



Coastal Change Analysis Using Airborne LiDAR Data and Historic Aerial Photographs

Neil Olson

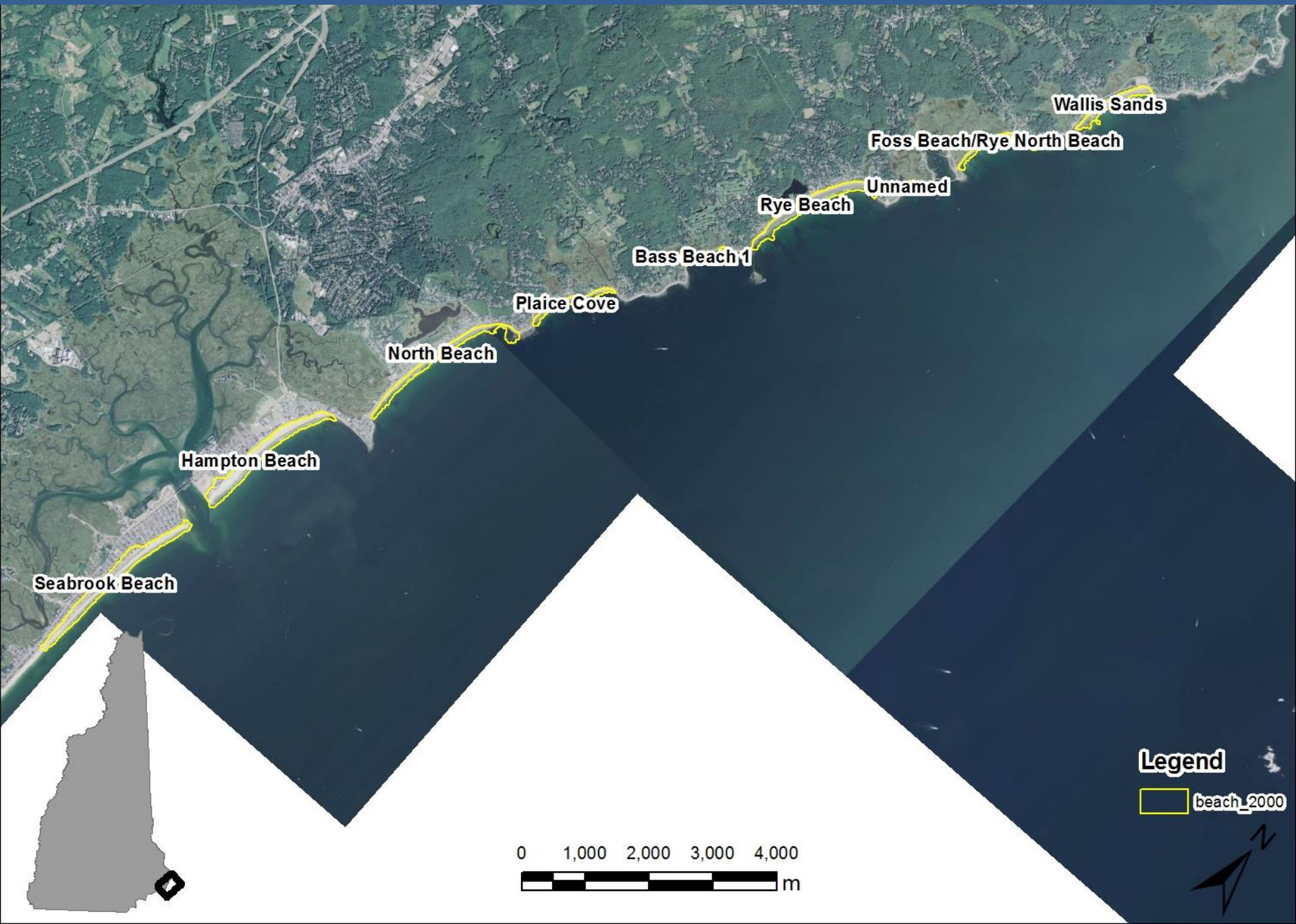
New Hampshire Geological
Survey

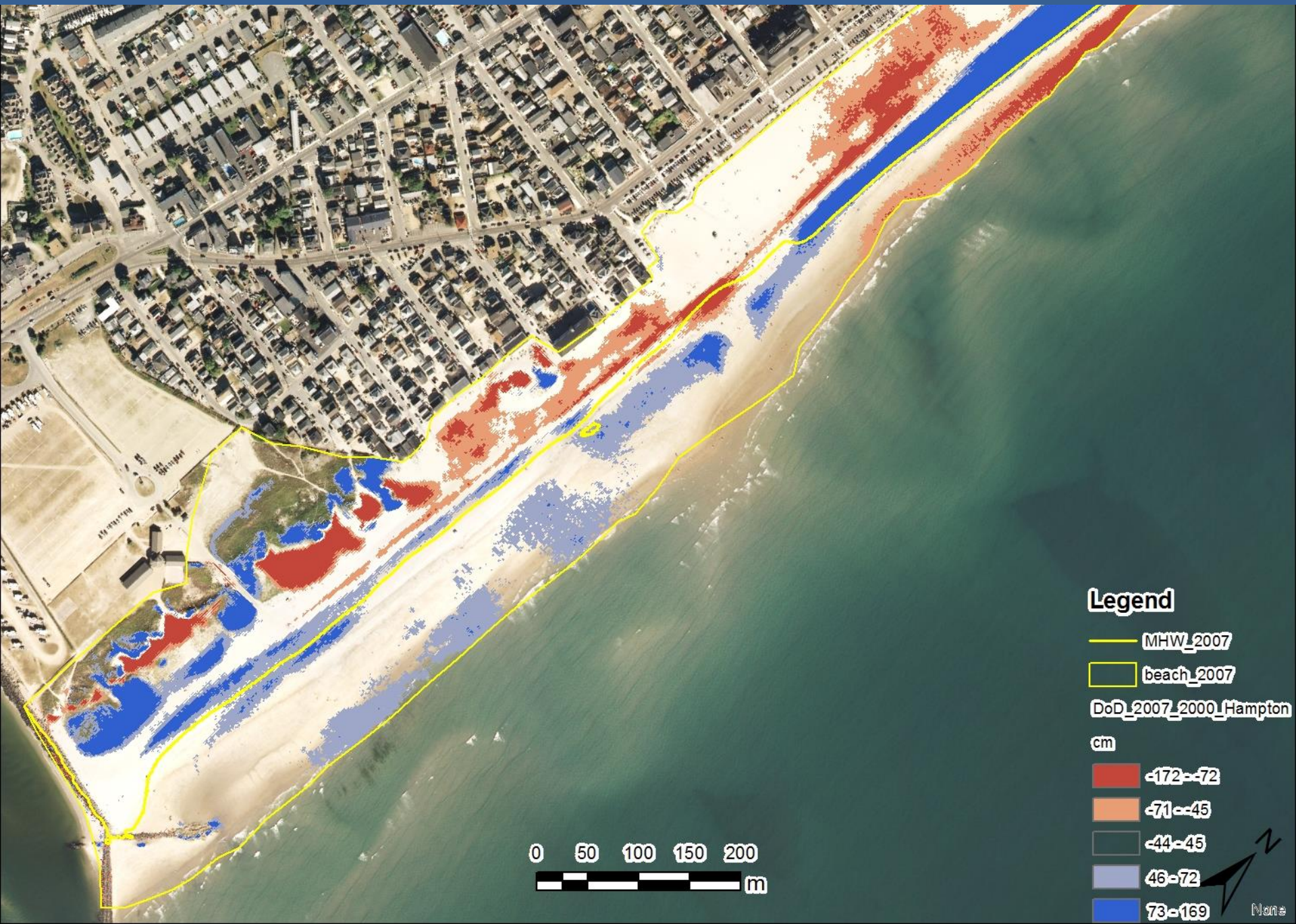
Coastal Summit 6/19/2015

- Funding provided by BOEM Hurricane Sandy Coastal Recovery and Resiliency-Resource Identification, Delineation and Management Practices
- Assistance from Larry Ward, Zach McAvoy, Rick Chormann

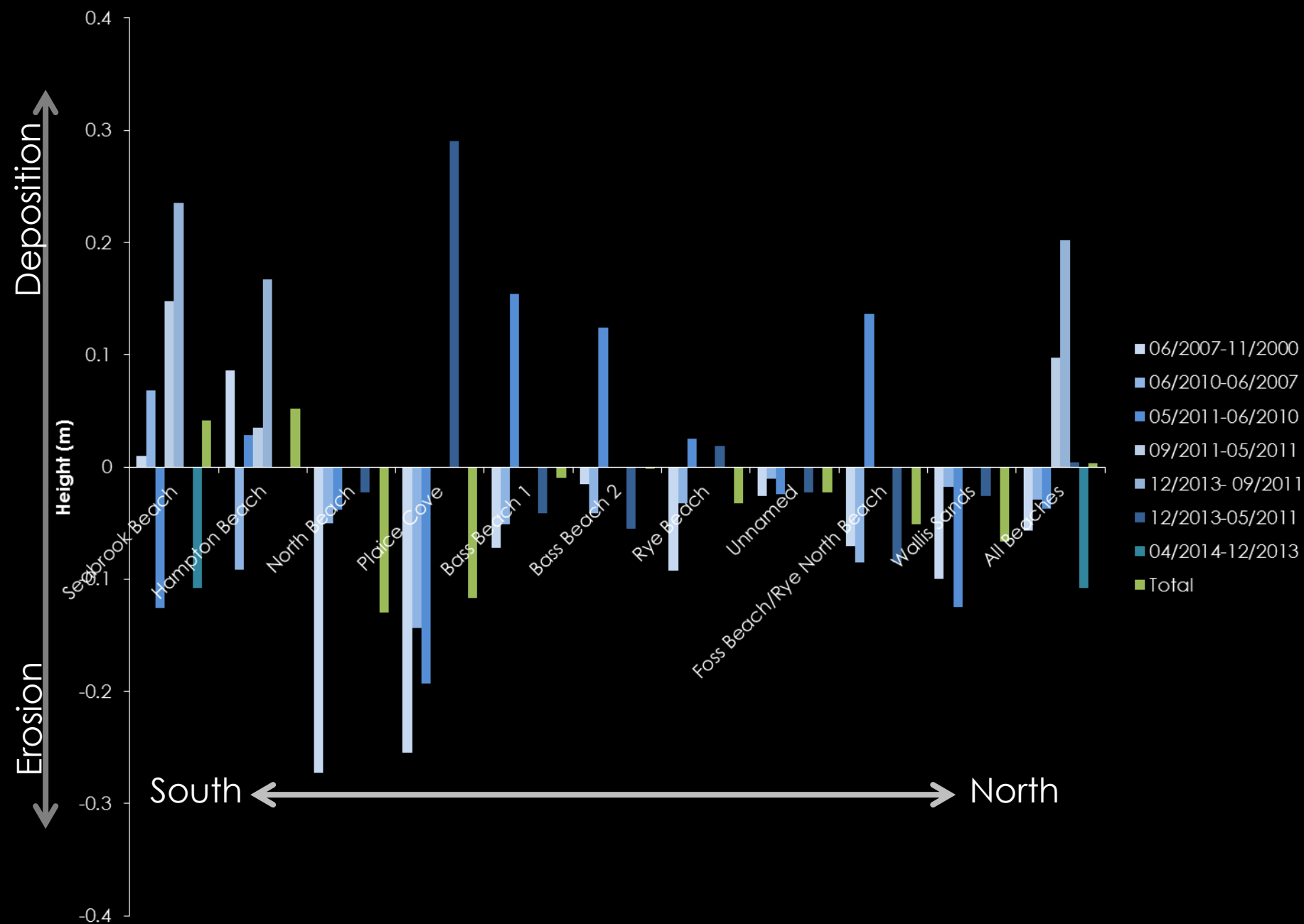


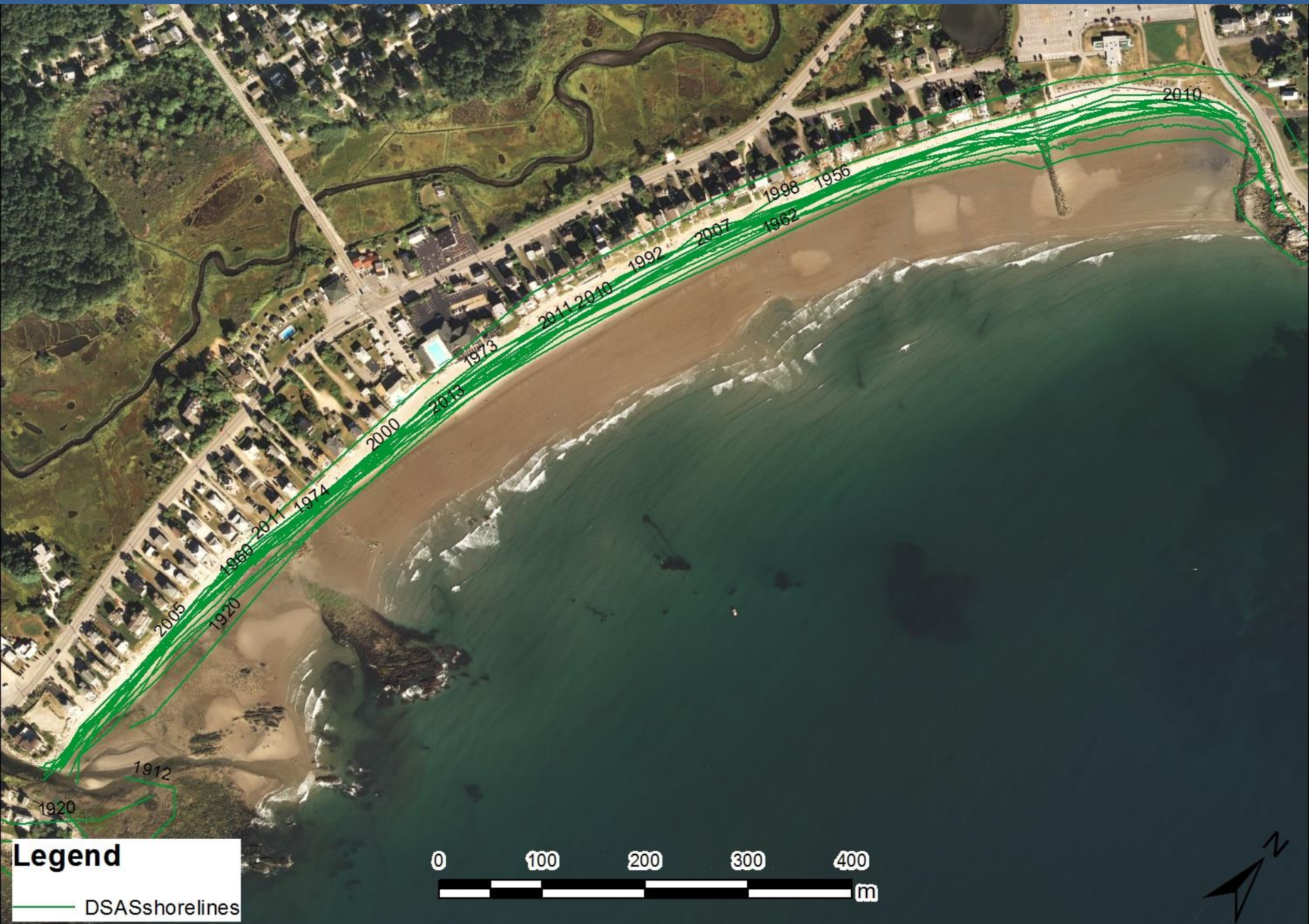
University of
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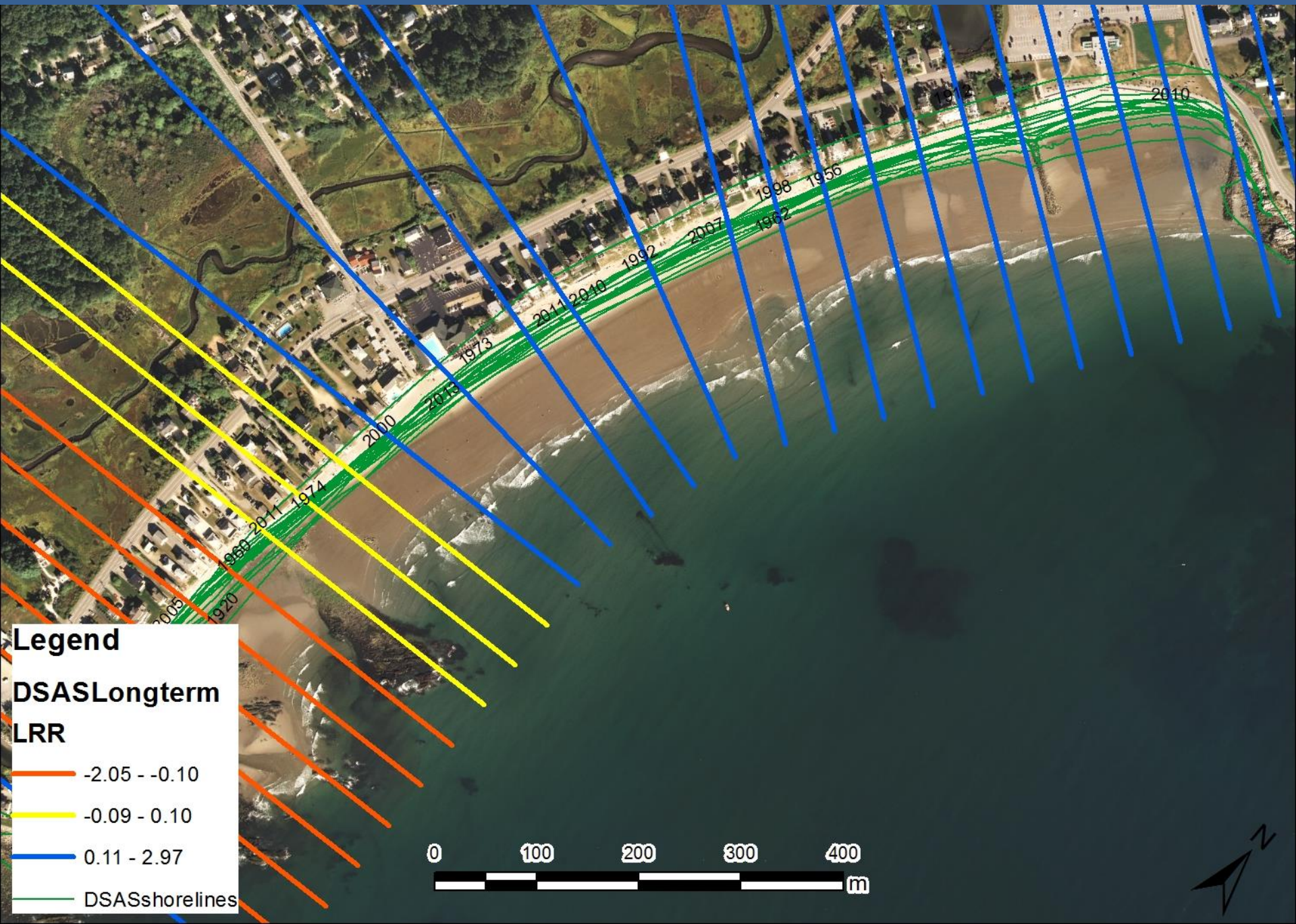


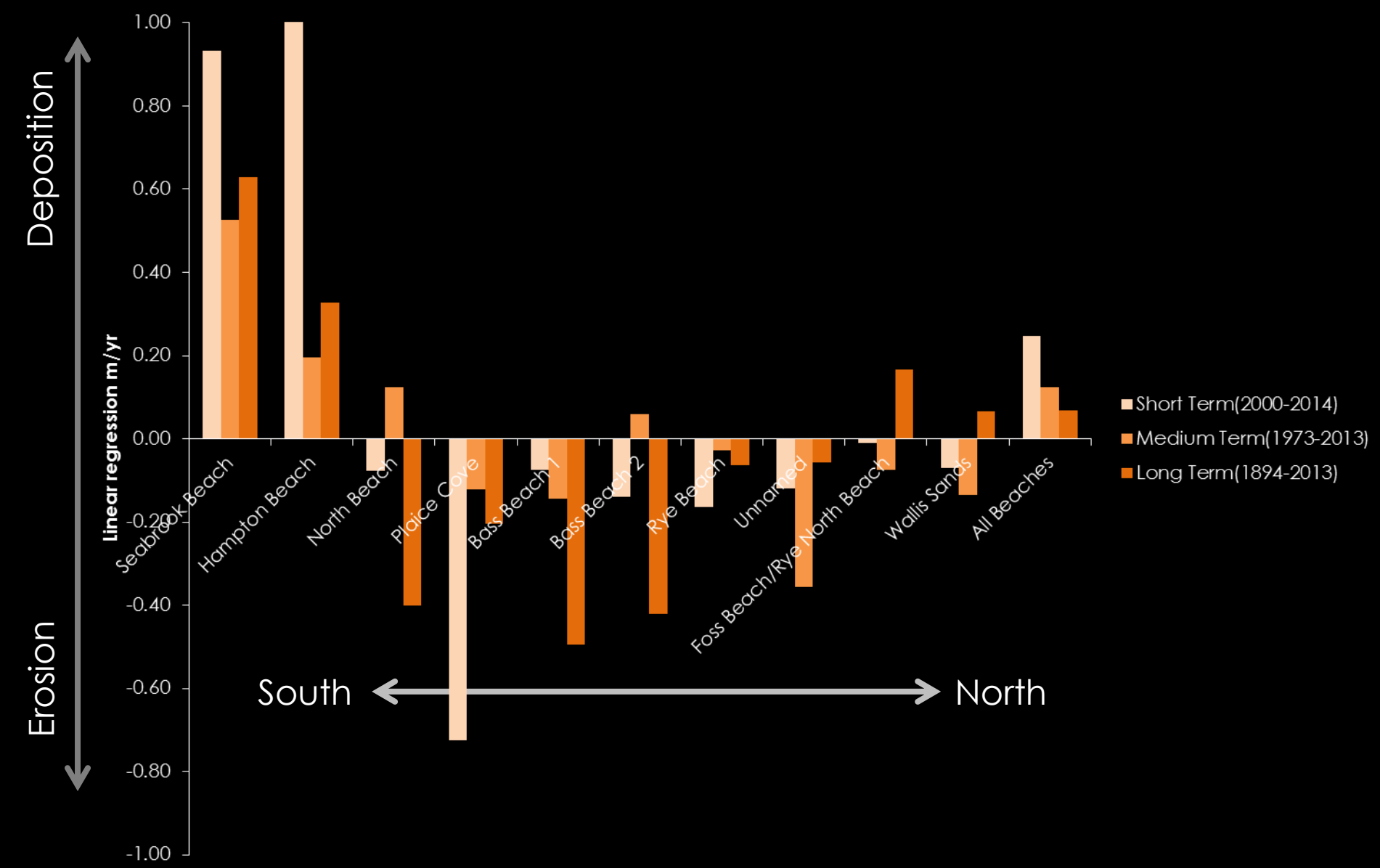












Site	Year	Volume (yards ³)
Wallis Sands	1963	200,000
Wallis Sands	1972	1,0000
Wallis Sands	1983	?
Hampton	1935	1,000,000
Hampton	1955	400,000
Hampton	1965	169,000
Hampton	1972	70,000
Hampton	?	340,000
Hampton	1987	21,000
Wallis Sands	2001	40,000
Seabrook	2005	?
Seabrook	2012	120,000
Hampton	2012	52,000

Volumes from Haddad and Pilkey 1998, Summary of New England Beach Nourishment Experience (1935-1996) Journal of Coastal Research 14-4 pp.1395-1404 and NHDES Coastal Management Office/US Army Corps of Engineers

Beach	Shorelines (m/yr)	LiDAR (m³)
Seabrook Beach	0.63	95,256.00
Hampton Beach	0.33	89,144.71
North Beach	-0.40	-70,246.98
Plaice Cove	-0.21	-30,946.82
Bass Beach 1	-0.50	-542.02
Bass Beach 2	-0.42	-33.22
Rye Beach	-0.06	-26,268.79
Unnamed	-0.06	-1,745.97
Foss Beach/Rye North Beach	0.17	-13,474.14
Wallis Sands	0.07	-21,972.28
All Beaches	0.07	19,170.49