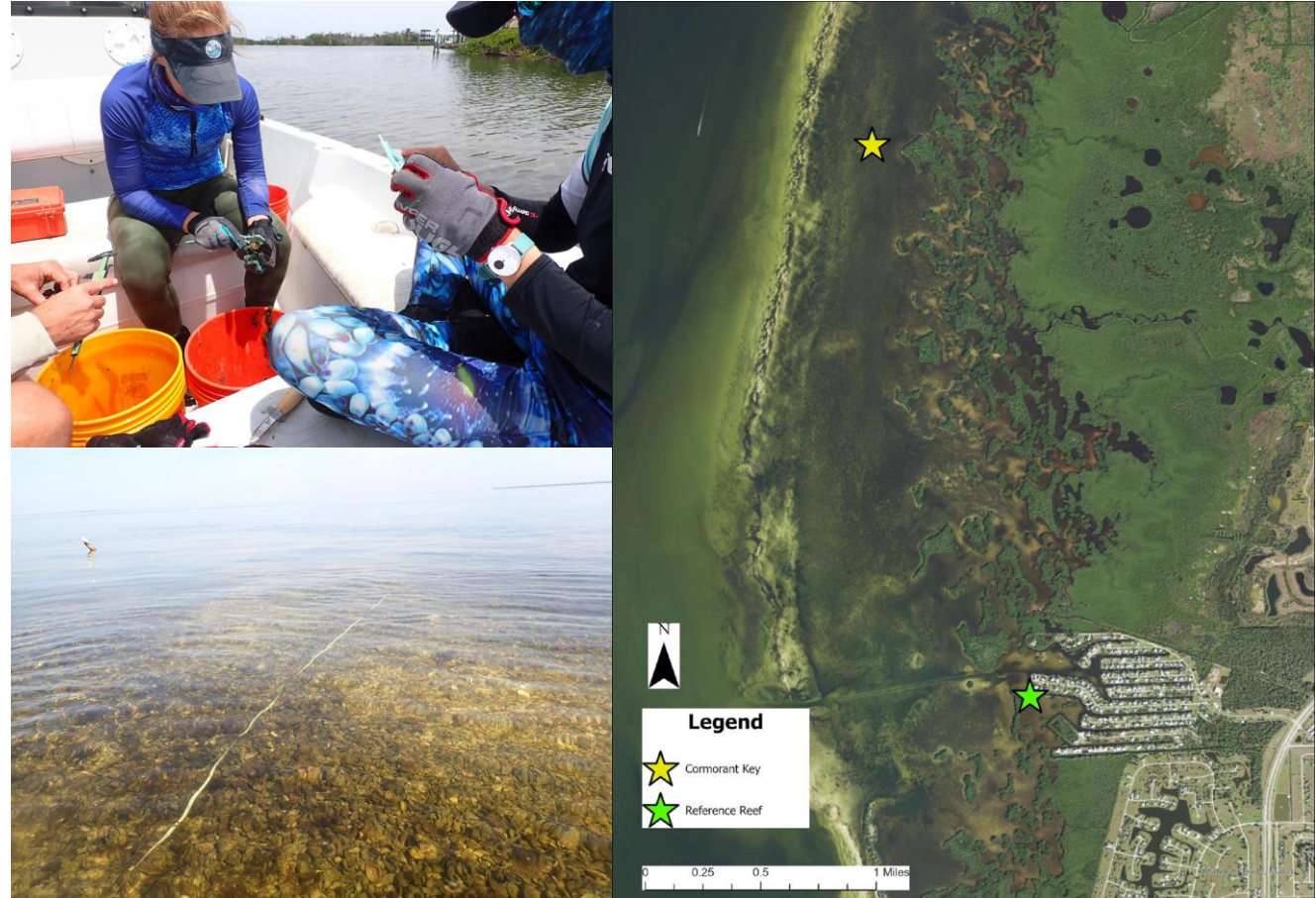
- 55 volunteers from 11 different organizations shoveled, transported and helped deploy over 800 buckets of loose shell (~12 tons) on Cormorant Key in May of 2022:
 - ❖ SCCF.
 - ❖ Friends of Charlotte Harbor Aquatic Preserves.
 - ❖ CrossFit Punta Gorda.
 - ❖ Florida Fish and Wildlife Conservation (FWC).
 - ❖ Charlotte County Sea Grant.
 - ❖ City of Cape Coral.
 - ❖ Charlotte Harbor Preserve State Park.
 - ❖ West Coast Inland Navigation District.
 - ❖ FWC Law Enforcement.
 - ❖ Punta Gorda Middle School Fishing Club.
 - ❖ Pirate Harbor Community.
- Shell serves as substrate for spat to attach & grow to form dense clusters known as oyster reefs or beds.





MONITORING METHODS IN CORMORANT KEY

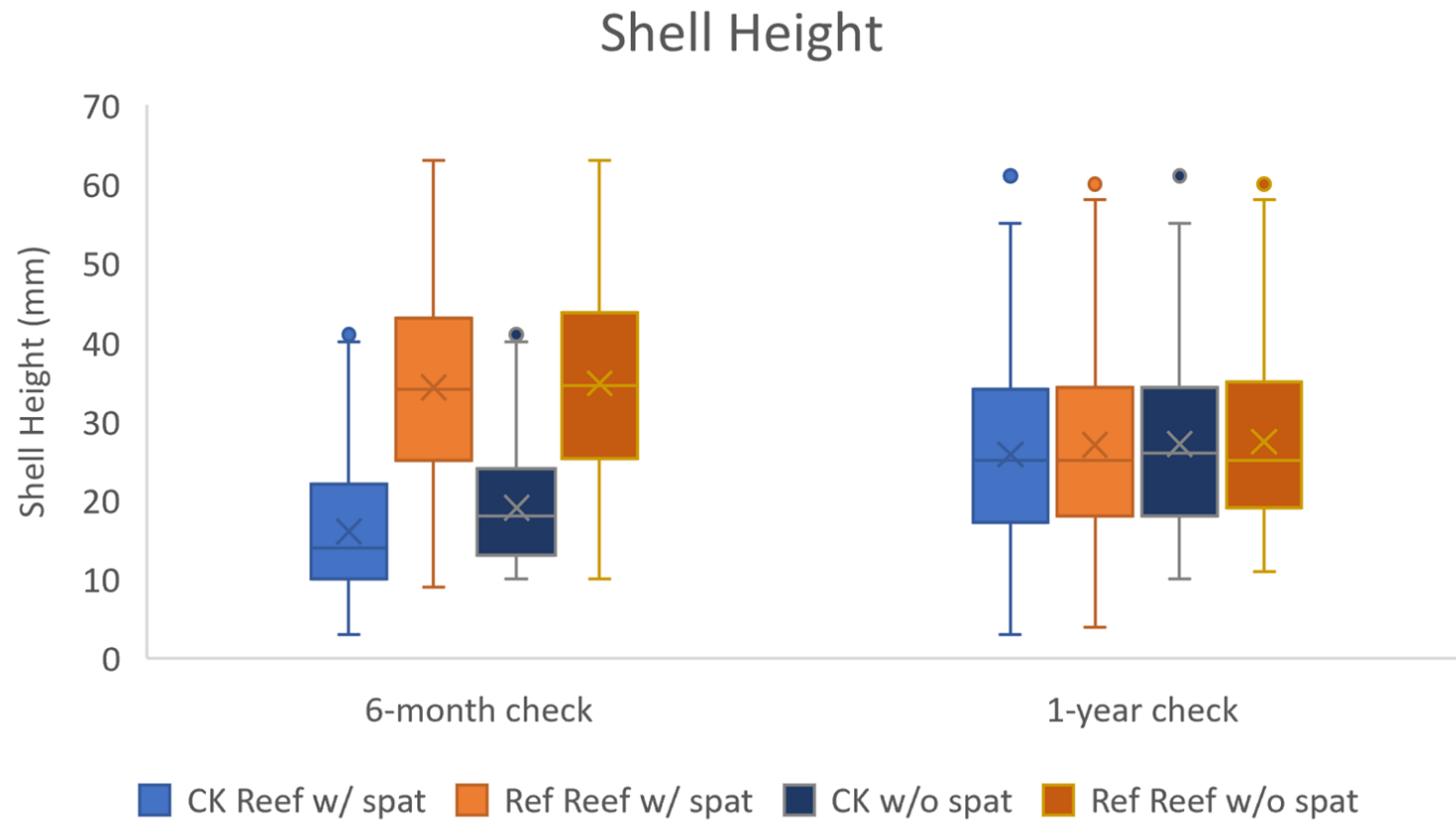
- Monitored 6-months & 1-year after restoration.
- Collected five 0.0625m² quadrats.
- Measured oyster density & shell height.
- Compared to nearby reference reef.
- Will continue to be monitored annually.





RESULTS

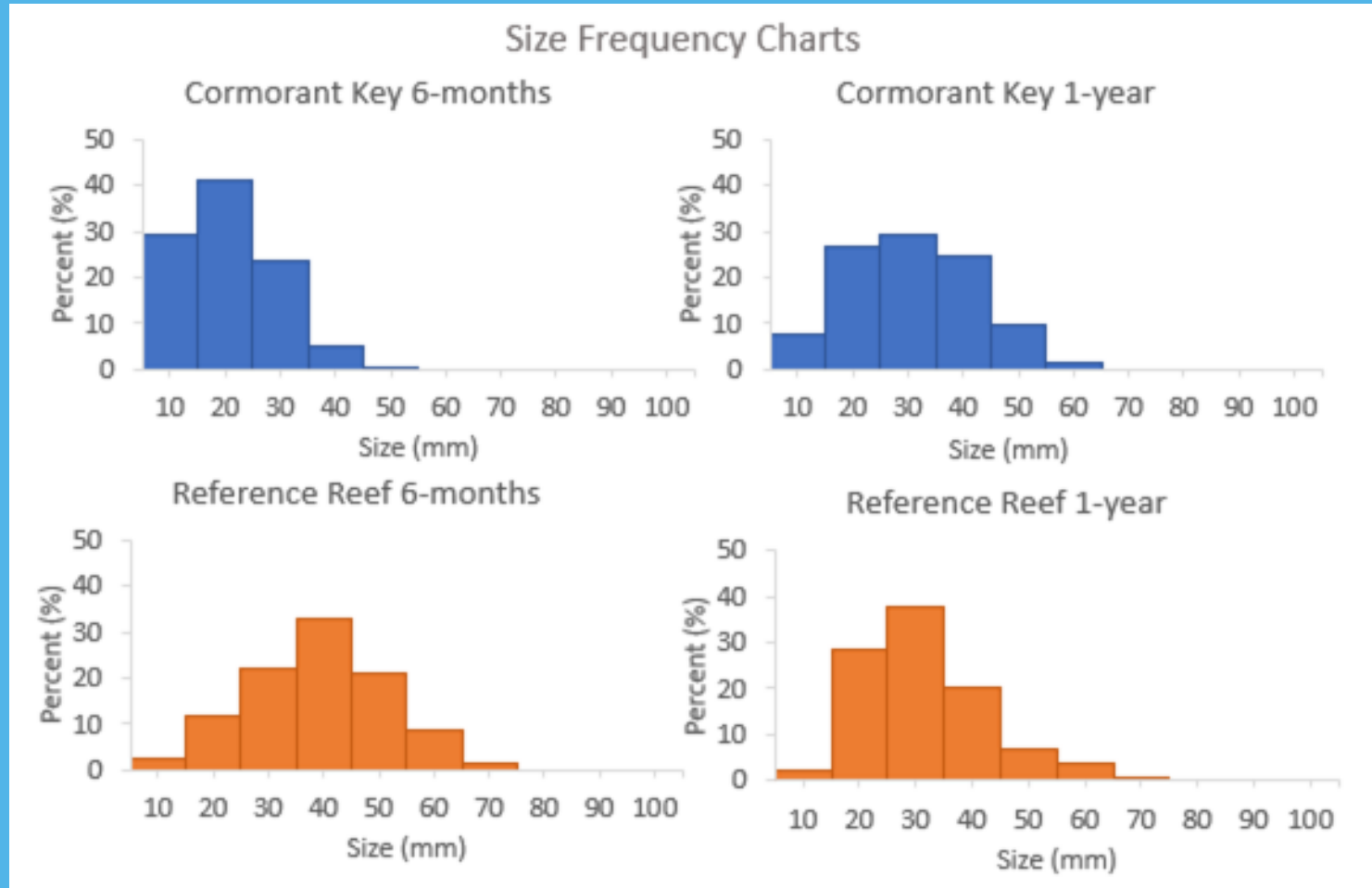
SHELL HEIGHT





RESULTS

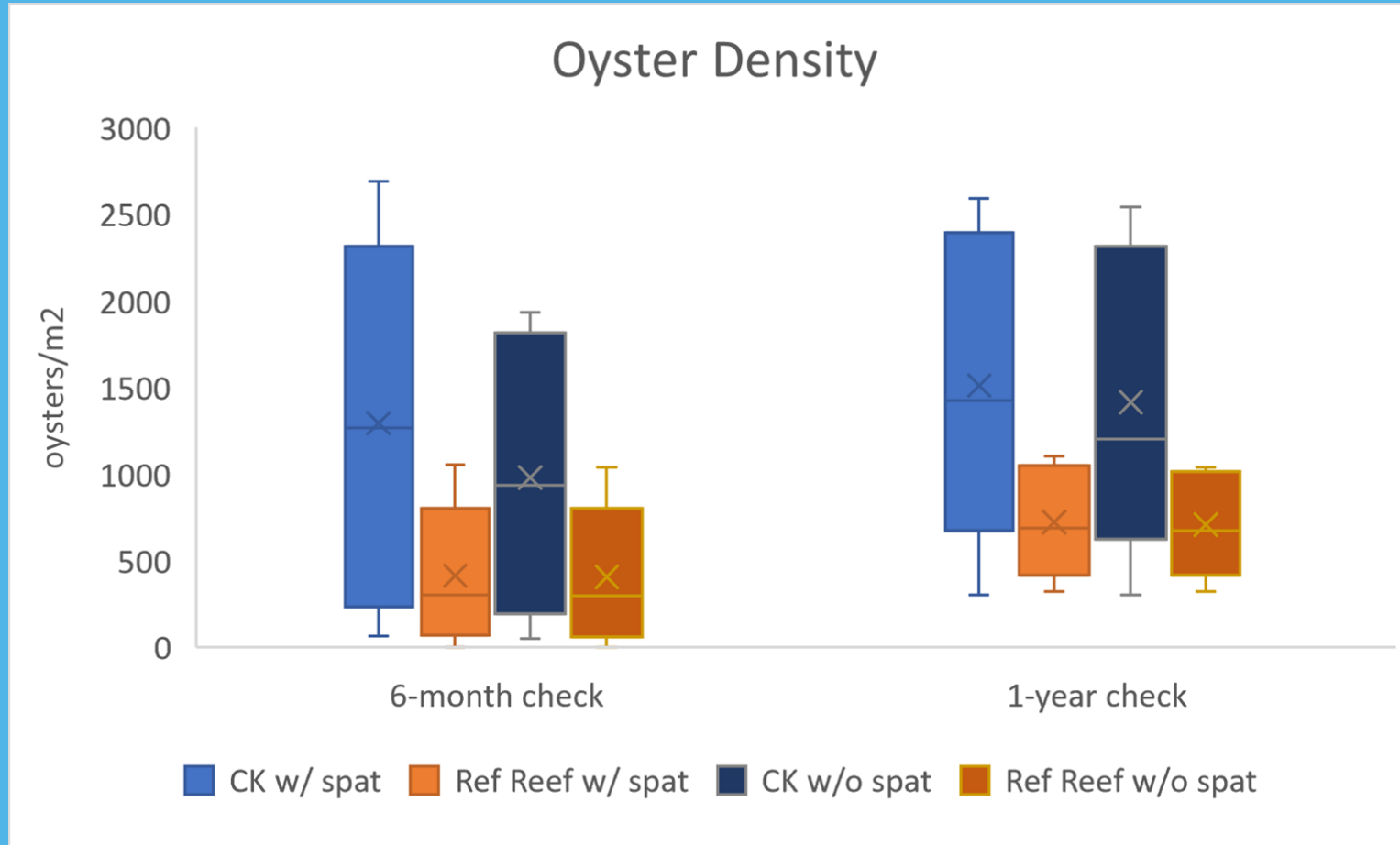
SIZE FREQUENCY





RESULTS

OYSTER DENSITY





DISCUSSION

- Cormorant Key appears to be following the pattern of other oyster restoration projects in this area with a large initial settlement event.
- Oyster density will drop after 2-3 years and shell heights will resemble those of reference reef- CK may be ahead of schedule as shell heights are already similar.
- Opportunities to add additional shell?



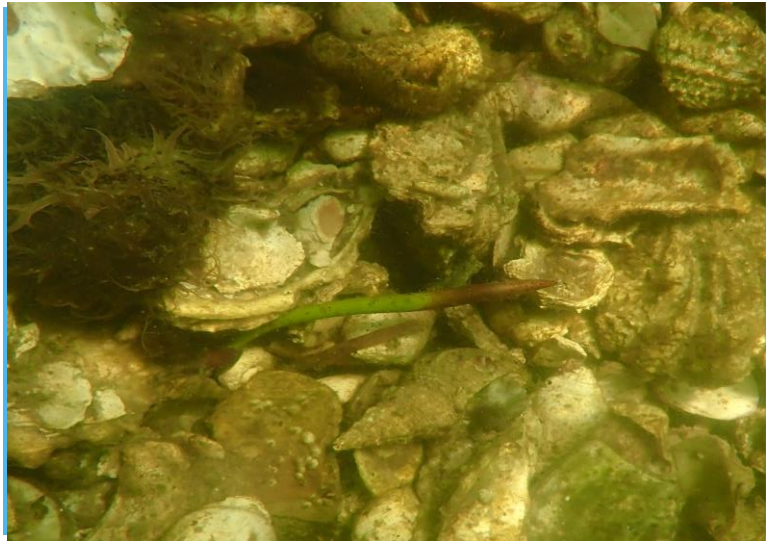


OYSTER SPAT/CORMORANT KEY





REEF UTILIZATION





THANK YOU

Kayla Hayes

RCP / Charlotte Harbor Aquatic Preserves
Florida Department of Environmental Protection

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