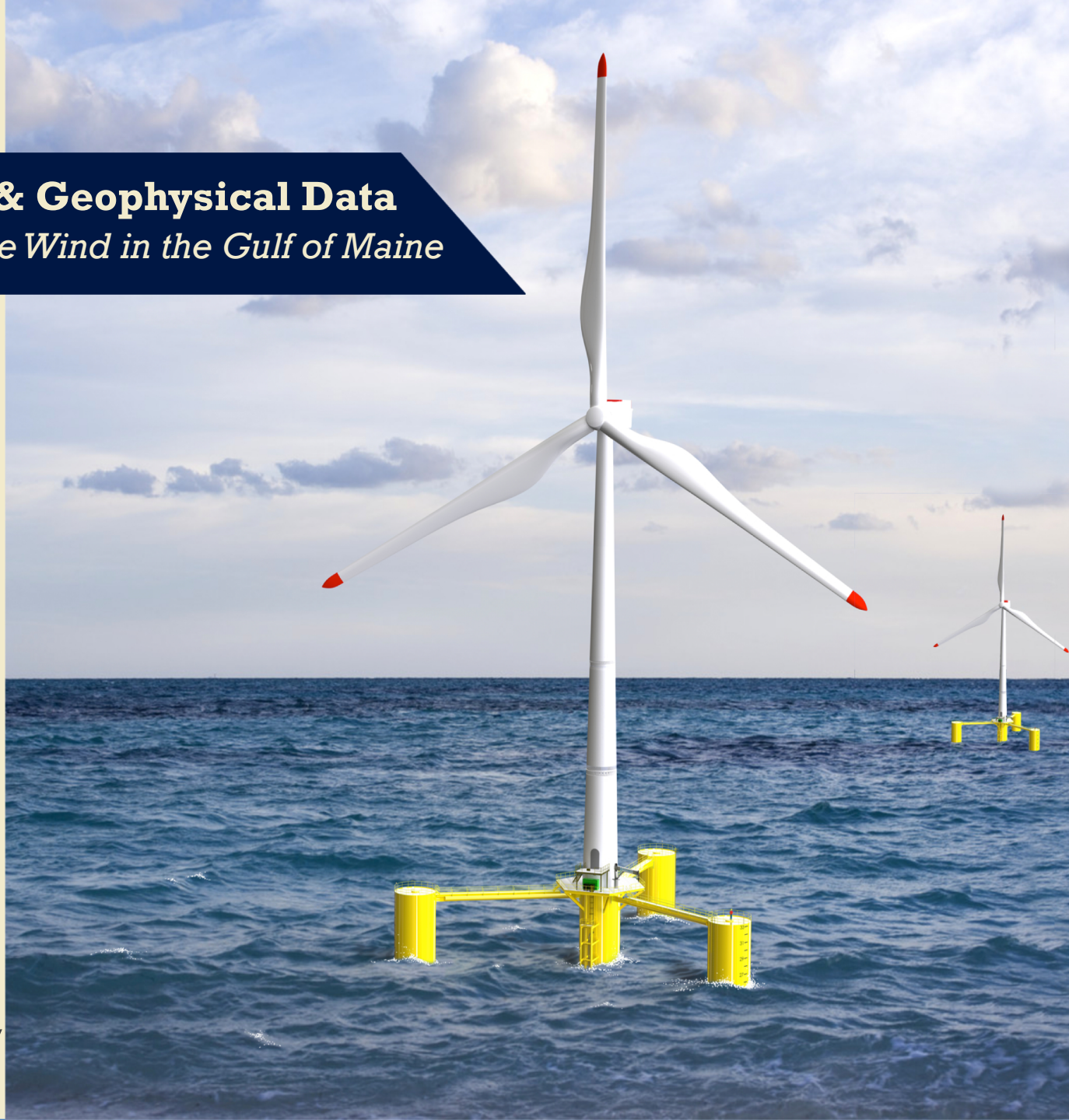


Wind/Geological & Geophysical Data

Siting Floating Offshore Wind in the Gulf of Maine

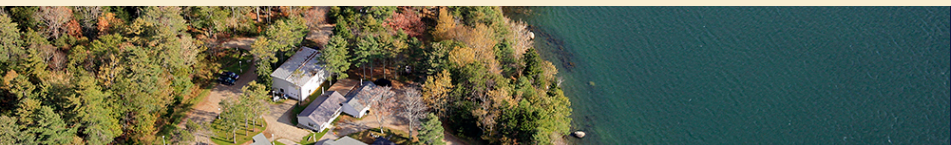
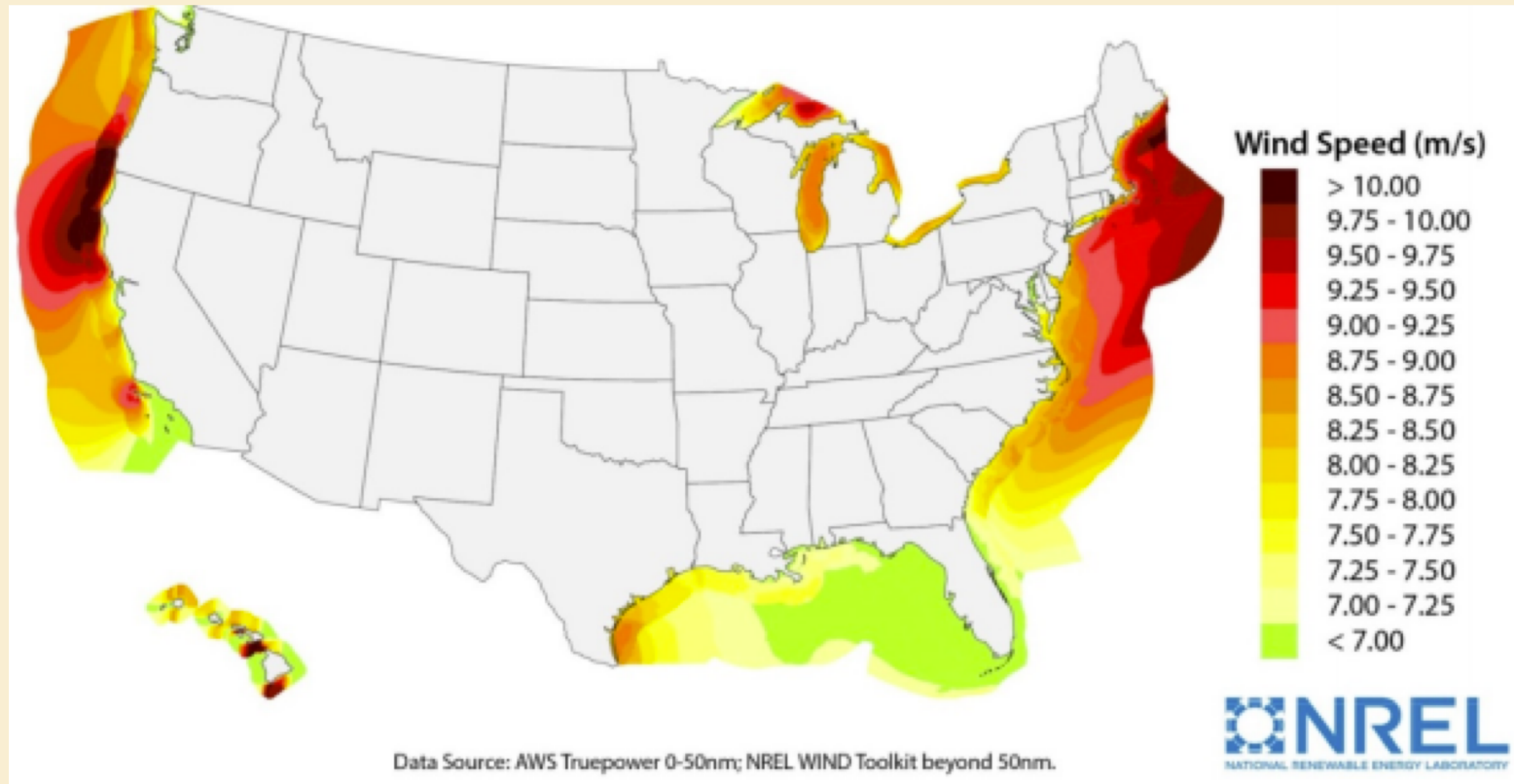


Darling Marine
Center



Damian C. Brady
damian.brady@maine.edu

Some of the Strongest Wind in the Country



Net Technical Energy Potential (TWh/year)

1,200

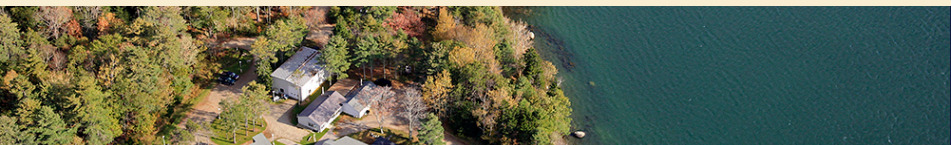
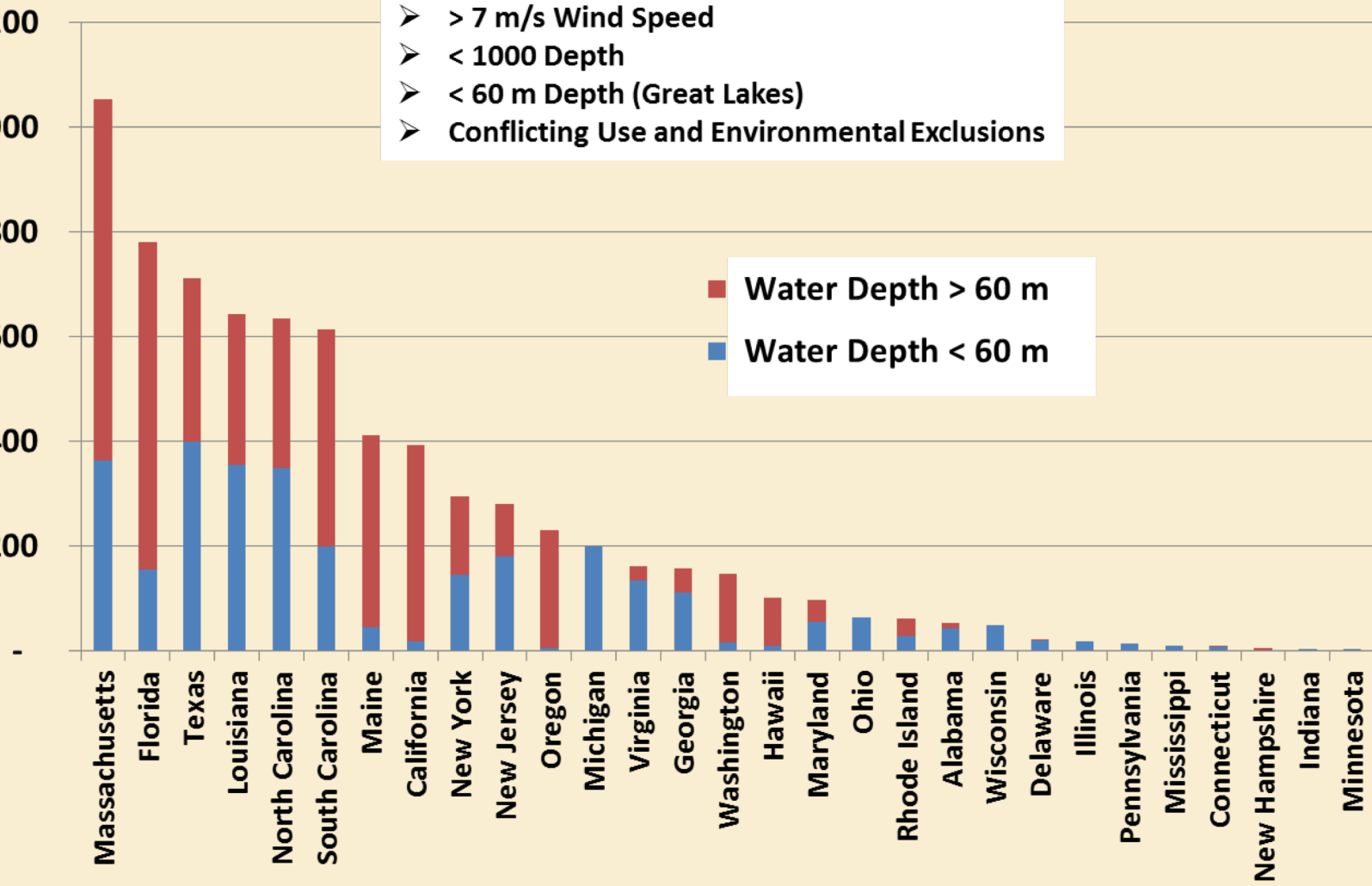
1,000

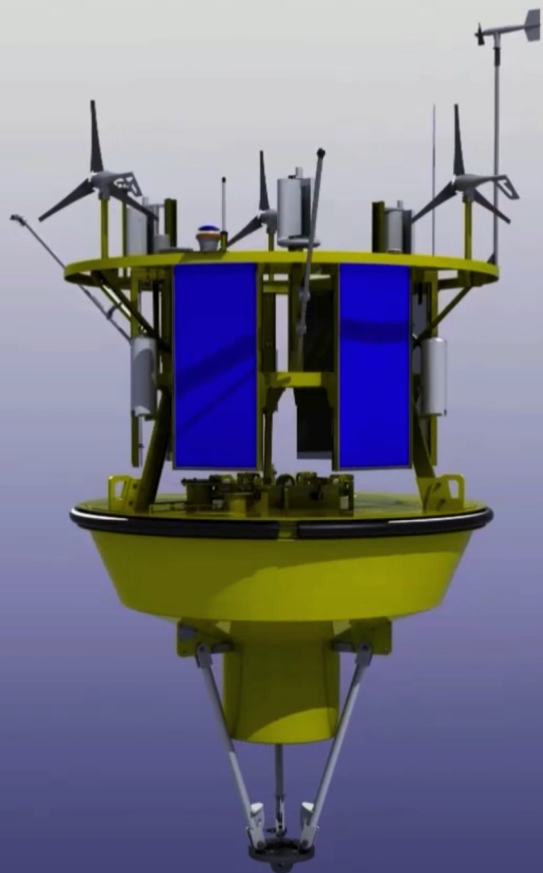
800

600

400

200





DeepCLiDAR

Technical Overview

LiDAR **Windcube® Offshore**

Measure wind speed at 40 m - 200 m height
GLGH Stage 3 acceptance for use in formal wind resource assessment campaigns

Other Sensors **Metocean:** wave, wind, and current
Ecological: acoustic, bird, bat, and fish

Hull Type & Construction Aluminum, 3 m Discus Buoy, fully seal welded with main central hatch for all data and power control electronics.

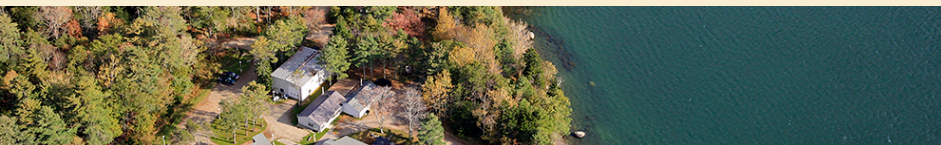
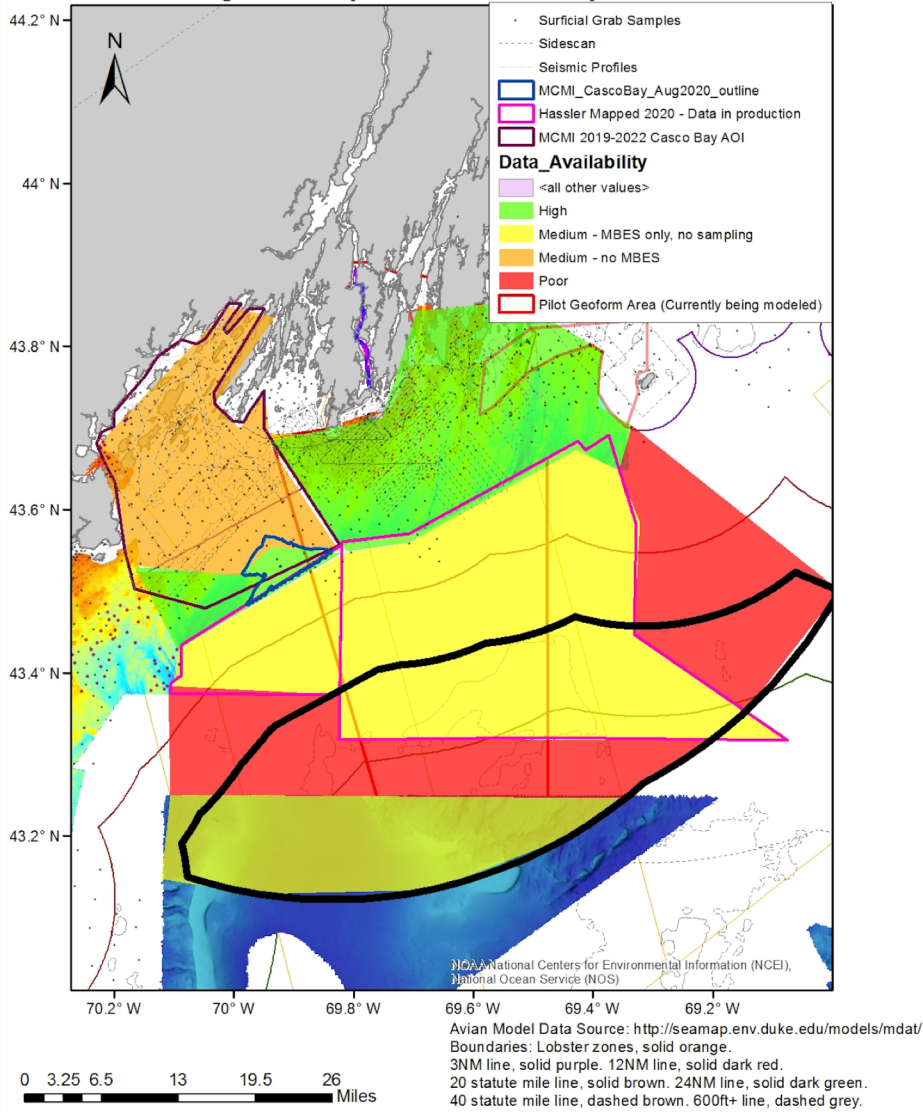
Telemetry GOES, CDMA/GSM, IRIDIUM

Mooring **Shallow water:** chain with gravity anchor
Deep Water: Chain/ Wire/Chain with gravity anchor

Geological & Geophysical

- The majority of the Gulf of Maine is *NOT* mapped by Multibeam Echosounder (MBES) – the *Maine Coastal Program* improves this every year
- But the data quantity and quality increases as we get closer to shore
- Wind projects are looking for relatively soft bottom for mooring and cable burial

Current High Quality Data Availability



Geological & Geophysical

- **Any proposed project would need an in-depth survey of:**
 - Bathymetry (for seafloor slope) and Bottom Hardness (using Multibeam Echosounder)
 - Sub-bottom profiling
 - Magnetometer (for historical preservation)
 - Grab samples (to verify the type of bottom)
 - Biological considerations: for example, Essential Fish Habitat

