



# **Coastal Field and Lab Research Capabilities Relevant to SPI Nearshore Berm Project**

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**OCEAN ENGINEERING**  
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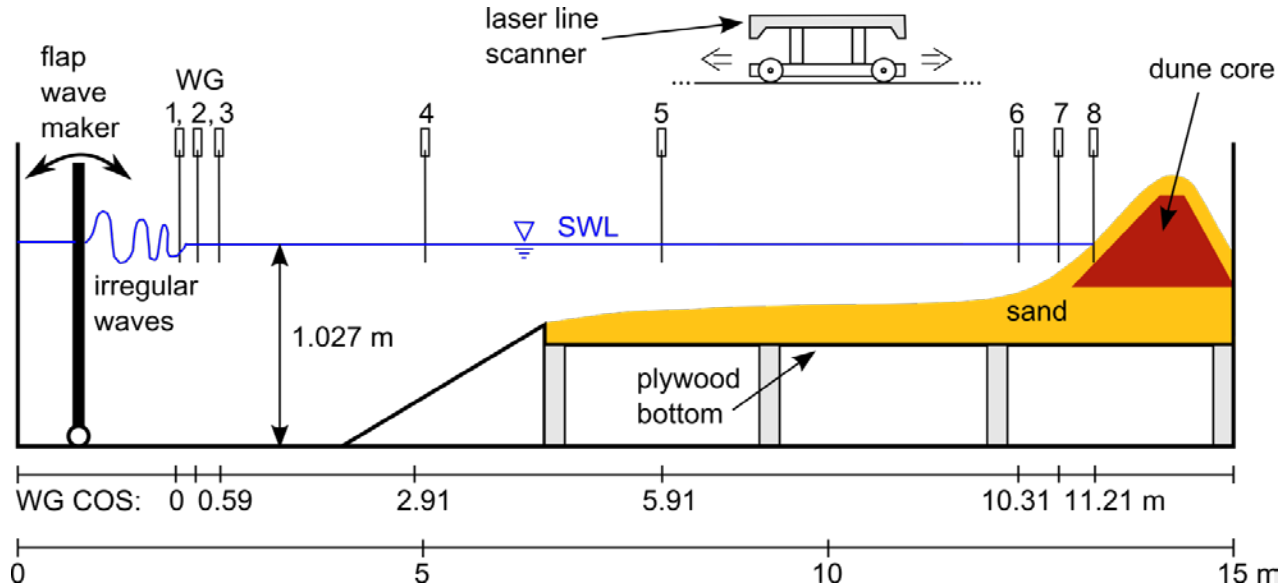


## **Available Hydro and Sediment Field Instrumentation:**

- 1 Nortek Signature 1000 (directional waves, current profile, turbulence)
- 1 Nortek 2MHz Aquadopp (directional waves, current profile)
- 1 Nortek 1MHz Aquadopp (directional waves, current profile)
- 1 Nortek Vector (3D point velocities, turbulence)
- 2 Nortek Vectrino II Profiler (3D velocity profile over 3 cm, wired)
- 1 Nortek Vectrino Sidelooker (3D point velocities near bed, wired)
- 7 Lowell Tilt Current Meters (360-Deg. current velocity vectors)
- 3 RBR Solo D Pressure Transducers
- 2 RBR Solo D-Wave Pressure Transducers
- 5 Campbell Optical Backscatter Sensors (suspended sediment concentration)

## **Additional Systems:**

- 1 Leica RTK GPS Rover system (incl. radio antenna)
- 2 Quad-copter UAV systems (incl. digital camera and GPS)
- 1 Field Control Center Trailer (18 ft, enclosed)
- 2 Research Kayaks
- 1 Research Pontoon Boat
- 1 Alumacraft Research Vessel (14.5 ft, 25hp, V-Hull)



Conduct physical model studies in moveable-bed wave flume.

## **Available Lab Testing Capabilities:**

- 1 Moveable-Bed Wave Flume (15m, flap, spectral waves, LabView-controlled)
- 9 Capacitance Wave Gauges
- 2 Nortek Vectrino II Profiler (3D velocity profile over 3 cm, wired)
- 1 Nortek Vectrino Sidelooker (3D point velocities near bed, wired)
- 3 GE/Druck Pressure Transducers
- 1 CCD Laser Line Scanner (3D profile evolution)
- 1 Flow Re-Circulation System (Flow Meter, Pump, Piping for Overtopping Meas.)
- Sediment Analysis Capabilities (Sieves, Settling Tubes, Malvern Mastersizer)