**CMS Thermograph Array Project Site Information – Monastery Beach**

10.01.2020 - Andrew Morgan & Scott Chapman

Permit Information:

Monterey Bay National Marine Sanctuary Permit #: MBNMS-2019-010
California Department of Fish and Wildlife Permit #: S-191530001-19154-001
California Department of Fish and Wildlife Permit Holder ID#: EID-191530001
California State Parks Permit #: 061719-021

Divers Participating:

Andrew Morgan
Scott Chapman

Instrument Number:

30 FSW Temperature Sensor – 20733046
Retrieved Sensor – 20668563

60 FSW Temperature Sensor – 20733049
Retrieved Sensor – 20668564

Date:

October 1st, 2020

Site Description:

Dive Site GPS Coordinates (Approximate) – 36 31’ 26.1” N / 121 55’ 44.1” W

Monastery Beach dive site is a part of the Point Lobos State Reserve (State Park Unit) and is located within the Point Lobos State Marine Reserve (SMR). The beach sits right off Pacific Coast Highway (Highway 1) and is directly across the street from the Carmelite Mission. Parking is free along the highway. There are no showers, but there are two restrooms with flush toilets available on the south side of the beach. Monastery Beach is approximately 5 minute drive south to Carmel-by-the-Sea. The dive site is often described as two separate diving locations, Monastery South and Monastery North. The southern part of the dive site is located to your left if you are facing off shore. The northern part of the dive site is located to your right if you are facing offshore. On a good day, Monastery Beach is considered some of the best diving in Monterey. The water tends to have more upwelling from deeper depths so it has a tendency to be cooler and clearer than other sites. However, surf entry and exit at Monastery Beach can be very dangerous and has resulted in a handful of fairly high profile dive accidents.

This dive site is considered an advanced to expert surf entry. New divers to the area should always be accompanied by an experienced buddy. Entry and exit should always be made from the edges of the beach at the north and south, not in the middle. The entry itself is very steep and is made even more exhausting by course, gravelly sand that moves a great deal under foot. The slope also produces an undertow and washing-machine effect that can make it very difficult for divers to exit the water. Over the course of a dive, conditions can change and may be more difficult on the way out of the water than they were on the way in. Use extreme caution when diving this site, and if you fall in the surf zone you should always crawl out on your hands and knees.

<u>Location and Coordinates:</u>

30 FSW Temperature Sensor – Exact GPS Coordinates – Undetermined

Although exact GPS coordinates were not taken from the surface directly above the sensor, the following directions and techniques can be used to relocate the shallow sensor:

- The shallow sensor is located in North Monastery.
- Before enter along the north edge of the beach take note of the large wash rock off shore to the northwest. It is located near the middle of the kelp forest and can be seen at both low tide and high tide.
- Surface swim along the outer edge of the kelp canopy until you reach the wash rock.
- Swim through the top of the kelp canopy and position yourself approximately 50 yards past the wash rock on the southwest side.
- On the surface, divers should then line themselves up using the following compass headings:
    - 40-degrees to the tallest rock spire onshore
    - 130-degrees to right edge of Carmelite Mission
    - 230-degrees to bald white rock just outside of Whaler's Cove
- Once divers have aligned themselves with the above coordinated they should descend. This will get you in the general area of the shallow sensor.
- If you do not descend directly onto the sensor, divers should use a circular or semi-circular search pattern until it is located.

60 FSW Temperature Sensor – Exact GPS Coordinates – Undetermined

Although exact GPS coordinates were not taken from the surface directly above the sensor, the following directions and techniques can be used to relocate the deep sensor:

- The deep sensor is also located in North Monastery.
- Once you find the shallow sensor attach a line and reel to the eyebolt of the shallow sensor.
- Swim along a 270 degree heading for approximately 60 feet.
- The deep sensor is located just down slope of the granite rock reef structure.
- If you do not immediately locate the deep sensor, divers should arch the line/reel along a semi-circular search pattern until it is located.

Time Instrument Hits Water:

30 FSW Temperature Sensor – 9:20am

60 FSW Temperature Sensor – 9:20am

Time Instrument Is Fastened to Bottom:

30 FSW Temperature Sensor – 10:15am

60 FSW Temperature Sensor – 10:23am

Tide:

| | | |
|---|---|---|
| 4:53 AM | low | 0.79 ft. |
| 11:05 AM | high | 4.83 ft. |
| **5:10 PM** | **low** | **1.26 ft.** |
| 11:13 PM | high | 4.75 ft. |

Depth:

30 FSW Temperature Sensor – actual depth of sensor 29 FSW

60 FSW Temperature Sensor – actual depth of sensor 58 FSW

Substrate:

Monastery Beach is comprised of two large reef structures on each end of the cove, separated by a larger patch of open sand. The majority of the reef structure is large solid granite boulders. As

you swim offshore along a 300-degree heading the reef takes a steep trajectory into the Carmel Trench. Onshore is along a 120-degree heading.

Distance from Shore:

Exact distance from shore is unknown and difficult to determine. Approximate distance from shore for the shallow sensor is 300 yards. The approximate distance from shore for the deep sensor is 325 yards. This approximation is based on a visual estimate from the surface, directly above where the sensor was deployed. The information in this report will allow the laymen diver to reliably relocate the sensor.

Bathymetry:

The bathymetry surrounding both sensor locations is very similar, large granite boulders that follow a steep slope as you move further offshore. The reef at North Monastery is very dynamic with various cracks and crevices, and is host to a very dense and healthy kelp forest.