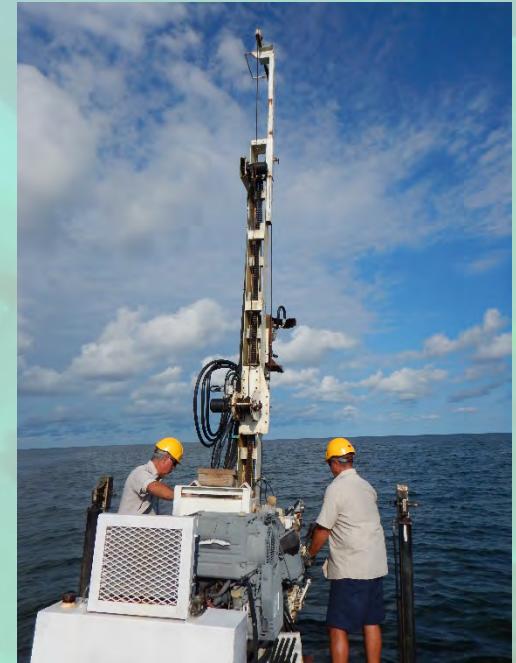


Hernando County Aquatics Services and Waterways



1. **Waterways, Boat Ramps, and Navigation Aids**
2. **Waterway Hazards and Maintaining Navigation**
3. **Derelict boats / oil spill containment**
4. **Dock/ Seawall Permitting**
5. **Lake Management**
6. **Marine Resource Program**



Keith.Kolasa@hernandocounty.us

Phone 352-754-5884

Recent Accomplishments 2016-2018



1. Bendickson Reef Expansion ✓
2. Shallow Reef Arrays – Reefballs ✓
3. Volunteer Reefball Construction ✓
4. Hunters Lake Tussock Removal ✓
5. Oyster Reef Deployment ✓
6. Shoreline Stabilization - Marsh Grass Planting ✓
7. Coastal Kayak Trail ✓
8. Marine Area Strategic Plan ✓
9. RESTORE Funding Allocations ✓
10. Research Partnerships ✓
11. Hernando Beach Channel Speed Zone ✓
12. Boat Ramp Master Plan

Hunters Lake Tussock Removal

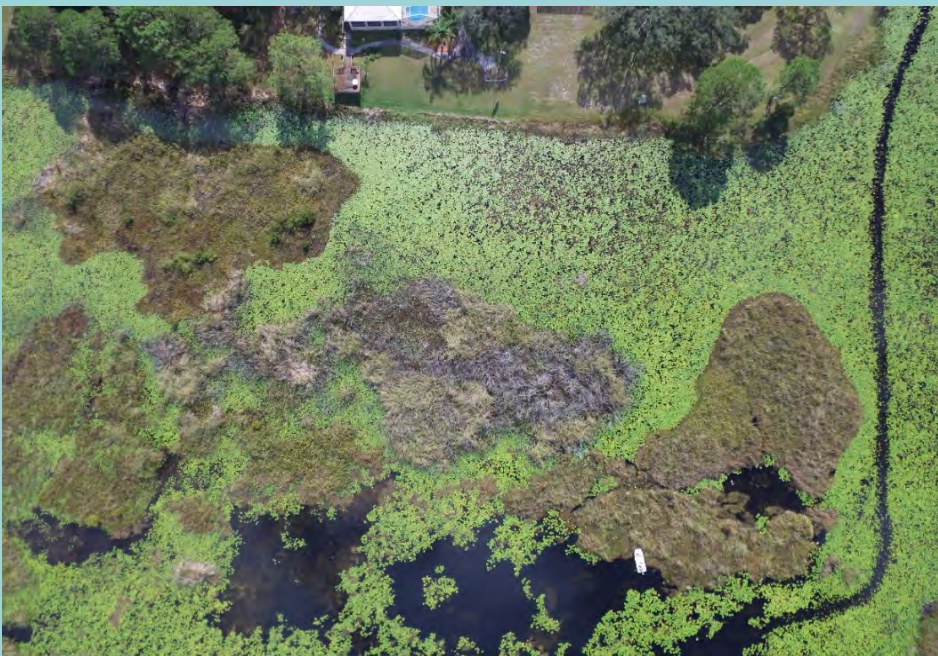


Hunters Lake Tussock Removal

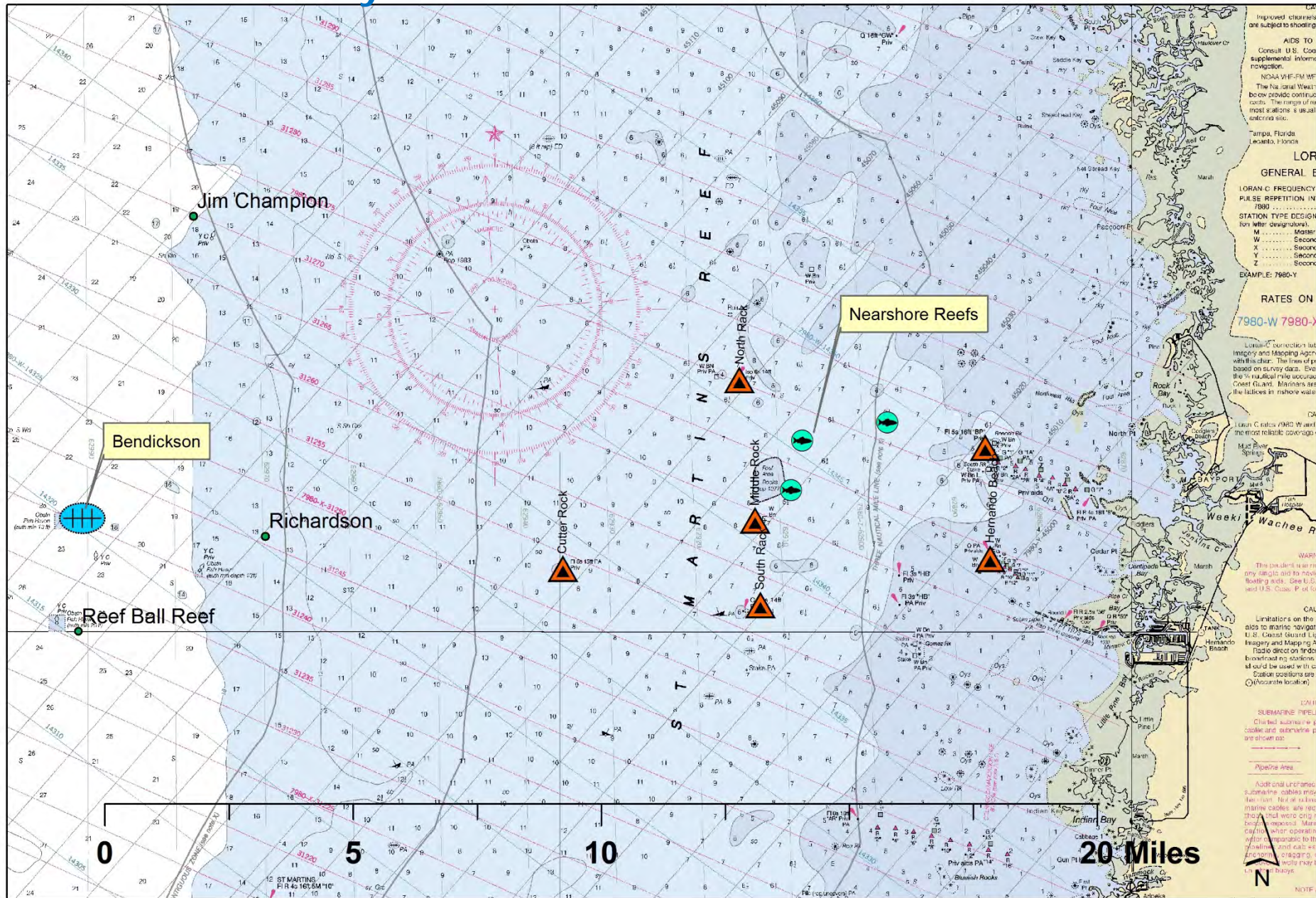








Hernando County Artificial Reefs



Bendickson Reef Expansion



Bendickson 1995



Bendickson 2016

Bendickson Reef Expansion

600 tons deployed - August 2017



Bendickson Reef Expansion

600 tons deployed - August 2017



Bendickson Reef Expansion



Bendickson Army Tank Reef Expansion



ACOE Permit Boundary Coordinates

NW 28 31.828
82 58.833
NE 28 31.828
82 58.553
SW 28 31.585
82 58.833
SE 28 31.585
82 58.553

Site 1: Approximate Area 0.5 acres (150 ft x 150 ft)

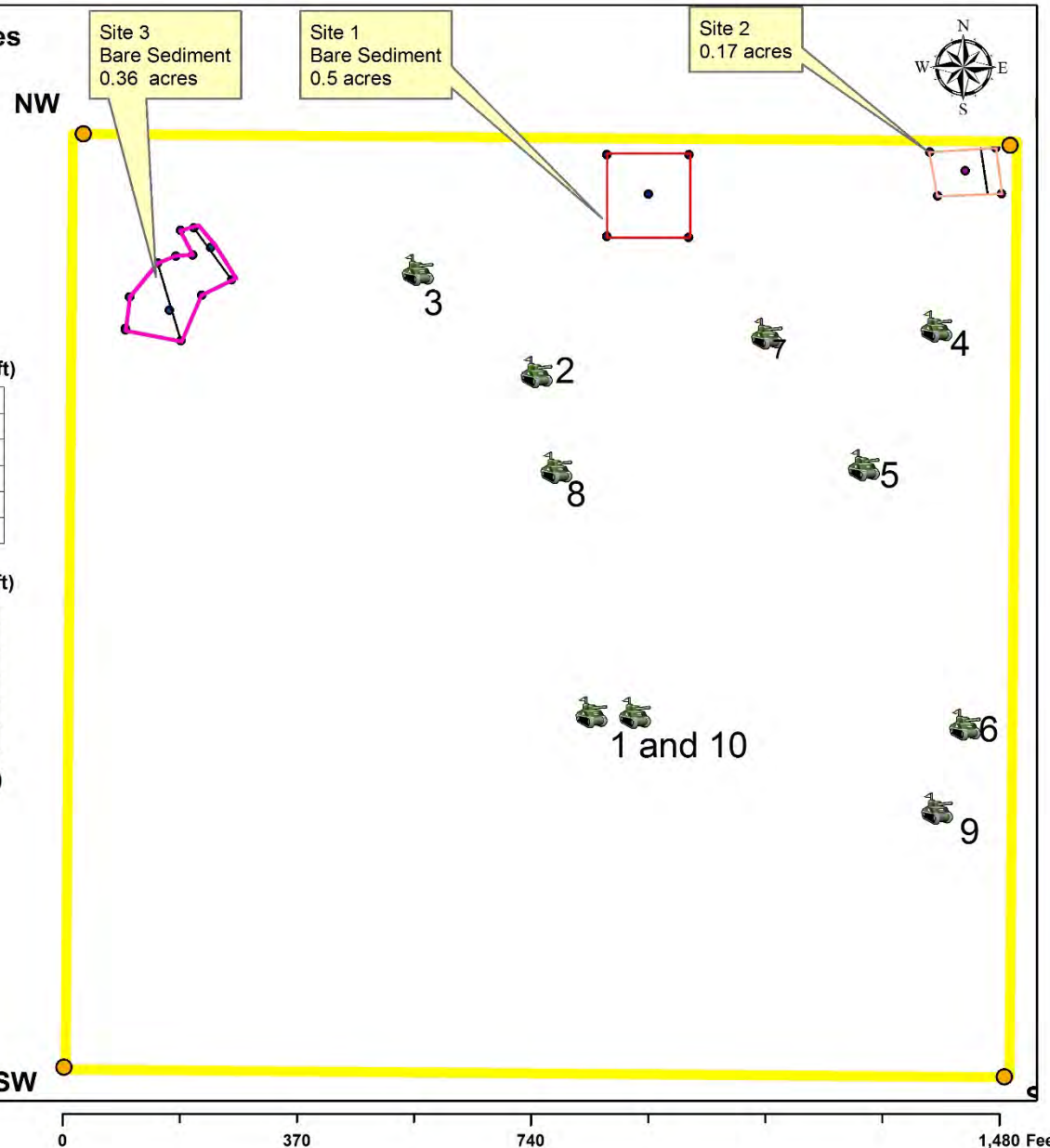
FID	Location	Lat	Long
0	Center	28° 31.813' N	82° 58.660' W
1	SW	28° 31.802' N	82° 58.672' W
2	SE	28° 31.802' N	82° 58.648' W
3	NE	28° 31.824' N	82° 58.648' W
4	NW	28° 31.823' N	82° 58.673' W

Site 2: Approximate Area 0.17 acres (70 ft x 100 ft)

FID	Location	Lat	Long
0	Center2	28° 31.820' N	82° 58.567' W
1	SE 2	28° 31.814' N	82° 58.556' W
2	NE 2	28° 31.826' N	82° 58.558' W
3	SW 2	28° 31.813' N	82° 58.575' W
4	NW 2	28° 31.825' N	82° 58.577' W

Site 3: Approximate Area 0.4 acres (180 ft x 85 ft)

ident	Lat	Long
551	28° 31.777' N	82° 58.815' W
552	28° 31.777' N	82° 58.814' W
553	28° 31.782' N	82° 58.802' W
554	28° 31.794' N	82° 58.805' W
555	28° 31.785' N	82° 58.813' W
556	28° 31.774' N	82° 58.798' W
557	28° 31.796' N	82° 58.800' W
558	28° 31.796' N	82° 58.795' W
559	28° 31.803' N	82° 58.799' W
560	28° 31.803' N	82° 58.795' W
561	28° 31.798' N	82° 58.790' W
562	28° 31.790' N	82° 58.783' W
564	28° 31.786' N	82° 58.792' W



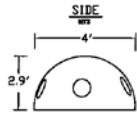
Shallow Reef Arrays - Reef Balls



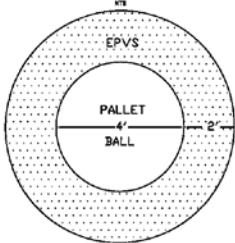
Toshiba 11x17

PALLET BALL TYPICAL LAYOUT

EPVS= EFFECTIVE PROTECTIVE VOID SPACE



TOP



BUDY
(TYP.)

REEF SITE "B"

NOTE:

BUDYS SHALL BE INSTALLED THAT CLEARLY DEFINE THE BOUNDARY OF THE PROJECT FOOTPRINT PRIOR TO DEPLOYMENT OF THE REEF STRUCTURES. BUDYS SHALL TO BE REMOVED UPON PROJECT COMPLETION.

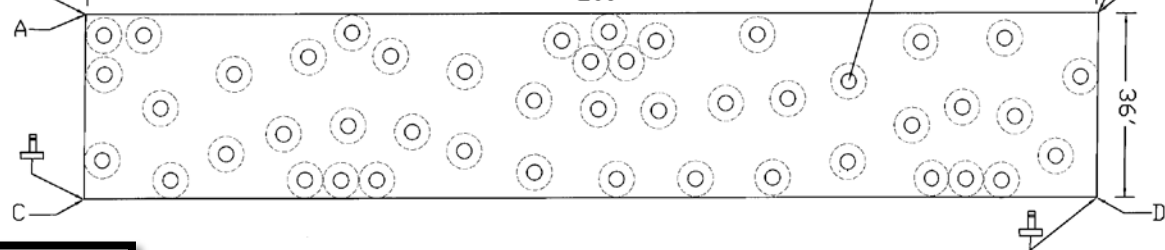
PROPOSED CONFIGURATION

QUANTITY= 47

SCALE: 1:20

200'

PROPOSED
PALLET BALL
(TYP)



COORDINATES

LAT

LONG

A= 28 32.963' -82 45.770'

B= 28 32.939' -82 45.745'

C= 28 32.959' -82 45.775'

D= 28 32.936' -82 45.749'

LOCATION

3.9 MILES NW OF ENTRANCE TO
THE HERNANDO BEACH CHANNEL.
6.8 MILES FROM COASTLINE.

9-15-14

Reef
Innovations

Pallet Ball



- 4' diameter
- 2' 9" height
- surface area 75 sq ft
- average number of holes 17-24
- wavy bottom
- interconnecting holes
- aggregated exposed outside surface texture
- Weight 1300 lbs.



HERNANDO COUNTY
Transportation Services
ENGINEERING DEPARTMENT
1525 East Jefferson Street
Brooksville, FL 34601-2807
Ph. (352) 754-4062 Fax. (352) 754-4423

UNLESS SIGNED
DATED, & SEALED
URBAN M. MALMBERG, P.E.
FL. REG. P.E. NO. 59405

HERNANDO BEACH
SHALLOW REEF PROJECT

CEO No.
13-

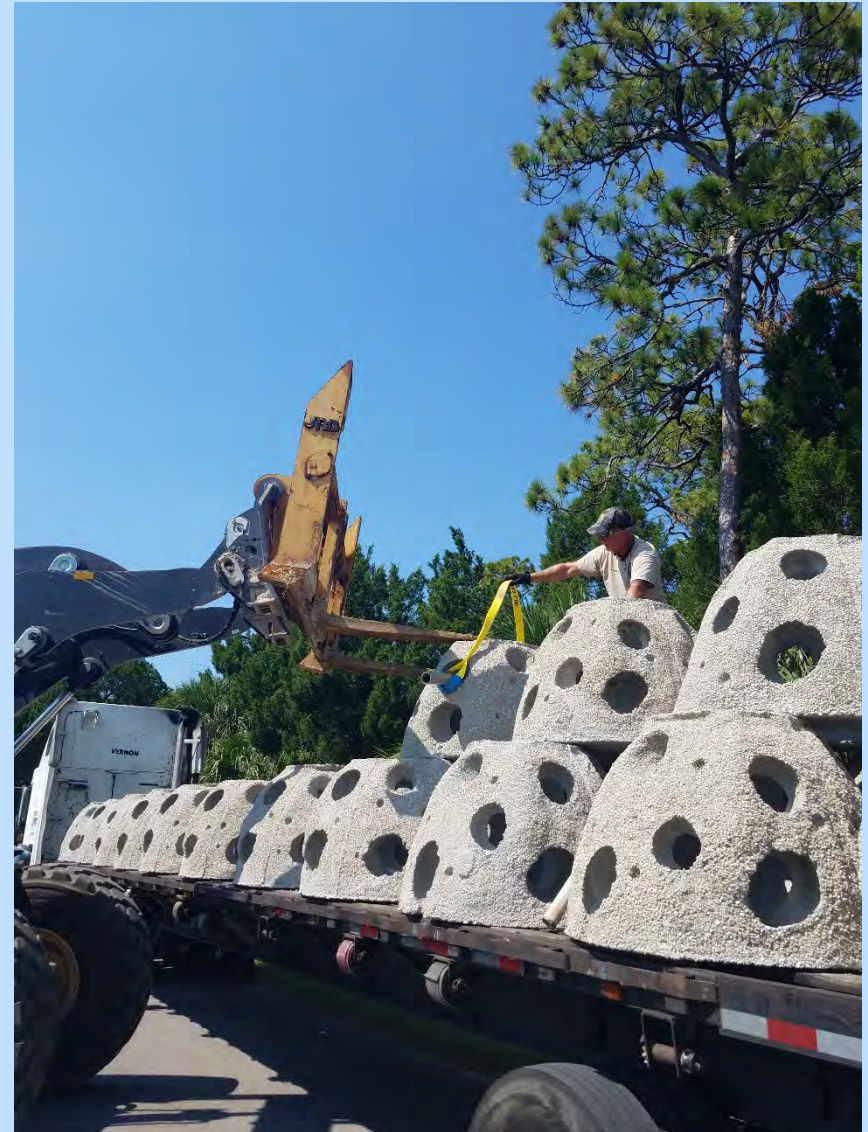
Drawing Name:
CEO/NAME

Drawn By:
CEO Staff

Scale:
1:1

Sheet No.
4 of 5

Shallow Reef Arrays – Reef Balls



Community Outreach - Reef Ball Molds

















Centipede Bay April 14, 2018



Shoreline Stabilization Marsh Grass Planting at Linda Pedersen Park

May 2018



A Strategic Marine Area Plan for Hernando County

Alexandra Barshel, J.D. Cand.
Samantha Sanders, J.D. Cand.

Conservation Clinic, University of Florida College of Law
Thomas T. Ankersen, Legal Skills Professor and Director,
Statewide Legal Specialist, Florida Sea Grant

Emma Pistole, M.S. Cand.

UF/IFAS Nature Coast Biological Station
Mike Allen, Professor and Director

Brittany Hall-Scharf, Extension Agent
Florida Sea Grant

Keith Kolasa
Aquatic Services Manager, Hernando County



Identified Goals



- Goal 1: Shoreline stabilization
- Goal 2: Oyster reefs
- Goal 3: Artificial reefs
- Goal 4: Recreational and commercial fisheries
- Goal 5: Vessel navigation and gulf access
- Goal 6: Hard bottom habitat and seagrass

Goals

Objectives

Policies/Actions



State of Florida

STATE EXPENDITURE PLAN

Submitted Pursuant to
the Spill Impact Component
of the RESTORE Act

33 U.S.C. § 1321(t)(3)

Prepared by the Gulf Consortium
for the State of Florida



Hernando County - Pot 3 Project Budgets

Project	Cost
Artificial Reef Program	\$ 2,350,000
Oyster Reefs and Living Shorelines	\$ 750,000
Boat Ramp and Coastal Park Amenities	\$ 1,165,000
Channel Improvements - Hernando Beach, Pine Island, Weeki Wachee Canals	\$ 3,135,000
Paddling Trails	\$ 260,000
Water Quality – Calienta Street	\$ 2,400,000
Septic to Sewer	\$ 2,600,000
TOTAL	\$12,660,000



Pot 1 - Project Budgets

Project	Cost
Bayou Drive Restoration	\$ 175,000
Linda Pedersen swim area restoration	\$ 300,000
TBD	\$ 625,000
TOTAL	\$1,100,000



SUMMARY



- Numerous Projects Successfully Completed Over Past Two Years
- RESTORE Funding Allocated for Many Additional Projects
- Exciting Opportunity to Continue to Build Marine Resource Program



Bendickson Reef, Hernando County



Centipede Bay, Hernando County

THANK YOU



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Phone 352-754-5884

Photo Credits: Keith Kolasa

