



Coastal Data Collection in the Sunset Beach Region

Presented by
Robert Walker, PE
Coastal Engineer

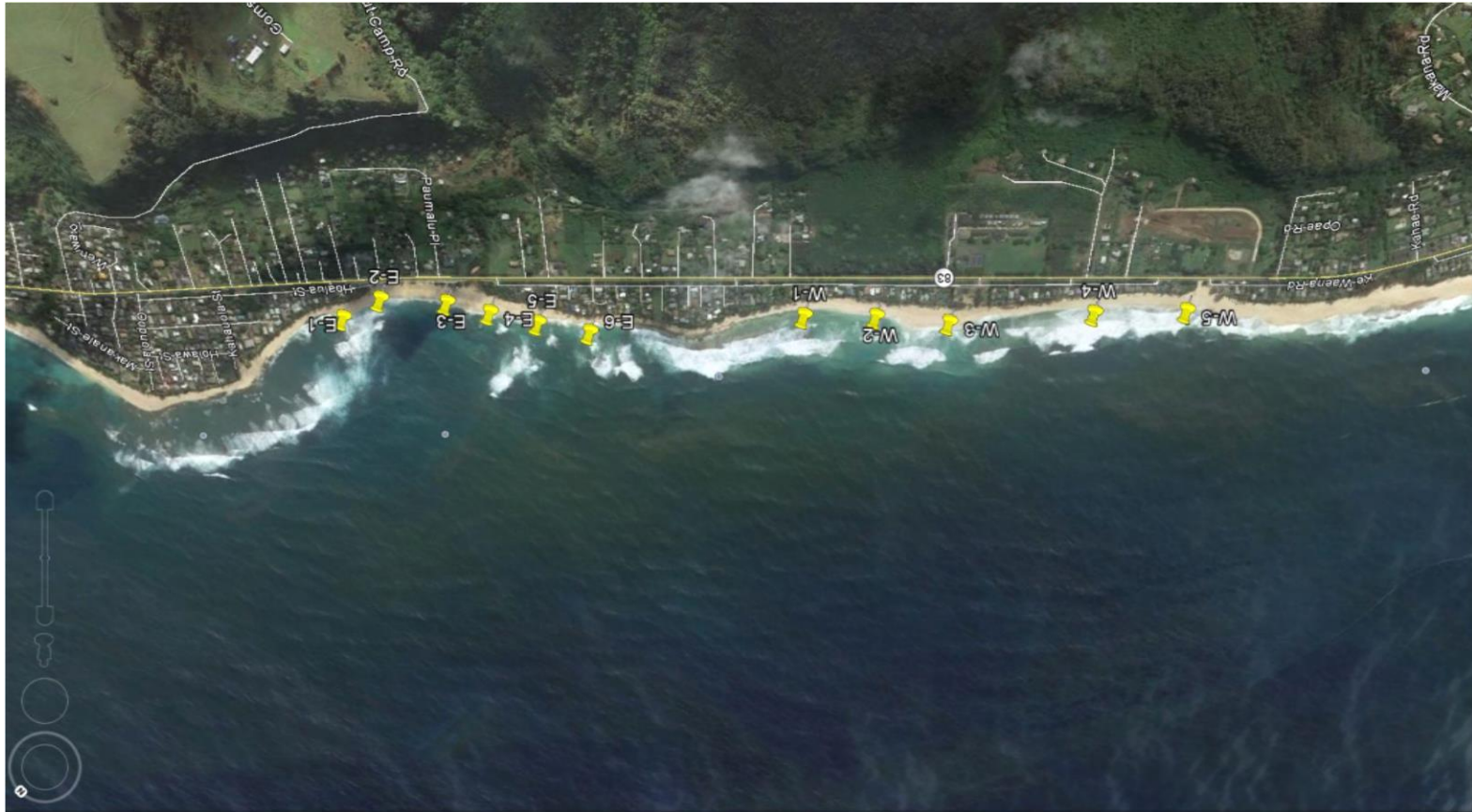


- Background
- Data collection:
 - Beach profile surveys
 - Wave and current measurements
 - Channel bottom elevation
 - Current, Temperature, and Density
 - Personal interviews
- Next steps



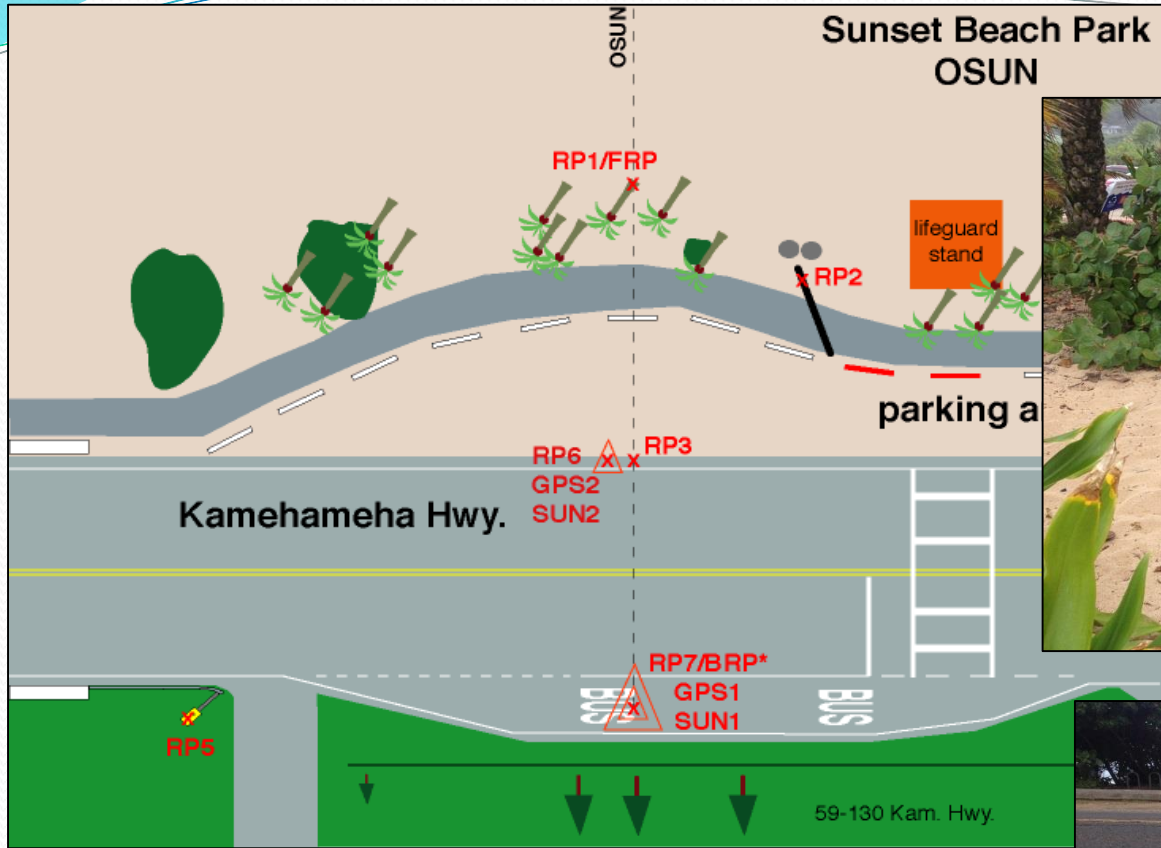


Beach Profile Locations



Setup



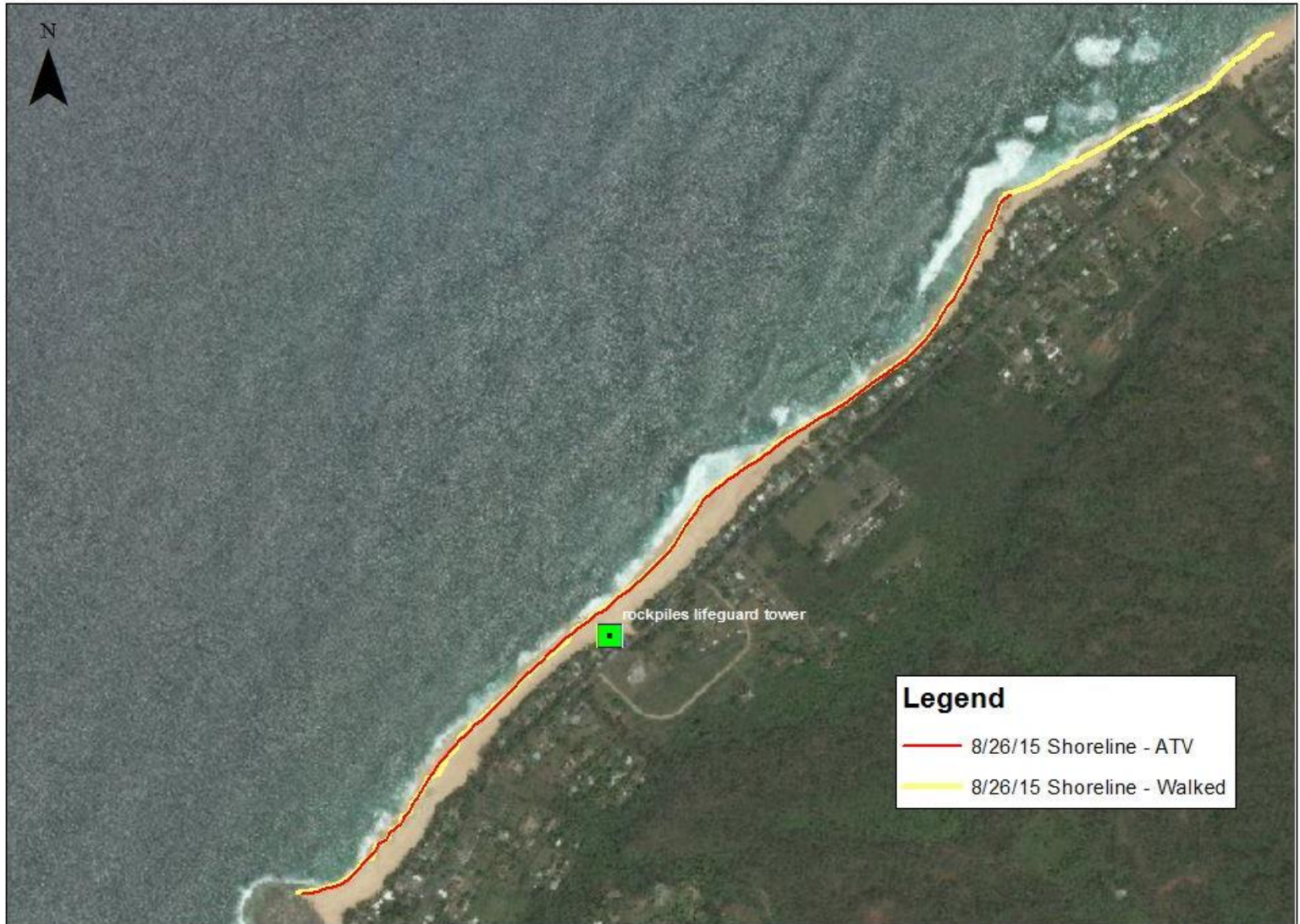




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rockpiles lifeguard tower

Legend

- 8/26/15 Shoreline - ATV
- 8/26/15 Shoreline - Walked

0 0.15 0.3 0.6 Miles

Digital Globe Image Date: 8/28/2015

Visual Surf Observations (Pat Caldwell)

- Larry Godderd 1968-1987
- Pat Caldwell 1987-present

Format:

```
yyyy mm dd nshor wshor almo dh winw wspd wdir nsd ssd
2000 1 1 8 4 1 2 3 2 17 15 999
2000 1 2 5 2 1 2 2 2 17 15 999
2000 1 3 4 2 1 2 2 2 17 15 999
```

yyyy: year, mm: month, dd: day

nshor (mostly sunset until > 15 Hawaii scale (Hs), then
Waimea reports are used)

wshor (Makaha)

almo (Ala Moana)

dh (Diamond Head)

winw (windward Oahu (east side) index)

wspd (wind speed in beaufort for open waters)

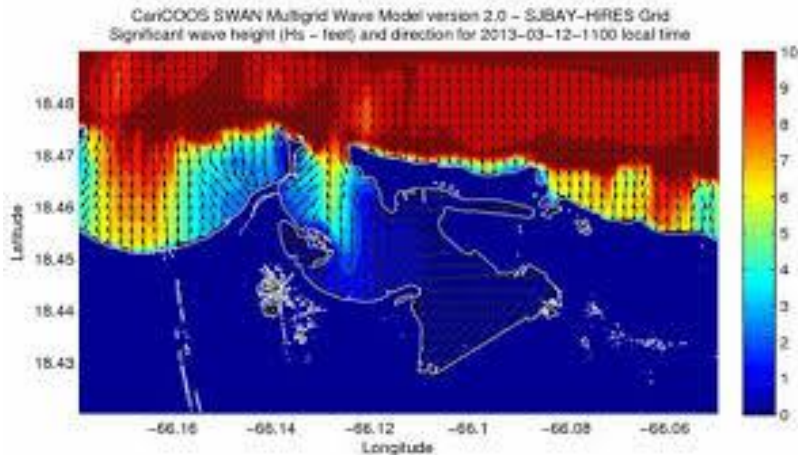
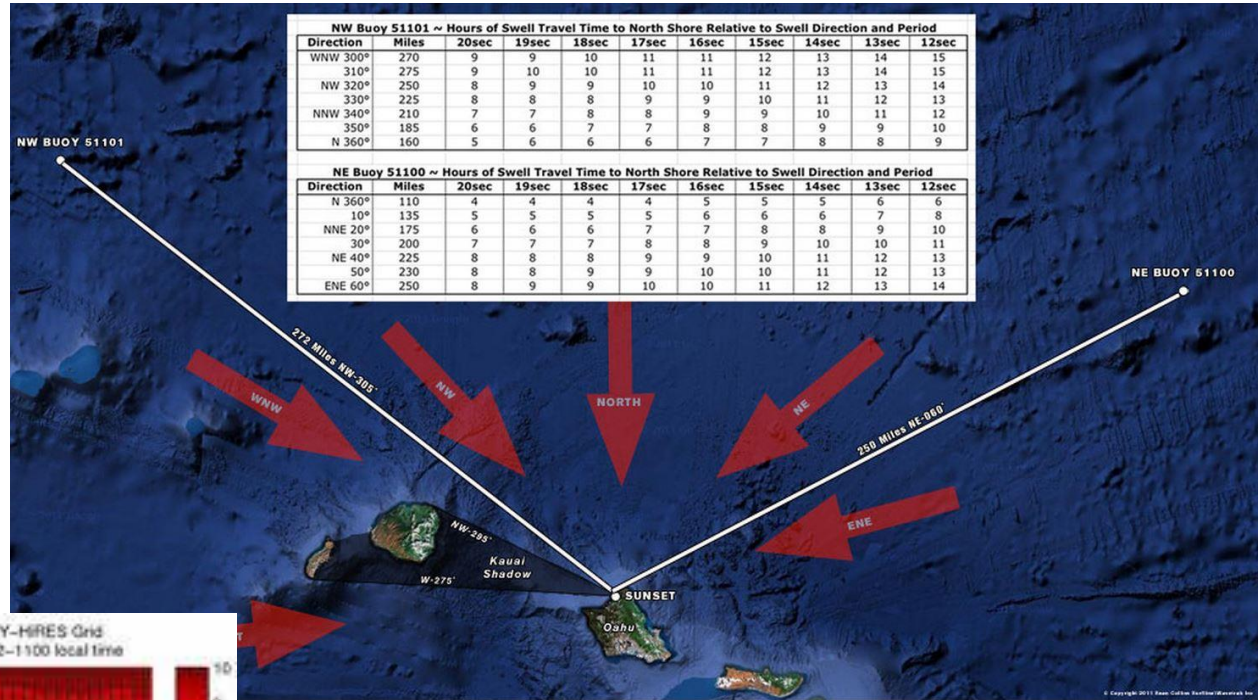
wdir (wind direction, coded 1=N 2=NNE 3=NE, etc ... 16=NNW
17:calm, 18:mixed)

nsd (north shore wave direction as above)

ssd (south shore direction)

Waves

- Buoys
- WIS
- Wavewatch



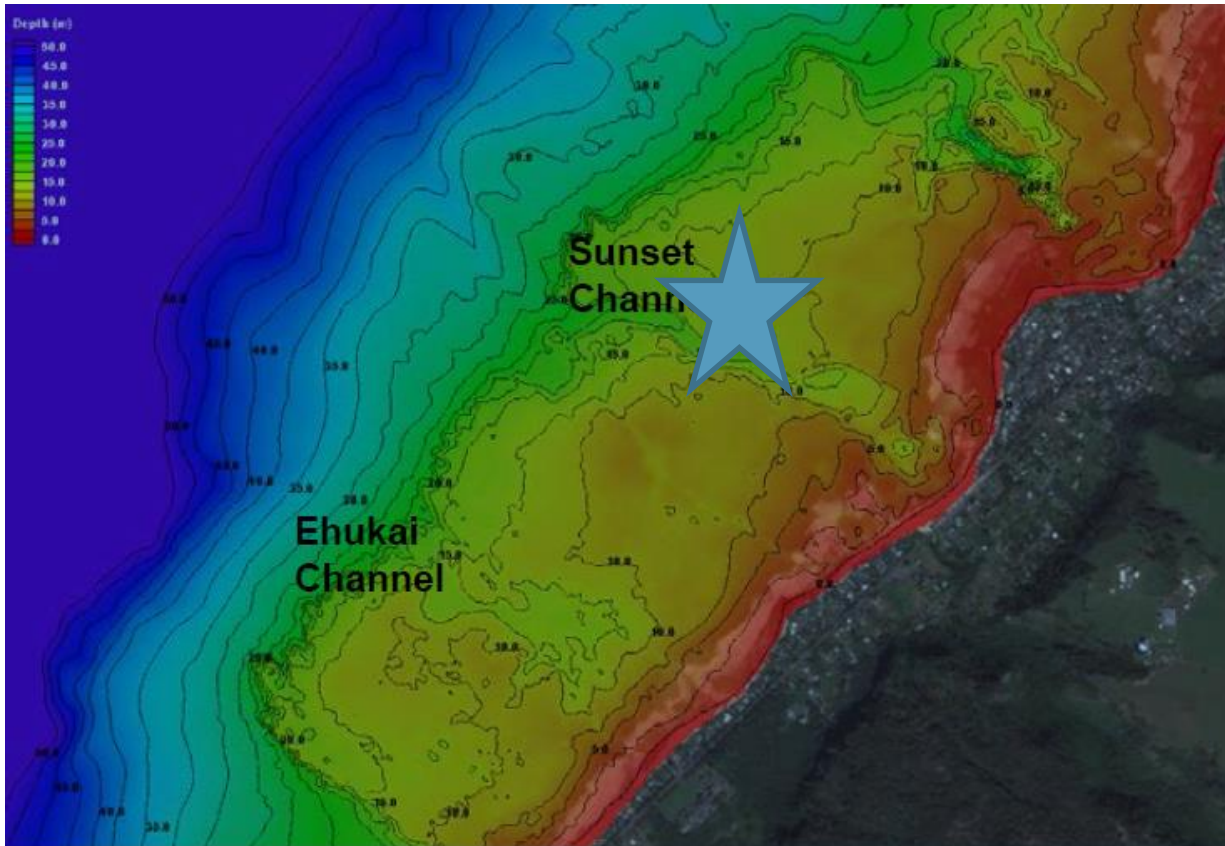
ADCP – Waves and Currents



- Summer 2015
- Winter 2015/2016



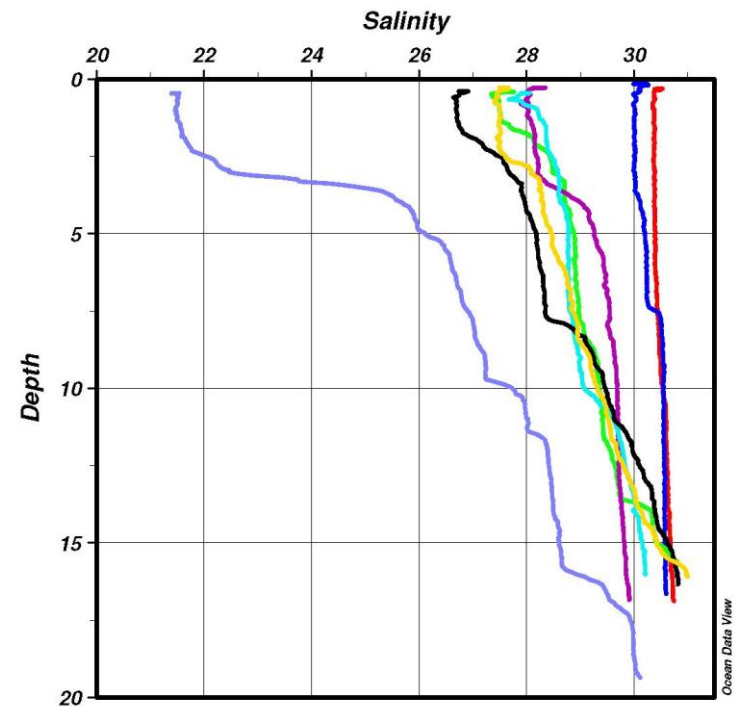
Sedimeter



Citadel CTD



- Conductivity
- Temperature
- Depth



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Southern Maine Volunteer Beach Profile Monitoring Program

Volunteers Mapping the State of Maine's Beaches since 1999



Partners



- US Army Corps of Engineers
- Hawaii Department of Land and Natural Resources, Office of Conservation and Coastal Lands
- University of Hawaii (UH) Sea Grant
- UH Department of Geology & Geophysics
- UH Department of Geography
- UH Coastal Geology Group
- UH Department of Civil and Environmental Engineering
- City and County of Honolulu Ocean Safety & Lifeguard Services