## BUOYS FROM HEAD TO TOE

ABOVE
THE WATER
& BELOW

Lightning rod Wind direction
Humidity
Wind speed

····Cell/GPS antennae

**Air temperature** 

NORTHEASTERN
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OBSERVING SYSTEMS

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Solar panels

Air pressure

Safety light

Control & battery box

O' DEPTH IN FEET

5'

10'

## 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) 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 Doplar Current Profiler (ADCP) (Measures ocean current speed using sound

waves)

Wire rope assembly

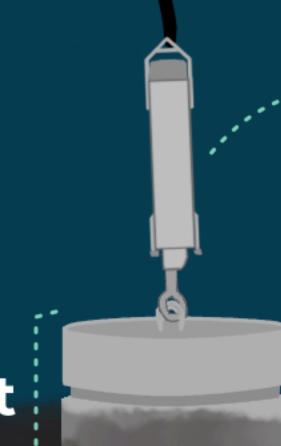
(Very strong mooring line that also acts as a data transmission line to transmit info from underwater sensors to the buoy data logger)

## **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)



i 300'

100'

2,500-3,000 lb anchor weight !