

Pacific Islands Ocean Observing System Equipment: Standard Operating Procedures

Below are descriptions of the standard operating procedures for calibrating, validating, operating, and maintaining equipment owned and/or operated by PacIOOS.

High Frequency Radar

PacIOOS operates 7 (and in the process of adding 2 more) HFR stations throughout the region. NOAA IOOS and the HFR Steering Team developed standard operating procedures for HFR. PacIOOS follows these guidelines.

<http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/SCCOOS-BestPractices.pdf>

Datawell Waverider Buoys

PacIOOS operates 15 Waverider Buoys (MKIII and DWR4) throughout the region. PacIOOS follows the standard operating procedures outlined in the National Wave Plan (p. 31) and in the Datawell manuals:

<http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/mk3.pdf>

http://www.pacioos.hawaii.edu/wp-content/uploads/2020/07/Cert_Datawell_DWR4_2020.pdf

Near shore water quality sensors

PacIOOS operates 11 SBE 16plus V2 & WET Labs ECO-FLNTUS sensor packages throughout the region. In general, the manufacturer, Sea Bird Electronics, performs the instrument calibrations once every 2 years. PacIOOS staff provide operations and maintenance as recommended in the following manuals:

SBE 16plus V2

http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/16plusV2_rs232_011.pdf

WET Labs

<http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/3en.pdf>

PacIOOS operates 2 SBE 37SMP sensors

The manufacturer, Sea Bird Electronics, performs the instrument calibrations once every 2 years.

PacIOOS staff provide operations and maintenance as recommended in the following manual:

SBE 37 SMP:

http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/37SMP_RS232_020.pdf

Water Quality Buoys

PacIOOS operates the following equipment on Hawaii Island. The equipment is located on buoys.

PacIOOS operates two YSI EMM-68 buoys (http://www.pacioos.hawaii.edu/wp-content/uploads/2020/07/Cert_e61-emm68-buoy.pdf). PacIOOS staff perform the maintenance of the buoys and moorings. Monthly service (and more frequent when possible) is designed to remove biofouling that accumulates and give a visual inspection of the buoy and the

mooring. Once a year, the buoy comes out of the water. An extensive check of onboard electrical equipment, exhaustive corrosion check, and a recoating process is performed.

PacIOOS operates two YSI EXO2 Sonde sensors, one each at Pelekane Bay and Hilo Bay. PacIOOS staff perform the calibrations using the procedures from the YSI manual, section 4, page 78-140. PacIOOS staff and partners also perform all operations and maintenance as recommended in the YSI manual:

http://www.pacioos.hawaii.edu/wp-content/uploads/2020/07/Cert_EXO-User-Manual.pdf

Gliders

PacIOOS operates one glider. PacIOOS and University of Hawaii staff will operate the glider. There are procedures followed for the construction, deployment, data collection, retrieval, and maintenance of the glider. These documents provide the operating procedures followed:

- 1) iRobot Seaglider User Guide: http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/iRobot_Seaglider_User_Guide-Rev.C-Jan12.pdf
- 2) Seaglider Field Team Operations: http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/3.1b_Field_Team_Operations.pdf