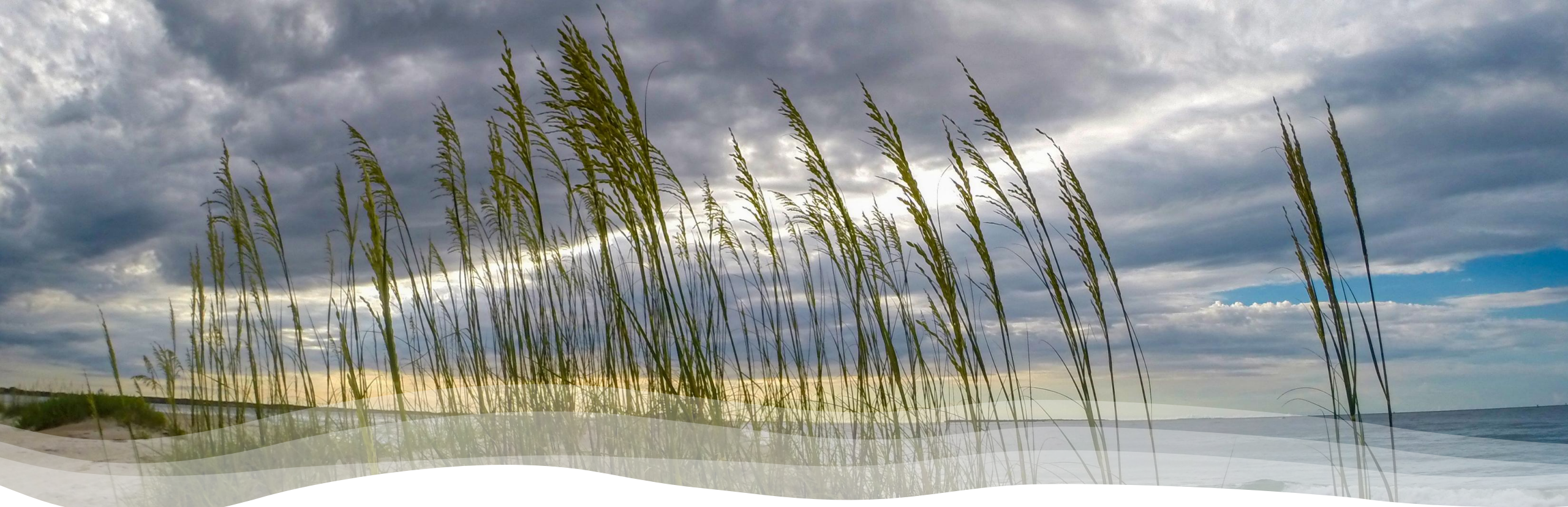




Inlet Hazard Areas & Setback Scenarios: Vegetation vs. Hybrid-Vegetation Line (HVL)

Ken Richardson - NC Division of Coastal Management

November 19, 2025

Examples of Current Inlet Hazard Areas

Old Topsail Inlet (closed)



Hatteras Inlet



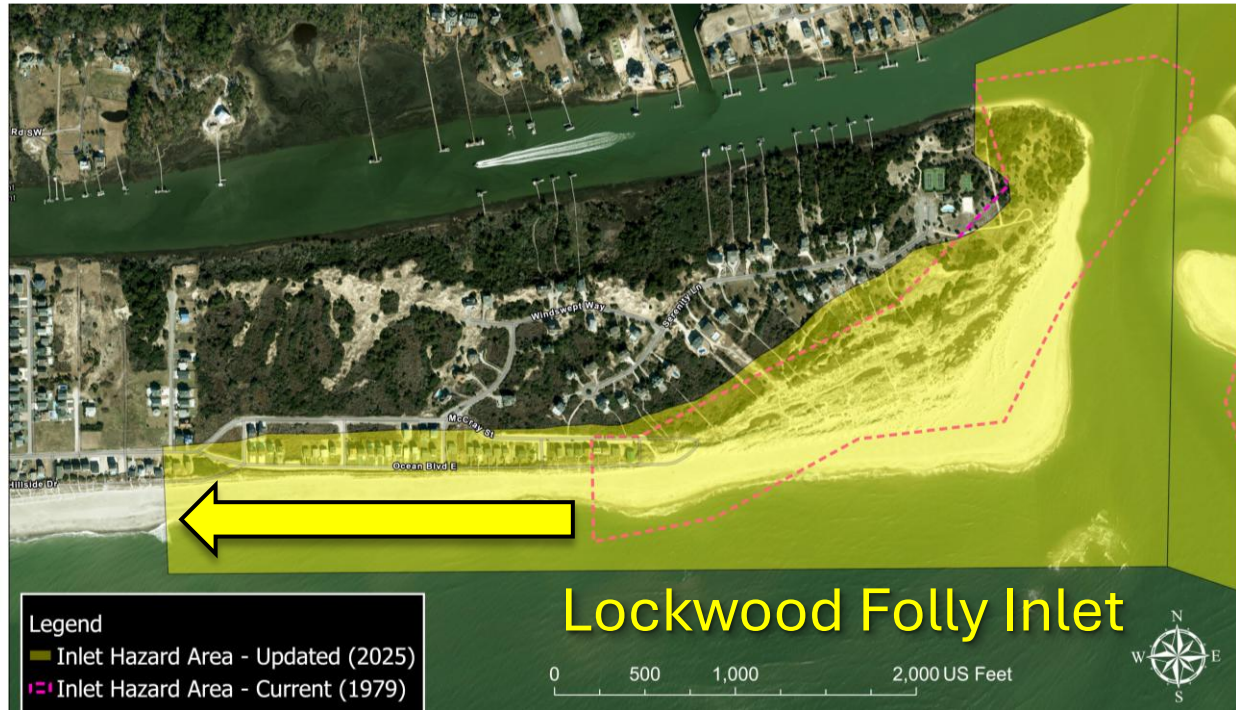
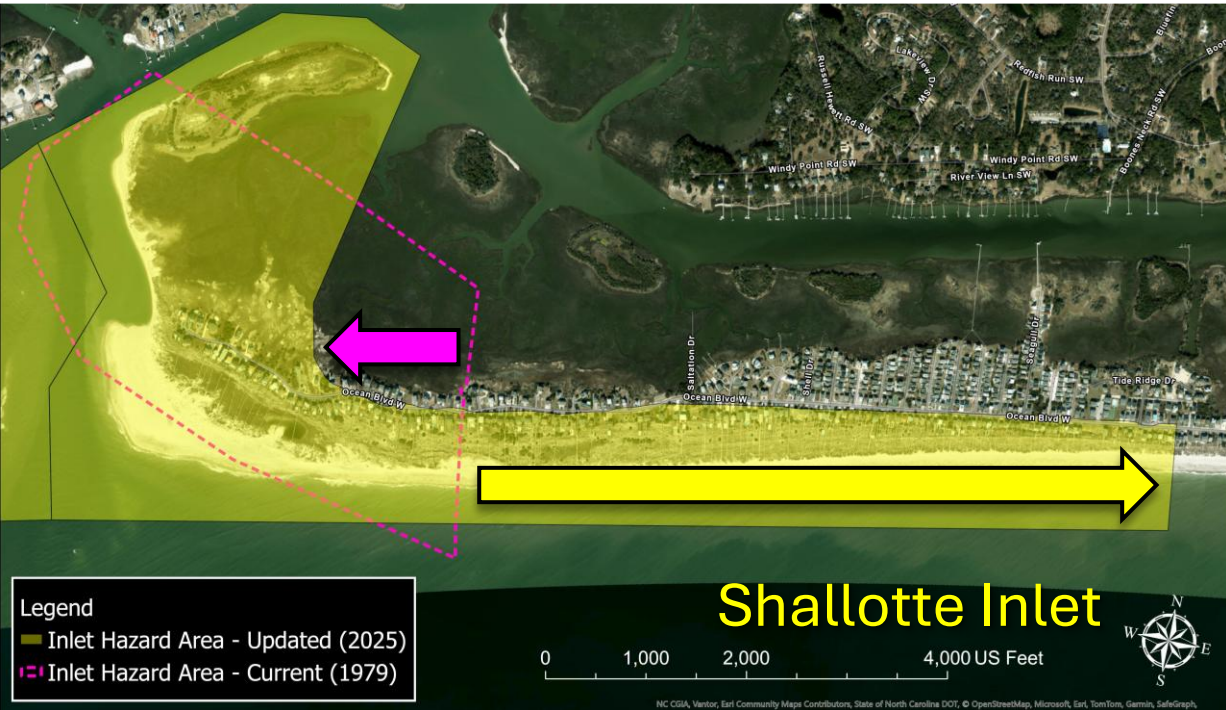
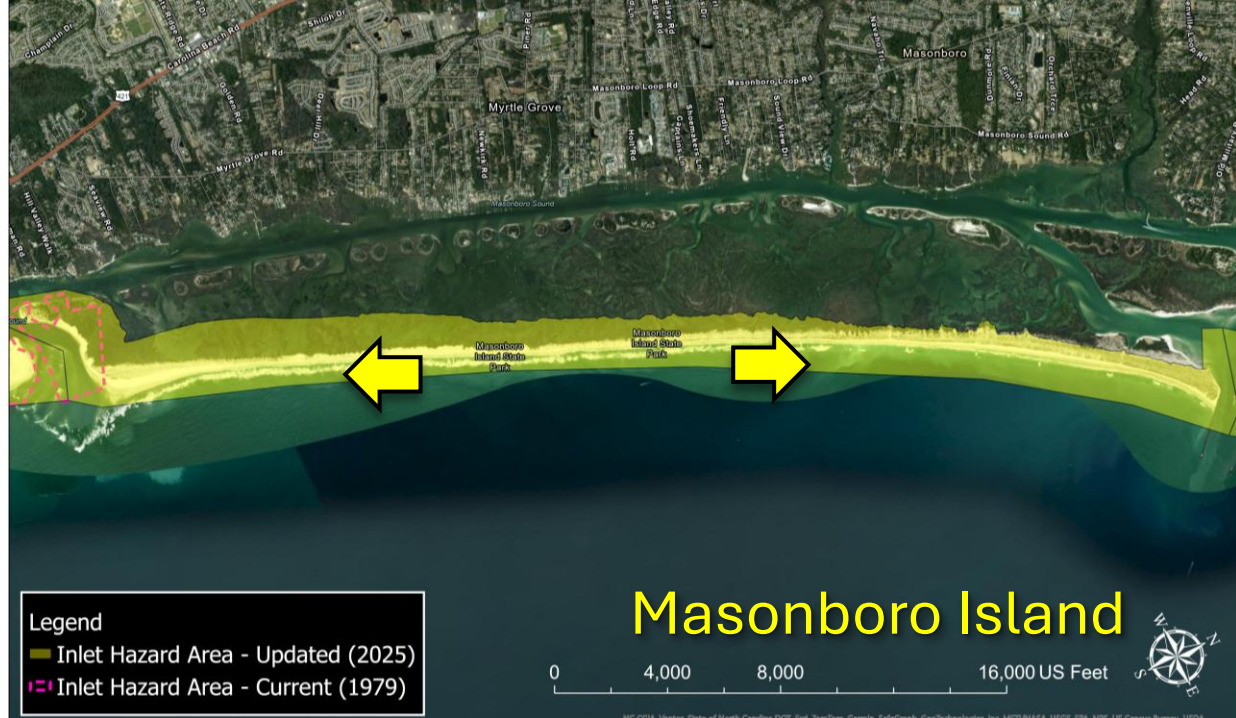
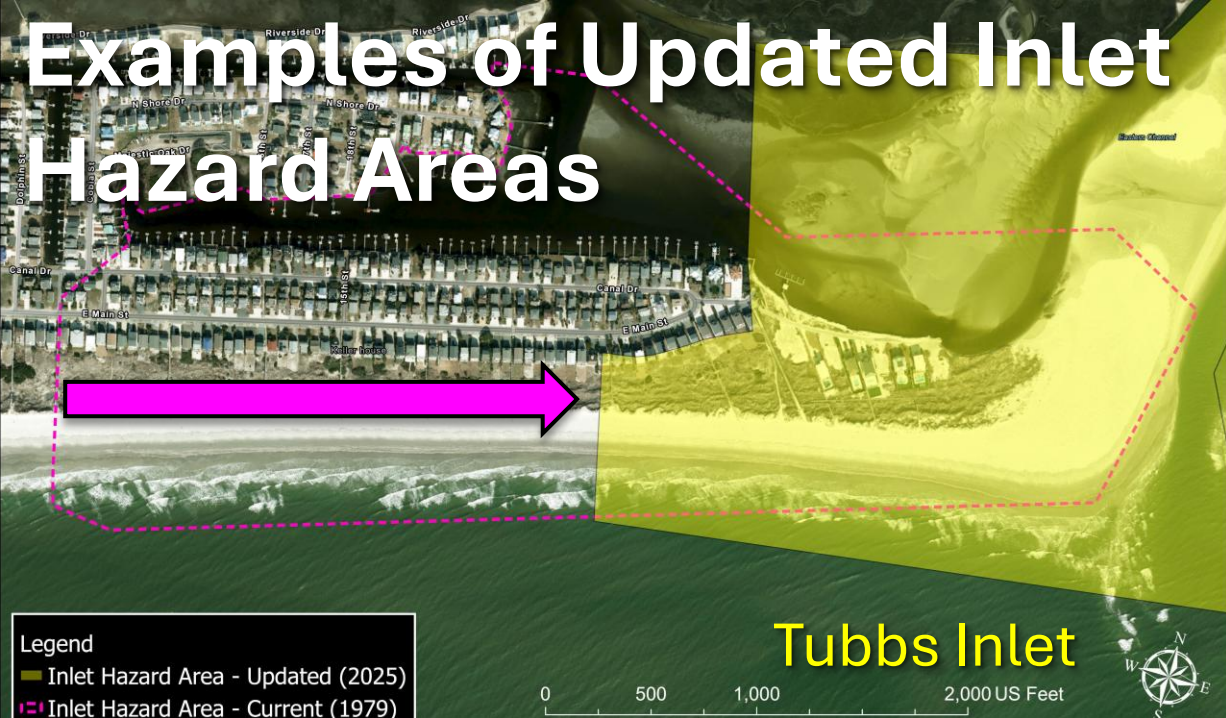
Shallotte Inlet



Barden Inlet



Examples of Updated Inlet Hazard Areas



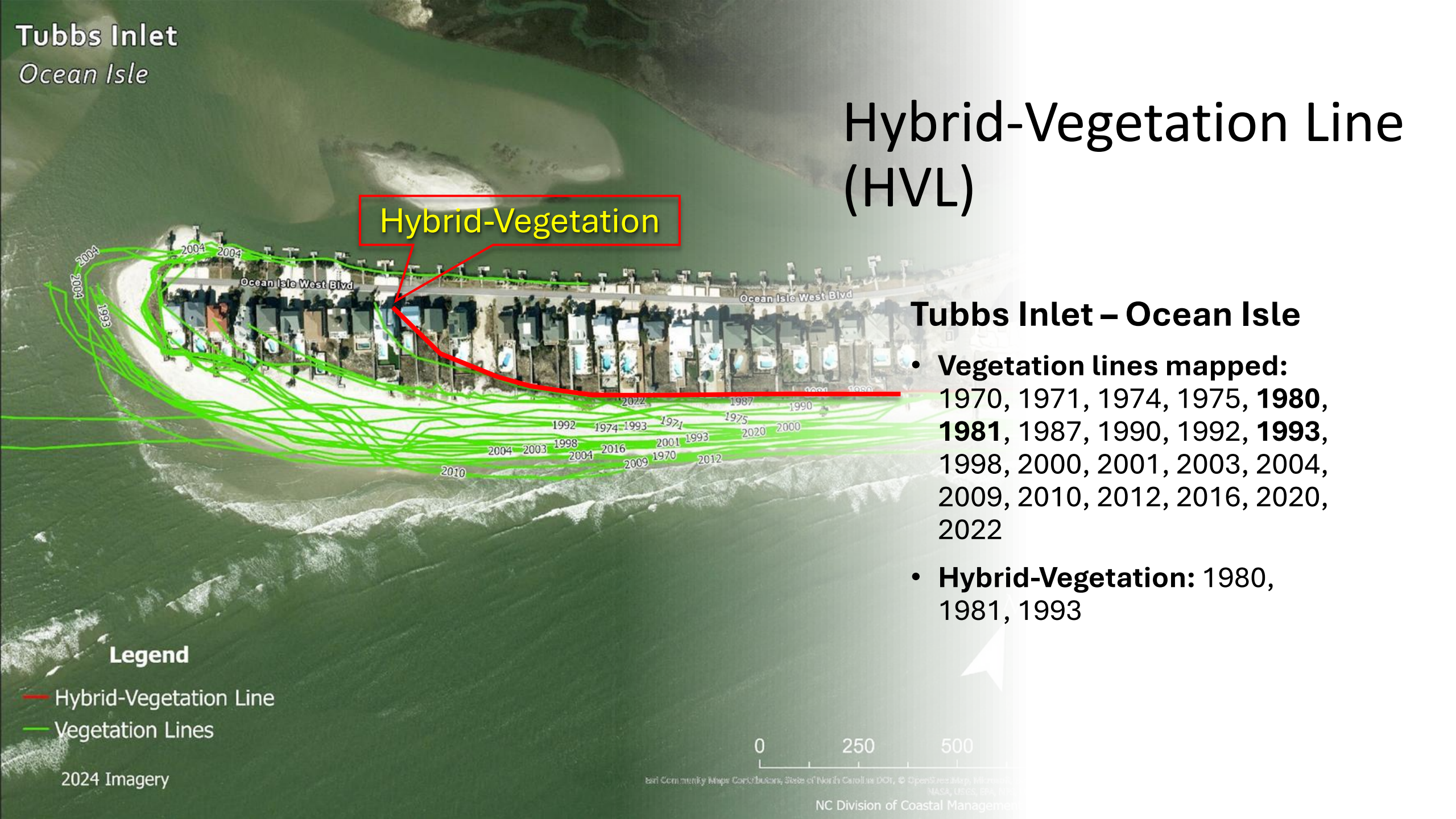
Structures Inside Inlet Hazard Areas (Current vs. Updated)

Location	Current IHA (1979)	Updated IHA (2025)	Difference (current to 2025)
Tubbs Inlet – Sunset Beach	206	17	-189
Tubbs Inlet – Ocean Isle	41	30	-11
Shallotte Inlet – Ocean Isle	0	200	200
Shallotte Inlet – Holden Beach	59	144	85
Lockwood Folly Inlet – Holden Beach	4	42	38
Lockwood Folly Inlet – Oak Island	43	105	62
Carolina Beach Inlet – Carolina Beach	0	18	18
Masonboro Inlet – Wrightsville Beach	0	3	3
Mason Inlet – Wrightsville Beach	1	16	15
Mason Inlet – Figure Eight	36	10	-26
Rich Inlet – Figure Eight	36	62	26
New Topsail Inlet – Topsail Beach	177	17	-160
New River Inlet – North Topsail Beach	84	125	41
Bogue Inlet – Emerald Isle	96	77	-19
Total:	783	866	83

Updating Erosion Rates & IHA Boundaries

Requires Rule Amendments:

1. **07H .0304(1)** - definition of Ocean Erodible Area (OEA) to reference erosion rate report & maps
2. **07H .0304(2)** – definition of Inlet Hazard Area (IHA) to reference:
 - IHA erosion rates report & maps
 - Updated IHA boundary report and maps
3. **07H .0310(a)(1)** – reference inlet erosion rate setbacks, not adjacent OEA
 - Include reference to hybrid-vegetation if used to measure setbacks?
4. **07H .0310(a)(4)** – clarify that existing grandfather rules apply inside IHAs



2025 Updated Inlet Hazard Area

2025 Proposed Inlet Hazard Area

Eastern Channel

IHA (current)

HVL

90-YRL

30-YRL

IHA (2025)

Legend

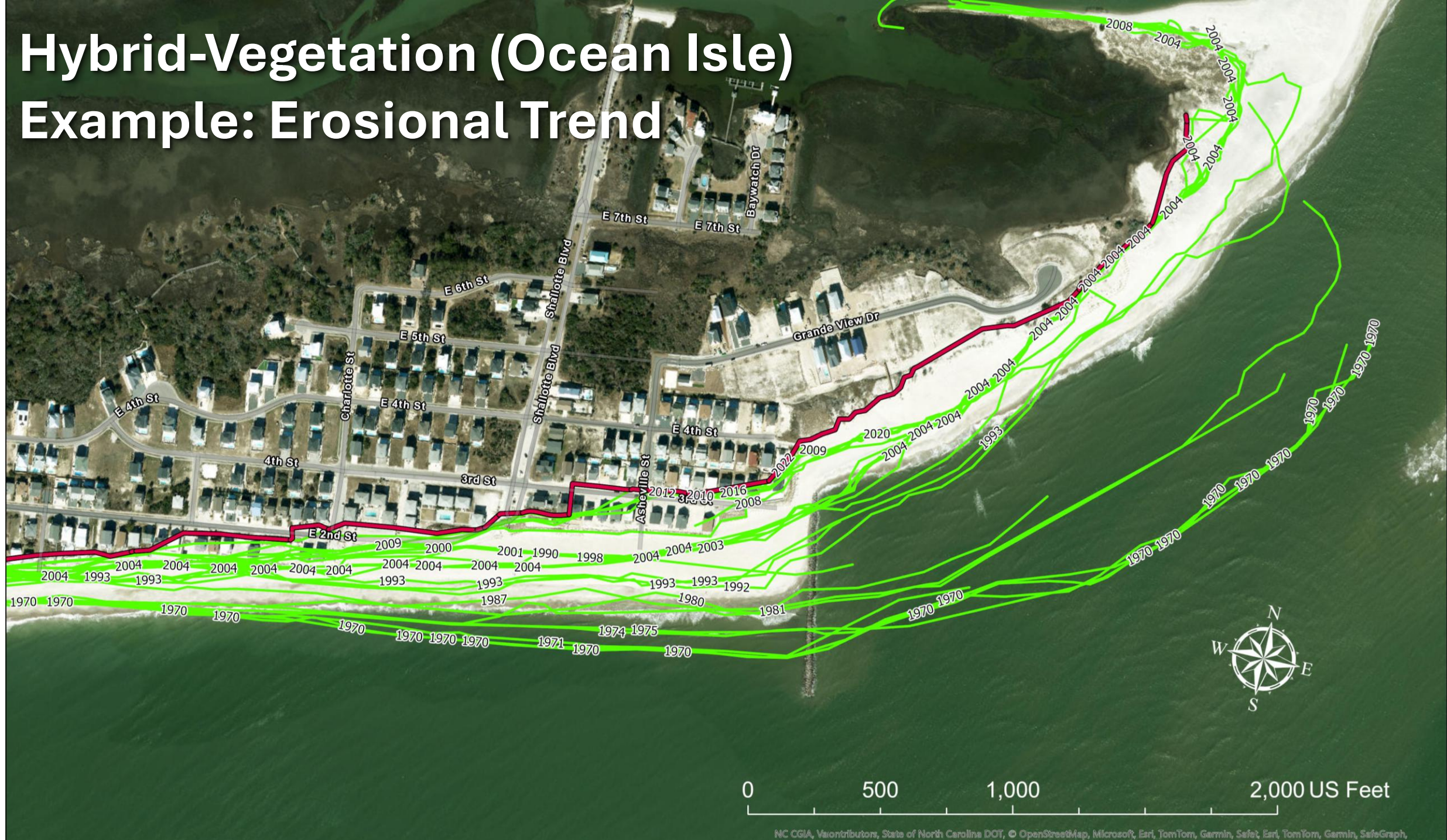
- 90-Year Risk Line
- 30-Year Risk Line
- Hybrid-Vegetation Line
- 2025 Proposed IHA Alongshore BND
- Inlet Hazard Area (2025 Update)
- Inlet Hazard Area (1979) Current



0 0.13 0.25 0.5 Miles

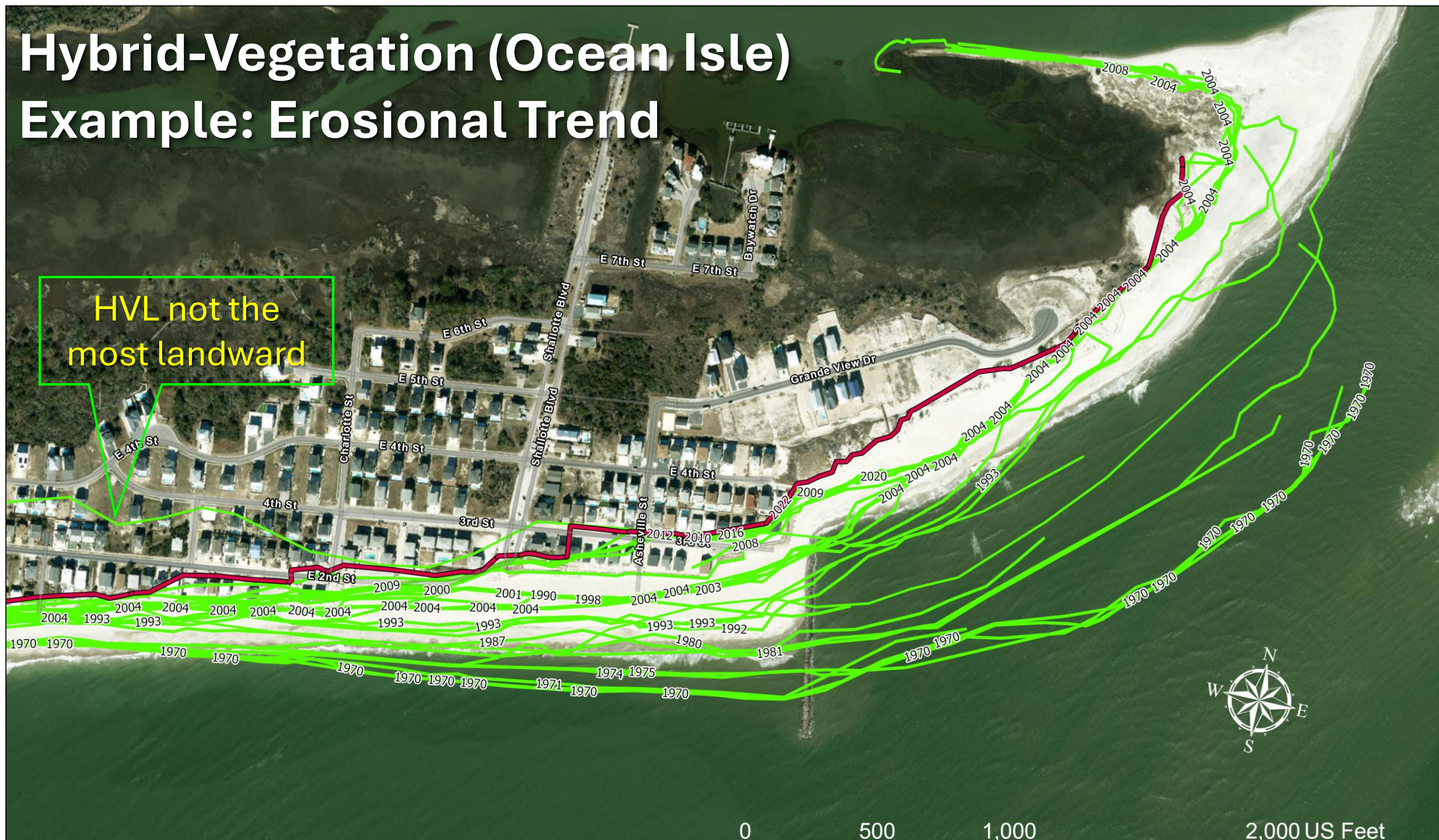
Hybrid-Vegetation (Ocean Isle)

Example: Erosional Trend

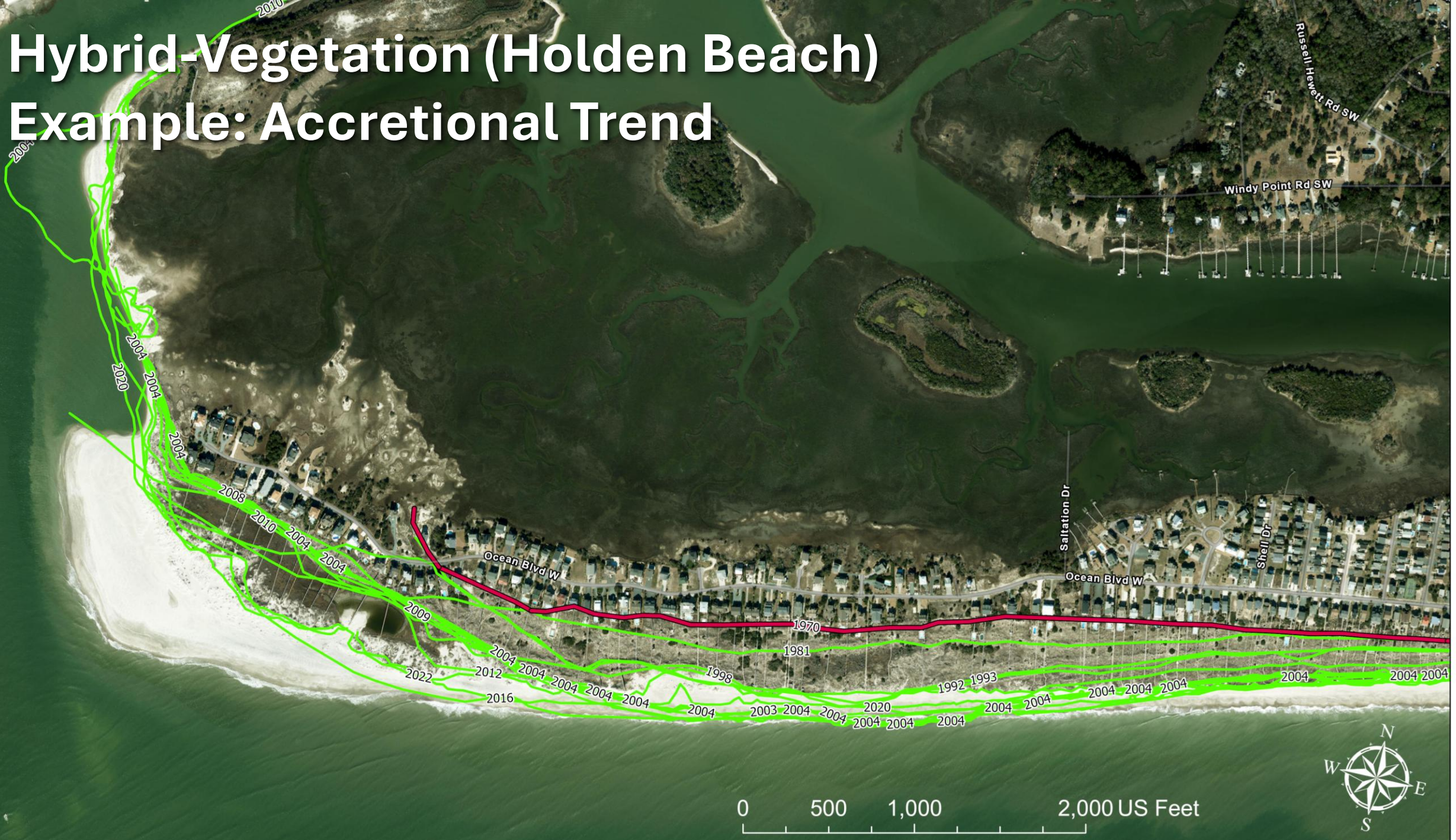


Hybrid-Vegetation (Ocean Isle) Example: Erosional Trend

HVL not the
most landward



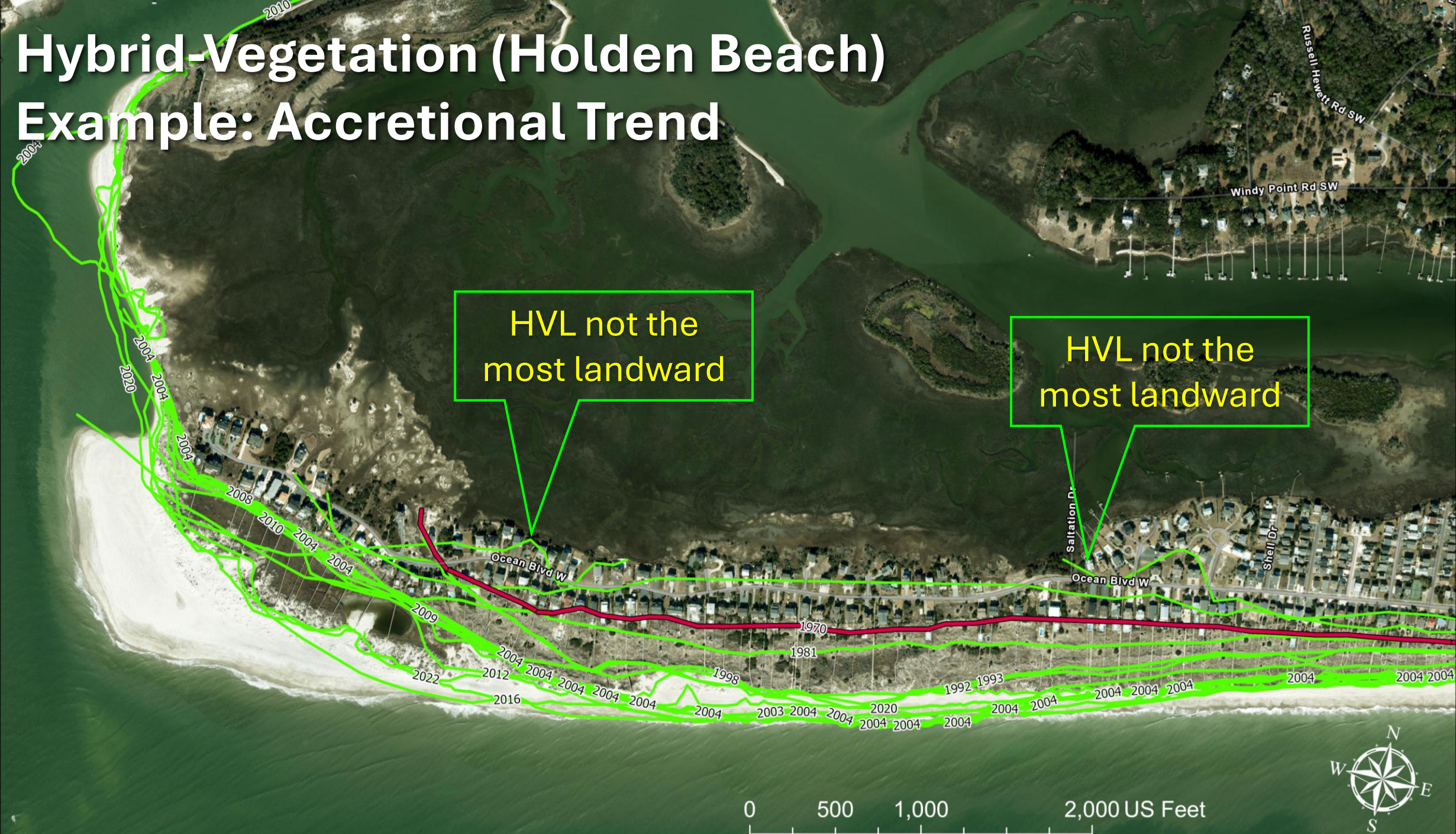
Hybrid-Vegetation (Holden Beach) Example: Accretional Trend



An aerial photograph of a coastal area, likely Holden Beach, showing a mix of green vegetation and brown sandy areas. A green dashed line is drawn across the image, indicating an accretional trend. The text 'Hybrid-Vegetation (Holden Beach)' and 'Example: Accretional Trend' is overlaid in large white font. A small '2024' watermark is visible in the bottom left corner.

Hybrid-Vegetation (Holden Beach)

Example: Accretional Trend



Hybrid-Vegetation (HVL) vs. Pre-Project Vegetation Line (PPVL):

PPVL - Vegetation before beach nourishment

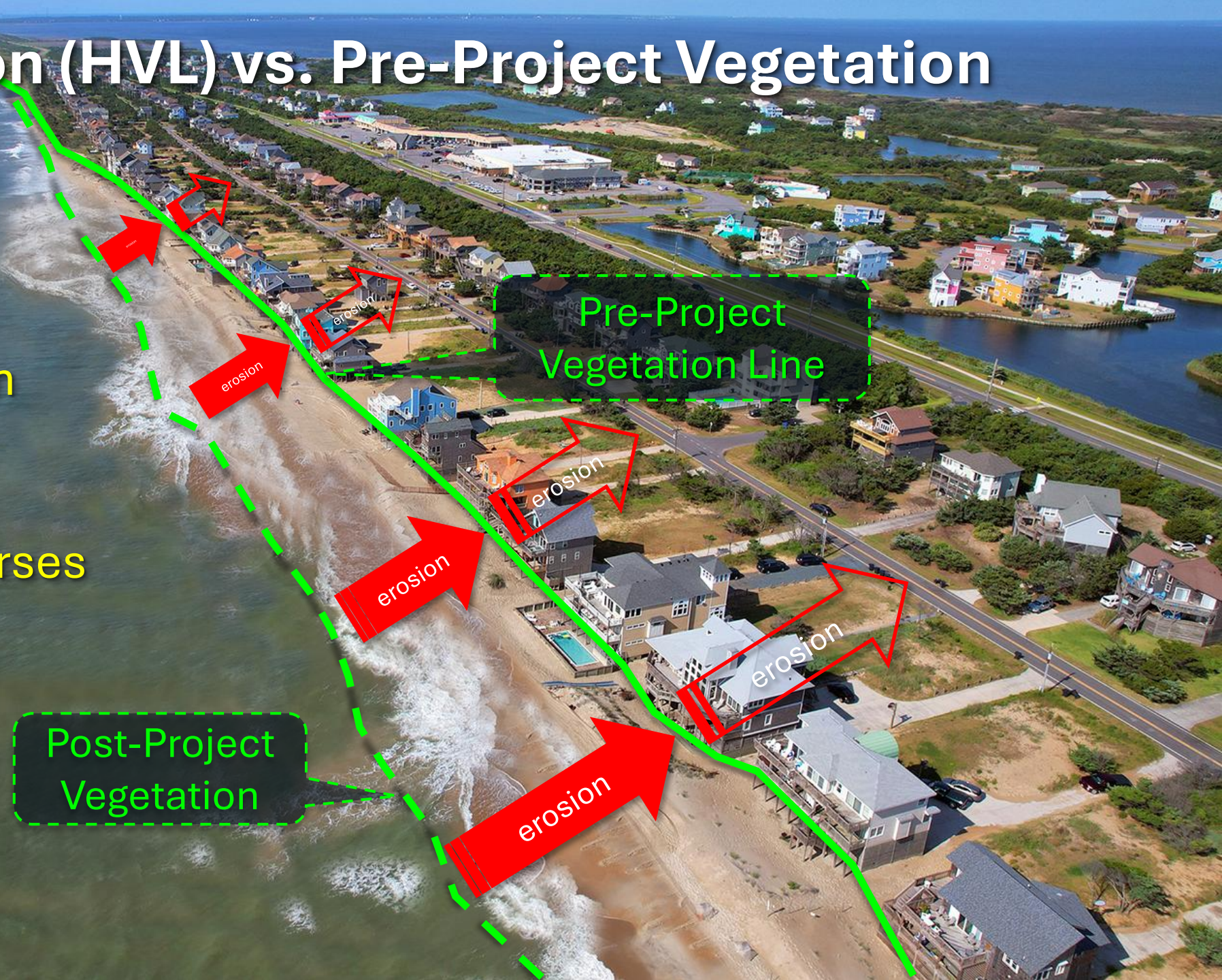
HVL - vegetation line before natural accretion started

Pre-Project
Vegetation Line

Hybrid-Vegetation (HVL) vs. Pre-Project Vegetation Line (PPVL):

Oceanfront:
Without routine
maintenance = erosion

Inlet Areas:
Accretional trend reverses
= erosion



Base Photo: Dare County, NC

Photo Simulation: NC DCM

Existing Structures & Potential Issues with Meeting Setbacks:

3 Scenarios

Location	Total Structures Inside 2025 IHA	(#1) Current Requirements Current Veg. & 2020 Setbacks	(#2) Current Veg. & 2025 Setbacks	(#3) Hybrid-Vegetation Current Veg. & 2025 Setbacks
Sunset Beach - Tubbs Inlet	17	0	0	5
Ocean Isle - Tubbs Inlet	30	1	12	13
Ocean Isle - Shallotte Inlet	200	66	113	122
Holden Beach - Shallotte Inlet	144	0	0	97
Holden Beach - Lockwood Folly Inlet	42	34	2	20
Oak Island - Lockwood Folly Inlet	105	24	24	76
Carolina Beach - CB Inlet	18	2	1	15
Wrightsville Beach - Masonboro Inlet	3	0	0	1
Wrightsville Beach - Mason Inlet	16	0	0	3
Figure Eight - Mason Inlet	10	9	9	10
Figure Eight - Rich Inlet	62	14	22	33
Topsail Beach - New Topsail Inlet	17	2	2	7
N. Topsail Beach - New River Inlet	123	41	58	68
Emerald Isle - Bogue Inlet	77	0	0	36
Total:	866	193	243	506

Measuring Setbacks: Vegetation Line or Hybrid- Vegetation Line (HVL)?

CRAC Recommendations?

- 1. Vegetation Line or Pre-Project Vegetation?**
- 2. Hybrid-Vegetation Line?**
 - 1. If used, grandfather existing structures?**