



NEAR NEWPORT, OREGON

PACWAVE NORTH WAVE ENERGY TEST SITE

Testing Wave Energy for the Future

PacWave is an open ocean wave energy testing facility at Oregon State University. It consists of two sites, each located within several miles of the deep-water commercial port of Newport, Oregon. PacWave North is an established autonomous test site for small-scale, prototype, and maritime market technologies. PacWave North offers a site in state waters with streamlined permitting; expected time to permit is under one year. The site is shallower than PacWave South and closer to port. PacWave North is a persistently monitored site (wave, metocean measurements, and habitat surveys).

SITE SPECIFICATIONS

- Flexible number of berths
- Located 2 nautical miles off the coastline
- Depth is 45-55 meters MLLW
- Site Coordinates:
 - NW: 44° 41' 52.08"N 124° 08' 46.32"W
 - NE: 44° 41' 54.96"N 124° 07' 22.44"W
 - SE: 44° 40' 54.84"N 124° 07' 18.48"W
 - SW: 44° 40' 52.32"N 124° 08' 42.72"W
- Seabed has a soft, sandy bottom
- Mean annual wave power density is 40kW/m, variable with year/location
- Wave data facilities include Waverider or similar buoys
- Wave periods are 5-17s
- Prevailing Wave Direction is WNW
- The majority of sea states are within the range of:
 $1m < H_{m0} < 3.5m$ and $7s < T_e < 11s$ @ wwww
including extreme sea states caused by severe storms where H_{m0} exceeded 7.5m

ENVIRONMENT

- Environmental site characterization data
- Meterological & metocean data

TECHNICAL CAPABILITY

- Data acquisition

INFRASTRUCTURE & SUPPORT FACILITIES

- Site access/nearest ports are Newport portofnewport.com and Toledo portoftoledo.org
- Support facilities include berthing & working areas, office facilities, and boatyard

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Oregon State
University

Affiliated with:

