

BUOYS FROM HEAD TO TOE

ABOVE THE WATER & BELOW

NORTHEASTERN REGIONAL ASSOCIATION OF COASTAL OCEAN OBSERVING SYSTEMS

NERACOOS.org

- Lightning rod
- Wind speed
- Air pressure
- Safety light
- Solar panels
- Wind direction
- Humidity
- Rain gauge
- Cell/GPS antennae
- Air temperature
- Sensor data logger
- Control & battery box



0' DEPTH IN FEET

3'

5'

10'

50'

100'

300'

Chlorophyll
(Detects algae & tracks harmful algal blooms, AKA "red tides")

Dissolved oxygen
(This kind of sensor can be customized to measure different parameters, including dissolved oxygen, temperature, salinity, & pressure)

Not all buoys are outfitted with these exact sensors in this order; the technology used varies by location and operator.

At-depth temperature & salinity

"Compliant elastic tether"
(Allows the mooring line to stretch so buoy can ride the waves & more accurately record wave height)

2,500-3,000 lb anchor weight

Surface temperature, salinity

**Sub-surface sensors not to scale*

Near-surface ocean currents

pH sensor
(Tracks changes in the ocean's acidity)

At-depth temperature & salinity

Acoustic Doppler Current Profiler (ADCP)
(Measures ocean current speed using sound waves)

Wire rope assembly
(Very strong mooring line that also acts as a data transmission line to transmit info from underwater sensors to the buoy data logger)

Float
(Prevents too much slack in the mooring line/keeps sensors upright)

"Acoustic release"
(When the buoy needs to be retrieved for maintenance, a signal sent to the acoustic release triggers the separation of the mooring line from the anchor)

