Trend in Foredune Crestline Displacement, Fire Island National Seashore, 1976-2005

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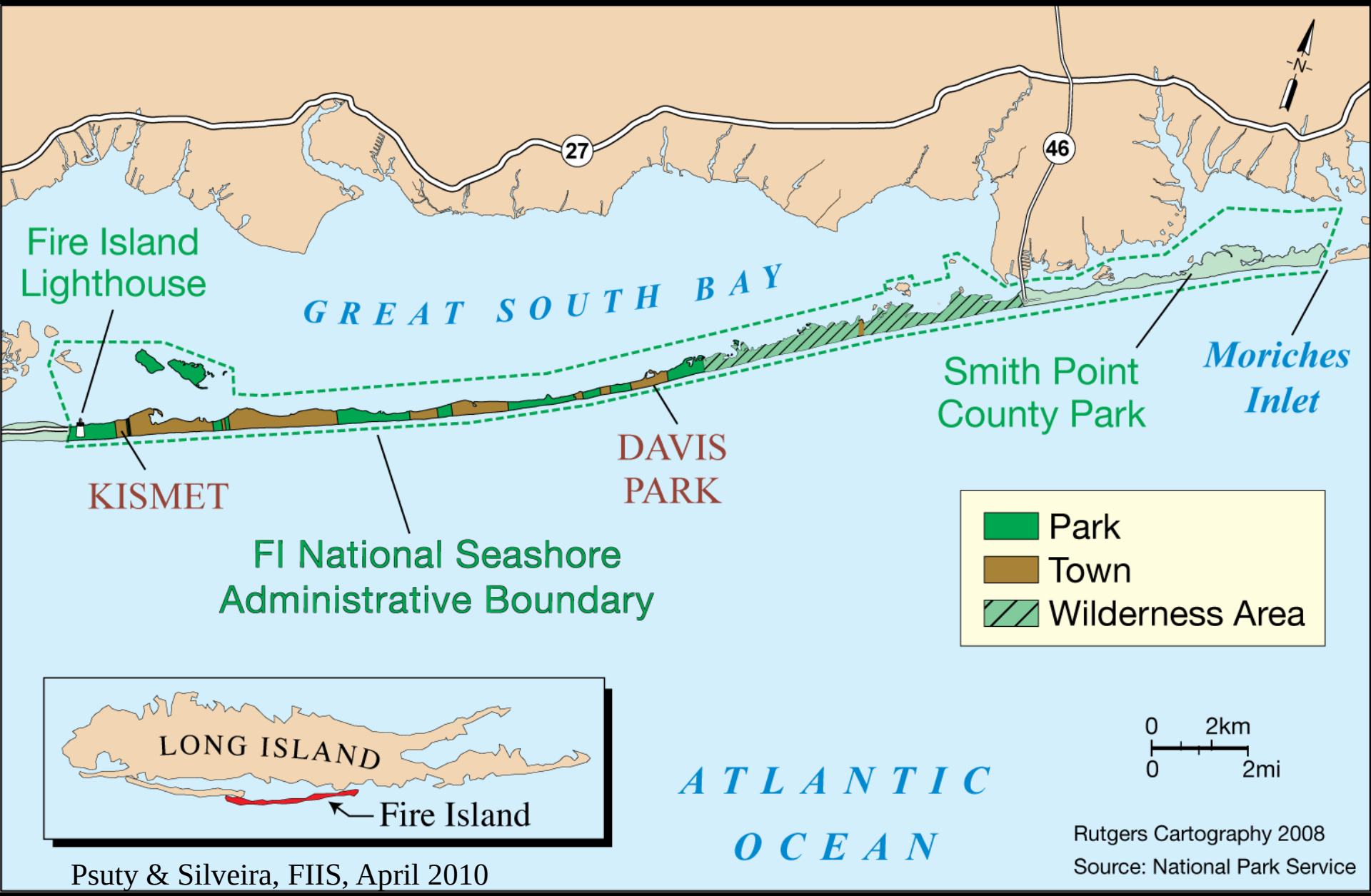

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Coastal Foredune Position

- more conservative than beach,
perhaps more diagnostic of trend

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Downdrift Inlet Effect

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Accumulation and Displacement

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Scarped Dune

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Foredune in communities
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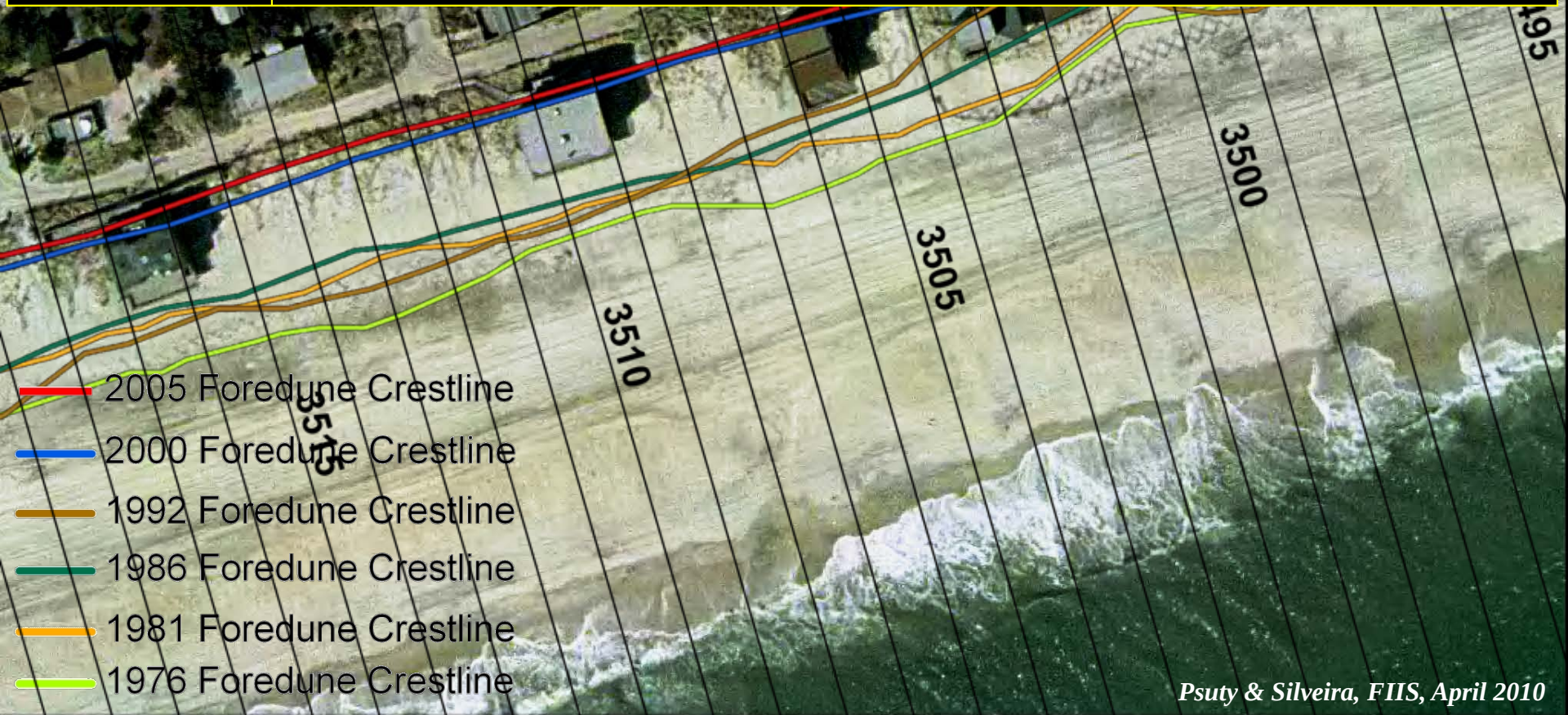
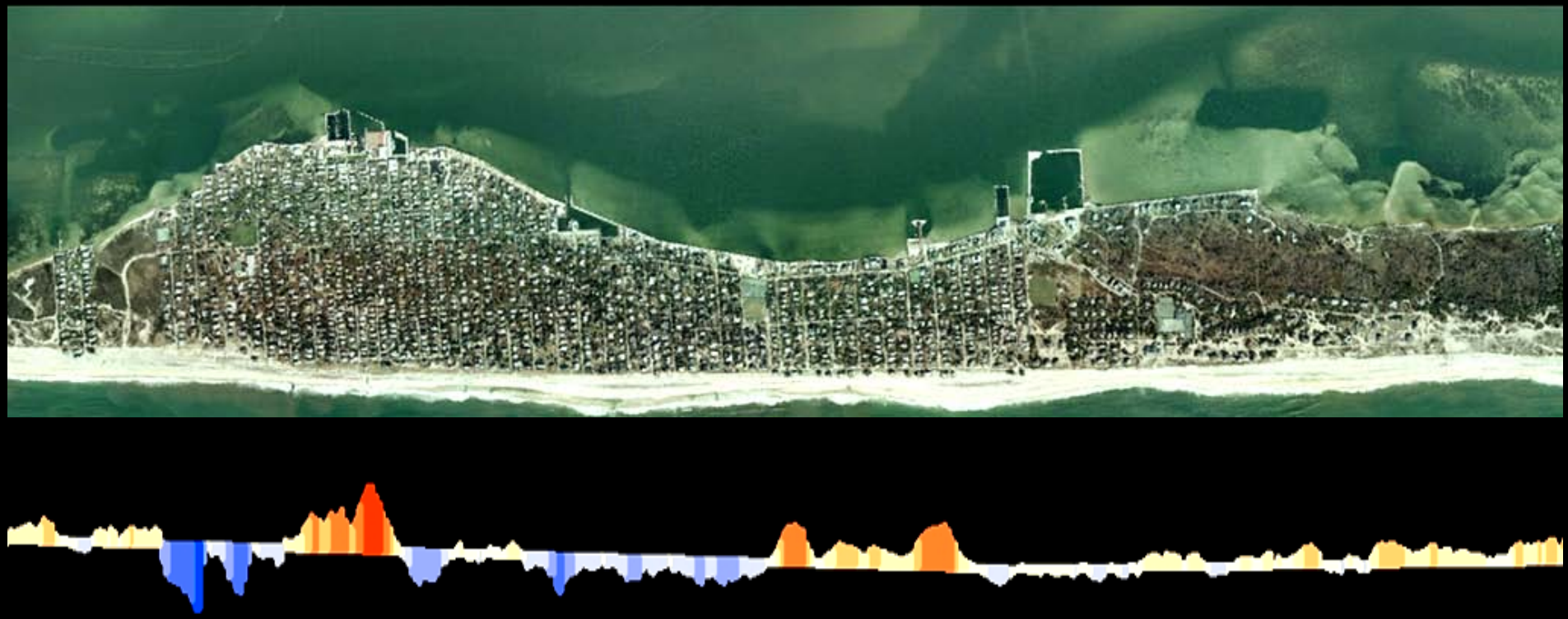
TRANSECT ORDER	CHANGES				
	1976-1981	1981-1986	1986-1992	1992-2000	2000-2005
3495	1.77	0.19	-6.97	-0.28	-6.55
3496	-1.07	2.54	-4.42	-1.73	-7.45
3497	-1.78	0.98	2.68	-8.45	-7.05
3498	-1.57	-2.61	7.00	-10.85	-6.80
3499	-4.75	-1.50	8.41	-11.80	-6.87
3500	-4.67	-2.03	5.36	-8.57	-6.59



Foredune change between 2000 and 2005



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Dune Scarping

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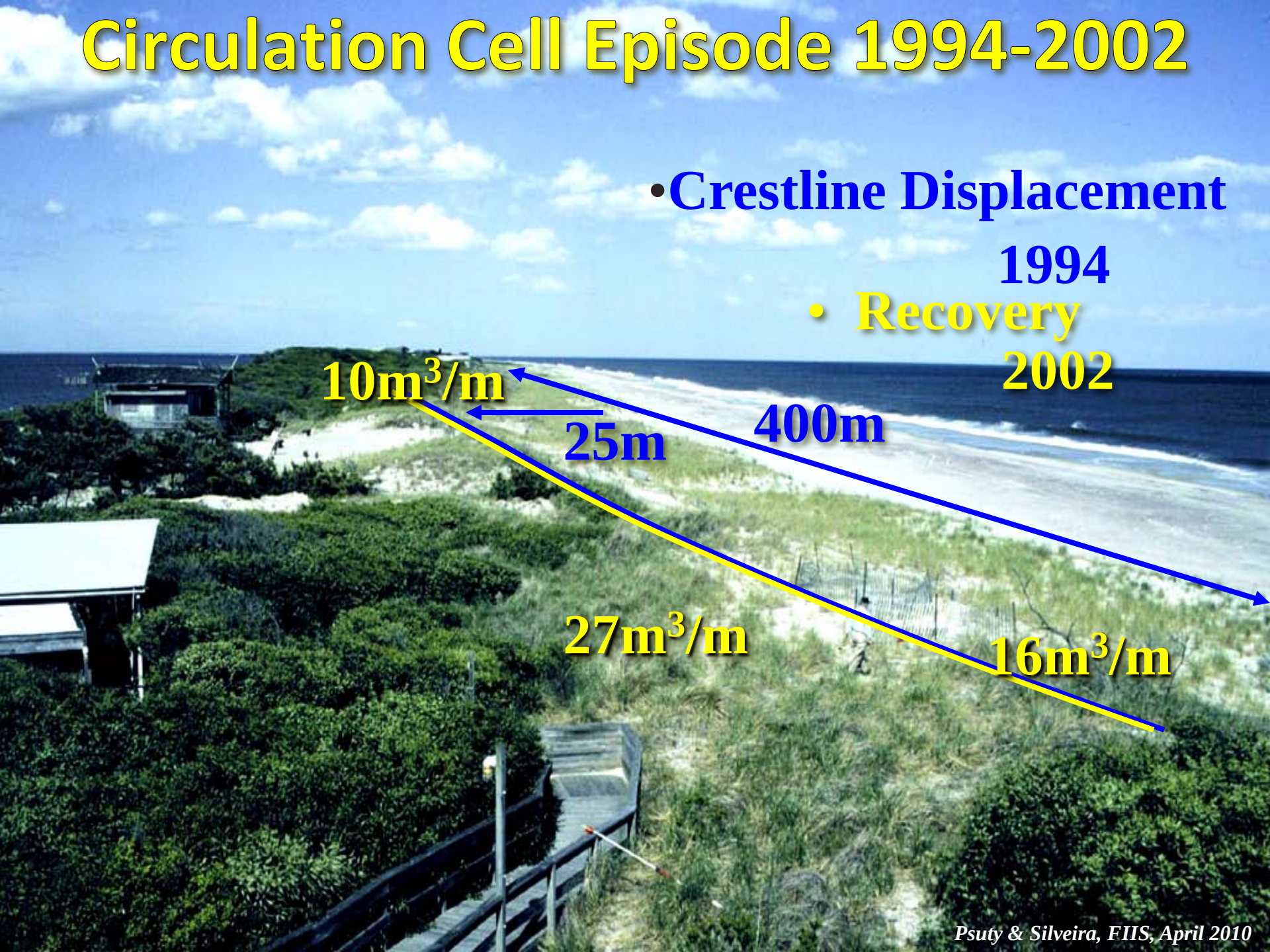
Circulation Cell Episode 1994-2002



Dune Displacement

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Dune erosion and removal

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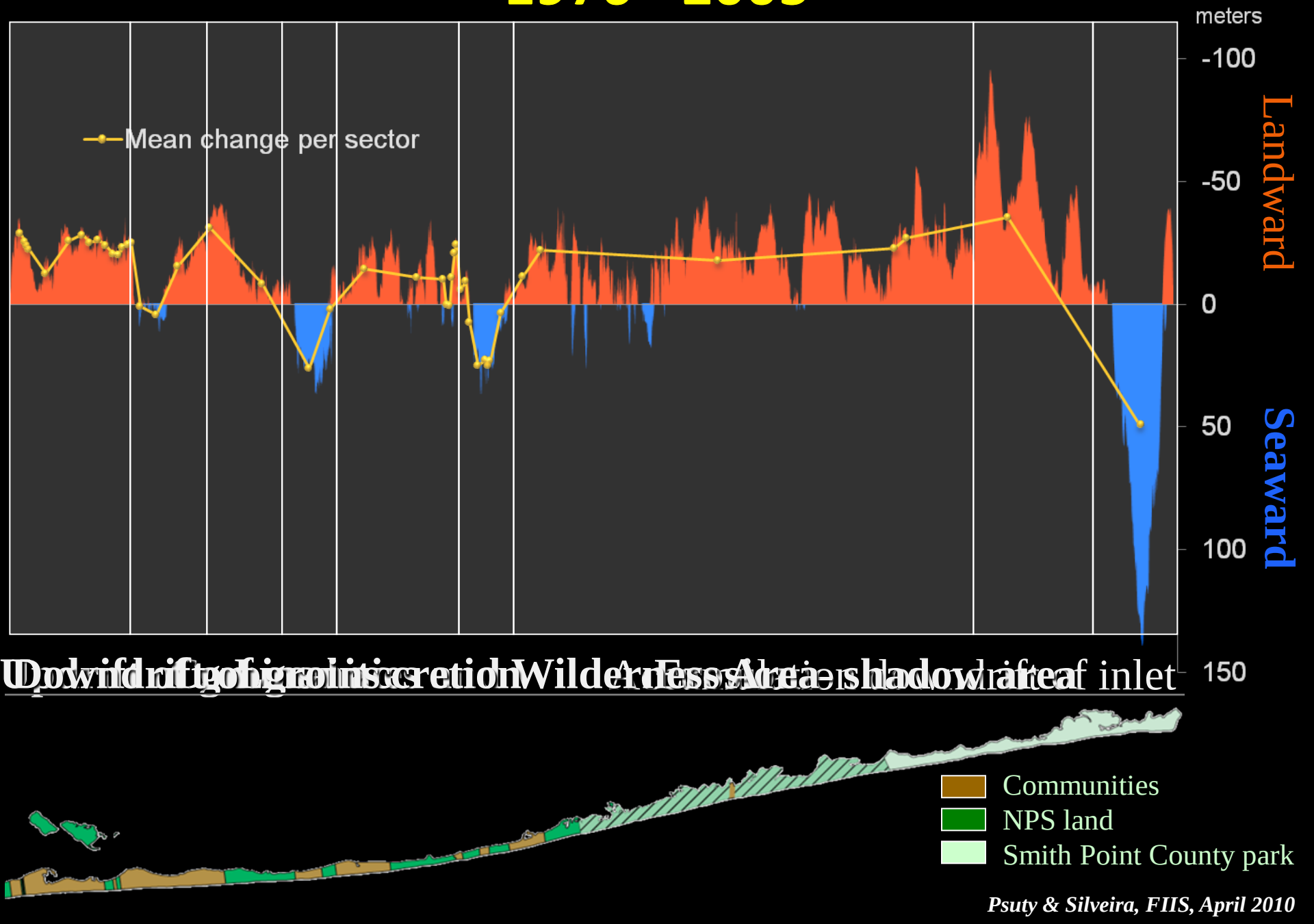
1976 - 2005



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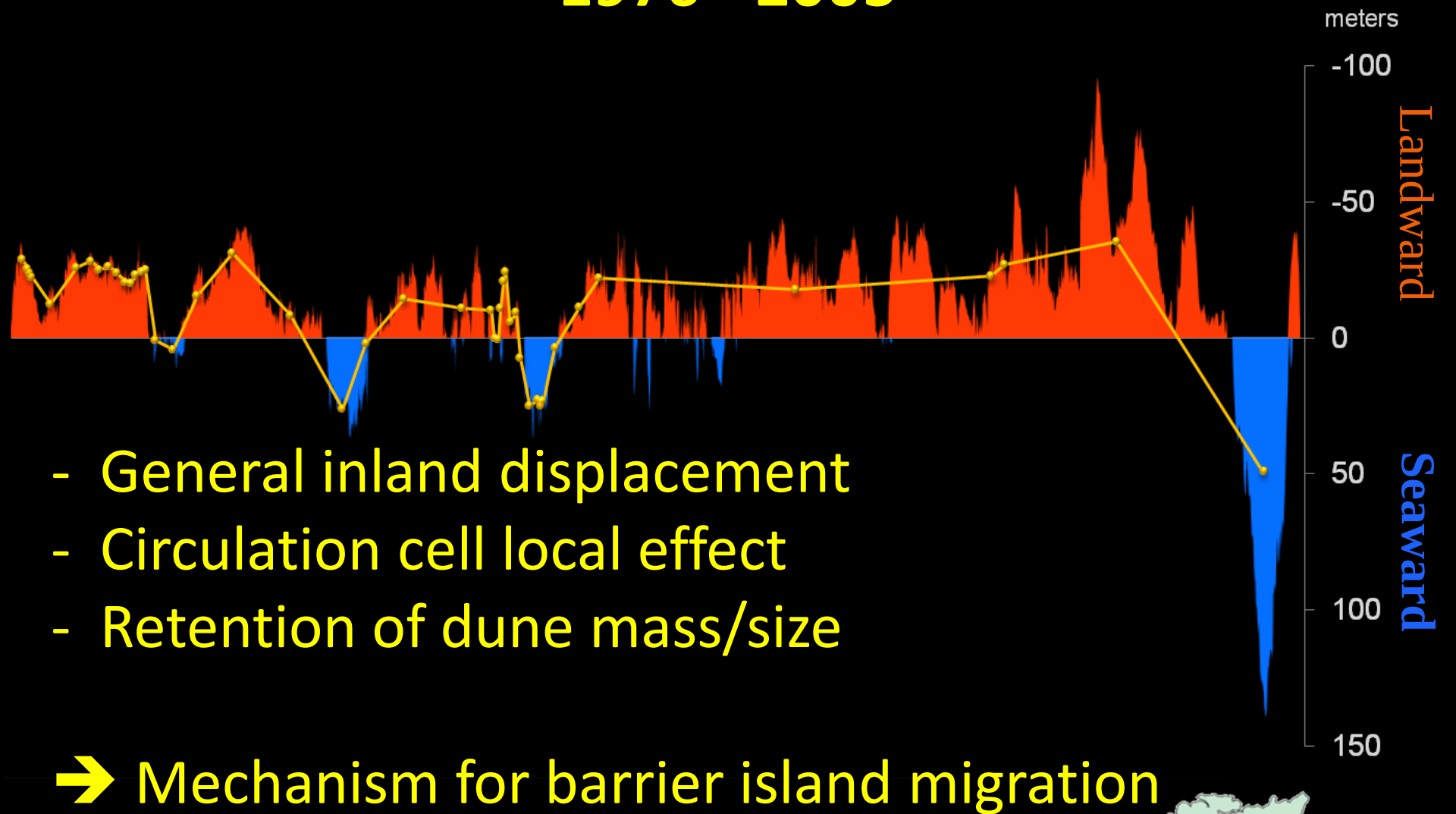
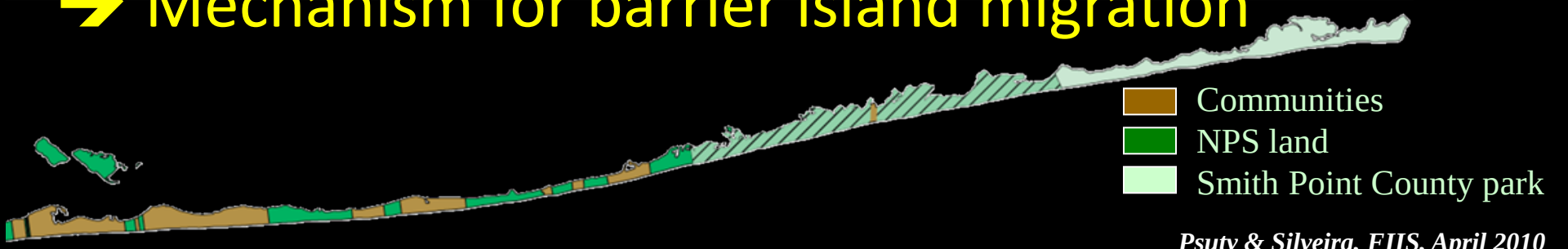
1976 - 2005



- General inland displacement
- Circulation cell local effect
- Retention of dune mass/size

➔ Mechanism for barrier island migration



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