

Living Shoreline Spar Monitoring Node with Signage

Martin and St Lucie Counties (St. Lucie Estuary)

- There is a strong real-world basis for a Martin & St. Lucie Counties living shoreline experiment.
- Key fact: Martin and St. lucy Counties are actively implementing living shoreline restoration in the St. Lucie Estuary and Indian River Lagoon, including mangrove planting, oyster reefs, and seagrass recovery efforts
- Seagrass decline and restoration mapping is already an active county project
- Monitoring water quality, sediments, and seagrass health is a documented restoration objective

Not hypothetical — Deployment directly aligns with ongoing county restoration programs.

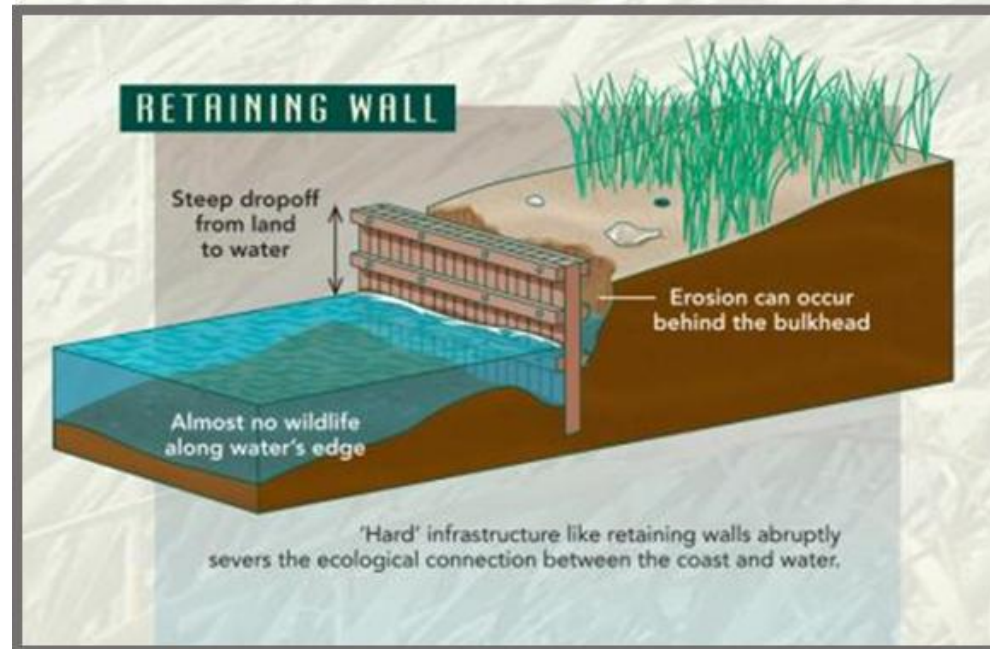
Living Shorelines

Living Shoreline is a term that is used to describe an alternative approach to traditional shoreline stabilization using natural vegetation and native habitats instead of hardened materials such as bulkheads, rip rap, or sea walls.



Traditional Seawalls, Bulkheads Hard, or 'Gray' Infrastructure

- Fixes shoreline edge
 - Less resilient to sea level rise
 - 'Coastal Squeeze'
- Loss of intertidal habitat
- Increased erosion at base and downdrift
 - Costly repair or replacement



Living Shorelines Soft, or "Green" Infrastructure

- Installation and integration of natural habitats
- Increase resiliency to storms and sea level rise
- Enhance biodiversity and ecological function
 - Maintains connection between land and water
- Improve water quality





Before – Feb 2004

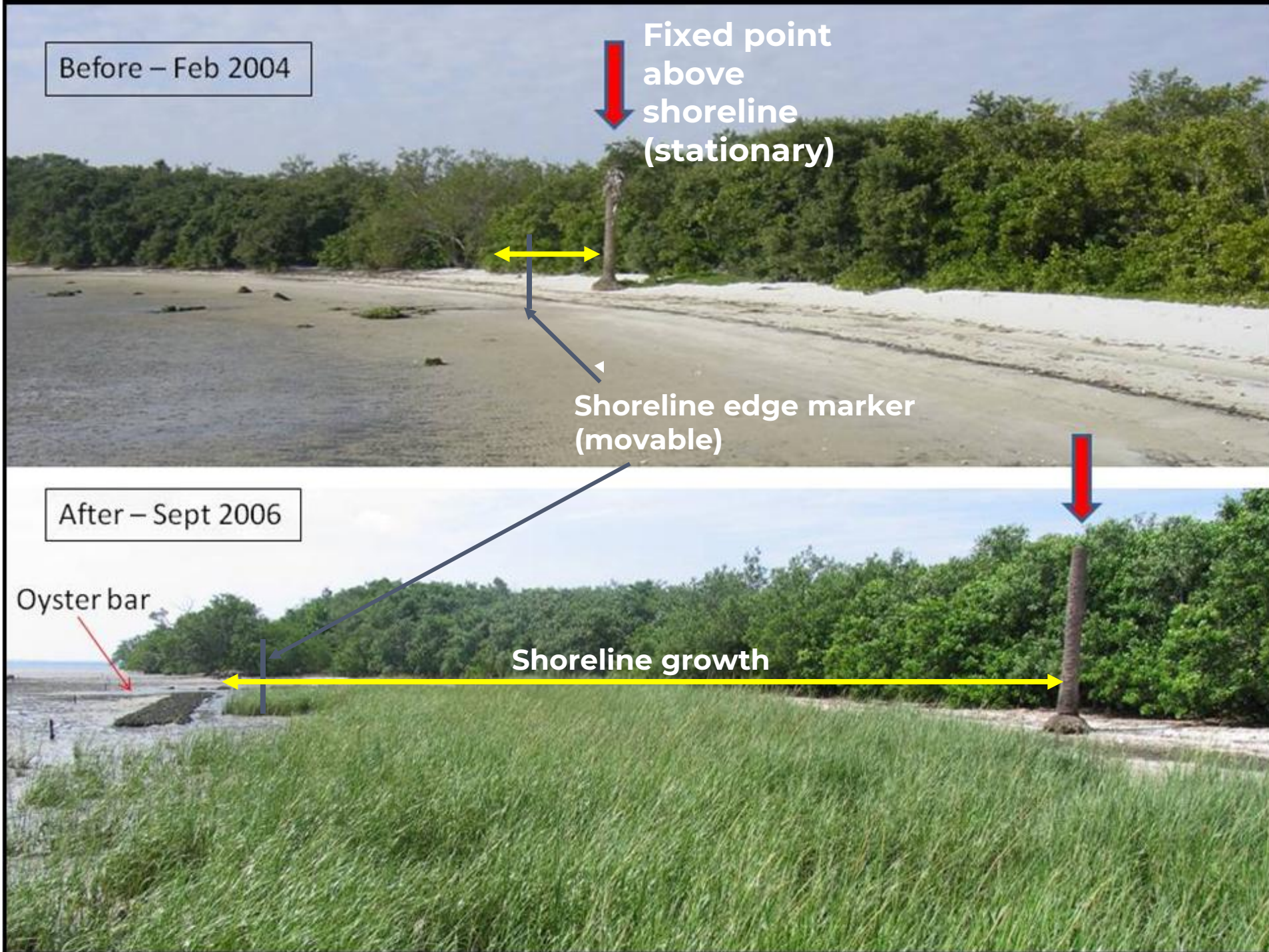
Fixed point
above
shoreline
(stationary)

Shoreline edge marker
(movable)

After – Sept 2006

Oyster bar

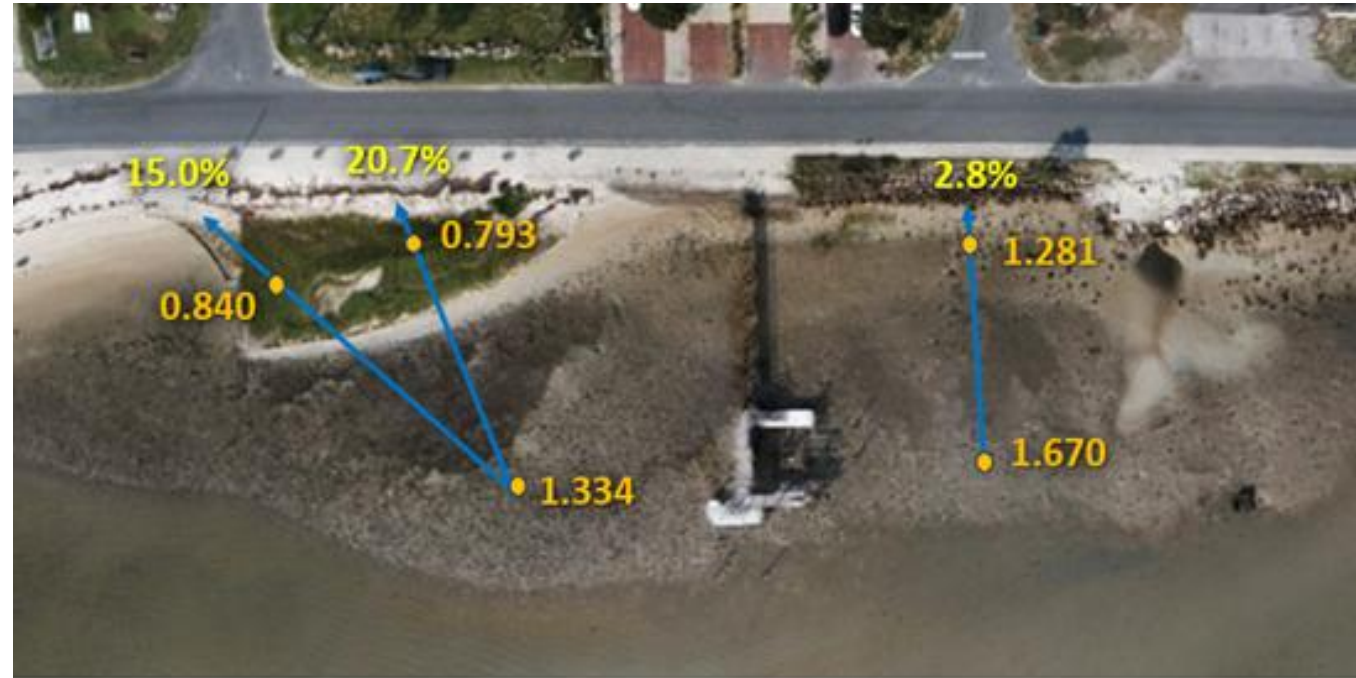
Shoreline growth



Why Living Shorelines Matter



- Coastal protection
- Habitat and biodiversity
- Water quality
- Resilience
- Recreation
- Aesthetics



Maximum incident wave power and attenuation along G street kW/m



NEWSLETTERS SIGN IN NPR SHOP DONATE

NEWS CULTURE MUSIC PODCASTS & SHOWS SEARCH

NATIONAL

Hurricane Idalia shows nature may provide the best shoreline protection

FEBRUARY 15, 2024 · 5:00 AM ET
HEARD ON ALL THINGS CONSIDERED

By Greg Allen

3-Minute Listen

+ PLAYLIST

TRANSCRIPT



<https://www.npr.org/2024/02/15/1227741074/nature-shoreline-protection-hurricane-season>

Barry, et al. 2025 Performance assessment of 3 living shorelines in Cedar Key, FL. 2025. *Estuaries and Coasts* 48:7



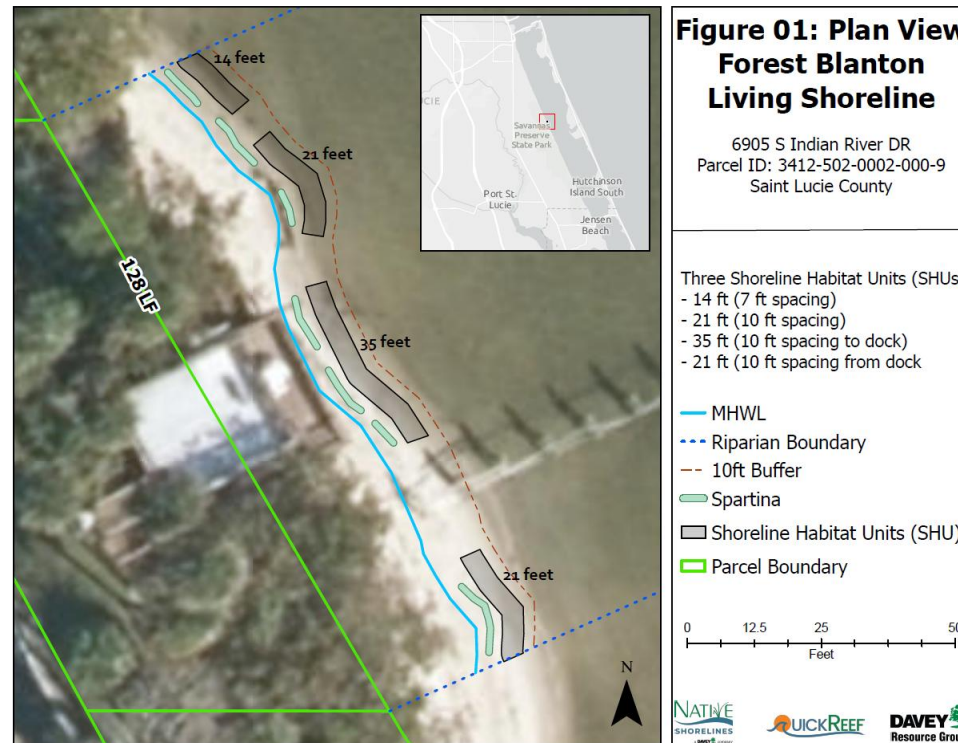
Buffered shoreline, Conchy Joe's

Indian Hills oyster reefs



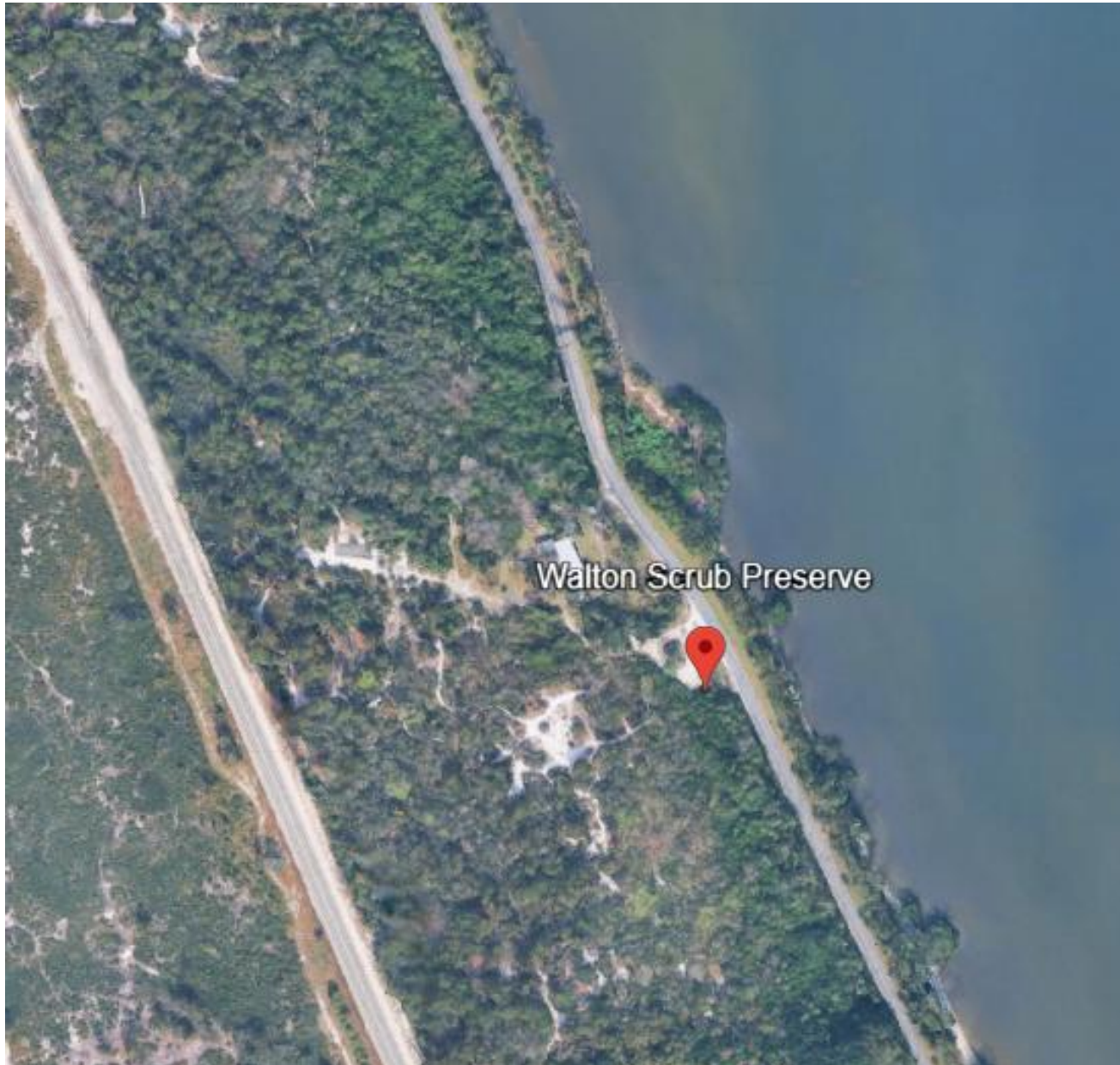
Driftwood Inn

Living shorelines in the IRL (Indian River Drive)





Walton Scrub Preserve Living Shoreline Project



- Principals: St. Lucie County
 - Sea & Shoreline lead contractor
- ~2,000 feet of shoreline
- Living shoreline reef modules + native shoreline plantings in areas where erosion is occurring.
- Currently in permitting and design phase

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FLORIDA SEA GRANT
SERVING FLORIDA'S COASTS FOR 50 YEARS



Privately funded living shoreline project photo Credit Vicent Encomio