

Monterey Bay Aquarium Research Institute Pre-deployment Notification of Wave Glider

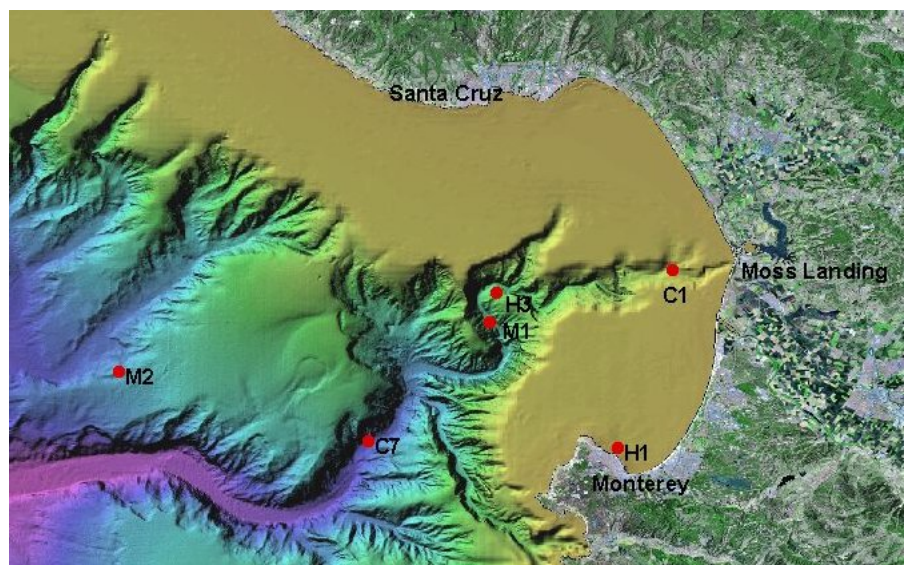
Deployment Dates: Tentatively February 19 – May 27, 2016

Deployment Location (approximate): 3 nm west of Moss Landing. (Launched from MBARI's R/V *Paragon*.)

Location and Waypoints (see images):

Note: Operators will observe for traffic when crossing the separation scheme to the south.

- 1.) Launch & Recovery 3nm from MBARI
- 2.) C1 36.797, -121.847
- 3.) M1 36.747, -122.022
- 4.) M2 36.691, -122.376
- 5.) Station M (Rover) 35.1206,-122.9765





Mission Objectives: The Wave Glider will be deployed on a nearly continuous basis over the course of three months, running missions to support several programs.

- 1.) **Biological Oceanography Group (BOG) Time series/CANON:** The Wave Glider will run between station C1, M1, and M2 then back along the same route following our Long Range AUV (LRAUV) and using pH and pCO₂ sensors for ongoing time series work along this track. It will also run in this area to support our CANON field program (project #901009). The Wave Glider will be recovered periodically within this time frame but will be redeployed quickly to continue these studies.
- 2.) **Station M:** The Wave Glider will be deployed offshore west of Moss Landing on approximately April 4th and then transit directly to Station M (as shown in the second map). As previously reported, MBARI has benthic research equipment currently deployed at a long-term time series location outside of the Sanctuary known as Station M (approximately 35 07.1089N, 122 58.5125W). The main instruments, the Benthic Rover and the Sedimentation Transport Sensor (STS), are deployed in 4000 meters of water near Station M. The site is typically only visited 2 times per year to download data and check on equipment. Researchers will use the Wave Glider to query the Rover for basic health and status information and geolocate the STS and Rover. In the event that an anomaly is reported, the team might be able to deal with the issue sooner than the scheduled bi-annual cruise will allow. Time on station will be 1–2 weeks. The team plans to collect CTD/fluorometer data while in transit.

- 3.) **Coordinated Canyon Experiment (CCE, project #901023):** The main purpose for the mission will be to track sediment transport events using benthic event detectors (BEDs) and the Benthic Instrument Node (BIN) sensor deployed as part of the CCE described in project #901023.
- 4.) The second Wave Glider (SV2 - the smaller Wave Glider in the picture below) may also be deployed in the same time frame approximately 3 nm off Moss Landing at a point identified as C1 (36.797, -121.847) in the first image and will run back and forth from this location to our previous M2 mooring location (36.691, -122.376) with pH and pCO₂ sensors for ongoing time series work along this track.

On Board Instrumentation: Benthos acoustic modem, EcoPuck Fluorometer, CTD, Ocean Acidification (OA) payload (sensors to measure pCO₂ and pH levels in seawater).

Potential Toxic Materials (e.g., batteries): It has lithium ion batteries in plastic water tight housings. The battery packs are inside a plastic payload box, providing double containment.

General Description of Glider: Please see image below and attached data sheet for specifications. The Wave Glider moves at speeds of less than 2kt. It is approximately 9.5ft x 2ft (longboard size), yellow in color, with a contact plaque and a mast extending 1 meter above the water surface bearing a flag and light.



Figure 1. The SV3 Wave Glider is shown here beside the smaller SV2 Wave Glider.