

# **Erosion and Sediment Characteristics at West Pond Living Shoreline**

By: Kirsten Ivins and Tiasha Dey

# West Pond Before Sandy-6/2012



# West Pond After Sandy-11/2012



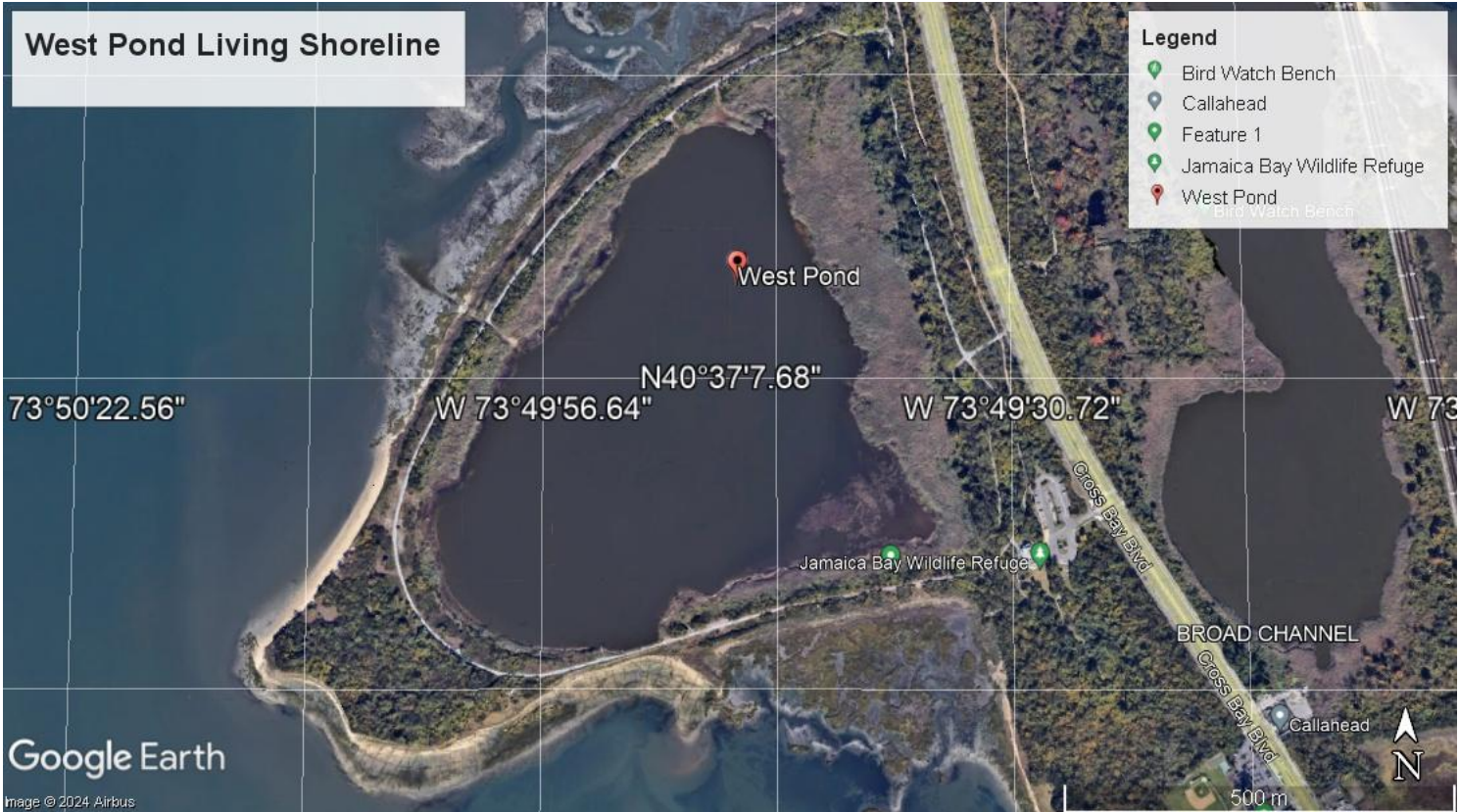


# Background: West Pond Living Shoreline





# West Pond Today-03/2024



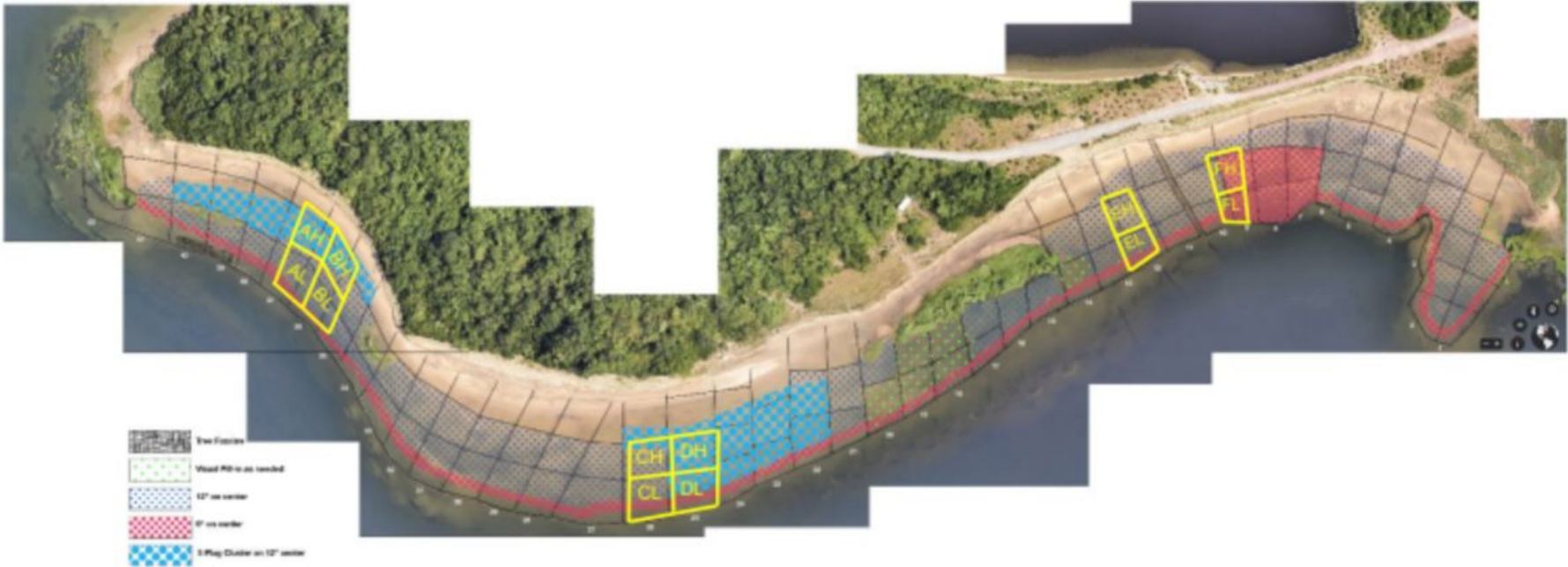
# Research Questions



Christmas tree  
fascine: natural  
breakwater



# BUEE 2023 Research Location



West Pond Living Shoreline Replanting Plan – June 2023

# 2023 Monitoring Points at the West Pond Living Shoreline

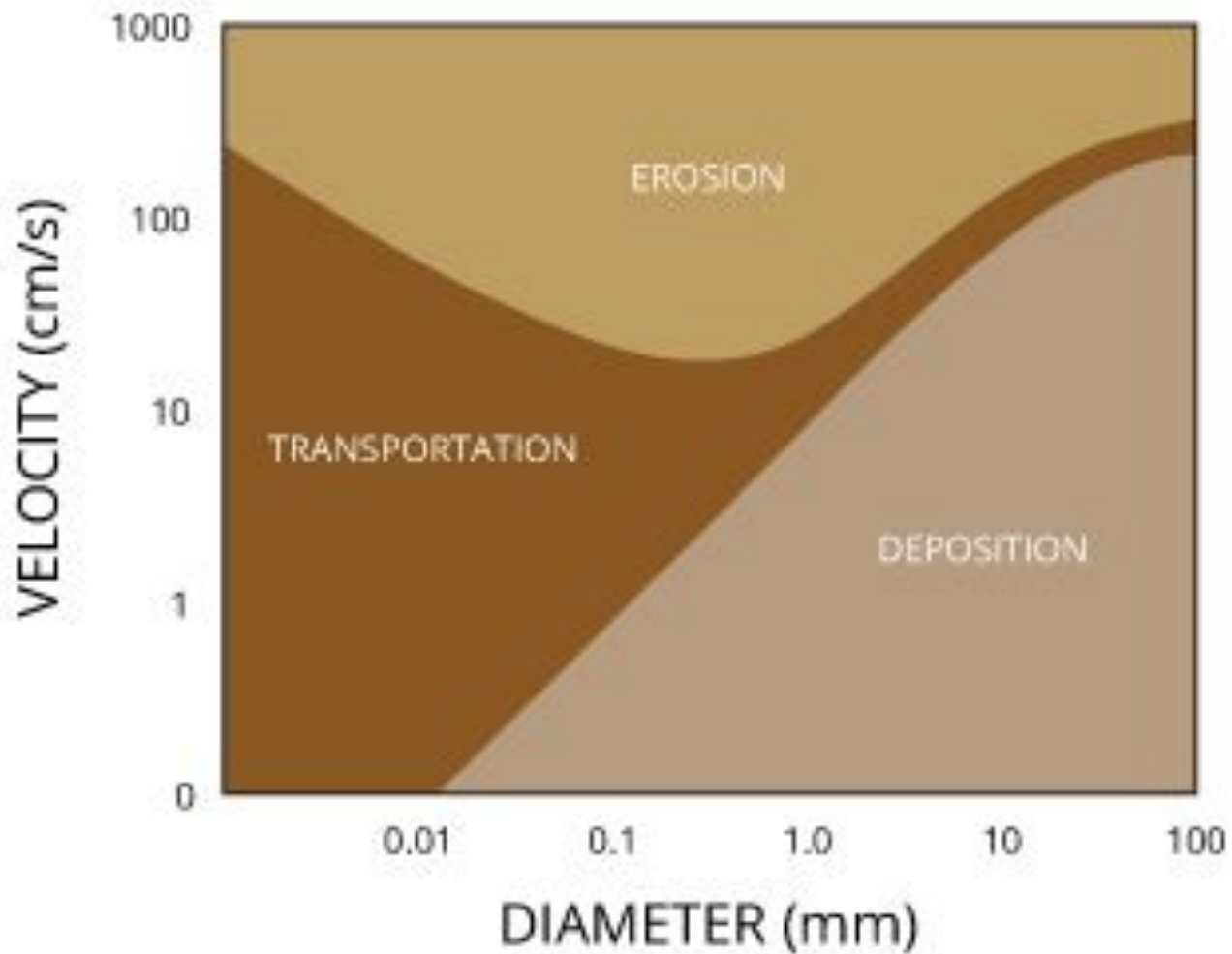




# Elevation/Erosion Stabilization at the West Pond Living Shoreline



**Grain  
Size  
Matters**

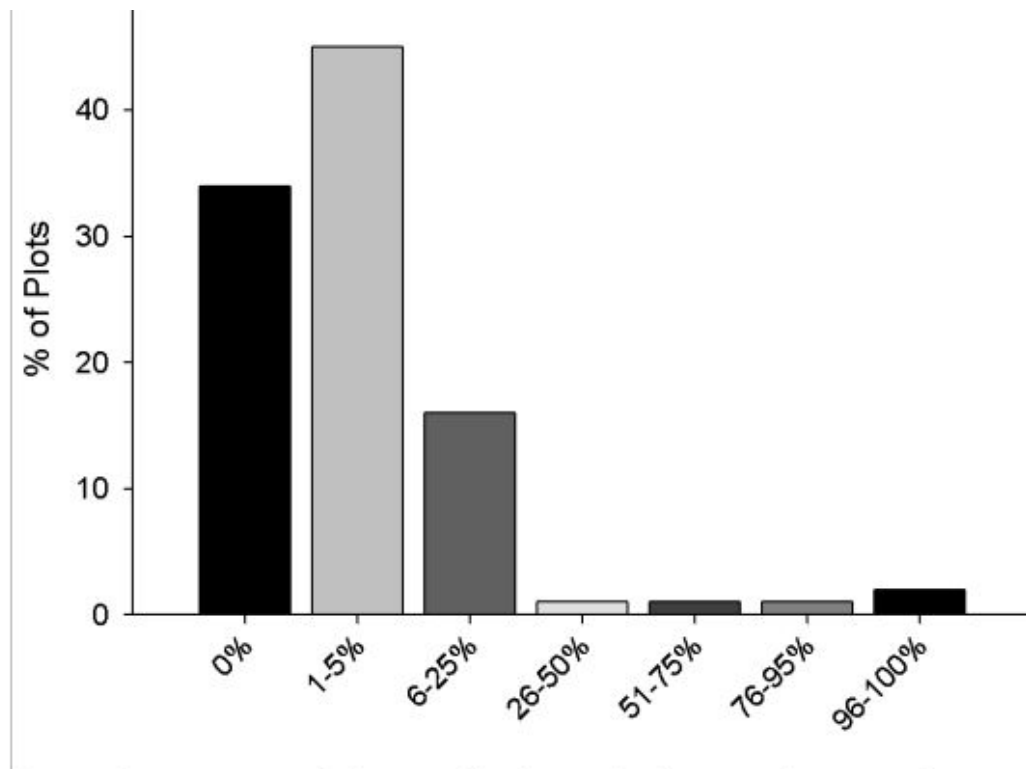




# Elevation Tool Kit: Real-Time Kinematic (RTK) Global Position System (GPS)



# Sediment



**Fig. 16.** The percentage of plots visually observed to have gravel coverage from 0-100% in the West Pond Living Shoreline. The proportion that was not gravel was instead sand.



# Sediment Grain Size Variation



A. Grain size		
"Gravel" > 2mm	Pebbles 4–64 mm	
	Granules 2–4 mm	
	Coarse sand 0.5–2 mm	
	Medium sand 0.25–0.5 mm	
	Fine sand 0.06–0.25 mm	
	Silt 0.004–0.06 mm	
	Clay < 0.004 mm	

# Sediment Measurement Tools

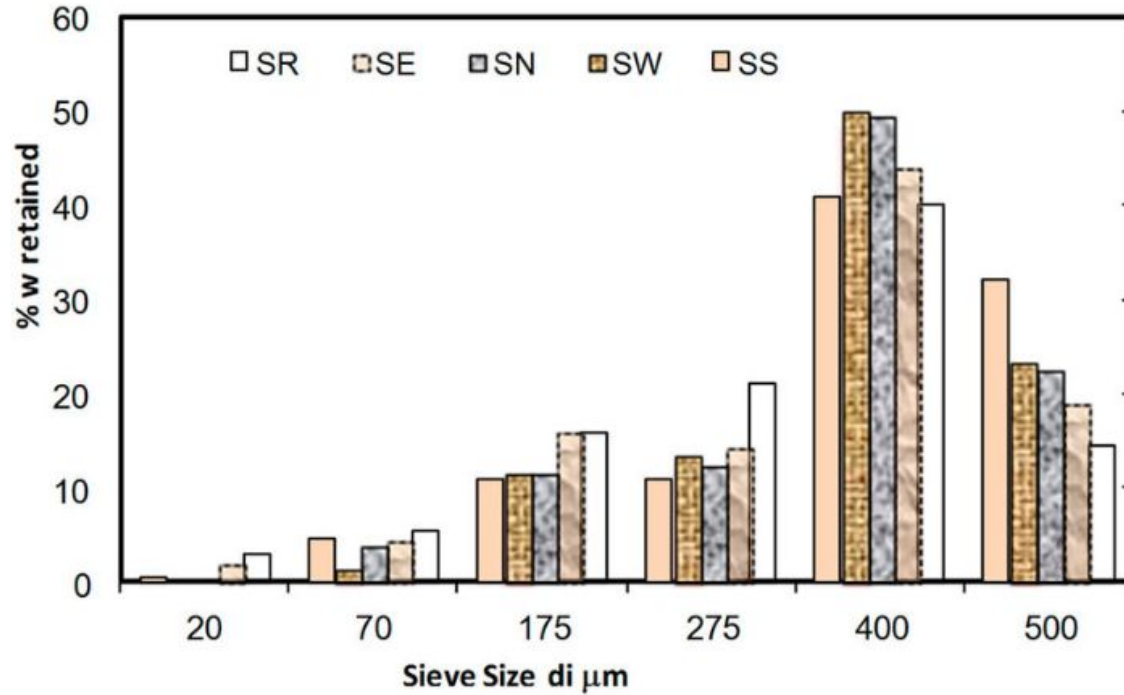
Drying Oven



Sediment Shaker



# Sieve Analysis Graph Example



Histogram of the average grain size distribution of all samples collected from the rock and from the four orientations.

# What can we learn from this research?

