

**Dataset:** Temperature, pH, DO, and salinity data from Mumford Cove in Connecticut, USA starting in April 2015

**Project(s):** Understanding the effects of acidification and hypoxia within and across generations in a coastal marine fish (HYPOA)

**Abstract:** Despite their importance for research and environmental protection, there's still a shortage of high quality and high-resolution temperature, pH, and oxygen data particularly in shallow coastal habitats. We monitor five important environmental parameters (i.e., depth, temperature, salinity, pH, and dissolved oxygen) at 30 minute intervals in Mumford Cove, CT (41° 19' 25" N 72° 01' 07" W), a small (2 km N-S × 0.5 km E-W), shallow (1-5m), cone-shaped embayment opening to the northeastern Long Island Sound, with protected marsh habitat along its western side, marsh and beach habitat along its eastern side, and an extensive seagrass (*Zostera marina*) cover. Continuous monitoring is achieved by swapping identical and recalibrated probes (Eureka Manta Sub2) every 3-5 weeks. For a complete list of measurements, refer to the supplemental document 'Field\_names.pdf', and a full dataset description is included in the supplemental file 'Dataset\_description.pdf'. The most current version of this dataset is available at: <http://www.bco-dmo.org/dataset/659874>

**Description:** Temperature, pH, DO, and salinity monitoring data from Mumford Cove, CT USA

Since April 2015, pH, DO, temperature, and salinity measurements have been taken in 30 min intervals in Mumford Cove, CT, United States. This is a shallow cove that is typical for the area.

This dataset includes records from 4/4/2015 to 8/25/2016

**Acquisition** All measurements were made with Eureka Manta Sub2 probes

**Description:** ([www.waterprobes.com](http://www.waterprobes.com)). The measurement interval was 30 minutes. All measurements were made in Mumford Cove, CT, ~ 0.5m above sandy bottom. Deployment time of each sensor varied between 3-6 weeks, all probes were calibrated prior to deployment for salinity, pH, 100% air-saturated water oxygen. The probe was attached to a local subsurface buoy.

**pH:** calibrated with 3-point, NIST certified buffers, accuracy +/- 0.1, precision: 0.01, automatic temperature correction

**Optically Measured DO (HDO):** calibrated with 100% air-saturated water

**Salinity:** Calibrated with FisherScientific Conductivity standard 50,000 uS/cm

**Processing** QA/QC consisted of identifying and deleting salinity data that 'jumped' within a

**Description:** single 30 min interval more than 1 salinity unit.

**BCO-DMO Processing Notes:**

- Removed spaces in data values and replaced with underscores
- Reformatted column names to comply with BCO-DMO standards
- All blank cells were filled with "nd"

## Deployment Information

### Deployment description for lab Avery\_Point Mumford\_Cove

Shallow, coastal embayment in outer Long Island Sound, US Atlantic coast.

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## Instrument Information

<b>Instrument</b>	Eureka Manta Sub2 probe
<b>Description</b>	Took data on temperature, pH, DO, and salinity
<b>Generic Instrument Name</b>	Water Quality Multiprobe
<b>Generic Instrument Description</b>	An instrument which measures multiple water quality parameters based on the sensor configuration.